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Welcome

AWS WAFV2

Note
This is the latest version of the AWS WAF API, released in November, 2019. The names of the entities that you use to access this API, like endpoints and namespaces, all have the versioning information added, like "V2" or "v2", to distinguish from the prior version. We recommend migrating your resources to this version, because it has a number of significant improvements. If you used AWS WAF prior to this release, you can't use this AWS WAFV2 API to access any AWS WAF resources that you created before. You can access your old rules, web ACLs, and other AWS WAF resources only through the AWS WAF Classic APIs. The AWS WAF Classic APIs have retained the prior names, endpoints, and namespaces. For information, including how to migrate your AWS WAF resources to this version, see the AWS WAF Developer Guide.

AWS WAF is a web application firewall that lets you monitor the HTTP and HTTPS requests that are forwarded to Amazon CloudFront, an Amazon API Gateway REST API, an Application Load Balancer, or an AWS AppSync GraphQL API. AWS WAF also lets you control access to your content. Based on conditions that you specify, such as the IP addresses that requests originate from or the values of query strings, the Amazon API Gateway REST API, CloudFront distribution, the Application Load Balancer, or the AWS AppSync GraphQL API responds to requests either with the requested content or with an HTTP 403 status code (Forbidden). You also can configure CloudFront to return a custom error page when a request is blocked.

This API guide is for developers who need detailed information about AWS WAF API actions, data types, and errors. For detailed information about AWS WAF features and an overview of how to use AWS WAF, see the AWS WAF Developer Guide.

You can make calls using the endpoints listed in AWS WAF endpoints and quotas.

- For regional applications, you can use any of the endpoints in the list. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.
- For Amazon CloudFront applications, you must use the API endpoint listed for US East (N. Virginia): us-east-1.

Alternatively, you can use one of the AWS SDKs to access an API that's tailored to the programming language or platform that you're using. For more information, see AWS SDKs.

We currently provide two versions of the AWS WAF API: this API and the prior versions, the classic AWS WAF APIs. This new API provides the same functionality as the older versions, with the following major improvements:

- You use one API for both global and regional applications. Where you need to distinguish the scope, you specify a Scope parameter and set it to CLOUDFRONT or REGIONAL.
- You can define a web ACL or rule group with a single call, and update it with a single call. You define all rule specifications in JSON format, and pass them to your rule group or web ACL calls.
- The limits AWS WAF places on the use of rules more closely reflects the cost of running each type of rule. Rule groups include capacity settings, so you know the maximum cost of a rule group when you use it.
AWS WAF Classic

*Note*
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

This is the AWS WAF Classic API Reference for using AWS WAF Classic with Amazon CloudFront. The AWS WAF Classic actions and data types listed in the reference are available for protecting CloudFront distributions. You can use these actions and data types via the endpoint waf.amazonaws.com. This guide is for developers who need detailed information about the AWS WAF Classic API actions, data types, and errors. For detailed information about AWS WAF Classic features and an overview of how to use the AWS WAF Classic API, see the AWS WAF Classic in the developer guide.

AWS WAF Classic Regional

*Note*
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

This is the AWS WAF Classic Regional API Reference for using AWS WAF Classic with the AWS resources, Elastic Load Balancing Application Load Balancers and Amazon API Gateway APIs. The AWS WAF Classic actions and data types listed in the reference are available for protecting these resource types. You can use these actions and data types by means of the endpoints listed in AWS WAF Classic endpoints and quotas. This guide is for developers who need detailed information about the AWS WAF Classic API actions, data types, and errors. For detailed information about AWS WAF Classic features and an overview of how to use the AWS WAF Classic API, see the AWS WAF Classic in the developer guide.
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- CheckCapacity (p. 12)
- CreateIPSet (p. 21)
- CreateRegexPatternSet (p. 25)
- CreateRuleGroup (p. 29)
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- DeleteIPSet (p. 54)
- DeleteLoggingConfiguration (p. 57)
- DeletePermissionPolicy (p. 59)
- DeleteRegexPatternSet (p. 61)
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- DeleteWebACL (p. 67)
- DescribeManagedRuleGroup (p. 71)
- DisassociateWebACL (p. 76)
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**AssociateWebACL**

**Service: AWS WAFV2**

Associates a web ACL with a regional application resource, to protect the resource. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

For Amazon CloudFront, don't use this call. Instead, use your CloudFront distribution configuration. To associate a web ACL, in the CloudFront call `UpdateDistribution`, set the web ACL ID to the Amazon Resource Name (ARN) of the web ACL. For information, see `UpdateDistribution`.

**Request Syntax**

```
{
  "ResourceArn": "string",
  "WebACLArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 9)**

The Amazon Resource Name (ARN) of the resource to associate with the web ACL.

The ARN must be in one of the following formats:
- For an Amazon API Gateway REST API: `arn:aws:apigateway:region::/restapis/api-id/stages/stage-name`
- For an AWS AppSync GraphQL API: `arn:aws:appsync:region:account-id:apis/GraphQLApiId`

Type: String


Pattern: .\S.*

Required: Yes

**WebACLArn (p. 9)**

The Amazon Resource Name (ARN) of the web ACL that you want to associate with the resource.

Type: String


Pattern: .\S.*

Required: Yes
Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
• You specified a parameter name or value that isn't valid.
• Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn't retrieve the resource that you requested. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
• AWS SDK for Ruby V3
CheckCapacity
Service: AWS WAFV2

Returns the web ACL capacity unit (WCU) requirements for a specified scope and set of rules. You can use this to check the capacity requirements for the rules you want to use in a RuleGroup (p. 838) or WebACL (p. 866).

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. The WCU limit for web ACLs is 1,500.

Request Syntax

```json
{
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     { "Name": "string", "Value": "string" }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     { "Name": "string", "Value": "string" }
                  ]
               }
            },
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     { "Name": "string", "Value": "string" }
                  ]
               }
            },
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     { "Name": "string", "Value": "string" }
                  ]
               }
            }
         }
      }
   ]
}
```

12
"CaptchaConfig": {  
  "ImmunityTimeProperty": {  
    "ImmunityTime": number  
  },  
  "Name": "string",  
  "OverrideAction": {  
    "Count": {  
      "CustomRequestHandling": {  
        "InsertHeaders": [  
          {  
            "Name": "string",  
            "Value": "string"  
          }  
        ]  
      }  
    },  
    "None": {  
    }  
  },  
  "Priority": number,  
  "RuleLabels": [  
    {  
      "Name": "string"  
    }  
  ],  
  "Statement": {  
    "AndStatement": {  
      "Statements": [  
        "Statement"  
      ]  
    },  
    "ByteMatchStatement": {  
      "FieldToMatch": {  
        "AllQueryArguments": {  
        },  
        "Body": {  
        },  
        "JsonBody": {  
          "InvalidFallbackBehavior": "string",  
          "MatchPattern": {  
            "All": {  
            },  
            "IncludedPaths": [ "string" ]  
          },  
          "MatchScope": "string"  
        },  
        "Method": {  
        },  
        "QueryString": {  
        },  
        "SingleHeader": {  
          "Name": "string"  
        },  
        "SingleQueryArgument": {  
          "Name": "string"  
        },  
        "UriPath": {  
        }  
      },  
      "PositionalConstraint": "string",  
      "SearchString": blob,  
      "TextTransformations": [  
        {  
          "Priority": number,  
          "Type": "string"  
        }  
      ]  
    }  
  }  
}
"GeoMatchStatement": {
    "CountryCodes": [ "string" ],
    "ForwardedIPConfig": {
        "FallbackBehavior": "string",
        "HeaderName": "string"
    }
},
"IPSetReferenceStatement": {
    "ARN": "string",
    "IPSetForwardedIPConfig": {
        "FallbackBehavior": "string",
        "HeaderName": "string",
        "Position": "string"
    }
},
"LabelMatchStatement": {
    "Key": "string",
    "Scope": "string"
},
"ManagedRuleGroupStatement": {
    "ExcludedRules": [
        { "Name": "string" }
    ],
    "ManagedRuleGroupConfigs": [
        { "LoginPath": "string",
          "PasswordField": { "Identifier": "string" },
          "PayloadType": "string",
          "UsernameField": { "Identifier": "string" }
        }
    ],
    "Name": "string",
    "ScopeDownStatement": "Statement",
    "VendorName": "string",
    "Version": "string"
},
"NotStatement": { "Statement": "Statement" },
"OrStatement": { "Statements": [ "Statement" ] },
"RateBasedStatement": {
    "AggregateKeyType": "string",
    "ForwardedIPConfig": {
        "FallbackBehavior": "string",
        "HeaderName": "string"
    },
    "Limit": number,
    "ScopeDownStatement": "Statement"
},
"RegexMatchStatement": {
    "FieldToMatch": { "AllQueryArguments": [] }
}
"Body": {
  "JsonBody": {
    "InvalidFallbackBehavior": "string",
    "MatchPattern": {
      "All": {
      },
      "IncludedPaths": [ "string" ]
    },
    "MatchScope": "string"
  },
  "Method": {
  },
  "QueryString": {
  },
  "SingleHeader": {
    "Name": "string"
  },
  "SingleQueryArgument": {
    "Name": "string"
  },
  "UriPath": {
  }
},
"RegexString": "string",
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"RegexPatternSetReferenceStatement": {
  "ARN": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
}
"RuleGroupReferenceStatement": {
  "ARN": "string",
  "ExcludedRules": [
    {
      "Name": "string"
    }
  ]
},
"SizeConstraintStatement": {
  "ComparisonOperator": "string",
  "FieldToMatch": {
    "AllQueryArguments": {},
    "Body": {},
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {},
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {},
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "Size": number,
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
},
"SqlInjectionsMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {},
    "Body": {},
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {},
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    }
  }
}
"SingleHeader": {
  "Name": "string"
},
"SingleQueryArgument": {
  "Name": "string"
},
"UriPath": {
}
},
"TextTransformations": [
  {
    "Priority": "number",
    "Type": "string"
  }
]
},
"XssMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "TextTransformations": [
    {
      "Priority": "number",
      "Type": "string"
    }
  ]
},
"VisibilityConfig": {
  "CloudWatchMetricsEnabled": boolean,
  "MetricName": "string",
  "SampledRequestsEnabled": boolean
}
],
"Scope": "string"}
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Rules (p. 12)

An array of Rule (p. 834) that you’re configuring to use in a rule group or web ACL.

Type: Array of Rule (p. 834) objects

Required: Yes

Scope (p. 12)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Response Syntax

```json
{
   "Capacity": number
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Capacity (p. 18)

The capacity required by the rules and scope.

Type: Long

Valid Range: Minimum value of 0.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFExpiredManagedRuleGroupVersionException

The operation failed because the specified version for the managed rule group has expired. You can retrieve the available versions for the managed rule group by calling ListAvailableManagedRuleGroupVersions (p. 155).

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn’t perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn’t recognize a parameter in the request. For example:

- You specified a parameter name or value that isn’t valid.
- Your nested statement isn’t valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a WebACL with a DefaultAction that isn’t among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can’t be associated.

HTTP Status Code: 400

WAFInvalidResourceException

AWS WAF couldn’t perform the operation because the resource that you requested isn’t valid. Check the resource, and try again.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn’t exist.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

You tried to use a managed rule group that’s available by subscription, but you aren’t subscribed to it yet.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn’t retrieve the resource that you requested. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateIPSet

Service: AWS WAFV2

Creates an IPSet (p. 784), which you use to identify web requests that originate from specific IP addresses or ranges of IP addresses. For example, if you're receiving a lot of requests from a ranges of IP addresses, you can configure AWS WAF to block them using an IPSet that lists those IP addresses.

Request Syntax

```
{
    "Addresses": [ "string" ],
    "Description": "string",
    "IPAddressVersion": "string",
    "Name": "string",
    "Scope": "string",
    "Tags": [  
        {  
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Addresses (p. 21)

Contains an array of strings that specifies zero or more IP addresses or blocks of IP addresses in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports all IPv4 and IPv6 CIDR ranges except for /0.

Example address strings:

- To configure AWS WAF to allow, block, or count requests that originated from the IP address 192.0.2.44, specify 192.0.2.44/32.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify 192.0.2.0/24.
- To configure AWS WAF to allow, block, or count requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify 1111:0000:0000:0000:0000:0000:0000:0111/128.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Example JSON Addresses specifications:

- Empty array: "Addresses": []
- Array with one address: "Addresses": ["192.0.2.44/32"]
- Array with three addresses: "Addresses": ["192.0.2.44/32", "192.0.2.0/24", "192.0.0.0/16"]
- INVALID specification: "Addresses": [""] INVALID
CreateIPSet

Type: Array of strings


Pattern: .\S+.

Required: Yes

Description (p. 21)

A description of the IP set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^\[\w+=:#@/\-,.\]\[\w+=:#@/\-,.\s\]+\[\w+=:#@/\-,.\]$+

Required: No

IPAddressVersion (p. 21)

The version of the IP addresses, either IPv4 or IPv6.

Type: String

Valid Values: IPv4  |  IPv6

Required: Yes

Name (p. 21)

The name of the IP set. You cannot change the name of an IPSet after you create it.

Type: String


Pattern: ^\[\w\-\]+$+

Required: Yes

Scope (p. 21)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT  |  REGIONAL

Required: Yes

Tags (p. 21)

An array of key:value pairs to associate with the resource.

Type: Array of Tag (p. 856) objects
Array Members: Minimum number of 1 item.
Required: No

Response Syntax

```json
{
    "Summary": {
        "ARN": "string",
        "Description": "string",
        "Id": "string",
        "LockToken": "string",
        "Name": "string"
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**Summary (p. 23)**

High-level information about an IPSet (p. 784), returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage an IPSet, and the ARN, that you provide to the IPSetReferenceStatement (p. 788) to use the address set in a Rule (p. 834).

Type: IPSetsSummary (p. 789) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDuplicateItemException**

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

**WAFFnetInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFFnetInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFFnetInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
• Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
## CreateRegexPatternSet

**Service:** AWS WAFV2

Create a [RegexPatternSet (p. 828)](https://docs.aws.amazon.com/waf/latest/APIReference/API_CreateRegexPatternSet.html), which you reference in a [RegexPatternSetReferenceStatement (p. 830)](https://docs.aws.amazon.com/waf/latest/APIReference/API_CreateRegexPatternSetReferenceStatement.html), to have AWS WAF inspect a web request component for the specified patterns.

### Request Syntax

```json
{
  "Description": "string",
  "Name": "string",
  "RegularExpressionList": [
    {
      "RegexString": "string"
    }
  ],
  "Scope": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

### Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Description (p. 25)**

A description of the set that helps with identification.

*Type:* String

*Length Constraints:* Minimum length of 1. Maximum length of 256.

*Pattern:* `^[\w+=:#@/\-.,\s]+[\w+=:#@/\-.,\s]*$`

*Required:* No

**Name (p. 25)**

The name of the set. You cannot change the name after you create the set.

*Type:* String


*Pattern:* `^[\w\-]+$`

*Required:* Yes

**RegularExpressionList (p. 25)**

Array of regular expression strings.

*Type:* Array of [Regex (p. 826)](https://docs.aws.amazon.com/waf/latest/APIReference/API_Regex.html) objects
Scope (p. 25)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String
Valid Values: CLOUDFRONT | REGIONAL

Tags (p. 25)

An array of key:value pairs to associate with the resource.

Type: Array of Tag (p. 856) objects
Array Members: Minimum number of 1 item.

Response Syntax

```json
{
  "Summary": {
    "ARN": "string",
    "Description": "string",
    "Id": "string",
    "LockToken": "string",
    "Name": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Summary (p. 26)

High-level information about a RegexPatternSet (p. 828), returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a RegexPatternSet, and the ARN, that you provide to the RegexPatternSetReferenceStatement (p. 830) to use the pattern set in a Rule (p. 834).

Type: RegexPatternSetSummary (p. 831) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFFrontendServerError

Your request is invalid. AWS WAF couldn't perform the operation because of a system problem. Error response contains additional information.

HTTP Status Code: 500

WAFFrontendServerMalformedException

Your request is invalid. AWS WAF couldn't perform the operation because of a system problem. Error response contains additional information.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateRuleGroup
Service: AWS WAFV2

Creates a RuleGroup (p. 838) per the specifications provided.

A rule group defines a collection of rules to inspect and control web requests that you can use in a WebACL (p. 866). When you create a rule group, you define an immutable capacity limit. If you update a rule group, you must stay within the capacity. This allows others to reuse the rule group with confidence in its capacity requirements.

Request Syntax

```json
{
   "Capacity": number,
   "CustomResponseBodies": {
      "string": {
         "Content": "string",
         "ContentType": "string"
      }
   },
   "Description": "string",
   "Name": "string",
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               },
               "Block": {
                  "CustomResponse": {
                     "CustomResponseBodyKey": "string",
                     "ResponseCode": number,
                     "ResponseHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  },
                  "Captcha": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     },
                     "Count": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     }
                  }
               }
            }
         }
      }
   }
}
```
"Name": "string",
"OverrideAction": {
  "Count": {
    "CustomRequestHandling": {
      "InsertHeaders": [
        {
          "Name": "string",
          "Value": "string"
        }
      ]
    },
    "None": {
    }
  },
  "Priority": number,
  "RuleLabels": [
    {
      "Name": "string"
    }
  ],
  "Statement": {
    "AndStatement": {
      "Statements": [
        "Statement"
      ]
    },
    "ByteMatchStatement": {
      "FieldToMatch": {
        "AllQueryArguments": {
        },
        "Body": {
        },
        "JsonBody": {
          "InvalidFallbackBehavior": "string",
          "MatchPattern": {
            "All": {
            },
            "IncludedPaths": [ "string" ]
          },
          "MatchScope": "string"
        },
        "Method": {
        },
        "QueryString": {
        },
        "SingleHeader": {
          "Name": "string"
        },
        "SingleQueryArgument": {
          "Name": "string"
        },
        "UriPath": {
        }
      }
    }
  }
}
"SearchString": blob,
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"GeoMatchStatement": {
  "CountryCodes": [ "string" ],
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  }
},
"IPSetReferenceStatement": {
  "ARN": "string",
  "IPSetForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string",
    "Position": "string"
  }
},
"LabelMatchStatement": {
  "Key": "string",
  "Scope": "string"
},
"ManagedRuleGroupStatement": {
  "ExcludedRules": [
    {
      "Name": "string"
    }
  ],
  "ManagedRuleGroupConfigs": [
    {
      "LoginPath": "string",
      "PasswordField": {
        "Identifier": "string"
      },
      "PayloadType": "string",
      "UsernameField": {
        "Identifier": "string"
      }
    }
  ],
  "Name": "string",
  "ScopeDownStatement": "Statement",
  "VendorName": "string",
  "Version": "string"
},
"NotStatement": {
  "Statement": "Statement"
},
"OrStatement": {
  "Statements": [
  "Statement"
  ]
},
"RateBasedStatement": {
  "AggregateKeyType": "string",
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  },
  "Limit": number,
  "ScopeDownStatement": "Statement"
"RegexMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
      },
    "Body": {
    },
  } "JsonBody": {
    "InvalidFallbackBehavior": "string",
    "MatchPattern": {
      "All": {
      },
      "IncludedPaths": [ "string" ]
    },
    "MatchScope": "string",
  } "Method": {
  },
  "QueryString": {
  },
  "SingleHeader": {
    "Name": "string"
  },
  "SingleQueryArgument": {
    "Name": "string"
  },
  "UriPath": {
  }
},
"RegexString": "string",
"TextTransformations": [
  {
    "Priority": number,
    "Type": "String"
  }
],
"RegexPatternSetReferenceStatement": {
  "ARN": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
  } "JsonBody": {
    "InvalidFallbackBehavior": "string",
    "MatchPattern": {
      "All": {
      },
      "IncludedPaths": [ "string" ]
    },
    "MatchScope": "string",
  } "Method": {
  },
  "QueryString": {
  },
  "SingleHeader": {
    "Name": "string"
  },
  "SingleQueryArgument": {
    "Name": "string"
  },
  "UriPath": {
  }
},

}
"TextTransformations": [ 
  { 
    "Priority": number,  
    "Type": "string" 
  } 
], 
"RuleGroupReferenceStatement": { 
  "ARN": "string",  
  "ExcludedRules": [ 
    { 
      "Name": "string" 
    } 
  ] 
}, 
"SizeConstraintStatement": { 
  "ComparisonOperator": "string",  
  "FieldToMatch": { 
    "AllQueryArguments": { 
    },  
    "Body": { 
    },  
    "JsonBody": { 
      "InvalidFallbackBehavior": "string",  
      "MatchPattern": { 
        "All": { 
        },  
        "IncludedPaths": [ "string" ] 
      },  
      "MatchScope": "string" 
    },  
    "Method": { 
    },  
    "QueryString": { 
    },  
    "SingleHeader": { 
      "Name": "string" 
    },  
    "SingleQueryArgument": { 
      "Name": "string" 
    },  
    "UriPath": { 
    } 
  },  
  "Size": number,  
  "TextTransformations": [ 
    { 
      "Priority": number,  
      "Type": "string" 
    } 
  ] 
}, 
"SqliMatchStatement": { 
  "FieldToMatch": { 
    "AllQueryArguments": { 
    },  
    "Body": { 
    },  
    "JsonBody": { 
      "InvalidFallbackBehavior": "string",  
      "MatchPattern": { 
        "All": { 
        },  
        "IncludedPaths": [ "string" ] 
      },  
      "MatchScope": "string" 
    } 
  }
AWSVAFV2 API Reference
CreateRuleGroup

},
  "Method": {
  },
  "QueryString": {
  },
  "SingleHeader": {
    "Name": "string"
  },
  "SingleQueryArgument": {
    "Name": "string"
  },
  "UriPath": {
  },
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]},
  "XssMatchStatement": {
    "FieldToMatch": {
      "AllQueryArguments": {
      },
      "Body": {
      },
      "JsonBody": {
        "InvalidFallbackBehavior": "string",
        "MatchPattern": {
          "All": {
          },
          "IncludedPaths": [ "string" ]
        },
        "MatchScope": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
        "Name": "string"
      },
      "SingleQueryArgument": {
        "Name": "string"
      },
      "UriPath": {
      },
      "TextTransformations": [
        {
          "Priority": number,
          "Type": "string"
        }
      ]
    },
    "VisibilityConfig": {
      "CloudWatchMetricsEnabled": boolean,
      "MetricName": "string",
      "SampledRequestsEnabled": boolean
    }
  },
  "Scope": "string",
  "Tags": [
  ]}
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Capacity (p. 29)**

The web ACL capacity units (WCUs) required for this rule group.

When you create your own rule group, you define this, and you cannot change it after creation. When you add or modify the rules in a rule group, AWS WAF enforces this limit. You can check the capacity for a set of rules using CheckCapacity (p. 12).

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. The WCU limit for web ACLs is 1,500.

Type: Long

Valid Range: Minimum value of 1.

Required: Yes

**CustomResponseBodies (p. 29)**

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the rule group, and then use them in the rules that you define in the rule group.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: String to CustomResponseBody (p. 767) object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: ^[\w\-]+$

Required: No
Description (p. 29)

A description of the rule group that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^\[\w+=:#@/\-,.\]^[\w+=:#@/\-,.\s]+^[\w+=:#@/\-,.\]$ #

Required: No

Name (p. 29)

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String


Pattern: ^[\w\-]+$ #

Required: Yes

Rules (p. 29)

The Rule (p. 834) statements used to identify the web requests that you want to allow, block, or count. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule (p. 834) objects

Required: No

Scope (p. 29)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT  --region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Tags (p. 29)

An array of key:value pairs to associate with the resource.

Type: Array of Tag (p. 856) objects

Array Members: Minimum number of 1 item.

Required: No

VisibilityConfig (p. 29)

Defines and enables Amazon CloudWatch metrics and web request sample collection.
Type: `VisibilityConfig (p. 865)` object

Required: Yes

**Response Syntax**

```json
{
  "Summary": {
    "ARN": "string",
    "Description": "string",
    "Id": "string",
    "LockToken": "string",
    "Name": "string"
  }
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

**Summary (p. 37)**

High-level information about a `RuleGroup (p. 838)`, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a `RuleGroup`, and the ARN, that you provide to the `RuleGroupReferenceStatement (p. 841)` to use the rule group in a `Rule (p. 834)`.

Type: `RuleGroupSummary (p. 842)` object

**Errors**

For information about the errors that are common to all actions, see `Common Errors (p. 1051)`.

**WAFDuplicateItemException**

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
There are several error messages that can occur when using the CreateRuleGroup operation:

- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

**WAFLimitsExceeded(Exception**

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

**WAFNonexistentItem(Exception**

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

**WAFOptimisticLockException**

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

**WAFSubscriptionNotFoundException**

You tried to use a managed rule group that's available by subscription, but you aren't subscribed to it yet.

HTTP Status Code: 400

**WAFTagOperationException**

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

**WAFTagOperationInternalErrorException**

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

**WAFTagOperationInternalErrorException**

AWS WAF couldn't retrieve the resource that you requested. Retry your request.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
**CreateWebACL**

Service: AWS WAFV2

Creates a WebACL (p. 866) per the specifications provided.

A web ACL defines a collection of rules to use to inspect and control web requests. Each rule has an action defined (allow, block, or count) for requests that match the statement of the rule. In the web ACL, you assign a default action to take (allow, block) for any request that does not match any of the rules. The rules in a web ACL can be a combination of the types Rule (p. 834), RuleGroup (p. 838), and managed rule group. You can associate a web ACL with one or more AWS resources to protect. The resources can be an Amazon CloudFront distribution, an Amazon API Gateway REST API, an Application Load Balancer, or an AWS AppSync GraphQL API.

**Request Syntax**

```json
{
   "CaptchaConfig": {
      "ImmunityTimeProperty": {
         "ImmunityTime": number
      }
   },
   "CustomResponseBodies": {
      "string": {
         "Content": "string",
         "ContentType": "string"
      }
   },
   "DefaultAction": {
      "Allow": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
      }
      }
   },
   "Block": {
      "CustomResponse": {
         "CustomResponseBodyKey": "string",
         "ResponseCode": number,
         "ResponseHeaders": [
            {
               "Name": "string",
               "Value": "string"
            }
         ]
      }
   },
   "Description": "string",
   "Name": "string",
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            }
         }
      }
   ]
}
```
"Block": {
    "CustomResponse": {
        "CustomResponseBodyKey": "string",
        "ResponseCode": number,
        "ResponseHeaders": [
            {
                "Name": "string",
                "Value": "string"
            }
        ]
    },
    "Captcha": {
        "CustomRequestHandling": {
            "InsertHeaders": [
                {
                    "Name": "string",
                    "Value": "string"
                }
            ]
        },
        "Count": {
            "CustomRequestHandling": {
                "InsertHeaders": [
                    {
                        "Name": "string",
                        "Value": "string"
                    }
                ]
            }
        }
    },
    "CaptchaConfig": {
        "ImmunityTimeProperty": {
            "ImmunityTime": number
        }
    },
    "Name": "string",
    "OverrideAction": {
        "Count": {
            "CustomRequestHandling": {
                "InsertHeaders": [
                    {
                        "Name": "string",
                        "Value": "string"
                    }
                ]
            }
        },
        "None": {
            "Priority": number,
            "RuleLabels": [
                {
                    "Name": "string"
                }
            ],
            "Statement": {
                "AndStatement": {
                    "Statements": [
                }
            }
        }
    }
}
"Statement"
],
"ByteMatchStatement": {
"FieldToMatch": {
"AllQueryArguments": {

},
"Body": {
},
"JsonBody": {
"InvalidFallbackBehavior": "string",
"MatchPattern": {
"All": {

},
"IncludedPaths": [ "string" ]
},
"MatchScope": "string"
},
"Method": {

},
"QueryString": {

},
"SingleHeader": {
"Name": "string"
},
"SingleQueryArgument": {
"Name": "string"
},
"UriPath": {

},
"PositionalConstraint": "string",
"SearchString": blob,
"TextTransformations": [
{
"Priority": number,
"Type": "string"
}
],
"GeoMatchStatement": {
"CountryCodes": [ "string" ],
"ForwardedIPConfig": {
"FallbackBehavior": "string",
"HeaderName": "string"
}
},
"IPSetReferenceStatement": {
"ARN": "string",
"IPSetForwardedIPConfig": {
"FallbackBehavior": "string",
"HeaderName": "string",
"Position": "string"
}
},
"LabelMatchStatement": {
"Key": "string",
"Scope": "string"
},
"ManagedRuleGroupStatement": {
"ExcludedRules": {
"Name": "string"
}
},
"ManagedRuleGroupConfigs": [
CreateWebACL

{
    "LoginPath": "string",
    "PasswordField": {
        "Identifier": "string"
    },
    "PayloadType": "string",
    "UsernameField": {
        "Identifier": "string"
    }
}

"Name": "string",
"ScopeDownStatement": "Statement",
"VendorName": "string",
"Version": "string"

"NotStatement": {
    "Statement": "Statement"
},

"OrStatement": {
    "Statements": [
        "Statement"
    ]
},

"RateBasedStatement": {
    "AggregateKeyType": "string",
    "ForwardedIPConfig": {
        "FallbackBehavior": "string",
        "HeaderName": "string"
    },
    "Limit": number,
    "ScopeDownStatement": "Statement"
},

"RegexMatchStatement": {
    "FieldToMatch": {
        "AllQueryArguments": {
        },
        "Body": {
        },
        "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
                "All": {
                },
                "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string"
        },
        "Method": {
        },
        "QueryString": {
        },
        "SingleHeader": {
            "Name": "string"
        },
        "SingleQueryArgument": {
            "Name": "string"
        },
        "UriPath": {
        }
    },
    "RegexString": "string",
    "TextTransformations": [
        {
            "Priority": number,
            "Type": "string"
        }
    ]
}

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"RegexPatternSetReferenceStatement": {
"ARN": "String",
"FieldToMatch": {
"AllQueryArguments": {
},
"Body": {
},
"JsonBody": {
"InvalidFallbackBehavior": "string",
"MatchPattern": {
"All": {

"IncludedPaths": [ "string" ]
},
"MatchScope": "string"
},
"Method": {
},
"QueryString": {
},
"SingleHeader": {
"Name": "string"

"SingleQueryArgument": {
"Name": "string"
},
"UriPath": {
}
},
"TextTransformations": [ {
"Priority": number,
"Type": "string"
}
]}
},
"RuleGroupReferenceStatement": {
"ARN": "String",
"ExcludedRules": [ {
"Name": "string"
}
]}
},
"SizeConstraintStatement": {
"ComparisonOperator": "string",
"FieldToMatch": {
"AllQueryArguments": {
},
"Body": {
},
"JsonBody": {
"InvalidFallbackBehavior": "string",
"MatchPattern": {
"All": {

"IncludedPaths": [ "string" ]
},
"MatchScope": "string"
},
"Method": {
},
"QueryString": {
}
}
},
   "SingleHeader": {
      "Name": "string"
   },
   "SingleQueryArgument": {
      "Name": "string"
   },
   "UriPath": {
   },
   "Size": number,
   "TextTransformations": [
   {
      "Priority": number,
      "Type": "string"
   }
   ],
   "SqlInjectionMatchStatement": {
      "FieldToMatch": {
         "AllQueryArguments": {
         },
         "Body": {
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriPath": {
         }
      },
      "TextTransformations": [
      {
         "Priority": number,
         "Type": "string"
      }
      ],
      "XssMatchStatement": {
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               }
            },
            "MatchScope": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriPath": {
         }
      }
   ]
}
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

CaptchaConfig (p. 40)

Specifies how AWS WAF should handle CAPTCHA evaluations for rules that don't have their own CaptchaConfig settings. If you don't specify this, AWS WAF uses its default settings for CaptchaConfig.

Type: CaptchaConfig (p. 759) object

Required: No
CustomResponseBodies (p. 40)

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the web ACL, and then use them in the rules and default actions that you define in the web ACL.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: String to CustomResponseBody (p. 767) object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: ^\w[-]+$  
Required: No

DefaultAction (p. 40)

The action to perform if none of the Rules contained in the WebACL match.

Type: DefaultAction (p. 768) object

Required: Yes

Description (p. 40)

A description of the web ACL that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^[\w+=:#@/-,.]+[\w+=:#@/-,.]+$  
Required: No

Name (p. 40)

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String


Pattern: ^[\w-]+$  
Required: Yes

Rules (p. 40)

The Rule (p. 834) statements used to identify the web requests that you want to allow, block, or count. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule (p. 834) objects

Required: No
Scope (p. 40)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Tags (p. 40)

An array of key:value pairs to associate with the resource.

Type: Array of Tag (p. 856) objects

Array Members: Minimum number of 1 item.

Required: No

VisibilityConfig (p. 40)

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig (p. 865) object

Required: Yes

Response Syntax

```
{
  "Summary": {
    "ARN": "string",
    "Description": "string",
    "Id": "string",
    "LockToken": "string",
    "Name": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Summary (p. 48)

High-level information about a WebACL (p. 866), returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a WebACL, and the ARN, that you provide to operations like AssociateWebACL (p. 9).

Type: WebACLSummary (p. 870) object
**Errors**

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](https://aws.amazon.com).  

**WAFDuplicateItemException**

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a `DefaultAction` that isn't among the types available at `DefaultAction` (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

**WAFInvalidResourceException**

AWS WAF couldn't perform the operation because the resource that you requested isn't valid. Check the resource, and try again.

HTTP Status Code: 400

**WAFLimitsExceededException**

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see [AWS WAF quotas](https://aws.amazon.com) in the [AWS WAF Developer Guide](https://aws.amazon.com).

HTTP Status Code: 400

**WAFNonexistentItemException**

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

**WAFOptimisticLockException**

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400
WAFSubscriptionNotFoundException

You tried to use a managed rule group that's available by subscription, but you aren't subscribed to it yet.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

WAFUnavailableEntityException

AWS WAF couldn't retrieve the resource that you requested. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteFirewallManagerRuleGroups

Service: AWS WAFV2

Deletes all rule groups that are managed by AWS Firewall Manager for the specified web ACL.

You can only use this if `ManagedByFirewallManager` is false in the specified WebACL (p. 866).

**Request Syntax**

```
{
    "WebACLArn": "string",
    "WebACLLockToken": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**WebACLArn (p. 51)**

The Amazon Resource Name (ARN) of the web ACL.

Type: String


Pattern: `.\S.*`

Required: Yes

**WebACLLockToken (p. 51)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**Response Syntax**

```
{
    "NextWebACLLockToken": "string"
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextWebACLLockToken (p. 51)

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a `DefaultAction` that isn't among the types available at `DefaultAction` (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.
HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteIPSet

Service: AWS WAFV2

Deletes the specified IPSet (p. 784).

Request Syntax

```json
{
    "Id": "string",
    "LockToken": "string",
    "Name": "string",
    "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Id (p. 54)**

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**LockToken (p. 54)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**Name (p. 54)**

The name of the IP set. You cannot change the name of an IPSet after you create it.

Type: String


Pattern: `^[\w\-]+$`
Required: Yes

Scope (p. 54)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLoudFront --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFAssociatedItemException

AWS WAF couldn’t perform the operation because your resource is being used by another resource or it's associated with another resource.

For DeleteWebACL, you will only get this exception if the web ACL is still associated with a regional resource. Deleting a web ACL that is still associated with an Amazon CloudFront distribution won’t get this exception.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn’t perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn’t valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn’t recognize a parameter in the request. For example:
- You specified a parameter name or value that isn’t valid.
- Your nested statement isn’t valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a WebACL with a DefaultAction that isn’t among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can’t be associated.
HTTP Status Code: 400

**WAFNonexistentItemException**

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

**WAFOptimisticLockException**

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

**WAFTagOperationException**

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

**WAFTagOperationInternalErrorException**

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteLoggingConfiguration
Service: AWS WAFV2

Deletes the LoggingConfiguration (p. 798) from the specified web ACL.

Request Syntax

```json
{
    "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 57)**

The Amazon Resource Name (ARN) of the web ACL from which you want to delete the LoggingConfiguration (p. 798).

Type: String


Pattern: .\S.*

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at `DefaultAction (p. 768)`.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

`WAFNonexistentItemException`

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

`WAFOptimisticLockException`

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• [AWS Command Line Interface](#)
• [AWS SDK for .NET](#)
• [AWS SDK for C++](#)
• [AWS SDK for Go](#)
• [AWS SDK for Java V2](#)
• [AWS SDK for JavaScript](#)
• [AWS SDK for PHP V3](#)
• [AWS SDK for Python](#)
• [AWS SDK for Ruby V3](#)
DeletePermissionPolicy

Service: AWS WAFV2

Permanently deletes an IAM policy from the specified rule group.

You must be the owner of the rule group to perform this operation.

Request Syntax

```json
{
    "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 59)**

The Amazon Resource Name (ARN) of the rule group from which you want to delete the policy.

You must be the owner of the rule group to perform this operation.

Type: String


Pattern: .*

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400
WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
DeleteRegexPatternSet
Service: AWS WAFV2

Deletes the specified RegexPatternSet (p. 828).

Request Syntax

```
{
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Id (p. 61)**

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**LockToken (p. 61)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**Name (p. 61)**

The name of the set. You cannot change the name after you create the set.

Type: String


Pattern: `^[\w\-]+$`
**Required:** Yes

**Scope (p. 61)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint `us-east-1`.

**Type:** String

**Valid Values:** CLOUDFRONT | REGIONAL

**Required:** Yes

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFAssociatedItemException**

AWS WAF couldn't perform the operation because your resource is being used by another resource or it's associated with another resource.

For DeleteWebACL, you will only get this exception if the web ACL is still associated with a regional resource. Deleting a web ACL that is still associated with an Amazon CloudFront distribution won't get this exception.

HTTP Status Code: 400

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.
HTTP Status Code: 400

**WAFNonexistentItemException**

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

**WAFOptimisticLockException**

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

**WAFTagOperationException**

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

**WAFTagOperationInternalErrorException**

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRuleGroup

Service: AWS WAFV2

Deletes the specified RuleGroup (p. 838).

Request Syntax

```
{
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Id (p. 64)**

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**LockToken (p. 64)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**Name (p. 64)**

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String


Pattern: `^[\w\-]+$`
Required: Yes

**Scope (p. 64)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- **CLI** - Specify the Region when you use the CloudFront scope: ```--scope=CLOUDFRONT --region=us-east-1```.
- **API and SDKs** - For all calls, use the Region endpoint us-east-1.

**Type:** String

**Valid Values:** CLOUDFRONT | REGIONAL

Required: Yes

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

**Errors**

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](#).

**WAFAssociatedItemException**

AWS WAF couldn't perform the operation because your resource is being used by another resource or it's associated with another resource.

For **DeleteWebACL**, you will only get this exception if the web ACL is still associated with a regional resource. Deleting a web ACL that is still associated with an Amazon CloudFront distribution won't get this exception.

HTTP Status Code: 400

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.
HTTP Status Code: 400

**WAFNonexistentItemException**

AWS WAF couldn’t perform the operation because your resource doesn’t exist.

HTTP Status Code: 400

**WAFOptimisticLockException**

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

**WAFTagOperationException**

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

**WAFTagOperationInternalErrorException**

AWS WAF couldn’t perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteWebACL

Service: AWS WAFV2

Deletes the specified WebACL (p. 866).

You can only use this if ManagedByFirewallManager is false in the specified WebACL (p. 866).

Note
Before deleting any web ACL, first disassociate it from all resources.

- To retrieve a list of the resources that are associated with a web ACL, use the following calls:
  - For regional resources, call ListResourcesForWebACL (p. 175).
  - For Amazon CloudFront distributions, use the CloudFront call ListDistributionsByWebACLId. For information, see ListDistributionsByWebACLId.
- To disassociate a resource from a web ACL, use the following calls:
  - For regional resources, call DisassociateWebACL (p. 76).
  - For Amazon CloudFront distributions, provide an empty web ACL ID in the CloudFront call UpdateDistribution. For information, see UpdateDistribution.

Request Syntax

```
{
  "Id": "string",
  "LockToken": "string",
  "Name": "string",
  "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Id (p. 67)

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes

LockToken (p. 67)

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.
Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes

**Name (p. 67)**

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String


Pattern: ^[\w\-]+$

Required: Yes

**Scope (p. 67)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- **CLI** - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- **API and SDKs** - For all calls, use the Region endpoint `us-east-1`.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

### Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

### Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](#).

**WAFAssociatedItemException**

AWS WAF couldn't perform the operation because your resource is being used by another resource or it's associated with another resource.

For `DeleteWebACL`, you will only get this exception if the web ACL is still associated with a regional resource. Deleting a web ACL that is still associated with an Amazon CloudFront distribution won't get this exception.

HTTP Status Code: 400

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.
HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn’t exist.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeManagedRuleGroup
Service: AWS WAFV2

Provides high-level information for a managed rule group, including descriptions of the rules.

Request Syntax

```json
{
   "Name": "string",
   "Scope": "string",
   "VendorName": "string",
   "VersionName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Name (p. 71)

The name of the managed rule group. You use this, along with the vendor name, to identify the rule group.

Type: String


Pattern: ^[\w\-]+$

Required: Yes

Scope (p. 71)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint `us-east-1`.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

VendorName (p. 71)

The name of the managed rule group vendor. You use this, along with the rule group name, to identify the rule group.

Type: String

**Pattern**: .*\S.*

**Required**: Yes

**VersionName (p. 71)**

The version of the rule group. You can only use a version that is not scheduled for expiration. If you don't provide this, AWS WAF uses the vendor's default version.

**Type**: String

**Length Constraints**: Minimum length of 1. Maximum length of 64.

**Pattern**: ^[\w#\.:\-\/]+$

**Required**: No

**Response Syntax**

```json
{
   "AvailableLabels": [
      {
         "Name": "string"
      }
   ],
   "Capacity": number,
   "ConsumedLabels": [
      {
         "Name": "string"
      }
   ],
   "LabelNamespace": "string",
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            }
         }
      }
   ]
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

AvailableLabels (p. 72)

The labels that one or more rules in this rule group add to matching web requests. These labels are defined in the RuleLabels for a Rule (p. 834).

Type: Array of LabelSummary (p. 797) objects

Capacity (p. 72)

The web ACL capacity units (WCUs) required for this rule group. AWS WAF uses web ACL capacity units (WCU) to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect each rule's relative cost. Rule group capacity is fixed at creation, so users can plan their web ACL WCU usage when they use a rule group. The WCU limit for web ACLs is 1,500.

Type: Long

Valid Range: Minimum value of 1.

ConsumedLabels (p. 72)

The labels that one or more rules in this rule group match against in label match statements. These labels are defined in a LabelMatchStatement specification, in the Statement (p. 852) definition of a rule.

Type: Array of LabelSummary (p. 797) objects

LabelNamespace (p. 72)

The label namespace prefix for this rule group. All labels added by rules in this rule group have this prefix.

- The syntax for the label namespace prefix for a managed rule group is the following:

  awswaf:managed:<vendor>::<rule group name>:
• When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:

<label namespace>:<label from rule>

Type: String
Pattern: ^[0-9A-Za-z_\-:\]+$

Rules (p. 72)
Type: Array of RuleSummary (p. 844) objects

SnsTopicArn (p. 72)
The Amazon resource name (ARN) of the Amazon Simple Notification Service SNS topic that's used to record changes to the managed rule group. You can subscribe to the SNS topic to receive notifications when the managed rule group is modified, such as for new versions and for version expiration. For more information, see the Amazon Simple Notification Service Developer Guide.

Type: String
Pattern: .*\S.*

VersionName (p. 72)
The managed rule group's version.
Type: String
Length Constraints: Minimum length of 1. Maximum length of 64.
Pattern: ^\[\w#:.\-/]+$
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFInvalidResourceException

AWS WAF couldn't perform the operation because the resource that you requested isn't valid. Check the resource, and try again.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DisassociateWebACL

Service: AWS WAFV2

Disassociates a web ACL from a regional application resource. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

For Amazon CloudFront, don't use this call. Instead, use your CloudFront distribution configuration. To disassociate a web ACL, provide an empty web ACL ID in the CloudFront call UpdateDistribution. For information, see UpdateDistribution.

Request Syntax

```
{
  "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceArn (p. 76)

The Amazon Resource Name (ARN) of the resource to disassociate from the web ACL.

The ARN must be in one of the following formats:
- For an Amazon API Gateway REST API: `arn:aws:apigateway:region::/restapis/api-id/stages/stage-name`
- For an AWS AppSync GraphQL API: `arn:aws:appsync:region:account-id:apis/GraphQLApiId`

Type: String


Pattern: .\S.*

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.
HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a `DefaultAction` that isn't among the types available at `DefaultAction` (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

**WAFNonexistentItemException**

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GenerateMobileSdkReleaseUrl
Service: AWS WAFV2

Generates a presigned download URL for the specified release of the mobile SDK.

The mobile SDK is not generally available. Customers who have access to the mobile SDK can use it to establish and manage AWS Security Token Service (AWS STS) security tokens for use in HTTP(S) requests from a mobile device to AWS WAF. For more information, see AWS WAF client application integration in the AWS WAF Developer Guide.

Request Syntax

```
{
    "Platform": "string",
    "ReleaseVersion": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Platform (p. 78)**

The device platform.

Type: String

Valid Values: iOS | ANDROID

Required: Yes

**ReleaseVersion (p. 78)**

The release version. For the latest available version, specify LATEST.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: ^[\w#:\./-]+$

Required: Yes

Response Syntax

```
{
    "Url": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
Url (p. 78)

The presigned download URL for the specified SDK release.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetIPSet
Service: AWS WAFV2

Retrieves the specified IPSet (p. 784).

Request Syntax

```json
{
  "Id": "string",
  "Name": "string",
  "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Id (p. 80)**

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**Name (p. 80)**

The name of the IP set. You cannot change the name of an IPSet after you create it.

Type: String


Pattern: `^[\\w\-]+$`

Required: Yes

**Scope (p. 80)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- **CLI** - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- **API and SDKs** - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

Response Syntax

```json
{
   "IPSet": {
      "Addresses": [ "string" ],
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "IPAddressVersion": "string",
      "Name": "string"
   },
   "LockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

**IPSet (p. 81)**

Type: IPSet (p. 784) object

**LockToken (p. 81)**

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetLoggingConfiguration

Service: AWS WAFV2

Returns the LoggingConfiguration (p. 798) for the specified web ACL.

Request Syntax

```json
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 83)**

The Amazon Resource Name (ARN) of the web ACL for which you want to get the LoggingConfiguration (p. 798).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "LoggingFilter": { 
         "DefaultBehavior": "string",
         "Filters": [ 
            { 
               "Behavior": "string",
               "Conditions": [ 
                  { 
                     "ActionCondition": { 
                        "Action": "string"
                     },
                     "LabelNameCondition": { 
                        "LabelName": "string"
                     }
                  }]
            } ],
            "Requirement": "string"
       } 
   }
}
```

"ManagedByFirewallManager": boolean,
"RedactedFields": [ 
{
}
**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**LoggingConfiguration (p. 83)**

The [LoggingConfiguration (p. 798)](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_GetLoggingConfiguration.html) for the specified web ACL.

Type: [LoggingConfiguration (p. 798)](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_GetLoggingConfiguration.html) object

**Errors**

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_GetLoggingConfiguration.html).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
• You specified a parameter name or value that isn't valid.
• Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400
WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
GetManagedRuleSet

Service: AWS WAFV2

Retrieves the specified managed rule set.

**Note**

This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers. Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are ListManagedRuleSets, GetManagedRuleSet, PutManagedRuleSetVersions, and UpdateManagedRuleSetVersionExpiryDate.

**Request Syntax**

```
{
  "Id": "string",
  "Name": "string",
  "Scope": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Id (p. 86)**

A unique identifier for the managed rule set. The ID is returned in the responses to commands like list. You provide it to operations like get and update.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**Name (p. 86)**

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set.

This name is assigned to the corresponding managed rule group, which your customers can access and use.

Type: String


Pattern: `^[\w\-]+$`

Required: Yes

**Scope (p. 86)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.
To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI: Specify the Region when you use the CloudFront scope: 
  --scope=CLOUDFRONT --region=us-east-1.
- API and SDKs: For all calls, use the Region endpoint us-east-1.

Type: String
Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

Response Syntax

```json
{
  "LockToken": "string",
  "ManagedRuleSet": {
    "ARN": "string",
    "Description": "string",
    "Id": "string",
    "LabelNamespace": "string",
    "Name": "string",
    "PublishedVersions": {
      "string": {
        "AssociatedRuleGroupArn": "string",
        "Capacity": number,
        "ExpiryTimestamp": number,
        "ForecastedLifetime": number,
        "LastUpdateTime": number,
        "PublishTimestamp": number
      }
    },
    "RecommendedVersion": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

**LockToken (p. 87)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

**ManagedRuleSet (p. 87)**

The managed rule set that you requested.
Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetMobileSdkRelease

Service: AWS WAFV2

Retrieves information for the specified mobile SDK release, including release notes and tags.

The mobile SDK is not generally available. Customers who have access to the mobile SDK can use it to establish and manage AWS Security Token Service (AWS STS) security tokens for use in HTTP(S) requests from a mobile device to AWS WAF. For more information, see AWS WAF client application integration in the AWS WAF Developer Guide.

Request Syntax

```
{
    "Platform": "string",
    "ReleaseVersion": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Platform (p. 89)**

The device platform.

Type: String

Valid Values: IOS | ANDROID

Required: Yes

**ReleaseVersion (p. 89)**

The release version. For the latest available version, specify LATEST.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: ^[\w#:\.\-/]+$

Required: Yes

Response Syntax

```
{
    "MobileSdkRelease": {
        "ReleaseNotes": "string",
        "ReleaseVersion": "string",
        "Tags": [
            {
                "Key": "string",
                "Value": "string"
            }
        ]
    }
}
```
"Timestamp": number

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**MobileSdkRelease (p. 89)**

Information for a specified SDK release, including release notes and tags.

Type: `MobileSdkRelease (p. 816)` object

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](https://docs.aws.amazon.com/waf/latest/APIReference/Content/CommonErrors.html).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at `DefaultAction (p. 768)`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

**WAFNonexistentItemException**

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
AWS WAFV2 API Reference

GetMobileSdkRelease

- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetPermissionPolicy
Service: AWS WAFV2

Returns the IAM policy that is attached to the specified rule group.
You must be the owner of the rule group to perform this operation.

Request Syntax

```
{
  "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceArn (p. 92)

The Amazon Resource Name (ARN) of the rule group for which you want to get the policy.
Type: String
Pattern: .\S.*
Required: Yes

Response Syntax

```
{
  "Policy": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

Policy (p. 92)

The IAM policy that is attached to the specified rule group.
Type: String
Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRateBasedStatementManagedKeys

Service: AWS WAFV2

Retrieves the keys that are currently blocked by a rate-based rule instance. The maximum number of managed keys that can be blocked for a single rate-based rule instance is 10,000. If more than 10,000 addresses exceed the rate limit, those with the highest rates are blocked.

For a rate-based rule that you've defined inside a rule group, provide the name of the rule group reference statement in your request, in addition to the rate-based rule name and the web ACL name.

AWS WAF monitors web requests and manages keys independently for each unique combination of web ACL, optional rule group, and rate-based rule. For example, if you define a rate-based rule inside a rule group, and then use the rule group in a web ACL, AWS WAF monitors web requests and manages keys for that web ACL, rule group reference statement, and rate-based rule instance. If you use the same rule group in a second web ACL, AWS WAF monitors web requests and manages keys for this second usage completely independent of your first.

Request Syntax

```
{
    "RuleGroupRuleName": "string",
    "RuleName": "string",
    "Scope": "string",
    "WebACLId": "string",
    "WebACLName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**RuleGroupRuleName (p. 94)**

The name of the rule group reference statement in your web ACL. This is required only when you have the rate-based rule nested inside a rule group.

Type: String


Pattern: ^\w-]+$

Required: No

**RuleName (p. 94)**

The name of the rate-based rule to get the keys for. If you have the rule defined inside a rule group that you're using in your web ACL, also provide the name of the rule group reference statement in the request parameter RuleGroupRuleName.

Type: String


Pattern: ^\w-]+$
Required: Yes

**Scope (p. 94)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint `us-east-1`.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

**WebACLId (p. 94)**

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**WebACLName (p. 94)**

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String


Pattern: `^[\w-]+$`

Required: Yes

**Response Syntax**

```json
{
  "ManagedKeysIPV4": {
    "Addresses": [ "string" ],
    "IPAddressVersion": "string"
  },
  "ManagedKeysIPV6": {
    "Addresses": [ "string" ],
    "IPAddressVersion": "string"
  }
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**ManagedKeysIPV4 (p. 95)**

The keys that are of Internet Protocol version 4 (IPv4).

Type: `RateBasedStatementManagedKeysIPSet (p. 825)` object

**ManagedKeysIPV6 (p. 95)**

The keys that are of Internet Protocol version 6 (IPv6).

Type: `RateBasedStatementManagedKeysIPSet (p. 825)` object

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a `DefaultAction` that isn't among the types available at `DefaultAction (p. 768)`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

**WAFNonexistentItemException**

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
GetRegexPatternSet

Service: AWS WAFV2

Retrieves the specified RegexPatternSet (p. 828).

Request Syntax

```json
{
  "Id": "string",
  "Name": "string",
  "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Id (p. 98)**

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**Name (p. 98)**

The name of the set. You cannot change the name after you create the set.

Type: String


Pattern: `^\[\w\-]+$`

Required: Yes

**Scope (p. 98)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint `us-east-1`.

Type: String

Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

Response Syntax

```json
{
   "LockToken": "string",
   "RegexPatternSet": {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "Name": "string",
      "RegularExpressionList": [
         {
            "RegexString": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**LockToken (p. 99)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

**RegexPatternSet (p. 99)**

Type: `RegexPatternSet (p. 828)` object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.
HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRuleGroup

Service: AWS WAFV2

Retrieves the specified RuleGroup (p. 838).

Request Syntax

```json
{
  "ARN": "string",
  "Id": "string",
  "Name": "string",
  "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ARN (p. 101)**

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: .*

Required: No

**Id (p. 101)**

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: ^[0-9a-f]{8}-(?:-[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: No

**Name (p. 101)**

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String


Pattern: ^[\w\-]+$

Required: No

**Scope (p. 101)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.
To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: No

Response Syntax

```json
{
    "LockToken": "string",
    "RuleGroup": {
        "ARN": "string",
        "AvailableLabels": [
            {
                "Name": "string"
            }
        ],
        "Capacity": number,
        "ConsumedLabels": [
            {
                "Name": "string"
            }
        ],
        "CustomResponseBodies": {
            "string": {
                "Content": "string",
                "ContentType": "string"
            }
        },
        "Description": "string",
        "Id": "string",
        "LabelNamespace": "string",
        "Name": "string",
        "Rules": [
            {
                "Action": {
                    "Allow": {
                        "CustomRequestHandling": {
                            "InsertHeaders": [
                                {
                                    "Name": "string",
                                    "Value": "string"
                                }
                            ]
                        }
                    },
                    "Block": {
                        "CustomResponse": {
                            "CustomResponseBodyKey": "string",
                            "ResponseCode": number,
                            "ResponseHeaders": [
                                {
                                    "Name": "string",
                                    "Value": "string"
                                }
                            ]
                        }
                    }
                }
            }
        ]
    }
}
```
"Captcha": {
    "CustomRequestHandling": {
        "InsertHeaders": [
            {
                "Name": "string",
                "Value": "string"
            }
        ]
    }
},
"Count": {
    "CustomRequestHandling": {
        "InsertHeaders": [
            {
                "Name": "string",
                "Value": "string"
            }
        ]
    }
},
"CaptchaConfig": {
    "ImmunityTimeProperty": {
        "ImmunityTime": number
    }
},
"Name": "string",
"OverrideAction": {
    "Count": {
        "CustomRequestHandling": {
            "InsertHeaders": [
                {
                    "Name": "string",
                    "Value": "string"
                }
            ]
        }
    },
    "None": {
    }
},
"Priority": number,
"RuleLabels": [
    {
        "Name": "string"
    }
],
"Statement": {
    "AndStatement": {
        "Statements": [
            "Statement"
        ]
    },
    "ByteMatchStatement": {
        "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
            },
            "JsonBody": {
                "InvalidFallbackBehavior": "string",
                "MatchPattern": {
                    "All": {
                    },
                    "IncludedPaths": [ "string" ]
            }
        }
    }
}
"MatchScope": "string",
"Method": {
"QueryString": {
"SingleHeader": {
"Name": "string"
},
"SingleQueryArgument": {
"Name": "string"
},
"UriPath": {

"PositionalConstraint": "string",
"SearchString": blob,
"TextTransformations": [

"Priority": number,
"Type": "string"
]
},
"GeoMatchStatement": {
"CountryCodes": [ "string" ],
"ForwardedIPConfig": {
"FallbackBehavior": "string",
"HeaderName": "string"
}
},
"IPSetReferenceStatement": {
"ARN": "string",
"IPSetForwardedIPConfig": {
"FallbackBehavior": "string",
"HeaderName": "string",
"Position": "string"
}
},
"LabelMatchStatement": {
"Key": "string",
"Scope": "string"
},
"ManagedRuleGroupStatement": {
"ExcludedRules": [

"Name": "string"
]
},
"ManagedRuleGroupConfig": [

"LoginPath": "string",
"PasswordField": {
"Identifier": "string"
},
"PayloadType": "string",
"UsernameField": {
"Identifier": "string"
}
],
"Name": "string",
"ScopeDownStatement": "Statement",
"VendorName": "string",
"Version": "string"


AWS WAFV2 API Reference
GetRuleGroup

},
  "NotStatement": {
    "Statement": "Statement"
  },
  "OrStatement": {
    "Statements": [
      "Statement"
    ]
  },
  "RateBasedStatement": {
    "AggregateKeyType": "string",
    "ForwardedIPConfig": {
      "FallbackBehavior": "string",
      "HeaderName": "string"
    },
    "Limit": number,
    "ScopeDownStatement": "Statement"
  },
  "RegexMatchStatement": {
    "FieldToMatch": {
      "AllQueryArguments": {
      },
      "Body": {
      },
      "JsonBody": {
        "InvalidFallbackBehavior": "string",
        "MatchPattern": {
          "All": {
            "IncludedPaths": [ "string" ]
          },
          "MatchScope": "string"
        }
      }
    },
    "Method": {
      "queryString": {
      },
      "SingleHeader": {
        "name": "string"
      },
      "SingleQueryArgument": {
        "name": "string"
      },
      "UriPath": {
      }
    },
    "RegexString": "string",
    "TextTransformations": [
      {
        "priority": number,
        "Type": "string"
      }
    ],
    "RegexPatternSetReferenceStatement": {
      "ARN": "string",
      "FieldToMatch": {
        "AllQueryArguments": {
        },
        "Body": {
        },
        "JsonBody": {
          "InvalidFallbackBehavior": "string",
          "MatchPattern": {
            "All": {
            }
          }
        }
      },
      "Method": {
        "queryString": {
        },
        "SingleHeader": {
          "name": "string"
        },
        "SingleQueryArgument": {
          "name": "string"
        },
        "UriPath": {
        }
      },
      "RegexString": "string",
      "TextTransformations": [
        {
          "priority": number,
          "Type": "string"
        }
      ]
    }
  }
}
"IncludedPaths": [ "string" ]
},
"MatchScope": "string"
},
"Method": {
},
"QueryString": {
},
"SingleHeader": {
  "Name": "string"
},
"SingleQueryArgument": {
  "Name": "string"
},
"UriPath": {
},
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"RuleGroupReferenceStatement": {
  "ARN": "string",
  "ExcludedRules": [
    {
      "Name": "string"
    }
  ],
"SizeConstraintStatement": {
  "ComparisonOperator": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "Size": number,
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
"SqlInjectionMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
},
"XssMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
}
"TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ],
  "VisibilityConfig": {
    "CloudWatchMetricsEnabled": boolean,
    "MetricName": "string",
    "SampledRequestsEnabled": boolean
  }
},
  "VisibilityConfig": {
    "CloudWatchMetricsEnabled": boolean,
    "MetricName": "string",
    "SampledRequestsEnabled": boolean
  }
}
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LockToken (p. 102)

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

RuleGroup (p. 102)

Type: RuleGroup (p. 838) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn’t perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.
HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetSampledRequests

Service: AWS WAFV2

Gets detailed information about a specified number of requests--a sample--that AWS WAF randomly selects from among the first 5,000 requests that your AWS resource received during a time range that you choose. You can specify a sample size of up to 500 requests, and you can specify any time range in the previous three hours.

GetSampledRequests returns a time range, which is usually the time range that you specified. However, if your resource (such as a CloudFront distribution) received 5,000 requests before the specified time range elapsed, GetSampledRequests returns an updated time range. This new time range indicates the actual period during which AWS WAF selected the requests in the sample.

Request Syntax

```json
{
    "MaxItems": number,
    "RuleMetricName": "string",
    "Scope": "string",
    "TimeWindow": {
        "EndTime": number,
        "StartTime": number
    },
    "WebAclArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

MaxItems (p. 110)

The number of requests that you want AWS WAF to return from among the first 5,000 requests that your AWS resource received during the time range. If your resource received fewer requests than the value of MaxItems, GetSampledRequests returns information about all of them.

Type: Long


Required: Yes

RuleMetricName (p. 110)

The metric name assigned to the Rule or RuleGroup for which you want a sample of requests.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: ^[\w#:\.\-/]+$

Required: Yes

Scope (p. 110)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.
To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: 
  --scope=CLOUDFRONT --region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

**TimeWindow (p. 110)**

The start date and time and the end date and time of the range for which you want `GetSampledRequests` to return a sample of requests. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours. If you specify a start time that's earlier than three hours ago, AWS WAF sets it to three hours ago.

Type: `TimeWindow (p. 861)` object

Required: Yes

**WebAclArn (p. 110)**

The Amazon resource name (ARN) of the `WebACL` for which you want a sample of requests.

Type: String


Pattern: .\S.*

Required: Yes

**Response Syntax**

```json
{
  "PopulationSize": number,
  "SampledRequests": [
    {
      "Action": "string",
      "CaptchaResponse": {
        "FailureReason": "string",
        "ResponseCode": number,
        "SolveTimestamp": number
      },
      "Labels": [
        {
          "Name": "string"
        }
      ],
      "Request": {
        "ClientIP": "string",
        "Country": "string",
        "Headers": [
          {
            "Name": "string",
            "Value": "string"
          }
        ]
      }
    }
  ]
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**PopulationSize (p. 111)**

The total number of requests from which GetSampledRequests got a sample of MaxItems requests. If PopulationSize is less than MaxItems, the sample includes every request that your AWS resource received during the specified time range.

Type: Long

**SampledRequests (p. 111)**

A complex type that contains detailed information about each of the requests in the sample.

Type: Array of SampledHTTPRequest (p. 845) objects

**TimeWindow (p. 111)**

Usually, TimeWindow is the time range that you specified in the GetSampledRequests request. However, if your AWS resource received more than 5,000 requests during the time range that you specified in the request, GetSampledRequests returns the time range for the first 5,000 requests. Times are in Coordinated Universal Time (UTC) format.

Type: TimeWindow (p. 861) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetWebACL

Service: AWS WAFV2

Retrieves the specified WebACL (p. 866).

Request Syntax

```json
{
  "Id": "string",
  "Name": "string",
  "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Id (p. 114)**

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**Name (p. 114)**

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String


Pattern: `^\[\w\-]+$`

Required: Yes

**Scope (p. 114)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- **CLI** - Specify the Region when you use the CloudFront scope: `--scope=CL OUDFRONT --region=us-east-1`
- **API and SDKs** - For all calls, use the Region endpoint us-east-1.

Type: String
Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Response Syntax

```json
{
    "ApplicationIntegrationURL": "string",
    "LockToken": "string",
    "WebACL": {
        "ARN": "string",
        "Capacity": number,
        "CaptchaConfig": {
            "ImmunityTimeProperty": {
                "ImmunityTime": number
            }
        },
        "CustomResponseBodies": {
            "string": {
                "Content": "string",
                "ContentType": "string"
            }
        },
        "DefaultAction": {
            "Allow": {
                "CustomRequestHandling": {
                    "InsertHeaders": [
                        {
                            "Name": "string",
                            "Value": "string"
                        }
                    ]
                },
                "Block": {
                    "CustomResponse": {
                        "CustomResponseBodyKey": "string",
                        "ResponseCode": number,
                        "ResponseHeaders": [
                            {
                                "Name": "string",
                                "Value": "string"
                            }
                        ]
                    }
                }
            }
        },
        "Description": "string",
        "Id": "string",
        "LabelNamespace": "string",
        "ManagedByFirewallManager": boolean,
        "Name": "string",
        "PostProcessFirewallManagerRuleGroups": [
            {
                "FirewallManagerStatement": {
                    "ManagedRuleGroupStatement": {
                        "ExcludedRules": [
                            {
                                "Name": "string"
                            }
                        ],
                        "ManagedRuleGroupConfigs": [
                            {"string": "string"},
                            {"string": "string"}
                        ]
                    }
                }
            }
        ]
    }
}
```
"LoginPath": "string",
"PasswordField": {
    "Identifier": "string"
},
"PayloadType": "string",
"UsernameField": {
    "Identifier": "string"
}
},
"Name": "string",
"ScopeDownStatement": {
    "AndStatement": {
        "Statements": [
            "Statement"
        ]
    },
    "ByteMatchStatement": {
        "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
            },
            "JsonBody": {
                "InvalidFallbackBehavior": "string",
                "MatchPattern": {
                    "All": {
                    },
                    "IncludedPaths": [
                        "string"
                    ]
                },
                "MatchScope": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
                "Name": "string"
            },
            "SingleQueryArgument": {
                "Name": "string"
            },
            "UriPath": {
            }
        },
        "PositionalConstraint": "string",
        "SearchString": "blob",
        "TextTransformations": [
            {
                "Priority": number,
                "Type": "string"
            }
        ]
    },
    "GeoMatchStatement": {
        "CountryCodes": [
            "string"
        ],
        "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
        }
    },
    "IPSetReferenceStatement": {
        "ARN": "string",
        "IPSetForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
        }
    }
}
"Position": "string"
}
"LabelMatchStatement": {
  "Key": "string",
  "Scope": "string"
},
"ManagedRuleGroupStatement": "ManagedRuleGroupStatement",
"NotStatement": {
  "Statement": "Statement"
},
"OrStatement": {
  "Statements": [
    "Statement"
  ]
},
"RateBasedStatement": {
  "AggregateKeyType": "string",
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  },
  "Limit": number,
  "ScopeDownStatement": "Statement"
},
"RegexMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "RegexString": "string",
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
},
"RegexPatternSetReferenceStatement": {
  "ARN": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    }
  },
  "LabelMatchStatement": {
    "Key": "string",
    "Scope": "string"
  },
  "ManagedRuleGroupStatement": "ManagedRuleGroupStatement",
  "NotStatement": {
    "Statement": "Statement"
  },
  "OrStatement": {
    "Statements": [
      "Statement"
    ]
  },
  "RateBasedStatement": {
    "AggregateKeyType": "string",
    "ForwardedIPConfig": {
      "FallbackBehavior": "string",
      "HeaderName": "string"
    },
    "Limit": number,
    "ScopeDownStatement": "Statement"
  },
  "RegexMatchStatement": {
    "FieldToMatch": {
      "AllQueryArguments": {
      },
      "Body": {
      },
      "JsonBody": {
        "InvalidFallbackBehavior": "string",
        "MatchPattern": {
          "All": {
          },
          "IncludedPaths": [ "string" ]
        },
        "MatchScope": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
        "Name": "string"
      },
      "SingleQueryArgument": {
        "Name": "string"
      },
      "UriPath": {
      }
    },
    "RegexString": "string",
    "TextTransformations": [
      {
        "Priority": number,
        "Type": "string"
      }
    ]
  }
}
"Body": {
},
"JsonBody": {
  "InvalidFallbackBehavior": "string",
  "MatchPattern": {
    "All": {
    },
    "IncludedPaths": [ "string" ]
  },
  "MatchScope": "string"
},
"Method": {
},
"QueryString": {
},
"SingleHeader": {
  "Name": "string"
},
"SingleQueryArgument": {
  "Name": "string"
},
"UriPath": {
},
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"RuleGroupReferenceStatement": {
  "ARN": "string",
  "ExcludedRules": [ {
    "Name": "string"
  } ]
},
"SizeConstraintStatement": {
  "ComparisonOperator": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  }
}
"Size": number,
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"SqlInjectionMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {},
    "Body": {},
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
          "IncludedPaths": [ "string" ]
        },
        "MatchScope": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
        "Name": "string"
      },
      "SingleQueryArgument": {
        "Name": "string"
      },
      "UriPath": {
      }
    },
    "TextTransformations": [
      {
        "Priority": number,
        "Type": "string"
      }
    ]
  }
},
"XssMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {},
    "Body": {},
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
          "IncludedPaths": [ "string" ]
        },
        "MatchScope": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
        "Name": "string"
      }
    }
  },
  "TextTransformations": [
  ]
}
### SingleQueryArgument
- **Name**: string

### UriPath
- **Name**: string

### TextTransformations
- **Priority**: number,
- **Type**: string

### RuleGroupReferenceStatement
- **ARN**: string,
- **ExcludedRules**: [Name: string]

### OverrideAction
- **Count**: {CustomRequestHandling: {InsertHeaders: [Name: string, Value: string]}}
- **None**: { }
- **Priority**: number,
- **VisibilityConfig**: {CloudWatchMetricsEnabled: boolean, MetricName: string, SampledRequestsEnabled: boolean}

### PreProcessFirewallManagerRuleGroups
- **FirewallManagerStatement**: {ManagedRuleGroupStatement: {ExcludedRules: [Name: string]}}
- **ManagedRuleGroupConfigs**: [LoginPath: string, PasswordField: {Identifier: string}, PayloadType: string]
GetWebACL

"UsernameField": {
  "Identifier": "string"
}

"Name": "string",
"ScopeDownStatement": {
  "AndStatement": {
    "Statements": [
    "Statement"
  ]
},
"ByteMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    }
  },
  "SingleQueryArgument": {
    "Name": "string"
  },
  "UriPath": {
  }
},
"PositionalConstraint": "string",
"SearchString": blob,
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"GeoMatchStatement": {
  "CountryCodes": [ "string" ],
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  }
},
"IPSetReferenceStatement": {
  "ARN": "string",
  "IPSetForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string",
    "Position": "string"
  }
},
"LabelMatchStatement": {
  "Key": "string"}
"Scope": "string",
"ManagedRuleGroupStatement": "ManagedRuleGroupStatement",
"NotStatement": {
  "Statement": "Statement"
},
"OrStatement": {
  "Statements": [
    "Statement"
  ]
},
"RateBasedStatement": {
  "AggregateKeyType": "string",
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  },
  "Limit": number,
  "ScopeDownStatement": "Statement"
},
"RegexMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string"
        ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "RegexString": "string",
  "TextTransformations": [
  ]
},
"RegexPatternSetReferenceStatement": {
  "ARN": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
"string"}
    }
  }
}
"All": { },
"IncludedPaths": [ "string" ],
"MatchScope": "string",
"Method": { },
"QueryString": { },
"SingleHeader": { 
  "Name": "string"
},
"SingleQueryArgument": { 
  "Name": "string"
},
"UriPath": { },
"TextTransformations": [ 
  { 
    "Priority": number,
    "Type": "string"
  }
],
"RuleGroupReferenceStatement": { 
  "ARN": "string",
  "ExcludedRules": [ 
    { 
      "Name": "string"
    }
  ]
},
"SizeConstraintStatement": { 
  "ComparisonOperator": "string",
  "FieldToMatch": { 
    "AllQueryArguments": { },
    "Body": { },
    "JsonBody": { 
      "InvalidFallbackBehavior": "string",
      "MatchPattern": { 
        "All": { },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": { },
    "QueryString": { }
  },
  "SingleHeader": { 
    "Name": "string"
  },
  "SingleQueryArgument": { 
    "Name": "string"
  },
  "UriPath": { }
},
"Size": number,
"TextTransformations": [ ]
"Priority": number,
"Type": "string"
}
"SqlInjectionMatchStatement": {
"FieldToMatch": {
"AllQueryArguments": {
},
"Body": {
},
"JsonBody": {
"InvalidFallbackBehavior": "string",
"MatchPattern": {
"All": {
},
"IncludedPaths": [ "string" ]
},
"MatchScope": "string"
},
"Method": {
},
"QueryString": {
},
"SingleHeader": {
"Name": "string"
},
"SingleQueryArgument": {
"Name": "string"
},
"UriPath": {
},
"TextTransformations": [
{
"Priority": number,
"Type": "string"
}
],
"XssMatchStatement": {
"FieldToMatch": {
"AllQueryArguments": {
},
"Body": {
},
"JsonBody": {
"InvalidFallbackBehavior": "string",
"MatchPattern": {
"All": {
},
"IncludedPaths": [ "string" ]
},
"MatchScope": "string"
},
"Method": {
},
"QueryString": {
},
"SingleHeader": {
"Name": "string"
},
"SingleQueryArgument": {
"Name": "string"
},
"UriPath": {
}


```json

GetWebACL

"Name": "string",
"OverrideAction": {
  "Count": {
    "CustomRequestHandling": {
      "InsertHeaders": [
        {
          "Name": "string",
          "Value": "string"
        }
      ]
    },
    "None": {
    }
  },
  "Priority": number,
  "VisibilityConfig": {
    "CloudWatchMetricsEnabled": boolean,
    "MetricName": "string",
    "SampledRequestsEnabled": boolean
  }
},

"Rules": [
  {
    "Action": {
      "Allow": {
        "CustomRequestHandling": {
          "InsertHeaders": [
            {
              "Name": "string",
              "Value": "string"
            }
          ]
        },
        "Block": {
          "CustomResponseBodyKey": "string",
          "ResponseCode": number,
          "ResponseHeaders": [
            {
              "Name": "string",
              "Value": "string"
            }
          ]
        }
      }
    }
  }
]
```

125
"Name": "string",
"OverrideAction": {
  "Count": {
    "CustomRequestHandling": {
      "InsertHeaders": [
        {
          "Name": "string",
          "Value": "string"
        }
      ]
    }
  },
  "None": {}
},
"Priority": number,
"RuleLabels": [
  {
    "Name": "string"
  }
],
"Statement": {
  "AndStatement": {
    "Statements": [
      "Statement"
    ]
  },
  "ByteMatchStatement": {
    "FieldToMatch": {
      "AllQueryArguments": {},
      "Body": {},
      "JsonBody": {
        "InvalidFallbackBehavior": "string",
        "MatchPattern": {

"All": {
},
"IncludedPaths": [ "string" ]
},
"MatchScope": "string"
},
"Method": {
},
"QueryString": {
},
"SingleHeader": {
  "Name": "string"
},
"SingleQueryArgument": {
  "Name": "string"
},
"UriPath": {
},
"PositionalConstraint": "string",
"SearchString": blob,
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"GeoMatchStatement": {
  "CountryCodes": [ "string" ],
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  }
},
"IPSetReferenceStatement": {
  "ARN": "string",
  "IPSetForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  }
},
"LabelMatchStatement": {
  "Key": "string",
  "Scope": "string"
},
"ManagedRuleGroupStatement": {
  "ExcludedRules": [
    {
      "Name": "string"
    }
  ],
  "ManagedRuleGroupConfigs": [
    {
      "LoginPath": "string",
      "PasswordField": {
        "Identifier": "string"
      },
      "PayloadType": "string",
      "UsernameField": {
        "Identifier": "string"
      }
    }
  ],
  "Name": "string"}
"ScopeDownStatement": "Statement",
"VendorName": "string",
"Version": "string"
},
"NotStatement": {
  "Statement": "Statement"
},
"OrStatement": {
  "Statements": [
    "Statement"
  ]
},
"RateBasedStatement": {
  "AggregateKeyType": "string",
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  },
  "Limit": number,
  "ScopeDownStatement": "Statement"
},
"RegexMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "RegexString": "string",
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
},
"RegexPatternSetReferenceStatement": {
  "ARN": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  }
}
"MatchPattern": {
  "All": {
  }
  "IncludedPaths": [ "string" ]
},
  "MatchScope": "string"
},
  "Method": {
  },
  "QueryString": {
  },
  "SingleHeader": {
    "Name": "string"
  },
  "SingleQueryArgument": {
    "Name": "string"
  },
  "UriPath": {
  }
},
  "TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
  ],
  "RuleGroupReferenceStatement": {
    "ARN": "string",
    "ExcludedRules": [
    {
      "Name": "string"
    }
  ],
  "SizeConstraintStatement": {
    "ComparisonOperator": "string",
    "FieldToMatch": {
      "AllQueryArguments": {
      },
      "Body": {
      },
      "JsonBody": {
        "InvalidFallbackBehavior": "string",
        "MatchPattern": {
          "All": {
          },
          "IncludedPaths": [ "string" ]
        },
        "MatchScope": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
        "Name": "string"
      },
      "SingleQueryArgument": {
        "Name": "string"
      },
      "UriPath": {
      }
    },
    "Size": number,
    "TextTransformations": [}
GetWebACL

```json
{
    "Priority": number,
    "Type": "string"
}
```

"SqlInjectionMatchStatement": {
    "FieldToMatch": {
        "AllQueryArguments": {
        },
        "Body": {
        },
        "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
                "All": {
                },
                "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string"
        },
        "Method": {
        },
        "QueryString": {
        },
        "SingleHeader": {
            "Name": "string"
        },
        "SingleQueryArgument": {
            "Name": "string"
        },
        "UriPath": {
        }
    },
    "TextTransformations": [
        {
            "Priority": number,
            "Type": "string"
        }
    ]
},
"XssMatchStatement": {
    "FieldToMatch": {
        "AllQueryArguments": {
        },
        "Body": {
        },
        "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
                "All": {
                },
                "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string"
        },
        "Method": {
        },
        "QueryString": {
        },
        "SingleHeader": {
            "Name": "string"
        },
        "SingleQueryArgument": {
            "Name": "string"
        },
        "UriPath": {
        }
    }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ApplicationIntegrationURL (p. 115)**

The URL to use in SDK integrations with AWS managed rule groups. For example, you can use the integration SDKs with the account takeover prevention managed rule group AWSManagedRulesATPRuleSet. This is only populated if you are using a rule group in your web ACL that integrates with your applications in this way. For more information, see AWS WAF client application integration in the AWS WAF Developer Guide.

Type: String

**LockToken (p. 115)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

**WebACL (p. 115)**

The web ACL specification. You can modify the settings in this web ACL and use it to update this web ACL or create a new one.

Type: WebACL (p. 866) object
Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetWebACLForResource

Service: AWS WAFV2

Retrieves the WebACL (p. 866) for the specified resource.

Request Syntax

```json
{
    "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 133)**

The ARN (Amazon Resource Name) of the resource.

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
    "WebACL": {
        "ARN": "string",
        "Capacity": number,
        "CaptchaConfig": {
            "ImmunityTimeProperty": {
                "ImmunityTime": number
            }
        },
        "CustomResponseBodies": {
            "string": {
                "Content": "string",
                "ContentType": "string"
            }
        },
        "DefaultAction": {
            "Allow": {
                "CustomRequestHandling": {
                    "InsertHeaders": [
                        {
                            "Name": "string",
                            "Value": "string"
                        }
                    ]
                }
            }
        },
        "Block": {
```
"CustomResponse": {  
  "CustomResponseBodyKey": "string",  
  "ResponseCode": number,  
  "ResponseHeaders": [  
    {  
      "Name": "string",  
      "Value": "string"  
    }  
  ]  
},  

"Description": "string",  
"Id": "string",  
"LabelNamespace": "string",  
"ManagedByFirewallManager": boolean,  
"Name": "string",  
"PostProcessFirewallManagerRuleGroups": [  
  {  
    "FirewallManagerStatement": {  
      "ManagedRuleGroupStatement": {  
        "ExcludedRules": [  
          {  
            "Name": "string"  
          }  
        ],  
        "ManagedRuleGroupConfigs": [  
          {  
            "LoginPath": "string",  
            "PasswordField": {  
              "Identifier": "string"  
            },  
            "PayloadType": "string",  
            "UsernameField": {  
              "Identifier": "string"  
            }  
          }  
        ],  
        "Name": "string",  
        "ScopeDownStatement": {  
          "AndStatement": {  
            "Statements": [  
              "Statement"  
            ]  
          },  
          "ByteMatchStatement": {  
            "FieldToMatch": {  
              "AllQueryArguments": {  
                
              },  
              "Body": {  
                
              },  
              "JsonBody": {  
                "InvalidFallbackBehavior": "string",  
                "MatchPattern": {  
                  "All": {  
                    
                  },  
                  "IncludedPaths": [  "string"  
                ],  
                "MatchScope": "string"  
              },  
              "Method": {  
                
              },  
              "QueryString": {  
                
              },  
              "SingleHeader": {  
                "Name": "string"  
              }  
            }  
          }  
        }  
      }  
    }  
  ]}
GetWebACLForResource

```
},
  "SingleQueryArgument": {
    "Name": "string"
  },
  "UriPath": {
  }
},
  "PositionalConstraint": "string",
  "SearchString": "blob",
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ],
  "GeoMatchStatement": {
    "CountryCodes": [ "string" ],
    "ForwardedIPConfig": {
      "FallbackBehavior": "string",
      "HeaderName": "string"
    }
  },
  "IPSetReferenceStatement": {
    "ARN": "string",
    "IPSetForwardedIPConfig": {
      "FallbackBehavior": "string",
      "HeaderName": "string",
      "Position": "string"
    }
  },
  "LabelMatchStatement": {
    "Key": "string",
    "Scope": "string"
  },
  "ManagedRuleGroupStatement": "ManagedRuleGroupStatement",
  "NotStatement": {
    "Statement": "Statement"
  },
  "OrStatement": {
    "Statements": [
      "Statement"
    ]
  },
  "RateBasedStatement": {
    "AggregateKeyType": "string",
    "ForwardedIPConfig": {
      "FallbackBehavior": "string",
      "HeaderName": "string"
    },
    "Limit": number,
    "ScopeDownStatement": "Statement"
  },
  "RegexMatchStatement": {
    "FieldToMatch": {
      "AllQueryArguments": {
      },
      "Body": {
      },
      "JsonBody": {
        "InvalidFallbackBehavior": "string",
        "MatchPattern": {
          "All": {
          },
          "IncludedPaths": [ "string" ]
        }
      }
    }
  }
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"MatchScope": "string",
"Method": {
"QueryString": {
"SingleHeader": {
"Name": "string"
},
"SingleQueryArgument": {
"Name": "string"
},
"UriPath": {
},
"RegexString": "string",
"TextTransformations": [
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"Priority": number,
"Type": "string"
}
]
},
"RegexPatternSetReferenceStatement": {
"ARN": "string",
"FieldToMatch": {
"AllQueryArguments": {
},
"Body": {
},
"JsonBody": {
"InvalidFallbackBehavior": "string",
"MatchPattern": {
"All": {
},
"IncludedPaths": [ "string" ]
},
"MatchScope": "string"
},
"Method": {
"QueryString": {
"SingleHeader": {
"Name": "string"
},
"SingleQueryArgument": {
"Name": "string"
},
"UriPath": {
},
"TextTransformations": [
{
"Priority": number,
"Type": "string"
}
]
},
"RuleGroupReferenceStatement": {
"ARN": "string",
"ExcludedRules": [
{
"Name": "string"
}
]}}}
"SizeConstraintStatement": {
  "ComparisonOperator": "string",
  "FieldToMatch": {
    "AllQueryArguments": {},
    "Body": {},
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {},
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {},
    "QueryString": {},
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {}
  },
  "Size": number,
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
},
"SqliMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {},
    "Body": {},
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {}
      },
      "IncludedPaths": [ "string" ]
    },
    "MatchScope": "string"
  },
  "Method": {},
  "QueryString": {},
  "SingleHeader": {
    "Name": "string"
  },
  "SingleQueryArgument": {
    "Name": "string"
  },
  "UriPath": {}
},
"Size": number,
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"XssMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
},
"VendorName": "string",
"Version": "string"
},
"RuleGroupReferenceStatement": {
  "ARN": "string",
  "ExcludedRules": [ {
    "Name": "string"
  ]
},
"Name": "string",
"OverrideAction": {
  "Count": {
    "CustomRequestHandling": {
      "InsertHeaders": [
        {
          "Name": "string",
          "Value": "string"
        }
      ]
    }
  }
}
"PreProcessFirewallManagerRuleGroups": [
  {
    "FirewallManagerStatement": {
      "ManagedRuleGroupStatement": {
        "ExcludedRules": [
          {
            "Name": "string"
          }
        ],
        "ManagedRuleGroupConfigs": [
          {
            "LoginPath": "string",
            "PasswordField": {
              "Identifier": "string"
            },
            "PayloadType": "string",
            "UsernameField": {
              "Identifier": "string"
            }
          }
        ],
        "Name": "string",
        "ScopeDownStatement": {
          "AndStatement": {
            "Statements": []
          }
        }
      }
    }
  },
  "ByteMatchStatement": {
    "FieldToMatch": {
      "AllQueryArguments": {
      },
      "Body": {
      },
      "JsonBody": {
        "InvalidFallbackBehavior": "string",
        "MatchPattern": {
          "All": {
          },
          "IncludedPaths": [ "string" ]
        },
        "MatchScope": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
        "Name": "string"
      },
      "SingleQueryArgument": {
        "Name": "string"
      },
      "UriPath": {
      },
      "Query": {
      }}}}
"PositionalConstraint": "string",
"SearchString": "blob",
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"GeoMatchStatement": {
  "CountryCodes": [ "string" ],
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  }
},
"IPSetReferenceStatement": {
  "ARN": "string",
  "IPSetForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string",
    "Position": "string"
  }
},
"LabelMatchStatement": {
  "Key": "string",
  "Scope": "string"
},
"ManagedRuleGroupStatement": "ManagedRuleGroupStatement",
"NotStatement": {
  "Statement": "Statement"
},
"OrStatement": {
  "Statements": [ "Statement" ]
},
"RateBasedStatement": {
  "AggregateKeyType": "string",
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  },
  "Limit": number,
  "ScopeDownStatement": "Statement"
},
"RegexMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": { },
    "Body": { },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": { },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": { },
    "QueryString": { }
"SingleHeader": {  
  "Name": "string"
},
"SingleQueryArgument": {  
  "Name": "string"
},
"UriPath": { }
},
"RegexString": "string",
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"RegexPatternSetReferenceStatement": {  
  "ARN": "string",
  "FieldToMatch": {  
    "AllQueryArguments": { }  
  },  
  "Body": { },  
  "JsonBody": {  
    "InvalidFallbackBehavior": "string",
    "MatchPattern": {  
      "All": { },
      "IncludedPaths": [ "string" ]
    },
    "MatchScope": "string"
  },  
  "Method": { },  
  "QueryString": { },  
  "SingleHeader": {  
    "Name": "string"
  },  
  "SingleQueryArgument": {  
    "Name": "string"
  },  
  "UriPath": { }
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"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"RuleGroupReferenceStatement": {  
  "ARN": "string",
  "ExcludedRules": [  
    {  
      "Name": "string"
    }
  ]
},
"SizeConstraintStatement": {  
  "ComparisonOperator": "string",
  "FieldToMatch": {  
    "AllQueryArguments": {  
      "Operator": "string",
      "Size": number
    }
  }
}
"XssMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
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"VendorName": "string",
"Version": "string"
},
"RuleGroupReferenceStatement": {
  "ARN": "string",
  "ExcludedRules": [ {
    "Name": "string"
  } ]
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"Name": "string",
"OverrideAction": {
  "Count": {
    "CustomRequestHandling": {
      "InsertHeaders": [ {
        "Name": "string",
        "Value": "string"
      } ]
    },
    "None": {
    }
  },
  "Priority": number,
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"VisibilityConfig": {
  "CloudWatchMetricsEnabled": boolean,
  "MetricName": "string",
  "SampledRequestsEnabled": boolean
}
],
"Rules": [
{
  "Action": {
    "Allow": {
      "CustomRequestHandling": {
        "InsertHeaders": [
          {
            "Name": "string",
            "Value": "string"
          }
        ]
      }
    },
    "Block": {
      "CustomResponse": {
        "CustomResponseBodyKey": "string",
        "ResponseCode": number,
        "ResponseHeaders": [
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            "Name": "string",
            "Value": "string"
          }
        ]
      }
    },
    "Captcha": {
      "CustomRequestHandling": {
        "InsertHeaders": [
          {
            "Name": "string",
            "Value": "string"
          }
        ]
      }
    },
    "Count": {
      "CustomRequestHandling": {
        "InsertHeaders": [
          {
            "Name": "string",
            "Value": "string"
          }
        ]
      }
    }
  },
  "CaptchaConfig": {
    "ImmunityTimeProperty": {
      "ImmunityTime": number
    }
  }
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"Name": "string",
"OverrideAction": {
  "Count": {
    "CustomRequestHandling": {
      "InsertHeaders": [
        {
          "Name": "string",
          "Value": "string"
        }
      ]
    }
  }
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"RuleLabels": [
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      "Name": "string"
   }
],
"Statement": {
   "AndStatement": {
      "Statements": [
         "Statement"
      ]
   },
   "ByteMatchStatement": {
      "FieldToMatch": {
         "AllQueryArguments": { },
         "Body": { },
         "JsonBody": {
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            "MatchPattern": {
               "All": {
                "IncludedPaths": [ "string" ]
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            },
            "Method": { },
            "QueryString": { },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriPath": { }
         },
         "PositionalConstraint": "string",
         "SearchString": "blob",
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "GeoMatchStatement": {
         "CountryCodes": [ "string" ],
         "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
         }
      },
      "IPSetReferenceStatement": {
         "ARN": "string",
         "IPSetForwardedIPConfig": {"priority": number,
         "Type": "string"
      }"}}
   ]
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"None": { }
"FallbackBehavior": "string",
"HeaderName": "string",
"Position": "string"
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"Name": "string"
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"PasswordField": {
"Identifier": "string"
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"PayloadType": "string",
"UsernameField": {
"Identifier": "string"
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"VendorName": "string",
"Version": "string"
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,"OrStatement": {
"Statements": [
"Statement"
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"ForwardedIPConfig": {
"FallbackBehavior": "string",
"HeaderName": "string"
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"SingleQueryArgument": {
"Name": "string"
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"UriPath": {

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"SingleQueryArgument": {
"Name": "string"
},
"UriPath": {

},
"TextTransformations": [
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"Priority": number,
"Type": "string"
}
]
},
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"ARN": "string",
"ExcludedRules": [
{
"Name": "string"
}
]
},
"SizeConstraintStatement": {
"ComparisonOperator": "string",
"FieldToMatch": {

}}}
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,"MatchPattern": { "All": { }
,"IncludedPaths": [ "string" ]
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,"MatchScope": "string"
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,"SingleQueryArgument": { "Name": "string"
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,"UriPath": { }
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,"Size": number,
,"TextTransformations": [ { "Priority": number,
,"Type": "string"
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,"Body": { }
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,"MatchPattern": { "All": { }
,"IncludedPaths": [ "string" ]
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,"Method": { }
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,"SingleHeader": { "Name": "string"
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,"SingleQueryArgument": { "Name": "string"
 },
,"UriPath": { }
 },
,"TextTransformations": [ { "Priority": number,
,"Type": "string"} ]
AWS WAFV2 API Reference
GetWebACLForResource

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

WebACL (p. 133)

The web ACL that is associated with the resource. If there is no associated resource, AWS WAF returns a null web ACL.
Type: WebACL (p. 866) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn't retrieve the resource that you requested. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListAvailableManagedRuleGroups

Service: AWS WAFV2

Retrieves an array of managed rule groups that are available for you to use. This list includes all AWS Managed Rules rule groups and all of the AWS Marketplace managed rule groups that you’re subscribed to.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string",
    "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 152)**

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

**NextMarker (p. 152)**

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .*\S.*

Required: No

**Scope (p. 152)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: 
  ```
  --scope=CLUFRONT  --region=us-east-1.
  ```

- API and SDKs - For all calls, use the Region endpoint us-east-1.
Type: String
Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

Response Syntax

```
{
    "ManagedRuleGroups": [
        {
            "Description": "string",
            "Name": "string",
            "VendorName": "string",
            "VersioningSupported": boolean
        }
    ],
    "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**ManagedRuleGroups (p. 153)**

Type: Array of `ManagedRuleGroupSummary (p. 805)` objects

**NextMarker (p. 153)**

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see `Common Errors (p. 1051)`.

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListAvailableManagedRuleGroupVersions

Service: AWS WAFV2

Returns a list of the available versions for the specified managed rule group.

Request Syntax

```json
{
   "Limit": number,
   "Name": "string",
   "NextMarker": "string",
   "Scope": "string",
   "VendorName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 155)

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a NextMarker value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

Name (p. 155)

The name of the managed rule group. You use this, along with the vendor name, to identify the rule group.

Type: String


Pattern: ^[\w\-]+$

Required: Yes

NextMarker (p. 155)

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\S.*

Required: No
Scope (p. 155)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: 
  ```shell
  --scope=CL O UDFRON T
  --region=us-east-1
  ```
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

VendorName (p. 155)

The name of the managed rule group vendor. You use this, along with the rule group name, to identify the rule group.

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
  "CurrentDefaultVersion": "string",
  "NextMarker": "string",
  "Versions": [
    {
      "LastUpdateTimeStamp": number,
      "Name": "string"
    }
  ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

CurrentDefaultVersion (p. 156)

The name of the version that's currently set as the default.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: ^[\w#:\.\-/]+$
NextMarker (p. 156)

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String
Length Constraints: Minimum length of 1. Maximum length of 256.
Pattern: .*\S.*

Versions (p. 156)

The versions that are currently available for the specified managed rule group.

Type: Array of ManagedRuleGroupVersion (p. 807) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
- AWS Command Line Interface
- AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListIPSets
Service: AWS WAFV2

Retrieves an array of IPSetSummary objects for the IP sets that you manage.

Request Syntax

```
{
  "Limit": number,
  "NextMarker": "string",
  "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 159)**

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a NextMarker value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

**NextMarker (p. 159)**

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .*

Required: No

**Scope (p. 159)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String
Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Response Syntax

```
{
  "IPSets": [
    {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "LockToken": "string",
      "Name": "string"
    }
  ],
  "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

IPSets (p. 160)

Array of IPSets. This may not be the full list of IPSets that you have defined. See the Limit specification for this request.

Type: Array of IPSetSummary (p. 789) objects

NextMarker (p. 160)

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListLoggingConfigurations

Service: AWS WAFV2

Retrieves an array of your LoggingConfiguration objects.

Request Syntax

```
{
  "Limit": number,
  "NextMarker": "string",
  "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

**Limit**

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

**NextMarker**

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\S.*

Required: No

**Scope**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- **CLI** - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- **API and SDKs** - For all calls, use the Region endpoint `us-east-1`. 
Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Response Syntax

```json
{
   "LoggingConfigurations": [
      {
         "LogDestinationConfigs": [ "string" ],
         "LoggingFilter": {
            "DefaultBehavior": "string",
            "Filters": [
               {
                  "Behavior": "string",
                  "Conditions": [
                     {
                        "ActionCondition": {
                           "Action": "string"
                        },
                        "LabelNameCondition": {
                           "LabelName": "string"
                        }
                     }
                  }
               },
               "Requirement": "string"
            }
         },
         "ManagedByFirewallManager": boolean,
         "RedactedFields": [
            {
               "AllQueryArguments": {
               },
               "Body": {
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
                     "All": {
                    },
                     "IncludedPaths": [ "string" ]
                  },
                  "MatchScope": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriPath": {
               }
            }
         }
      }
   }
}
```
AWS WAFV2 API Reference
ListLoggingConfigurations

Response Elements
If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

LoggingConfigurations (p. 163)
Type: Array of LoggingConfiguration (p. 798) objects

NextMarker (p. 163)
When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.
Type: String
Length Constraints: Minimum length of 1. Maximum length of 256.
Pattern: .*\S.*

Errors
For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException
Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.
HTTP Status Code: 500

WAFInvalidOperationException
The operation isn't valid.
HTTP Status Code: 400

WAFInvalidParameterException
The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.
HTTP Status Code: 400

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:
- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListManagedRuleSets

Service: AWS WAFV2

Retrieves the managed rule sets that you own.

**Note**
This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are ListManagedRuleSets, GetManagedRuleSet, PutManagedRuleSetVersions, and UpdateManagedRuleSetVersionExpiryDate.

**Request Syntax**

```
{
  "Limit": number,
  "NextMarker": "string",
  "Scope": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 166)**

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a NextMarker value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

**NextMarker (p. 166)**

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\S.*

Required: No

**Scope (p. 166)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.
API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String
Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

Response Syntax

```
{
  "ManagedRuleSets": [
    {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "LabelNamespace": "string",
      "LockToken": "string",
      "Name": "string"
    }
  ],
  "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**ManagedRuleSets (p. 167)**

Your managed rule sets.

Type: Array of ManagedRuleSetSummary (p. 811) objects

**NextMarker (p. 167)**

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.
HTTP Status Code: 500
WAFInvalidOperationException
The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException
The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:
- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListMobileSdkReleases
Service: AWS WAFV2

Retrieves a list of the available releases for the mobile SDK and the specified device platform.

The mobile SDK is not generally available. Customers who have access to the mobile SDK can use it to establish and manage AWS Security Token Service (AWS STS) security tokens for use in HTTP(S) requests from a mobile device to AWS WAF. For more information, see AWS WAF client application integration in the AWS WAF Developer Guide.

Request Syntax

```
{
    "Limit": number,
    "NextMarker": "string",
    "Platform": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 169)

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a NextMarker value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker (p. 169)

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .*

Required: No

Platform (p. 169)

The device platform to retrieve the list for.

Type: String

Valid Values: IOS | ANDROID

Required: Yes
Response Syntax

```json
{
  "NextMarker": "string",
  "ReleaseSummaries": [
    {
      "ReleaseVersion": "string",
      "Timestamp": number
    }
  ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 170)**

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .*\S.*

**ReleaseSummaries (p. 170)**

High level information for the available SDK releases.

Type: Array of [ReleaseSummary (p. 833)] objects

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](https://docs.aws.amazon.com/waf/latest/APIReference/what-xref.html#Waf-Errors).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a `DefaultAction` that isn't among the types available at [DefaultAction (p. 768)](https://docs.aws.amazon.com/waf/latest/APIReference/AmazonWebApplicationFirewall.html#AmazonWebApplicationFirewall-DefaultAction).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListRegexPatternSets
Service: AWS WAFV2

Retrieves an array of RegexPatternSetSummary (p. 831) objects for the regex pattern sets that you manage.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string",
    "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 172)**

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

**NextMarker (p. 172)**

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: . *

Required: No

**Scope (p. 172)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String
Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

Response Syntax

```json
{
  "NextMarker": "string",
  "RegexPatternSets": [
    {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "LockToken": "string",
      "Name": "string"
    }
  ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 173)**

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

- Type: String
- Pattern: .*\S.*

**RegexPatternSets (p. 173)**

- Type: Array of `RegexPatternSetSummary (p. 831)` objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListResourcesForWebACL

Service: AWS WAFV2

Retrieves an array of the Amazon Resource Names (ARNs) for the regional resources that are associated with the specified web ACL. If you want the list of Amazon CloudFront resources, use the CloudFront call ListDistributionsByWebACLId.

Request Syntax

```
{
    "ResourceType": "string",
    "WebACLArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

 ResourceType (p. 175)

Used for web ACLs that are scoped for regional applications. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

Type: String

Valid Values: APPLICATION_LOAD_BALANCER | API_GATEWAY | APPSYNC

Required: No

 WebACLArn (p. 175)

The Amazon Resource Name (ARN) of the web ACL.

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```
{
    "ResourceArns": [ "string" ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
**ResourceArns (p. 175)**

The array of Amazon Resource Names (ARNs) of the associated resources.

Type: Array of strings


Pattern: .*\S.*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

**WAFNonexistentItemException**

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
• AWS SDK for Ruby V3
ListRuleGroups
Service: AWS WAFV2

Retrieves an array of RuleGroupSummary objects for the rule groups that you manage.

Request Syntax

```json
{
  "Limit": number,
  "NextMarker": "string",
  "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

**Limit (p. 178)**

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a NextMarker value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

**NextMarker (p. 178)**

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\S.*

Required: No

**Scope (p. 178)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

Response Syntax

```json
{
   "NextMarker": "string",
   "RuleGroups": [
      {
         "ARN": "string",
         "Description": "string",
         "Id": "string",
         "LockToken": "string",
         "Name": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 179)**

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\S.*

**RuleGroups (p. 179)**

Type: Array of `RuleGroupSummary (p. 842)` objects

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](aws-wafv2-api-reference#common-errors).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
• You specified a parameter name or value that isn't valid.
• Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListTagsForResource
Service: AWS WAFV2

Retrieves the TagInfoForResource (p. 857) for the specified resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

You can tag the AWS resources that you manage through AWS WAF: web ACLs, rule groups, IP sets, and regex pattern sets. You can't manage or view tags through the AWS WAF console.

Request Syntax

```json
{
  "Limit": number,
  "NextMarker": "string",
  "ResourceARN": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 181)**

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

**NextMarker (p. 181)**

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .

Required: No

**ResourceARN (p. 181)**

The Amazon Resource Name (ARN) of the resource.

Type: String

Pattern: .*\S.*
Required: Yes

Response Syntax

```json
{
    "NextMarker": "string",
    "TagInfoForResource": {
        "ResourceARN": "string",
        "TagList": [
            {
                "Key": "string",
                "Value": "string"
            }
        ]
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 182)

When you request a list of objects with a Limit setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a NextMarker value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .*\S.*

TagInfoForResource (p. 182)

The collection of tagging definitions for the resource.

Type: TagInfoForResource (p. 857) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListWebACLs
Service: AWS WAFV2

Retrieves an array of WebACLSummary (p. 870) objects for the web ACLs that you manage.

Request Syntax

```json
{
   "Limit": number,
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 184)

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker (p. 184)

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\*\S.*

Required: No

Scope (p. 184)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

Response Syntax

```
{
    "NextMarker": "string",
    "WebACLs": [
        {
            "ARN": "string",
            "Description": "string",
            "Id": "string",
            "LockToken": "string",
            "Name": "string"
        }
    ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 185)**

When you request a list of objects with a *Limit* setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a *NextMarker* value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .*\S.*

**WebACLs (p. 185)**

Type: Array of *WebACLSummary (p. 870) objects*

Errors

For information about the errors that are common to all actions, see *Common Errors (p. 1051).*

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
• You specified a parameter name or value that isn't valid.
• Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
PutLoggingConfiguration

Service: AWS WAFV2

Enables the specified LoggingConfiguration (p. 798), to start logging from a web ACL, according to the configuration provided.

**Note**
You can define one logging destination per web ACL.

You can access information about the traffic that AWS WAF inspects using the following steps:

1. Create your logging destination. You can use an Amazon CloudWatch Logs log group, an Amazon Simple Storage Service (Amazon S3) bucket, or an Amazon Kinesis Data Firehose. For information about configuring logging destinations and the permissions that are required for each, see Logging web ACL traffic information in the *AWS WAF Developer Guide*.
2. Associate your logging destination to your web ACL using a PutLoggingConfiguration request.

When you successfully enable logging using a PutLoggingConfiguration request, AWS WAF creates an additional role or policy that is required to write logs to the logging destination. For an Amazon CloudWatch Logs log group, AWS WAF creates a resource policy on the log group. For an Amazon S3 bucket, AWS WAF creates a bucket policy. For an Amazon Kinesis Data Firehose, AWS WAF creates a service-linked role.

For additional information about web ACL logging, see Logging web ACL traffic information in the *AWS WAF Developer Guide*.

**Note**
This operation completely replaces the mutable specifications that you already have for the logging configuration with the ones that you provide to this call. To modify the logging configuration, retrieve it by calling GetLoggingConfiguration (p. 83), update the settings as needed, and then provide the complete logging configuration specification to this call.

**Request Syntax**

```json
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "LoggingFilter": { 
         "DefaultBehavior": "string",
         "Filters": [ 
            { 
               "Behavior": "string",
               "Conditions": [ 
                  { 
                     "ActionCondition": { 
                        "Action": "string"
                     },
                     "LabelNameCondition": { 
                        "LabelName": "string"
                     }
                  } 
               
               ,
               "Requirement": "string"
            }
         ]
      },
      "ManagedByFirewallManager": boolean,
      "RedactedFields": [ 
         { 
            "AllQueryArguments": 
```
PutLoggingConfiguration

```
{
  "Body": {
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
          "IncludedPaths": [ "string" ]
        },
        "MatchScope": "string"
      },
      "Method": {
        "QueryString": {
          "SingleHeader": {
            "Name": "string"
          },
          "SingleQueryArgument": {
            "Name": "string"
          },
          "UriPath": {
            "ResourceArn": "string"
          }
        }
      }
    }
  }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**LoggingConfiguration (p. 187)**

Type: LoggingConfiguration (p. 798) object

Required: Yes

Response Syntax

```
{
  "LoggingConfiguration": {
    "LogDestinationConfigs": [ "string" ],
    "LoggingFilter": {
      "DefaultBehavior": "string",
      "Filters": [
        {
          "Behavior": "string",
          "Conditions": [
            {
              "ActionCondition": {
                "Action": "string"
              },
              "LabelNameCondition": {
                "LabelName": "string"
              }
            }
          ]
        }
      ]
    }
  }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfiguration (p. 188)

Type: LoggingConfiguration (p. 798) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500
WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFLogDestinationPermissionIssueException

The operation failed because you don't have the permissions that your logging configuration requires. For information, see Logging web ACL traffic information in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn’t exist.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFServiceLinkedRoleErrorException

AWS WAF is not able to access the service linked role. This can be caused by a previous PutLoggingConfiguration request, which can lock the service linked role for about 20 seconds. Please try your request again. The service linked role can also be locked by a previous DeleteServiceLinkedRole request, which can lock the role for 15 minutes or more. If you recently made a call to DeleteServiceLinkedRole, wait at least 15 minutes and try the request again. If you receive this same exception again, you will have to wait additional time until the role is unlocked.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
PutManagedRuleSetVersions

Service: AWS WAFV2

Defines the versions of your managed rule set that you are offering to the customers. Customers see your offerings as managed rule groups with versioning.

**Note**

This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers. Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are ListManagedRuleSets, GetManagedRuleSet, PutManagedRuleSetVersions, and UpdateManagedRuleSetVersionExpiryDate.

Customers retrieve their managed rule group list by calling ListAvailableManagedRuleGroups (p. 152). The name that you provide here for your managed rule set is the name the customer sees for the corresponding managed rule group. Customers can retrieve the available versions for a managed rule group by calling ListAvailableManagedRuleGroupVersions (p. 155). You provide a rule group specification for each version. For each managed rule set, you must specify a version that you recommend using.

To initiate the expiration of a managed rule group version, use UpdateManagedRuleSetVersionExpiryDate (p. 208).

**Request Syntax**

```json
{
"Id": "string",
"LockToken": "string",
"Name": "string",
"RecommendedVersion": "string",
"Scope": "string",
"VersionsToPublish": {
 "string": {
  "AssociatedRuleGroupArn": "string",
  "ForecastedLifetime": number
  }
}
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Id (p. 192)**

A unique identifier for the managed rule set. The ID is returned in the responses to commands like list. You provide it to operations like get and update.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes
**LockToken (p. 192)**

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

- **Type:** String
- **Length Constraints:** Minimum length of 1. Maximum length of 36.
- **Pattern:** `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`
- **Required:** Yes

**Name (p. 192)**

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set. This name is assigned to the corresponding managed rule group, which your customers can access and use.

- **Type:** String
- **Length Constraints:** Minimum length of 1. Maximum length of 128.
- **Pattern:** `^[\w\-]+$`
- **Required:** Yes

**RecommendedVersion (p. 192)**

The version of the named managed rule group that you'd like your customers to choose, from among your version offerings.

- **Type:** String
- **Length Constraints:** Minimum length of 1. Maximum length of 64.
- **Pattern:** `^[\w#.\-]+$`
- **Required:** No

**Scope (p. 192)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- **CLI** - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- **API and SDKs** - For all calls, use the Region endpoint us-east-1.

- **Type:** String
- **Valid Values:** CLOUDFRONT | REGIONAL
- **Required:** Yes
**VersionsToPublish (p. 192)**

The versions of the named managed rule group that you want to offer to your customers.

Type: String to VersionToPublish (p. 864) object map

Key Length Constraints: Minimum length of 1. Maximum length of 64.

Key Pattern: `^[\w#:./-]+$`

Required: No

**Response Syntax**

```json
{
   "NextLockToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextLockToken (p. 194)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
You specified a parameter name or value that isn't valid.
Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
PutPermissionPolicy
Service: AWS WAFV2

Attaches an IAM policy to the specified resource. Use this to share a rule group across accounts.

You must be the owner of the rule group to perform this operation.

This action is subject to the following restrictions:

- You can attach only one policy with each PutPermissionPolicy request.
- The ARN in the request must be a valid WAF RuleGroup (p. 838) ARN and the rule group must exist in the same Region.
- The user making the request must be the owner of the rule group.

Request Syntax

```
{
    "Policy": "string",
    "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Policy (p. 196)**

The policy to attach to the specified rule group.

The policy specifications must conform to the following:

- The policy must be composed using IAM Policy version 2012-10-17 or version 2015-01-01.
- The policy must include specifications for **Effect**, **Action**, and **Principal**.
- **Effect** must specify **Allow**.
- **Action** must specify `wafv2:CreateWebACL`, `wafv2:UpdateWebACL`, and `wafv2:PutFirewallManagerRuleGroups` and may optionally specify `wafv2:GetRuleGroup`. AWS WAF rejects any extra actions or wildcard actions in the policy.
- The policy must not include a **Resource** parameter.

For more information, see IAM Policies.

Type: String


Pattern: .*$

Required: Yes

**ResourceArn (p. 196)**

The Amazon Resource Name (ARN) of the RuleGroup (p. 838) to which you want to attach the policy.
Type: String
Pattern: .*\S.*
Required: Yes

Response Elements
If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors
For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException
Your request is valid, but AWS WAF couldn't perform the operation because of a system problem.
Retry your request.
HTTP Status Code: 500

WAFInvalidParameterException
The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
• You specified a parameter name or value that isn't valid.
• Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.
HTTP Status Code: 400

WAFInvalidPermissionPolicyException
The operation failed because the specified policy isn't in the proper format.
The policy specifications must conform to the following:
• The policy must be composed using IAM Policy version 2012-10-17 or version 2015-01-01.
• The policy must include specifications for Effect, Action, and Principal.
• Effect must specify Allow.
• Action must specify wafv2:CreateWebACL, wafv2:UpdateWebACL, and wafv2:PutFirewallManagerRuleGroups and may optionally specify wafv2:GetRuleGroup. AWS WAF rejects any extra actions or wildcard actions in the policy.
• The policy must not include a Resource parameter.
For more information, see IAM Policies.
HTTP Status Code: 400

WAFNonexistentItemException
AWS WAF couldn't perform the operation because your resource doesn't exist.
HTTP Status Code: 400
Examples

Share a rule group with another account

This example illustrates one usage of PutPermissionPolicy.

```json
{
   "Version": "2012-10-17",
   "Statement": [
      {
         "Effect": "Allow",
         "Principal": {
            "AWS": "arn:aws:iam::111111111111:user/UserName"
         },
         "Action": [
            "wafv2:CreateWebACL",
            "wafv2:UpdateWebACL",
            "wafv2:PutFirewallManagerRuleGroups",
            "wafv2:GetRuleGroup"
         ]
      }
   ]
}
```

Example put permission policy call for the CLI:

This example illustrates one usage of PutPermissionPolicy.

```
 "$aws:iam":111111111111:user/ExampleUserName"}, "Action": 
 ["wafv2:UpdateWebACL","wafv2:CreateWebACL","wafv2:PutFirewallManagerRuleGroups"]}]}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
TagResource
Service: AWS WAFV2

Associates tags with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

You can tag the AWS resources that you manage through AWS WAF: web ACLs, rule groups, IP sets, and regex pattern sets. You can't manage or view tags through the AWS WAF console.

Request Syntax

```json
{
   "ResourceARN": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceARN (p. 199)**

The Amazon Resource Name (ARN) of the resource.

Type: String


Pattern: .*

Required: Yes

**Tags (p. 199)**

An array of key:value pairs to associate with the resource.

Type: Array of Tag (p. 856) objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFValidationError

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem.
Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
• You specified a parameter name or value that isn't valid.
• Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
UntagResource
Service: AWS WAFV2

Disassociates tags from an AWS resource. Tags are key:value pairs that you can associate with AWS resources. For example, the tag key might be "customer" and the tag value might be "companyA." You can specify one or more tags to add to each container. You can add up to 50 tags to each AWS resource.

Request Syntax

```
{
   "ResourceARN": "string",
   "TagKeys": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceARN (p. 202)**

The Amazon Resource Name (ARN) of the resource.

Type: String


Pattern: .*\S.*

Required: Yes

**TagKeys (p. 202)**

An array of keys identifying the tags to disassociate from the resource.

Type: Array of strings

Array Members: Minimum number of 1 item.


Pattern: ^([\p{L}\p{Z}\p{N}_\p{P}\{\p{N}\_:/:/+\-\@}\]*)$

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.
HTTP Status Code: 500
WAFInvalidOperationException
The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException
The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400
WAFFNonexistentItemException
AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400
WAFTagOperationException
An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400
WAFTagOperationInternalErrorException
AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateIPSet
Service: AWS WAFV2

Updates the specified IPSet (p. 784).

**Note**
This operation completely replaces the mutable specifications that you already have for the IP set with the ones that you provide to this call. To modify the IP set, retrieve it by calling GetIPSet (p. 80), update the settings as needed, and then provide the complete IP set specification to this call.

**Request Syntax**

```json
{
  "Addresses": [ "string" ],
  "Description": "string",
  "Id": "string",
  "LockToken": "string",
  "Name": "string",
  "Scope": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Addresses (p. 204)**

Contains an array of strings that specifies zero or more IP addresses or blocks of IP addresses in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports all IPv4 and IPv6 CIDR ranges except for /0.

Example address strings:
- To configure AWS WAF to allow, block, or count requests that originated from the IP address 192.0.2.44, specify 192.0.2.44/32.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify 192.0.2.0/24.
- To configure AWS WAF to allow, block, or count requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify 1111:0000:0000:0000:0000:0000:0000:0111/128.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Example JSON Addresses specifications:
- Empty array: "Addresses": []
- Array with one address: "Addresses": ["192.0.2.44/32"]
- Array with three addresses: "Addresses": ["192.0.2.44/32", "192.0.2.0/24", "192.0.0.0/16"]
- INVALID specification: "Addresses": [""] INVALID
Type: Array of strings
Pattern: .\S.*
Required: Yes

Description (p. 204)
A description of the IP set that helps with identification.
Type: String
Length Constraints: Minimum length of 1. Maximum length of 256.
Pattern: ^\[\w+=:#@/-,.]\[\w+=:#@/-,.]\[\w+=:#@/-,.]$+\[\w+=:#@/-,.]$
Required: No

Id (p. 204)
A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.
Type: String
Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$
Required: Yes

LockToken (p. 204)
A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.
Type: String
Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$
Required: Yes

Name (p. 204)
The name of the IP set. You cannot change the name of an IPSet after you create it.
Type: String
Pattern: ^\[\w\-]+$
Required: Yes

Scope (p. 204)
Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.
To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
  • CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.
  • API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Response Syntax

```
{
  "NextLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextLockToken (p. 206)**

A token used for optimistic locking. AWS WAF returns this token to your update requests. You use NextLockToken in the same manner as you use LockToken.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDuplicateItemException**

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateManagedRuleSetVersionExpiryDate

Service: AWS WAFV2

Updates the expiration information for your managed rule set. Use this to initiate the expiration of a managed rule group version. After you initiate expiration for a version, AWS WAF excludes it from the response to ListAvailableManagedRuleGroupVersions (p. 155) for the managed rule group.

**Note**
This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers. Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are ListManagedRuleSets, GetManagedRuleSet, PutManagedRuleSetVersions, and UpdateManagedRuleSetVersionExpiryDate.

**Request Syntax**

```
{
  "ExpiryTimestamp": number,
  "Id": "string",
  "LockToken": "string",
  "Name": "string",
  "Scope": "string",
  "VersionToExpire": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ExpiryTimestamp (p. 208)**

The time that you want the version to expire.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

Required: Yes

**Id (p. 208)**

A unique identifier for the managed rule set. The ID is returned in the responses to commands like list. You provide it to operations like get and update.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes

**LockToken (p. 208)**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated
with the token, you provide the token to operations like update and delete. AWS WAF uses the
token to ensure that no changes have been made to the entity since you last retrieved it. If a change
has been made, the update fails with a WAFOptimisticLockException. If this happens, perform
another get, and use the new token returned by that operation.

Type: String
Pattern: ^\[0-9a-f\]{8}-(?:\[0-9a-f\]{4}-){3}\[0-9a-f\]{12}$
Required: Yes

**Name** (p. 208)

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set.

This name is assigned to the corresponding managed rule group, which your customers can access
and use.

Type: String
Pattern: ^\[\w\-]+$  
Required: Yes

**Scope** (p. 208)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A
regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API,
or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --
  region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String
Valid Values: CLOUDFRONT | REGIONAL
Required: Yes

**VersionToExpire** (p. 208)

The version that you want to remove from your list of offerings for the named managed rule group.

Type: String
Length Constraints: Minimum length of 1. Maximum length of 64.
Pattern: ^\[\w#:\.\-/]+$
Required: Yes

**Response Syntax**

```json
{
}
```
"ExpiringVersion": "string",
"ExpiryTimestamp": number,
"NextLockToken": "string"
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ExpiringVersion (p. 209)**

The version that is set to expire.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: ^\[\w#:\.,\-\/]+$

**ExpiryTimestamp (p. 209)**

The time that the version will expire.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

**NextLockToken (p. 209)**

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400
WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at
  DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web
  ACL can't be associated.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has
changed since you last retrieved it. Get the resource again, make any changes you need to make to
the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRegexPatternSet
Service: AWS WAFV2

Updates the specified RegexPatternSet (p. 828).

Note
This operation completely replaces the mutable specifications that you already have for the
regex pattern set with the ones that you provide to this call. To modify the regex pattern set,
retrieve it by calling GetRegexPatternSet (p. 98), update the settings as needed, and then
provide the complete regex pattern set specification to this call.

Request Syntax

```json
{
   "Description": "string",
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "RegularExpressionList": [
      {
         "RegexString": "string"
      }
   ],
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common
Parameters (p. 1049).

The request accepts the following data in JSON format.

Description (p. 212)

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^[\w+=:#@/-,.]\[\w+=:#@/-,.\s\]+[\w+=:#@/-,.\s]*$  

Required: No

Id (p. 212)

A unique identifier for the set. This ID is returned in the responses to create and list commands. You
provide it to operations like update and delete.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$  

Required: Yes

LockToken (p. 212)

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to
mark the state of the entity at the time of the request. To make changes to the entity associated
with the token, you provide the token to operations like update and delete. AWS WAF uses the
token to ensure that no changes have been made to the entity since you last retrieved it. If a change
has been made, the update fails with a WAFOptimisticLockException. If this happens, perform
another get, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes

**Name (p. 212)**

The name of the set. You cannot change the name after you create the set.

Type: String


Pattern: ^[\w\-]+$

Required: Yes

**RegularExpressionList (p. 212)**

Type: Array of Regex (p. 826) objects

Required: Yes

**Scope (p. 212)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A
regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API,
or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --
  region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

**Response Syntax**

```json
{
   "NextLockToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
NextLockToken (p. 213)

A token used for optimistic locking. AWS WAF returns this token to your update requests. You use NextLockToken in the same manner as you use LockToken.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

• You specified a parameter name or value that isn't valid.
• Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
• You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400
WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRuleGroup

Service: AWS WAFV2

Updates the specified RuleGroup (p. 838).

Note
This operation completely replaces the mutable specifications that you already have for the rule group with the ones that you provide to this call. To modify the rule group, retrieve it by calling GetRuleGroup (p. 101), update the settings as needed, and then provide the complete rule group specification to this call.

A rule group defines a collection of rules to inspect and control web requests that you can use in a WebACL (p. 866). When you create a rule group, you define an immutable capacity limit. If you update a rule group, you must stay within the capacity. This allows others to reuse the rule group with confidence in its capacity requirements.

Request Syntax

```json
{
    "CustomResponseBodies": {
        "string": {
            "Content": "string",
            "ContentType": "string"
        }
    },
    "Description": "string",
    "Id": "string",
    "LockToken": "string",
    "Name": "string",
    "Rules": [
        {
            "Action": {
                "Allow": {
                    "CustomRequestHandling": {
                        "InsertHeaders": [
                            {
                                "Name": "string",
                                "Value": "string"
                            }
                        ]
                    }
                }
            }
        },
        {
            "Block": {
                "CustomResponse": {
                    "CustomResponseBodyKey": "string",
                    "ResponseCode": number,
                    "ResponseHeaders": [
                        {
                            "Name": "string",
                            "Value": "string"
                        }
                    ]
                }
            }
        },
        {
            "Captcha": {
                "CustomRequestHandling": {
                    "InsertHeaders": [
                        {
                            "Name": "string",
                            "Value": "string"
                        }
                    ]
                }
            }
        }
    ]
}
```
},
    "SingleQueryArgument": {
        "Name": "string"
    },
    "UriPath": {
    }
},
    "PositionalConstraint": "string",
    "SearchString": "blob",
    "TextTransformations": [
        {
            "Priority": "number",
            "Type": "string"
        }
    ],
    "GeoMatchStatement": {
        "CountryCodes": [
            "string"
        ],
        "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
        }
    },
    "IPSetReferenceStatement": {
        "ARN": "string",
        "IPSetForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string",
            "Position": "string"
        }
    },
    "LabelMatchStatement": {
        "Key": "string",
        "Scope": "string"
    },
    "ManagedRuleGroupStatement": {
        "ExcludedRules": [
            {
                "Name": "string"
            }
        ],
        "ManagedRuleGroupConfigs": [
            {
                "LoginPath": "string",
                "PasswordField": {
                    "Identifier": "string"
                },
                "PayloadType": "string",
                "UsernameField": {
                    "Identifier": "string"
                }
            }
        ],
        "Name": "string",
        "ScopeDownStatement": "Statement",
        "VendorName": "string",
        "Version": "string"
    },
    "NotStatement": {
        "Statement": "Statement"
    },
    "OrStatement": {
        "Statements": [
            "Statement"
        ]
    }
}
"RateBasedStatement": {
  "AggregateKeyType": "string",
  "ForwardedIPConfig": {
    "FallbackBehavior": "string",
    "HeaderName": "string"
  },
  "Limit": number,
  "ScopeDownStatement": "Statement"
},
"RegexMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": { },
    "Body": { },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": { },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": { },
    "QueryString": { },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": { }
  },
  "RegexString": "string",
  "TextTransformations": [
    { "Priority": number, "Type": "string" }
  ]
},
"RegexPatternSetReferenceStatement": {
  "ARN": "string",
  "FieldToMatch": {
    "AllQueryArguments": { },
    "Body": { },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": { },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": { },
    "QueryString": { },
    "SingleHeader": {
      "Name": "string"
    }
  }
}
"Name": "string",
},
"SingleQueryArgument": {
  "Name": "string",
},
"UriPath": {
}
},
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"RuleGroupReferenceStatement": {
  "ARN": "string",
  "ExcludedRules": [
    {
      "Name": "string"
    }
  ],
},
"SizeConstraintStatement": {
  "ComparisonOperator": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "Size": number,
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
},
"SqlIMatchStatement": {
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    }
  }
}
"JsonBody": {  
  "InvalidFallbackBehavior": "string",  
  "MatchPattern": {  
    "All": {  
      "IncludedPaths": [ "string" ]  
    },  
    "MatchScope": "string"  
  },  
  "Method": {  
  },  
  "QueryString": {  
  },  
  "SingleHeader": {  
    "Name": "string"  
  },  
  "SingleQueryArgument": {  
    "Name": "string"  
  },  
  "UriPath": {  
  }  
},  
"TextTransformations": [  
  {  
    "Priority": number,  
    "Type": "string"  
  }  
],  
"XssMatchStatement": {  
  "FieldToMatch": {  
    "AllQueryArguments": {  
    },  
    "Body": {  
    },  
    "JsonBody": {  
      "InvalidFallbackBehavior": "string",  
      "MatchPattern": {  
        "All": {  
          "IncludedPaths": [ "string" ]  
        },  
        "MatchScope": "string"  
      },  
      "Method": {  
      },  
      "QueryString": {  
      },  
      "SingleHeader": {  
        "Name": "string"  
      },  
      "SingleQueryArgument": {  
        "Name": "string"  
      },  
      "UriPath": {  
      }  
    },  
    "TextTransformations": [  
      {  
        "Priority": number,  
        "Type": "string"  
      }  
    ]  
  }  
},  
"VisibilityConfig": {  
  "CloudWatchMetrics PublicationEnabled": false,  
  "CloudWatchMetrics MetricName": "MyMetricName",  
  "SampleCount": 10,  
  "SamplePeriod": 300  
}
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

CustomResponseBodies (p. 216)

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the rule group, and then use them in the rules that you define in the rule group.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: String to CustomResponseBody (p. 767) object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^\w[-]+$`

Required: No

Description (p. 216)

A description of the rule group that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^\w+=:/#@/\-,-,\s\[\w+=:/#@/\-,-,\s\]+[\w+=:/#@/\-,-,\s\]$`

Required: No

Id (p. 216)

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

AWS WAFV2 API Reference
UpdateRuleGroup

Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes

**LockToken (p. 216)**

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes

**Name (p. 216)**

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String


Pattern: ^[\w\-]+$

Required: Yes

**Rules (p. 216)**

The Rule (p. 834) statements used to identify the web requests that you want to allow, block, or count. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule (p. 834) objects

Required: No

**Scope (p. 216)**

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:
- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

**VisibilityConfig (p. 216)**

Defines and enables Amazon CloudWatch metrics and web request sample collection.
Type: VisibilityConfig (p. 865) object
Required: Yes

Response Syntax

```json
{
   "NextLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**NextLockToken (p. 224)**

A token used for optimistic locking. AWS WAF returns this token to your update requests. You use NextLockToken in the same manner as you use LockToken.

Type: String
Pattern: ^[0-9a-f]{8}-(?:(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDuplicateItemException**

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

**WAFInternalErrorException**

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFLNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

You tried to use a managed rule group that's available by subscription, but you aren't subscribed to it yet.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn't retrieve the resource that you requested. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
UpdateWebACL
Service: AWS WAFV2

Updates the specified WebACL (p. 866).

Note
This operation completely replaces the mutable specifications that you already have for the web ACL with the ones that you provide to this call. To modify the web ACL, retrieve it by calling GetWebACL (p. 114), update the settings as needed, and then provide the complete web ACL specification to this call.

A web ACL defines a collection of rules to use to inspect and control web requests. Each rule has an action defined (allow, block, or count) for requests that match the statement of the rule. In the web ACL, you assign a default action to take (allow, block) for any request that does not match any of the rules. The rules in a web ACL can be a combination of the types Rule (p. 834), RuleGroup (p. 838), and managed rule group. You can associate a web ACL with one or more AWS resources to protect. The resources can be an Amazon CloudFront distribution, an Amazon API Gateway REST API, an Application Load Balancer, or an AWS AppSync GraphQL API.

Request Syntax

```json
{
   "CaptchaConfig": {
      "ImmunityTimeProperty": {
         "ImmunityTime": number
      }
   },
   "CustomResponseBodies": {
      "String": {
         "Content": "string",
         "ContentType": "string"
      }
   },
   "DefaultAction": {
      "Allow": {
         "CustomRequestHandling": {
            "InsertHeaders": [
            {
               "Name": "string",
               "Value": "string"
            }
            ]
         },
      },
      "Block": {
         "CustomResponse": {
            "CustomResponseBodyKey": "string",
            "ResponseCode": number,
            "ResponseHeaders": [
            {
               "Name": "string",
               "Value": "string"
            }
            ]
         }
      }
   },
   "Description": "string",
   "Id": "string",
   "LockToken": "string",
   "Name": "string"
}
```
"Rules": [
  {
    "Action": {
      "Allow": {
        "CustomRequestHandling": {
          "InsertHeaders": [
            {
              "Name": "string",
              "Value": "string"
            }
          ]
        },
        "Block": {
          "CustomResponse": {
            "CustomResponseBodyKey": "string",
            "ResponseCode": number,
            "ResponseHeaders": [
              {
                "Name": "string",
                "Value": "string"
              }
            ]
          },
          "Captcha": {
            "CustomRequestHandling": {
              "InsertHeaders": [
                {
                  "Name": "string",
                  "Value": "string"
                }
              ]
            },
            "Count": {
              "CustomRequestHandling": {
                "InsertHeaders": [
                  {
                    "Name": "string",
                    "Value": "string"
                  }
                ]
              }
            }
          },
          "CaptchaConfig": {"ImmunityTimeProperty": {
            "ImmunityTime": number
          }
        },
        "Name": "string",
        "OverrideAction": {
          "Count": {
            "CustomRequestHandling": {
              "InsertHeaders": [
                {
                  "Name": "string",
                  "Value": "string"
                }
              ]
            }
          }
        }
      },
      "None": {}
    }
  }
]
"Priority": number,
"RuleLabels": [
    {
        "Name": "string"
    }
],
"Statement": {
    "AndStatement": {
        "Statements": [
            "Statement"
        ]
    },
    "ByteMatchStatement": {
        "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
            },
            "JsonBody": {
                "InvalidFallbackBehavior": "string",
                "MatchPattern": {
                    "All": {
                    },
                    "IncludedPaths": [ "string" ]
                },
                "MatchScope": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
                "Name": "string"
            },
            "SingleQueryArgument": {
                "Name": "string"
            },
            "UriPath": {
            }
        },
        "PositionalConstraint": "string",
        "SearchString": blob,
        "TextTransformations": [
            {
                "Priority": number,
                "Type": "string"
            }
        ]
    },
    "GeoMatchStatement": {
        "CountryCodes": [ "string" ],
        "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
        }
    },
    "IPSetReferenceStatement": {
        "ARN": "string",
        "IPSetForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string",
            "Position": "string"
        }
    },
    "LabelMatchStatement": {
        "Key": "string",
    }
}
"Scope": "string"
},
"ManagedRuleGroupStatement": {
  "ExcludedRules": [
    {
      "Name": "string"
    }
  ],
  "ManagedRuleGroupConfigs": [
    {
      "LoginPath": "string",
      "PasswordField": {
        "Identifier": "string"
      },
      "PayloadType": "string",
      "UsernameField": {
        "Identifier": "string"
      }
    }
  ],
  "Name": "string",
  "ScopeDownStatement": "Statement",
  "VendorName": "string",
  "Version": "string"
},
"NotStatement": {
  "Statement": "Statement"
},
"OrStatement": {
  "Statements": [
    "Statement"
  ],
  "RateBasedStatement": {
    "AggregateKeyType": "string",
    "ForwardedIPConfig": {
      "FallbackBehavior": "string",
      "HeaderName": "string"
    },
    "Limit": number,
    "ScopeDownStatement": "Statement"
  },
  "RegexMatchStatement": {
    "FieldToMatch": {
      "AllQueryArguments": {
      },
      "Body": {
      },
      "JsonBody": {
        "InvalidFallbackBehavior": "string",
        "MatchPattern": {
          "All": {
          },
          "IncludedPaths": [ "string" ]
        },
        "MatchScope": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
        "Name": "string"
      },
      "SingleQueryArgument": {
        "Name": "string"
      }
    }
  }
}
"RegexString": "string",
"TextTransformations": [
  {
    "Priority": number,
    "Type": "string"
  }
],
"RegexPatternSetReferenceStatement": {
  "ARN": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {
        "All": {
        },
        "IncludedPaths": [ "string" ]
      },
      "MatchScope": "string"
    },
    "Method": {
    },
    "QueryString": {
    },
    "SingleHeader": {
      "Name": "string"
    },
    "SingleQueryArgument": {
      "Name": "string"
    },
    "UriPath": {
    }
  },
  "TextTransformations": [
    {
      "Priority": number,
      "Type": "string"
    }
  ]
},
"RuleGroupReferenceStatement": {
  "ARN": "string",
  "ExcludedRules": [
    {
      "Name": "string"
    }
  ]
},
"SizeConstraintStatement": {
  "ComparisonOperator": "string",
  "FieldToMatch": {
    "AllQueryArguments": {
    },
    "Body": {
    },
    "JsonBody": {
      "InvalidFallbackBehavior": "string",
      "MatchPattern": {

"All": { 
  "IncludedPaths": [ "string" ] 
},
"MatchScope": "string"
},
"Method": { 
},
"QueryString": { 
},
"SingleHeader": { 
  "Name": "string"
},
"SingleQueryArgument": { 
  "Name": "string"
},
"UriPath": { 
},
"Size": number,
"TextTransformations": [
  { 
    "Priority": number,
    "Type": "string"
  }
]
},
"SqlInjectionMatchStatement": { 
  "FieldToMatch": { 
    "AllQueryArguments": { 
    },
    "Body": { 
    },
    "JsonBody": { 
      "InvalidFallbackBehavior": "string",
      "MatchPattern": { 
        "All": { 
        },
        "IncludedPaths": [ "string" ] 
      },
      "MatchScope": "string"
    },
    "Method": { 
    },
    "QueryString": { 
    },
    "SingleHeader": { 
      "Name": "string"
    },
    "SingleQueryArgument": { 
      "Name": "string"
    },
    "UriPath": { 
    },
    "TextTransformations": [ 
      { 
        "Priority": number,
        "Type": "string"
      }
    ]
  }
},
"XssMatchStatement": { 
  "FieldToMatch": { 
    "AllQueryArguments": { 
    }
  }
}
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

CaptchaConfig (p. 226)

Specifies how AWS WAF should handle CAPTCHA evaluations for rules that don't have their own CaptchaConfig settings. If you don't specify this, AWS WAF uses its default settings for CaptchaConfig.

Type: CaptchaConfig (p. 759) object

Required: No
CustomResponseBodies (p. 226)

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the web ACL, and then use them in the rules and default actions that you define in the web ACL.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: String to CustomResponseBody (p. 767) object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: \^[\w\-]+$  

Required: No

DefaultAction (p. 226)

The action to perform if none of the Rules contained in the WebACL match.

Type: DefaultAction (p. 768) object

Required: Yes

Description (p. 226)

A description of the web ACL that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: \^[\w+:=:#@/\-,.]+\[\w+:=:#@/\-,.]+$  

Required: No

Id (p. 226)

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: \^[0-9a-f]{8}-\(?:[0-9a-f]{4}\)-\?\?[0-9a-f]{4}\-[0-9a-f]{12}$  

Required: Yes

LockToken (p. 226)

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.
Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes

Name (p. 226)

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String


Pattern: ^[\w-]+$ 

Required: Yes

Rules (p. 226)

The Rule (p. 834) statements used to identify the web requests that you want to allow, block, or count. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule (p. 834) objects

Required: No

Scope (p. 226)

Specifies whether this is for an Amazon CloudFront distribution or for a regional application. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, or an AWS AppSync GraphQL API.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: --scope=CLOUDFRONT --region=us-east-1.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

VisibilityConfig (p. 226)

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig (p. 865) object

Required: Yes

Response Syntax

```json
{
    "NextLockToken": "string"
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextLockToken (p. 234)**

A token used for optimistic locking. AWS WAF returns this token to your update requests. You use NextLockToken in the same manner as you use LockToken.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDuplicateItemException**

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

**WAFExpiredManagedRuleGroupVersionException**

The operation failed because the specified version for the managed rule group has expired. You can retrieve the available versions for the managed rule group by calling ListAvailableManagedRuleGroupVersions (p. 155).

HTTP Status Code: 400

**WAFFInvalidOperationException**

The operation isn't valid.

HTTP Status Code: 400

**WAFFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a WebACL with a DefaultAction that isn't among the types available at DefaultAction (p. 768).
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

HTTP Status Code: 400
AWS WAFV2 API Reference
AWS WAF Classic

WAFInvalidResourceException

AWS WAF couldn’t perform the operation because the resource that you requested isn’t valid. Check the resource, and try again.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn’t exist.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

You tried to use a managed rule group that’s available by subscription, but you aren’t subscribed to it yet.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn’t retrieve the resource that you requested. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

AWS WAF Classic

The following actions are supported by AWS WAF Classic:
CreateByteMatchSet (p. 239)  
CreateGeoMatchSet (p. 243)  
CreateIPSet (p. 247)  
CreateRateBasedRule (p. 250)  
CreateRegexMatchSet (p. 255)  
CreateRegexPatternSet (p. 258)  
CreateRule (p. 261)  
CreateRuleGroup (p. 265)  
CreateSizeConstraintSet (p. 269)  
CreateSqlInjectionMatchSet (p. 273)  
CreateWebACL (p. 277)  
CreateWebACLMigrationStack (p. 282)  
CreateXssMatchSet (p. 286)  
DeleteByteMatchSet (p. 290)  
DeleteGeoMatchSet (p. 293)  
DeleteIPSet (p. 296)  
DeleteLoggingConfiguration (p. 299)  
DeletePermissionPolicy (p. 301)  
DeleteRateBasedRule (p. 303)  
DeleteRegexMatchSet (p. 306)  
DeleteRegexPatternSet (p. 309)  
DeleteRule (p. 312)  
DeleteRuleGroup (p. 315)  
DeleteSizeConstraintSet (p. 318)  
DeleteSqlInjectionMatchSet (p. 321)  
DeleteWebACL (p. 324)  
DeleteXssMatchSet (p. 327)  
GetByteMatchSet (p. 330)  
GetChangeToken (p. 333)  
GetChangeTokenStatus (p. 335)  
GetGeoMatchSet (p. 337)  
GetSizeConstraintSet (p. 339)  
GetLoggingConfiguration (p. 341)  
GetPermissionPolicy (p. 343)  
GetRateBasedRule (p. 345)  
GetRateBasedRuleManagedKeys (p. 347)  
GetRegexMatchSet (p. 350)  
GetRegexPatternSet (p. 352)  
GetRule (p. 354)  
GetRuleGroup (p. 356)  
GetSampledRequests (p. 358)  
GetSizeConstraintSet (p. 362)  
GetSqlInjectionMatchSet (p. 365)  
GetWebACL (p. 368)  
GetXssMatchSet (p. 371)  
ListActivatedRulesInRuleGroup (p. 373)
• ListByteMatchSets (p. 376)
• ListGeoMatchSets (p. 379)
• ListIPSets (p. 382)
• ListLoggingConfigurations (p. 385)
• ListRateBasedRules (p. 388)
• ListRegexMatchSets (p. 391)
• ListRegexPatternSets (p. 394)
• ListRuleGroups (p. 397)
• ListRules (p. 400)
• ListSizeConstraintSets (p. 403)
• ListSqlInjectionMatchSets (p. 406)
• ListSubscribedRuleGroups (p. 409)
• ListTagsForResource (p. 412)
• ListWebACLs (p. 415)
• ListXssMatchSets (p. 418)
• PutLoggingConfiguration (p. 421)
• PutPermissionPolicy (p. 424)
• TagResource (p. 427)
• UntagResource (p. 430)
• UpdateByteMatchSet (p. 432)
• UpdateGeoMatchSet (p. 436)
• UpdateIPSet (p. 440)
• UpdateRateBasedRule (p. 445)
• UpdateRegexMatchSet (p. 450)
• UpdateRegexPatternSet (p. 454)
• UpdateRule (p. 458)
• UpdateRuleGroup (p. 462)
• UpdateSizeConstraintSet (p. 466)
• UpdateSqlInjectionMatchSet (p. 471)
• UpdateWebACL (p. 475)
• UpdateXssMatchSet (p. 480)
CreateByteMatchSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a ByteMatchSet. You then use UpdateByteMatchSet (p. 432) to identify the part of a web request that you want AWS WAF to inspect, such as the values of the User-Agent header or the query string. For example, you can create a ByteMatchSet that matches any requests with User-Agent headers that contain the string BadBot. You can then configure AWS WAF to reject those requests.

To create and configure a ByteMatchSet, perform the following steps:

1. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a CreateByteMatchSet request.
2. Submit a CreateByteMatchSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateByteMatchSet request.
4. Submit an UpdateByteMatchSet (p. 432) request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
    "ChangeToken": "string",
    "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 239)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes
Name (p. 239)

A friendly name or description of the ByteMatchSet (p. 878). You can’t change Name after you create a ByteMatchSet.

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
  "ByteMatchSet": {
    "ByteMatchSetId": "string",
    "ByteMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "PositionalConstraint": "string",
        "TargetString": blob,
        "TextTransformation": "string"
      }
    ],
    "Name": "string",
    "ChangeToken": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ByteMatchSet (p. 240)

A ByteMatchSet (p. 878) that contains no ByteMatchTuple objects.

Type: ByteMatchSet (p. 878) object

ChangeToken (p. 240)

The ChangeToken that you used to submit the CreateByteMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateGeoMatchSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an GeoMatchSet (p. 891), which you use to specify which web requests you want to allow or block based on the country that the requests originate from. For example, if you’re receiving a lot of requests from one or more countries and you want to block the requests, you can create an GeoMatchSet that contains those countries and then configure AWS WAF to block the requests.

To create and configure a GeoMatchSet, perform the following steps:

1. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a CreateGeoMatchSet request.
2. Submit a CreateGeoMatchSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateGeoMatchSet (p. 436) request.
4. Submit an UpdateGeoMatchSetSet request to specify the countries that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
  "ChangeToken": "string",
  "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 243)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

Name (p. 243)

A friendly name or description of the GeoMatchSet (p. 891). You can't change Name after you create the GeoMatchSet.
Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```
{
    "ChangeToken": "string",
    "GeoMatchSet": {
        "GeoMatchConstraints": [
            {
                "Type": "string",
                "Value": "string"
            }
        ],
        "GeoMatchSetId": "string",
        "Name": "string"
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 244)**

The ChangeToken that you used to submit the CreateGeoMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .*\S.*

**GeoMatchSet (p. 244)**

The GeoMatchSet returned in the CreateGeoMatchSet response. The GeoMatchSet contains no GeoMatchConstraints.

Type: GeoMatchSet (p. 891) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400
AWS WAFV2 API Reference
CreateGeoMatchSet

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateIPSet

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an IPSet (p. 898), which you use to specify which web requests that you want to allow or block based on the IP addresses that the requests originate from. For example, if you're receiving a lot of requests from one or more individual IP addresses or one or more ranges of IP addresses and you want to block the requests, you can create an IPSet that contains those IP addresses and then configure AWS WAF to block the requests.

To create and configure an IPSet, perform the following steps:

1. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a CreateIPSet request.
2. Submit a CreateIPSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateIPSet (p. 440) request.
4. Submit an UpdateIPSet request to specify the IP addresses that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 247)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**Name (p. 247)**

A friendly name or description of the IPSet (p. 898). You can't change Name after you create the IPSet.
### CreateIPSet

Type: String


Pattern: .\S.*

Required: Yes

#### Response Syntax

```json
{
  "ChangeToken": "string",
  "IPSet": {
    "IPSetDescriptors": [
      {
        "Type": "string",
        "Value": "string"
      }
    ],
    "IPSetId": "string",
    "Name": "string"
  }
}
```

#### Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 248)**

The `ChangeToken` that you used to submit the CreateIPSet request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 335)].

Type: String


Pattern: .\S.*

**IPSet (p. 248)**

The `IPSet (p. 898)` returned in the CreateIPSet response.

Type: `IPSet (p. 898)` object

#### Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)].

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.
HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateRateBasedRule
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RateBasedRule (p. 908). The RateBasedRule contains a RateLimit, which specifies the maximum number of requests that AWS WAF allows from a specified IP address in a five-minute period. The RateBasedRule also contains the IPSet objects, ByteMatchSet objects, and other predicates that identify the requests that you want to count or block if these requests exceed the RateLimit.

If you add more than one predicate to a RateBasedRule, a request not only must exceed the RateLimit, but it also must match all the conditions to be counted or blocked. For example, suppose you add the following to a RateBasedRule:

- An IPSet that matches the IP address 192.0.2.44/32
- A ByteMatchSet that matches BadBot in the User-Agent header

Further, you specify a RateLimit of 1,000.

You then add the RateBasedRule to a WebACL and specify that you want to block requests that meet the conditions in the rule. For a request to be blocked, it must come from the IP address 192.0.2.44 and the User-Agent header in the request must contain the value BadBot. Further, requests that match these two conditions must be received at a rate of more than 1,000 requests every five minutes. If both conditions are met and the rate is exceeded, AWS WAF blocks the requests. If the rate drops below 1,000 for a five-minute period, AWS WAF no longer blocks the requests.

As a second example, suppose you want to limit requests to a particular page on your site. To do this, you could add the following to a RateBasedRule:

- A ByteMatchSet with FieldToMatch of URI
- A PositionalConstraint of STARTS_WITH
- A TargetString of login

Further, you specify a RateLimit of 1,000.

By adding this RateBasedRule to a WebACL, you could limit requests to your login page without affecting the rest of your site.

To create and configure a RateBasedRule, perform the following steps:

1. Create and update the predicates that you want to include in the rule. For more information, see CreateByteMatchSet (p. 239), CreateIPSet (p. 247), and CreateSqlInjectionMatchSet (p. 273).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a CreateRule request.
3. Submit a CreateRateBasedRule request.
4. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRule (p. 458) request.
5. Submit an UpdateRateBasedRule request to specify the predicates that you want to include in the rule.
6. Create and update a WebACL that contains the RateBasedRule. For more information, see CreateWebACL (p. 277).

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "MetricName": "string",
  "Name": "string",
  "RateKey": "string",
  "RateLimit": number,
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 251)**

The ChangeToken that you used to submit the CreateRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*

Required: Yes

**MetricName (p. 251)**

A friendly name or description for the metrics for this RateBasedRule. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RateBasedRule.

Type: String


Pattern: .\S.*

Required: Yes

**Name (p. 251)**

A friendly name or description of the RateBasedRule. You can't change the name of a RateBasedRule after you create it.
CreateRateBasedRule

Type: String
Pattern: .*\S.*
Required: Yes

**RateKey (p. 251)**

The field that AWS WAF uses to determine if requests are likely arriving from a single source and thus subject to rate monitoring. The only valid value for RateKey is IP. IP indicates that requests that arrive from the same IP address are subject to the RateLimit that is specified in the RateBasedRule.

Type: String
Valid Values: IP
Required: Yes

**RateLimit (p. 251)**

The maximum number of requests, which have an identical value in the field that is specified by RateKey, allowed in a five-minute period. If the number of requests exceeds the RateLimit and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long
Valid Range: Minimum value of 100. Maximum value of 2000000000.
Required: Yes

**Tags (p. 251)**

Type: Array of Tag (p. 946) objects
Array Members: Minimum number of 1 item.
Required: No

**Response Syntax**

```json
{
    "ChangeToken": "string",
    "Rule": {
        "MatchPredicates": [
            {
                "DataId": "string",
                "Negated": boolean,
                "Type": "string"
            }
        ],
        "MetricName": "string",
        "Name": "string",
        "RateKey": "string",
        "RateLimit": number,
        "RuleId": "string"
    }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 252)**

The ChangeToken that you used to submit the CreateRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S+. *

**Rule (p. 252)**

The RateBasedRule (p. 908) that is returned in the CreateRateBasedRule response.

Type: RateBasedRule (p. 908) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFBadRequestException**

HTTP Status Code: 400

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceeded Exception

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateRegexMatchSet

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RegexMatchSet (p. 910). You then use UpdateRegexMatchSet (p. 450) to identify the part of a web request that you want AWS WAF to inspect, such as the values of the User-Agent header or the query string. For example, you can create a RegexMatchSet that contains a RegexMatchTuple that looks for any requests with User-Agent headers that match a RegexPatternSet with pattern B[a@]dB[o0]t. You can then configure AWS WAF to reject those requests.

To create and configure a RegexMatchSet, perform the following steps:

1. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a CreateRegexMatchSet request.
2. Submit a CreateRegexMatchSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRegexMatchSet request.
4. Submit an UpdateRegexMatchSet (p. 450) request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value, using a RegexPatternSet, that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
    "ChangeToken": "string",
    "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 255)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes
Name (p. 255)

A friendly name or description of the RegexMatchSet (p. 910). You can't change Name after you create a RegexMatchSet.

Type: String


Pattern: \S.*

Required: Yes

Response Syntax

```
{
  "ChangeToken": "string",
  "RegexMatchSet": {
    "Name": "string",
    "RegexMatchSetId": "string",
    "RegexMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "RegexPatternSetId": "string",
        "TextTransformation": "string"
      }
    ]
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 256)

The ChangeToken that you used to submit the CreateRegexMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: \S.*

RegexMatchSet (p. 256)

A RegexMatchSet (p. 910) that contains no RegexMatchTuple objects.

Type: RegexMatchSet (p. 910) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateRegexPatternSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RegexPatternSet. You then use UpdateRegexPatternSet (p. 454) to specify the regular expression (regex) pattern that you want AWS WAF to search for, such as B[a@]dB[o0]t. You can then configure AWS WAF to reject those requests.

To create and configure a RegexPatternSet, perform the following steps:

1. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a CreateRegexPatternSet request.
2. Submit a CreateRegexPatternSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRegexPatternSet request.
4. Submit an UpdateRegexPatternSet (p. 454) request to specify the string that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
  "ChangeToken": "string",
  "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 258)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes

Name (p. 258)

A friendly name or description of the RegexPatternSet (p. 917). You can't change Name after you create a RegexPatternSet.
Type: String
Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
  "ChangeToken": "string",
  "RegexPatternSet": {
    "Name": "string",
    "RegexPatternSetId": "string",
    "RegexPatternStrings": [ "string" ]
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 259)**

The ChangeToken that you used to submit the CreateRegexPatternSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String
Pattern: .*\S.*

**RegexPatternSet (p. 259)**

A RegexPatternSet (p. 917) that contains no objects.

Type: RegexPatternSet (p. 917) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400

**WAFFrontendError**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500
**WAFLimitsExceeded Exception**

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see [AWS WAF Classic quotas](https://aws.amazon.com/waf/classicquotas/) in the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/).

HTTP Status Code: 400

**WAFStaleData Exception**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](https://aws.amazon.com/cli/)
- [AWS SDK for .NET](https://docs.aws.amazon.com/sdk-for-net/v2/)
- [AWS SDK for C++](https://docs.aws.amazon.com/sdk-for-cpp/v1/)
- [AWS SDK for Go](https://godoc.org/github.com/aws/aws-sdk-go)
- [AWS SDK for Java V2](https://aws.amazon.com/java/)
- [AWS SDK for JavaScript](https://aws.amazon.com/javascript/)
- [AWS SDK for PHP V3](https://aws.amazon.com/php/)
- [AWS SDK for Python](https://aws.amazon.com/python/)
- [AWS SDK for Ruby V3](https://aws.amazon.com/ruby/)


CreateRule
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a Rule, which contains the IPSet objects, ByteMatchSet objects, and other predicates that identify the requests that you want to block. If you add more than one predicate to a Rule, a request must match all of the specifications to be allowed or blocked. For example, suppose that you add the following to a Rule:

- An IPSet that matches the IP address 192.0.2.44/32
- A ByteMatchSet that matches BadBot in the User-Agent header

You then add the Rule to a WebACL and specify that you want to blocks requests that satisfy the Rule. For a request to be blocked, it must come from the IP address 192.0.2.44 and the User-Agent header in the request must contain the value BadBot.

To create and configure a Rule, perform the following steps:

1. Create and update the predicates that you want to include in the Rule. For more information, see CreateByteMatchSet (p. 239), CreateIPSet (p. 247), and CreateSqlInjectionMatchSet (p. 273).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a CreateRule request.
3. Submit a CreateRule request.
4. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRule (p. 458) request.
5. Submit an UpdateRule request to specify the predicates that you want to include in the Rule.
6. Create and update a WebACL that contains the Rule. For more information, see CreateWebACL (p. 277).

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
  "ChangeToken": "string",
  "MetricName": "string",
  "Name": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 261)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**MetricName (p. 261)**

A friendly name or description for the metrics for this Rule. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the Rule.

Type: String


Pattern: .\S.*

Required: Yes

**Name (p. 261)**

A friendly name or description of the Rule (p. 921). You can't change the name of a Rule after you create it.

Type: String


Pattern: .\S.*

Required: Yes

**Tags (p. 261)**

Type: Array of Tag (p. 946) objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
    "ChangeToken": "string",
    "Rule": {
        "MetricName": "string",
```
"Name": "string",
"Predicates": [
{
   "DataId": "string",
   "Negated": boolean,
   "Type": "string"
}
],
"RuleId": "string"
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 262)**

The `ChangeToken` that you used to submit the `CreateRule` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 335)`.

Type: String


Pattern: .\S.*

**Rule (p. 262)**

The `Rule (p. 921)` returned in the `CreateRule` response.

Type: `Rule (p. 921)` object

Errors

For information about the errors that are common to all actions, see `Common Errors (p. 1051)`.

**WAFBadRequestException**

HTTP Status Code: 400

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
• You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateRuleGroup

Service: AWS WAF Classic

**Note**
This is *AWS WAF Classic* documentation. For more information, see *AWS WAF Classic* in the developer guide.

For the latest version of *AWS WAF*, use the AWS WAFV2 API and see the *AWS WAF Developer Guide*. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RuleGroup. A rule group is a collection of predefined rules that you add to a web ACL. You use UpdateRuleGroup (p. 462) to add rules to the rule group.

Rule groups are subject to the following limits:

- Three rule groups per account. You can request an increase to this limit by contacting customer support.
- One rule group per web ACL.
- Ten rules per rule group.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the *AWS WAF Developer Guide*.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "MetricName": "string",
  "Name": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see *Common Parameters* (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 265)**

The value returned by the most recent call to GetChangeToken (p. 333).

- Type: String
- Pattern: .*
- Required: Yes

**MetricName (p. 265)**

A friendly name or description for the metrics for this RuleGroup. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't
contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RuleGroup.

Type: String


Pattern: .\S.*

Required: Yes

**Name (p. 265)**

A friendly name or description of the RuleGroup (p. 923). You can't change Name after you create a RuleGroup.

Type: String


Pattern: .\S.*

Required: Yes

**Tags (p. 265)**

Type: Array of Tag (p. 946) objects

Array Members: Minimum number of 1 item.

Required: No

**Response Syntax**

```json
{
  "ChangeToken": "string",
  "RuleGroup": {
    "MetricName": "string",
    "Name": "string",
    "RuleGroupId": "string"
  }
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 266)**

The ChangeToken that you used to submit the CreateRuleGroup request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*
RuleGroup (p. 266)

An empty RuleGroup (p. 923).

Type: RuleGroup (p. 923) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateSizeConstraintSet
Service: AWS WAF Classic

**Note**
This is [AWS WAF Classic](https://aws.amazon.com/waf-classic) documentation. For more information, see [AWS WAF Classic](https://aws.amazon.com/waf-classic) in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/aws-waf-v2.html). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a SizeConstraintSet. You then use [UpdateSizeConstraintSet](https://docs.aws.amazon.com/waf/latest/APIReference/API_UpdateSizeConstraintSet.html) to identify the part of a web request that you want AWS WAF to check for length, such as the length of the User-Agent header or the length of the query string. For example, you can create a SizeConstraintSet that matches any requests that have a query string that is longer than 100 bytes. You can then configure AWS WAF to reject those requests.

To create and configure a SizeConstraintSet, perform the following steps:

1. Use [GetChangeToken](https://docs.aws.amazon.com/waf/latest/APIReference/API_GetChangeToken.html) to get the change token that you provide in the ChangeToken parameter of a CreateSizeConstraintSet request.
2. Submit a CreateSizeConstraintSet request.
3. Use [GetChangeToken](https://docs.aws.amazon.com/waf/latest/APIReference/API_GetChangeToken.html) to get the change token that you provide in the ChangeToken parameter of an UpdateSizeConstraintSet request.
4. Submit an [UpdateSizeConstraintSet](https://docs.aws.amazon.com/waf/latest/APIReference/API_UpdateSizeConstraintSet.html) request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters](https://docs.aws.amazon.com/waf/latest/APIReference/parameter-common.html).

The request accepts the following data in JSON format.

**ChangeToken (p. 269)**

The value returned by the most recent call to [GetChangeToken](https://docs.aws.amazon.com/waf/latest/APIReference/API_GetChangeToken.html).

Type: String


Pattern: .

Required: Yes
**Name (p. 269)**

A friendly name or description of the SizeConstraintSet (p. 934). You can't change Name after you create a SizeConstraintSet.

Type: String


Pattern: .*\S.*

Required: Yes

**Response Syntax**

```
{
  "ChangeToken": "string",
  "SizeConstraintSet": {
    "Name": "string",
    "SizeConstraints": [
      {
        "ComparisonOperator": "string",
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "Size": number,
        "TextTransformation": "string"
      }
    ],
    "SizeConstraintSetId": "string"
  }
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 270)**

The ChangeToken that you used to submit the CreateSizeConstraintSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .*\S.*

**SizeConstraintSet (p. 270)**

A SizeConstraintSet (p. 934) that contains no SizeConstraint objects.

Type: SizeConstraintSet (p. 934) object

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

• You specified an invalid parameter name.
• You specified an invalid value.
• You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateSqlInjectionMatchSet

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a **SqlInjectionMatchSet** (p. 938), which you use to allow, block, or count requests that contain snippets of SQL code in a specified part of web requests. AWS WAF searches for character sequences that are likely to be malicious strings.

To create and configure a **SqlInjectionMatchSet**, perform the following steps:

1. Use **GetChangeToken** (p. 333) to get the change token that you provide in the `ChangeToken` parameter of a `CreateSqlInjectionMatchSet` request.
2. Submit a `CreateSqlInjectionMatchSet` request.
3. Use **GetChangeToken** to get the change token that you provide in the `ChangeToken` parameter of an **UpdateSqlInjectionMatchSet** (p. 471) request.
4. Submit an **UpdateSqlInjectionMatchSet** (p. 471) request to specify the parts of web requests in which you want to allow, block, or count malicious SQL code.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the **AWS WAF Developer Guide**.

**Request Syntax**

```json
{
   "ChangeToken": "string",
   "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters** (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 273)**

The value returned by the most recent call to **GetChangeToken** (p. 333).

Type: String


Pattern: .*

Required: Yes

**Name (p. 273)**

A friendly name or description for the **SqlInjectionMatchSet** (p. 938) that you're creating. You can't change Name after you create the SqlInjectionMatchSet.
Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
  "ChangeToken": "string",
  "SqlInjectionMatchSet": {
    "Name": "string",
    "SqlInjectionMatchSetId": "string",
    "SqlInjectionMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "TextTransformation": "string"
      }
    ]
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 274)**

The ChangeToken that you used to submit the CreateSqlInjectionMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*

**SqlInjectionMatchSet (p. 274)**

A SqlInjectionMatchSet (p. 938).

Type: SqlInjectionMatchSet (p. 938) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDisallowedNameException**

The name specified is invalid.
HTTP Status Code: 400

**WAFAInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateWebACL

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](#) in the developer guide.

**For the latest version of AWS WAF** , use the AWS WAFV2 API and see the [AWS WAF Developer Guide](#). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a **WebACL**, which contains the **Rules** that identify the Amazon CloudFront web requests that you want to allow, block, or count. AWS WAF evaluates **Rules** in order based on the value of **Priority** for each **Rule**.

You also specify a default action, either **ALLOW** or **BLOCK**. If a web request doesn't match any of the **Rules** in a **WebACL**, AWS WAF responds to the request with the default action.

To create and configure a **WebACL**, perform the following steps:

1. Create and update the **ByteMatchSet** objects and other predicates that you want to include in **Rules**. For more information, see [CreateByteMatchSet](#), [UpdateByteMatchSet](#), [CreateIPSet](#), [UpdateIPSet](#), [CreateSqlInjectionMatchSet](#), and [UpdateSqlInjectionMatchSet](#).

2. Create and update the **Rules** that you want to include in the **WebACL**. For more information, see [CreateRule](#) and [UpdateRule](#).

3. Use [GetChangeToken](#) to get the change token that you provide in the **ChangeToken** parameter of a [CreateWebACL](#) request.

4. Submit a [CreateWebACL](#) request.

5. Use [GetChangeToken](#) to get the change token that you provide in the **ChangeToken** parameter of an [UpdateWebACL](#) request.

6. Submit an [UpdateWebACL](#) request to specify the **Rules** that you want to include in the **WebACL**, to specify the default action, and to associate the **WebACL** with an Amazon CloudFront distribution.

For more information about how to use the AWS WAF API, see the [AWS WAF Developer Guide](#).

**Request Syntax**

```
{
  "ChangeToken": "string",
  "DefaultAction": {
    "Type": "string"
  },
  "MetricName": "string",
  "Name": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters](#).
The request accepts the following data in JSON format.

**ChangeToken (p. 277)**

The value returned by the most recent call to `GetChangeToken (p. 333)`.

Type: String


Pattern: .*\S.*

Required: Yes

**DefaultAction (p. 277)**

The action that you want AWS WAF to take when a request doesn’t match the criteria specified in any of the `Rule` objects that are associated with the `WebACL`.

Type: `WafAction (p. 949)` object

Required: Yes

**MetricName (p. 277)**

A friendly name or description for the metrics for this `WebACL`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can’t contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can’t change `MetricName` after you create the `WebACL`.

Type: String


Pattern: .*\S.*

Required: Yes

**Name (p. 277)**

A friendly name or description of the `WebACL (p. 951)`. You can’t change `Name` after you create the `WebACL`.

Type: String


Pattern: .*\S.*

Required: Yes

**Tags (p. 277)**

Type: Array of `Tag (p. 946)` objects

Array Members: Minimum number of 1 item.

Required: No

**Response Syntax**

```json
{
```
"ChangeToken": "string",
"WebACL": {
  "DefaultAction": {
    "Type": "string"
  },
  "MetricName": "string",
  "Name": "string",
  "Rules": [
    {
      "Action": {
        "Type": "string"
      },
      "ExcludedRules": [
        {
          "RuleId": "string"
        }
      ],
      "OverrideAction": {
        "Type": "string"
      },
      "Priority": number,
      "RuleId": "string",
      "Type": "string"
    }
  ],
  "WebACLArn": "string",
  "WebACLId": "string"
}
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 278)

The ChangeToken that you used to submit the CreateWebACL request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*

WebACL (p. 278)

The WebACL (p. 951) returned in the CreateWebACL response.

Type: WebACL (p. 951) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFBadRequestException

HTTP Status Code: 400
**WAFNotAllowedNameException**

The name specified is invalid.

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**WAFTagOperationException**

HTTP Status Code: 400

**WAFTagOperationInternalErrorException**

HTTP Status Code: 500
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateWebACLMigrationStack

Service: AWS WAF Classic

Creates an AWS CloudFormation AWS WAFV2 template for the specified web ACL in the specified Amazon S3 bucket. Then, in CloudFormation, you create a stack from the template, to create the web ACL and its resources in AWS WAFV2. Use this to migrate your AWS WAF Classic web ACL to the latest version of AWS WAF.

This is part of a larger migration procedure for web ACLs from AWS WAF Classic to the latest version of AWS WAF. For the full procedure, including caveats and manual steps to complete the migration and switch over to the new web ACL, see Migrating your AWS WAF Classic resources to AWS WAF in the AWS WAF Developer Guide.

Request Syntax

```
{
    "IgnoreUnsupportedType": boolean,
    "S3BucketName": "string",
    "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**IgnoreUnsupportedType (p. 282)**

Indicates whether to exclude entities that can't be migrated or to stop the migration. Set this to true to ignore unsupported entities in the web ACL during the migration. Otherwise, if AWS WAF encounters unsupported entities, it stops the process and throws an exception.

Type: Boolean

Required: Yes

**S3BucketName (p. 282)**

The name of the Amazon S3 bucket to store the AWS CloudFormation template in. The S3 bucket must be configured as follows for the migration:

- If the bucket is encrypted, the encryption must use Amazon S3 (SSE-S3) keys. The migration doesn't support encryption with AWS Key Management Service (SSE-KMS) keys.
- The bucket name must start with `aws-waf-migration-`. For example, `aws-waf-migration-my-web-acl`.
- The bucket must be in the Region where you are deploying the template. For example, for a web ACL in `us-west-2`, you must use an Amazon S3 bucket in `us-west-2` and you must deploy the template stack to `us-west-2`.
- The bucket policies must permit the migration process to write data. For listings of the bucket policies, see the Examples section.

Type: String


Pattern: `^aws-waf-migration-[0-9A-Za-z\-_]*`
CreateWebACLMigrationStack

Required: Yes

WebACLId (p. 282)

The UUID of the WAF Classic web ACL that you want to migrate to WAF v2.

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
    "S3ObjectUrl": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

S3ObjectUrl (p. 283)

The URL of the template created in Amazon S3.

Type: String

Length Constraints: Minimum length of 1.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFEntityMigrationException

The operation failed due to a problem with the migration. The failure cause is provided in the exception, in the MigrationErrorType:

- ENTITY_NOT_SUPPORTED - The web ACL has an unsupported entity but the IgnoreUnsupportedType is not set to true.
- ENTITY_NOT_FOUND - The web ACL doesn't exist.
- S3_BUCKET_NO_PERMISSION - You don't have permission to perform the PutObject action to the specified Amazon S3 bucket.
- S3_BUCKET_NOT_ACCESSIBLE - The bucket policy doesn't allow AWS WAF to perform the PutObject action in the bucket.
- S3_BUCKET_NOT_FOUND - The S3 bucket doesn't exist.
- S3_BUCKET_INVALID_REGION - The S3 bucket is not in the same Region as the web ACL.
- S3_INTERNAL_ERROR - AWS WAF failed to create the template in the S3 bucket for another reason.

In addition, the exception includes specific details about the failure in the MigrationErrorReason.
HTTP Status Code: 400

AWS WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

AWSInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

AWSInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

AWSNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

Examples

Amazon S3 bucket policy for global Amazon CloudFront applications

This example illustrates one usage of CreateWebACLMigrationStack.

```json
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
```
Amazon S3 bucket policy for Amazon API Gateway API or Application Load Balancer applications

This example illustrates one usage of CreateWebACLMigrationStack.

```json
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
                "Service": "apiv2migration.waf-regional.amazonaws.com"
            },
            "Action": "s3:PutObject",
            "Resource": "arn:aws:s3:::<BUCKET_NAME>/AWSWAF/<CUSTOMER_ACCOUNT_ID>/*"
        }
    ]
}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateXssMatchSet

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an **XssMatchSet** (p. 955), which you use to allow, block, or count requests that contain cross-site scripting attacks in the specified part of web requests. AWS WAF searches for character sequences that are likely to be malicious strings.

To create and configure an **XssMatchSet**, perform the following steps:

1. Use **GetChangeToken** (p. 333) to get the change token that you provide in the **ChangeToken** parameter of a **CreateXssMatchSet** request.
2. Submit a **CreateXssMatchSet** request.
3. Use **GetChangeToken** to get the change token that you provide in the **ChangeToken** parameter of an **UpdateXssMatchSet** (p. 480) request.
4. Submit an **UpdateXssMatchSet** (p. 480) request to specify the parts of web requests in which you want to allow, block, or count cross-site scripting attacks.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the **AWS WAF Developer Guide**.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters** (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken** (p. 286)

The value returned by the most recent call to **GetChangeToken** (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**Name** (p. 286)

A friendly name or description for the **XssMatchSet** (p. 955) that you're creating. You can't change Name after you create the **XssMatchSet**.
Type: String
Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "XssMatchSet": {
      "Name": "string",
      "XssMatchSetId": "string",
      "XssMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 287)**

The ChangeToken that you used to submit the CreateXssMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String
Pattern: .*\S.*

**XssMatchSet (p. 287)**

An XssMatchSet (p. 955).

Type: XssMatchSet (p. 955) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDisallowedNameException**

The name specified is invalid.
HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn’t recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see [AWS WAF Classic quotas](https://docs.aws.amazon.com/waf/latest/developerguide/waf-limits.html) in the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/waf-limits.html).

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
DeleteByteMatchSet

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a ByteMatchSet (p. 878). You can't delete a ByteMatchSet if it's still used in any Rules or if it still includes any ByteMatchTuple (p. 882) objects (any filters).

If you just want to remove a ByteMatchSet from a Rule, use UpdateRule (p. 458).

To permanently delete a ByteMatchSet, perform the following steps:

1. Update the ByteMatchSet to remove filters, if any. For more information, see UpdateByteMatchSet (p. 432).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteByteMatchSet request.
3. Submit a DeleteByteMatchSet request.

Request Syntax

```
{
   "ByteMatchSetId": "string",
   "ChangeToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ByteMatchSetId (p. 290)

The ByteMatchSetId of the ByteMatchSet (p. 878) that you want to delete. ByteMatchSetId is returned by CreateByteMatchSet (p. 239) and by ListByteMatchSets (p. 376).

Type: String


Pattern: .\S.*

Required: Yes

ChangeToken (p. 290)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String

DeleteByteMatchSet

Pattern: .*\S.*
Required: Yes

Response Syntax

{
   "ChangeToken": "string"
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

ChangeToken (p. 291)

The ChangeToken that you used to submit the DeleteByteMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String
Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:
- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteGeoMatchSet

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a GeoMatchSet (p. 891). You can't delete a GeoMatchSet if it's still used in any Rules or if it still includes any countries.

If you just want to remove a GeoMatchSet from a Rule, use UpdateRule (p. 458).

To permanently delete a GeoMatchSet from AWS WAF, perform the following steps:

1. Update the GeoMatchSet to remove any countries. For more information, see UpdateGeoMatchSet (p. 436).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteGeoMatchSet request.
3. Submit a DeleteGeoMatchSet request.

**Request Syntax**

```json
{
   "ChangeToken": "string",
   "GeoMatchSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 293)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes

**GeoMatchSetId (p. 293)**

The GeoMatchSetId of the GeoMatchSet (p. 891) that you want to delete. GeoMatchSetId is returned by CreateGeoMatchSet (p. 243) and by ListGeoMatchSets (p. 379).

Type: String

Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 294)**

The ChangeToken that you used to submit the DeleteGeoMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

• You tried to delete a ByteMatchSet that is still referenced by a Rule.
• You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
DeleteIPSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an IPSet. You can't delete an IPSet if it's still used in any Rules or if it still includes any IP addresses.

If you just want to remove an IPSet from a Rule, use UpdateRule (p. 458).

To permanently delete an IPSet from AWS WAF, perform the following steps:

1. Update the IPSet to remove IP address ranges, if any. For more information, see UpdateIPSet (p. 440).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteIPSet request.
3. Submit a DeleteIPSet request.

Request Syntax

```
{
  "ChangeToken": "string",
  "IPSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 296)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**IPSetId (p. 296)**

The IPSetId of the IPSet (p. 898) that you want to delete. IPSetId is returned by CreateIPSet (p. 247) and by ListIPSets (p. 382).

Type: String

DeleteIPSet

Pattern: .\S.*
Required: Yes

Response Syntax

```
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 297)**

The ChangeToken that you used to submit the DeleteIPSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:
- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.
HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteLoggingConfiguration
Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes the LoggingConfiguration (p. 904) from the specified web ACL.

**Request Syntax**

```json
{
   "ResourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 299)**

The Amazon Resource Name (ARN) of the web ACL from which you want to delete the LoggingConfiguration (p. 904).

Type: String


Pattern: .*\S.*

Required: Yes

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeletePermissionPolicy
Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an IAM policy from the specified RuleGroup.

The user making the request must be the owner of the RuleGroup.

**Request Syntax**

```
{
    "ResourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters (p. 1049)**.

The request accepts the following data in JSON format.

**ResourceArn (p. 301)**

The Amazon Resource Name (ARN) of the RuleGroup from which you want to delete the policy.

The user making the request must be the owner of the RuleGroup.

Type: String


Pattern: .*

Required: Yes

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

**Errors**

For information about the errors that are common to all actions, see **Common Errors (p. 1051)**.

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRateBasedRule
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RateBasedRule (p. 908). You can't delete a rule if it's still used in any WebACL objects or if it still includes any predicates, such as ByteMatchSet objects.

If you just want to remove a rule from a WebACL, use UpdateWebACL (p. 475).

To permanently delete a RateBasedRule from AWS WAF, perform the following steps:

1. Update the RateBasedRule to remove predicates, if any. For more information, see UpdateRateBasedRule (p. 445).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteRateBasedRule request.
3. Submit a DeleteRateBasedRule request.

Request Syntax

```json
{
  "ChangeToken": "string",
  "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 303)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

RuleId (p. 303)

The RuleId of the RateBasedRule (p. 908) that you want to delete. RuleId is returned by CreateRateBasedRule (p. 250) and by ListRateBasedRules (p. 388).

Type: String

Pattern: \.*\S.*
Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 304)**

The ChangeToken that you used to submit the DeleteRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: \.*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn’t empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**WAFTagOperationException**

HTTP Status Code: 400

**WAFTagOperationInternalErrorException**

HTTP Status Code: 500

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRegexMatchSet

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RegexMatchSet (p. 910). You can’t delete a RegexMatchSet if it’s still used in any Rules or if it still includes any RegexMatchTuples objects (any filters).

If you just want to remove a RegexMatchSet from a Rule, use UpdateRule (p. 458).

To permanently delete a RegexMatchSet, perform the following steps:

1. Update the RegexMatchSet to remove filters, if any. For more information, see UpdateRegexMatchSet (p. 450).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteRegexMatchSet request.
3. Submit a DeleteRegexMatchSet request.

Request Syntax

```json
{
  "ChangeToken": "string",
  "RegexMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 306)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

RegexMatchSetId (p. 306)

The RegexMatchSetId of the RegexMatchSet (p. 910) that you want to delete. RegexMatchSetId is returned by CreateRegexMatchSet (p. 255) and by ListRegexMatchSets (p. 391).

Type: String

Pattern: .*S.*
Required: Yes

Response Syntax

```json
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

**ChangeToken (p. 307)**

The ChangeToken that you used to submit the DeleteRegexMatchSet request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 335)](#).

Type: String


Pattern: .*S.*

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](#).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRegexPatternSet

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RegexPatternSet (p. 917). You can't delete a RegexPatternSet if it's still used in any RegexMatchSet or if the RegexPatternSet is not empty.

Request Syntax

```
{
  "ChangeToken": "string",
  "RegexPatternSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 309)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes

**RegexPatternSetId (p. 309)**

The RegexPatternSetId of the RegexPatternSet (p. 917) that you want to delete. RegexPatternSetId is returned by CreateRegexPatternSet (p. 258) and by ListRegexPatternSets (p. 394).

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```
{
  "ChangeToken": "string"
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 309)

The ChangeToken that you used to submit the DeleteRegexPatternSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.
HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRule
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a Rule (p. 921). You can't delete a Rule if it's still used in any WebACL objects or if it still includes any predicates, such as ByteMatchSet objects.

If you just want to remove a Rule from a WebACL, use UpdateWebACL (p. 475).

To permanently delete a Rule from AWS WAF, perform the following steps:
1. Update the Rule to remove predicates, if any. For more information, see UpdateRule (p. 458).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteRule request.
3. Submit a DeleteRule request.

Request Syntax

```
{
  "ChangeToken": "string",
  "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 312)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**RuleId (p. 312)**

The RuleId of the Rule (p. 921) that you want to delete. RuleId is returned by CreateRule (p. 261) and by ListRules (p. 400).

Type: String


Pattern: .\S.*
**Required**: Yes

**Response Syntax**

```json
{
    "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 313)**

The `ChangeToken` that you used to submit the `DeleteRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S. *

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.
HTTP Status Code: 400
**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:
- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400
**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400
**WAFTagOperationException**

HTTP Status Code: 400
**WAFTagOperationInternalErrorException**

HTTP Status Code: 500

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRuleGroup
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RuleGroup (p. 923). You can't delete a RuleGroup if it's still used in any WebACL objects or if it still includes any rules.

If you just want to remove a RuleGroup from a WebACL, use UpdateWebACL (p. 475).

To permanently delete a RuleGroup from AWS WAF, perform the following steps:
1. Update the RuleGroup to remove rules, if any. For more information, see UpdateRuleGroup (p. 462).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteRuleGroup request.
3. Submit a DeleteRuleGroup request.

Request Syntax

```
{
  "ChangeToken": "string",
  "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 315)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

RuleGroupId (p. 315)

The RuleGroupId of the RuleGroup (p. 923) that you want to delete. RuleGroupId is returned by CreateRuleGroup (p. 265) and by ListRuleGroups (p. 397).

Type: String

Pattern: .*\S.*
Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 316)**

The `ChangeToken` that you used to submit the `DeleteRuleGroup` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 335)`.

- **Type:** String
- **Length Constraints:** Minimum length of 1. Maximum length of 128.
- **Pattern:** .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
• You tried to delete a **Rule** that still contains one or more **ByteMatchSet** objects or other predicates.
• You tried to delete a **ByteMatchSet** that contains one or more **ByteMatchTuple** objects.
• You tried to delete an **IPSet** that references one or more IP addresses.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:
• You tried to delete a **ByteMatchSet** that is still referenced by a **Rule**.
• You tried to delete a **Rule** that is still referenced by a **WebACL**.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**WAFTagOperationException**

HTTP Status Code: 400

**WAFTagOperationInternalErrorException**

HTTP Status Code: 500

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
DeleteSizeConstraintSet

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a SizeConstraintSet (p. 934). You can't delete a SizeConstraintSet if it's still used in any Rules or if it still includes any SizeConstraint (p. 931) objects (any filters).

If you just want to remove a SizeConstraintSet from a Rule, use UpdateRule (p. 458).

To permanently delete a SizeConstraintSet, perform the following steps:

1. Update the SizeConstraintSet to remove filters, if any. For more information, see UpdateSizeConstraintSet (p. 466).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteSizeConstraintSet request.
3. Submit a DeleteSizeConstraintSet request.

Request Syntax

```json
{
  "ChangeToken": "string",
  "SizeConstraintSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 318)
The value returned by the most recent call to GetChangeToken (p. 333).
Type: String
Pattern: .\S.*
Required: Yes

SizeConstraintSetId (p. 318)
The SizeConstraintSetId of the SizeConstraintSet (p. 934) that you want to delete. SizeConstraintSetId is returned by CreateSizeConstraintSet (p. 269) and by ListSizeConstraintSets (p. 403).
Type: String
Pattern: .*\S.*
Required: Yes

Response Syntax

```json
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

**ChangeToken (p. 319)**

The ChangeToken that you used to submit the DeleteSizeConstraintSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteSqlInjectionMatchSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a SqlInjectionMatchSet (p. 938). You can't delete a SqlInjectionMatchSet if it's still used in any Rules or if it still contains any SqlInjectionMatchTuple (p. 942) objects.

If you just want to remove a SqlInjectionMatchSet from a Rule, use UpdateRule (p. 458).

To permanently delete a SqlInjectionMatchSet from AWS WAF, perform the following steps:
1. Update the SqlInjectionMatchSet to remove filters, if any. For more information, see UpdateSqlInjectionMatchSet (p. 471).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of a DeleteSqlInjectionMatchSet request.
3. Submit a DeleteSqlInjectionMatchSet request.

Request Syntax

```
{
  "ChangeToken": "string",
  "SqlInjectionMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 321)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**SqlInjectionMatchSetId (p. 321)**

The SqlInjectionMatchSetId of the SqlInjectionMatchSet (p. 938) that you want to delete. SqlInjectionMatchSetId is returned by CreateSqlInjectionMatchSet (p. 273) and by ListSqlInjectionMatchSets (p. 406).

Type: String

Pattern: .*\S.*
Required: Yes

**Response Syntax**

```json
{
   "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 322)**

The `ChangeToken` that you used to submit the `DeleteSqlInjectionMatchSet` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 335)`.

- Type: String
- Pattern: .*\S.*

**Errors**

For information about the errors that are common to all actions, see `Common Errors (p. 1051)`.

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn’t empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:
- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteWebACL

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a WebACL (p. 951). You can’t delete a WebACL if it still contains any Rules.

To delete a WebACL, perform the following steps:

1. Update the WebACL to remove Rules, if any. For more information, see **UpdateWebACL (p. 475)**.
2. Use **GetChangeToken (p. 333)** to get the change token that you provide in the **ChangeToken** parameter of a **DeleteWebACL** request.
3. Submit a **DeleteWebACL** request.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "WebACLId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters (p. 1049)](https://aws.amazon.com/documentation).

The request accepts the following data in JSON format.

**ChangeToken (p. 324)**

The value returned by the most recent call to **GetChangeToken (p. 333)**.

Type: String


Pattern: `.*\S.*`

Required: Yes

**WebACLId (p. 324)**

The WebACLId of the [WebACL (p. 951)](https://aws.amazon.com/documentation) that you want to delete. WebACLId is returned by **CreateWebACL (p. 277)** and by **ListWebACLs (p. 415)**.

Type: String


Pattern: `.*\S.*`

Required: Yes
Response Syntax

```json
{
    "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 325)**

The ChangeToken that you used to submit the DeleteWebACL request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 335)](#).

Type: String


Pattern: .*[s]*

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](#).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

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DeleteXssMatchSet
Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an **XssMatchSet** (p. 955). You can't delete an **XssMatchSet** if it's still used in any **Rules** or if it still contains any **XssMatchTuple** (p. 959) objects.

If you just want to remove an **XssMatchSet** from a **Rule**, use **UpdateRule** (p. 458).

To permanently delete an **XssMatchSet** from AWS WAF, perform the following steps:

1. Update the **XssMatchSet** to remove filters, if any. For more information, see **UpdateXssMatchSet** (p. 480).
2. Use **GetChangeToken** (p. 333) to get the change token that you provide in the **ChangeToken** parameter of a **DeleteXssMatchSet** request.
3. Submit a **DeleteXssMatchSet** request.

**Request Syntax**

```json
{
   "ChangeToken": "string",
   "XssMatchSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters** (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken** (p. 327)

The value returned by the most recent call to **GetChangeToken** (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**XssMatchSetId** (p. 327)

The **XssMatchSetId** of the **XssMatchSet** (p. 955) that you want to delete. **XssMatchSetId** is returned by **CreateXssMatchSet** (p. 286) and by **ListXssMatchSets** (p. 418).

Type: String

Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 328)**

The ChangeToken that you used to submit the DeleteXssMatchSet request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 335)](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_GetChangeTokenStatus.html).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_Errors.html).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFFinvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

---

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)
GetByteMatchSet

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the ByteMatchSet (p. 878) specified by ByteMatchSetId.

Request Syntax

```
{
   "ByteMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ByteMatchSetId (p. 330)

The ByteMatchSetId of the ByteMatchSet (p. 878) that you want to get. ByteMatchSetId is returned by CreateByteMatchSet (p. 239) and by ListByteMatchSets (p. 376).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
   "ByteMatchSet": {
      "ByteMatchSetId": "string",
      "ByteMatchTuples": [
      {
         "FieldToMatch": {
            "Data": "string",
            "Type": "string"
         },
         "PositionalConstraint": "string",
         "TargetString": blob,
         "TextTransformation": "string"
      }
      ],
      "Name": "string"
   }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ByteMatchSet (p. 330)

Information about the ByteMatchSet (p. 878) that you specified in the GetByteMatchSet request. For more information, see the following topics:
- ByteMatchSet (p. 878): Contains ByteMatchSetId, ByteMatchTuples, and Name
- ByteMatchTuples: Contains an array of ByteMatchTuple (p. 882) objects. Each ByteMatchTuple object contains FieldToMatch (p. 887), PositionalConstraint, TargetString, and TextTransformation
- FieldToMatch (p. 887): Contains Data and Type

Type: ByteMatchSet (p. 878) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetChangeToken
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

When you want to create, update, or delete AWS WAF objects, get a change token and include the change token in the create, update, or delete request. Change tokens ensure that your application doesn't submit conflicting requests to AWS WAF.

Each create, update, or delete request must use a unique change token. If your application submits a GetChangeToken request and then submits a second GetChangeToken request before submitting a create, update, or delete request, the second GetChangeToken request returns the same value as the first GetChangeToken request.

When you use a change token in a create, update, or delete request, the status of the change token changes to PENDING, which indicates that AWS WAF is propagating the change to all AWS WAF servers. Use GetChangeTokenStatus to determine the status of your change token.

Response Syntax

```json
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 333)

The ChangeToken that you used in the request. Use this value in a GetChangeTokenStatus request to get the current status of the request.

Type: String


Pattern: .\S+. *

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFFInternalError Exception

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetChangeTokenStatus

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the status of a ChangeToken that you got by calling GetChangeToken (p. 333). ChangeTokenStatus is one of the following values:

- **PROVISIONED**: You requested the change token by calling GetChangeToken, but you haven't used it yet in a call to create, update, or delete an AWS WAF object.
- **PENDING**: AWS WAF is propagating the create, update, or delete request to all AWS WAF servers.
- **INSYNC**: Propagation is complete.

**Request Syntax**

```json
{
   "ChangeToken": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 335)**

The change token for which you want to get the status. This change token was previously returned in the GetChangeToken response.

- Type: String
- Pattern: .*\S.*
- Required: Yes

**Response Syntax**

```json
{
   "ChangeTokenStatus": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**ChangeTokenStatus (p. 335)**

The status of the change token.

Type: String

Valid Values: PROVISIONED | PENDING | INSYNC

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetGeoMatchSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the GeoMatchSet (p. 891) that is specified by GeoMatchSetId.

Request Syntax

```json
{
   "GeoMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

GeoMatchSetId (p. 337)

The GeoMatchSetId of the GeoMatchSet (p. 891) that you want to get. GeoMatchSetId is returned by CreateGeoMatchSet (p. 243) and by ListGeoMatchSets (p. 379).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
   "GeoMatchSet": {
      "GeoMatchConstraints": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
      "GeoMatchSetId": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**GeoMatchSet (p. 337)**

Information about the GeoMatchSet (p. 891) that you specified in the GetGeoMatchSet request. This includes the **Type**, which for a GeoMatchConstraint is always **Country**, as well as the **Value**, which is the identifier for a specific country.

- **Type**: GeoMatchSet (p. 891) object

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

- **WAFInternalErrorException**
  
  The operation failed because of a system problem, even though the request was valid. Retry your request.

  - HTTP Status Code: 500

- **WAFInvalidAccountException**

  The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

  - HTTP Status Code: 400

- **WAFNonexistentItemException**

  The operation failed because the referenced object doesn't exist.

  - HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetIPSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the IPSet (p. 898) that is specified by IPSetId.

Request Syntax

```
{
   "IPSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**IPSetId (p. 339)**

The IPSetId of the IPSet (p. 898) that you want to get. IPSetId is returned by CreateIPSet (p. 247) and by ListIPSets (p. 382).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
   "IPSet": {
      "IPSetDescriptors": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
      "IPSetId": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**IPSet (p. 339)**

Information about the **IPSet (p. 898)** that you specified in the `GetIPSet` request. For more information, see the following topics:

- **IPSet (p. 898)**: Contains `IPSetDescriptors`, `IPSetId`, and `Name`
- **IPSetDescriptors**: Contains an array of **IPSetDescriptor (p. 900)** objects. Each IPSetDescriptor object contains `Type` and `Value`

Type: **IPSet (p. 898)** object

**Errors**

For information about the errors that are common to all actions, see **Common Errors (p. 1051)**.

- **WAFInternalErrorException**
  
  The operation failed because of a system problem, even though the request was valid. Retry your request.

  HTTP Status Code: 500

- **WAFInvalidAccountException**

  The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

  HTTP Status Code: 400

- **WAFNonexistentItemException**

  The operation failed because the referenced object doesn't exist.

  HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetLoggingConfiguration
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the LoggingConfiguration (p. 904) for the specified web ACL.

Request Syntax

```json
{
  "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceArn (p. 341)

The Amazon Resource Name (ARN) of the web ACL for which you want to get the LoggingConfiguration (p. 904).

Type: String


Pattern: .*$

Required: Yes

Response Syntax

```json
{
  "LoggingConfiguration": {
    "LogDestinationConfigs": [ "string" ],
    "RedactedFields": [ {
      "Data": "string",
      "Type": "string"
    } ],
    "ResourceArn": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**LoggingConfiguration (p. 341)**

The `LoggingConfiguration (p. 904)` for the specified web ACL.

Type: `LoggingConfiguration (p. 904)` object

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetPermissionPolicy

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the IAM policy attached to the RuleGroup.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceArn (p. 343)

The Amazon Resource Name (ARN) of the RuleGroup for which you want to get the policy.

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```
{
   "Policy": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Policy (p. 343)

The IAM policy attached to the specified RuleGroup.

Type: String

Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRateBasedRule

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RateBasedRule (p. 908) that is specified by the RuleId that you included in the GetRateBasedRule request.

Request Syntax

```
{
    "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

RuleId (p. 345)

The RuleId of the RateBasedRule (p. 908) that you want to get. RuleId is returned by CreateRateBasedRule (p. 250) and by ListRateBasedRules (p. 388).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
    "Rule": {
        "MatchPredicates": [
            {
                "DataId": "string",
                "Negated": boolean,
                "Type": "string"
            },
            {
                "MetricName": "string",
                "Name": "string",
                "RateKey": "string",
                "RateLimit": number,
                "RuleId": "string"
            }
        ],
    }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**Rule (p. 345)**

Information about the `RateBasedRule (p. 908)` that you specified in the `GetRateBasedRule` request.

Type: `RateBasedRule (p. 908)` object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRateBasedRuleManagedKeys

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of IP addresses currently being blocked by the RateBasedRule (p. 908) that is specified by the RuleId. The maximum number of managed keys that will be blocked is 10,000. If more than 10,000 addresses exceed the rate limit, the 10,000 addresses with the highest rates will be blocked.

Request Syntax

```
{
    "NextMarker": "string",
    "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

NextMarker (p. 347)

A null value and not currently used. Do not include this in your request.

Type: String


Pattern: .\S.*

Required: No

RuleId (p. 347)

The RuleId of the RateBasedRule (p. 908) for which you want to get a list of ManagedKeys. RuleId is returned by CreateRateBasedRule (p. 250) and by ListRateBasedRules (p. 388).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
    "ManagedKeys": [ "string" ],
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ManagedKeys (p. 347)

An array of IP addresses that currently are blocked by the specified RateBasedRule (p. 908).

Type: Array of strings

NextMarker (p. 347)

A null value and not currently used.

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.
HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRegexMatchSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the
developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer
Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global
use.

Returns the RegexMatchSet (p. 910) specified by RegexMatchSetId.

Request Syntax

```json
{
   "RegexMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**RegexMatchSetId (p. 350)**

The RegexMatchSetId of the RegexMatchSet (p. 910) that you want to get. RegexMatchSetId is returned by CreateRegexMatchSet (p. 255) and by ListRegexMatchSets (p. 391).

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
   "RegexMatchSet": {
      "Name": "string",
      "RegexMatchSetId": "string",
      "RegexMatchTuples": [
      {
         "FieldToMatch": {
            "Data": "string",
            "Type": "string"
        },
        "RegexPatternSetId": "string",
        "TextTransformation": "string"
      }
      ]
   }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**RegexMatchSet (p. 350)**

Information about the `RegexMatchSet` (p. 910) that you specified in the `GetRegexMatchSet` request. For more information, see `RegexMatchTuple` (p. 914).

Type: `RegexMatchSet` (p. 910) object

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](#).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRegexPatternSet

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RegexPatternSet (p. 917) specified by RegexPatternSetId.

Request Syntax

```json
{
    "RegexPatternSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

RegexPatternSetId (p. 352)

The RegexPatternSetId of the RegexPatternSet (p. 917) that you want to get. RegexPatternSetId is returned by CreateRegexPatternSet (p. 258) and by ListRegexPatternSets (p. 394).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
    "RegexPatternSet": {
        "Name": "string",
        "RegexPatternSetId": "string",
        "RegexPatternStrings": [ "string" ]
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
RegexPatternSet (p. 352)

Information about the RegexPatternSet (p. 917) that you specified in the GetRegexPatternSet request, including the identifier of the pattern set and the regular expression patterns you want AWS WAF to search for.

Type: RegexPatternSet (p. 917) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRule
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the Rule (p. 921) that is specified by the RuleId that you included in the GetRule request.

Request Syntax

```json
{
  "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**RuleId (p. 354)**

The RuleId of the Rule (p. 921) that you want to get. RuleId is returned by CreateRule (p. 261) and by ListRules (p. 400).

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
  "Rule": {
    "MetricName": "string",
    "Name": "string",
    "Predicates": [
      {
        "DataId": "string",
        "Negated": boolean,
        "Type": "string"
      },
      ...
    ],
    "RuleId": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**Rule (p. 354)**

Information about the Rule (p. 921) that you specified in the GetRule request. For more information, see the following topics:

- Rule (p. 921): Contains MetricName, Name, an array of Predicate objects, and RuleId
- Predicate (p. 906): Each Predicate object contains DataId, Negated, and Type

Type: Rule (p. 921) object

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRuleGroup
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RuleGroup (p. 923) that is specified by the RuleGroupId that you included in the GetRuleGroup request.

To view the rules in a rule group, use ListActivatedRulesInRuleGroup (p. 373).

Request Syntax

```
{
  "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

RuleGroupId (p. 356)

The RuleGroupId of the RuleGroup (p. 923) that you want to get. RuleGroupId is returned by CreateRuleGroup (p. 265) and by ListRuleGroups (p. 397).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
  "RuleGroup": {
    "MetricName": "string",
    "Name": "string",
    "RuleGroupId": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
RuleGroup (p. 356)

Information about the RuleGroup (p. 923) that you specified in the GetRuleGroup request.

Type: RuleGroup (p. 923) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetSampledRequests

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Get detailed information about a specified number of requests--a sample--that AWS WAF randomly selects from among the first 5,000 requests that your AWS resource received during a time range that you choose. You can specify a sample size of up to 500 requests, and you can specify any time range in the previous three hours.

GetSampledRequests returns a time range, which is usually the time range that you specified. However, if your resource (such as an Amazon CloudFront distribution) received 5,000 requests before the specified time range elapsed, GetSampledRequests returns an updated time range. This new time range indicates the actual period during which AWS WAF selected the requests in the sample.

**Request Syntax**

```json
{
  "MaxItems": number,
  "RuleId": "string",
  "TimeWindow": {
    "EndTime": number,
    "StartTime": number
  },
  "WebAclId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**MaxItems (p. 358)**

The number of requests that you want AWS WAF to return from among the first 5,000 requests that your AWS resource received during the time range. If your resource received fewer requests than the value of MaxItems, GetSampledRequests returns information about all of them.

Type: Long


Required: Yes

**RuleId (p. 358)**

RuleId is one of three values:

- The RuleId of the Rule or the RuleGroupId of the RuleGroup for which you want GetSampledRequests to return a sample of requests.
- `Default_Action`, which causes GetSampledRequests to return a sample of the requests that didn't match any of the rules in the specified WebACL.
Type: String


Pattern: .*\S.*

Required: Yes

**TimeWindow (p. 358)**

The start date and time and the end date and time of the range for which you want `GetSampledRequests` to return a sample of requests. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

Type: `TimeWindow (p. 948)` object

Required: Yes

**WebAclId (p. 358)**

The `WebAclId` of the WebACL for which you want `GetSampledRequests` to return a sample of requests.

Type: String


Pattern: .*\S.*

Required: Yes

**Response Syntax**

```json
{
  "PopulationSize": number,
  "SampledRequests": [
    {
      "Action": "string",
      "Request": {
        "ClientIP": "string",
        "Country": "string",
        "Headers": [
          {
            "Name": "string",
            "Value": "string"
          }
        ],
        "HTTPVersion": "string",
        "Method": "string",
        "URI": "string"
      },
      "RuleWithinRuleGroup": "string",
      "Timestamp": number,
      "Weight": number
    }
  ],
  "TimeWindow": {
    "EndTime": number,
    "StartTime": number
  }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**PopulationSize (p. 359)**

The total number of requests from which GetSampledRequests got a sample of MaxItems requests. If PopulationSize is less than MaxItems, the sample includes every request that your AWS resource received during the specified time range.

Type: Long

**SampledRequests (p. 359)**

A complex type that contains detailed information about each of the requests in the sample.

Type: Array of SampledHTTPRequest (p. 929) objects

**TimeWindow (p. 359)**

Usually, TimeWindow is the time range that you specified in the GetSampledRequests request. However, if your AWS resource received more than 5,000 requests during the time range that you specified in the request, GetSampledRequests returns the time range for the first 5,000 requests. Times are in Coordinated Universal Time (UTC) format.

Type: TimeWindow (p. 948) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetSizeConstraintSet

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the SizeConstraintSet (p. 934) specified by SizeConstraintSetId.

**Request Syntax**

```json
{
    "SizeConstraintSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**SizeConstraintSetId (p. 362)**

The SizeConstraintSetId of the SizeConstraintSet (p. 934) that you want to get. SizeConstraintSetId is returned by CreateSizeConstraintSet (p. 269) and by ListSizeConstraintSets (p. 403).

Type: String


Pattern: .*\S.*

Required: Yes

**Response Syntax**

```json
{
    "SizeConstraintSet": {
        "Name": "string",
        "SizeConstraints": [
            {
                "ComparisonOperator": "string",
                "FieldToMatch": {
                    "Data": "string",
                    "Type": "string"
                },
                "Size": number,
                "TextTransformation": "string"
            }
        ],
        "SizeConstraintSetId": "string"
    }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

SizeConstraintSet (p. 362)

Information about the SizeConstraintSet (p. 934) that you specified in the GetSizeConstraintSet request. For more information, see the following topics:

- **SizeConstraintSet (p. 934)**: Contains SizeConstraintSetId, SizeConstraints, and Name
- **SizeConstraints**: Contains an array of SizeConstraint (p. 931) objects. Each SizeConstraint object contains FieldToMatch (p. 887), TextTransformation, ComparisonOperator, and Size
- **FieldToMatch (p. 887)**: Contains Data and Type

Type: SizeConstraintSet (p. 934) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
GetSqlInjectionMatchSet
Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see [AWS WAF Classic](https://aws.amazon.com/waf-classic) in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/wafv2/latest/developerguide/gs-wafv2.html). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the SqlInjectionMatchSet (p. 938) that is specified by SqlInjectionMatchSetId.

**Request Syntax**

```json
{
  "SqlInjectionMatchSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters](https://docs.aws.amazon.com/waf/latest/developerguide/waf-gs.html#common-parameters).

The request accepts the following data in JSON format.

**SqlInjectionMatchSetId (p. 365)**


- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: .\S.*
- **Required**: Yes

**Response Syntax**

```json
{
  "SqlInjectionMatchSet": {
    "Name": "string",
    "SqlInjectionMatchSetId": "string",
    "SqlInjectionMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "TextTransformation": "string"
      }
    ]
  }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

SqlInjectionMatchSet (p. 365)

Information about the SqlInjectionMatchSet (p. 938) that you specified in the GetSqlInjectionMatchSet request. For more information, see the following topics:

- SqlInjectionMatchSet (p. 938): Contains Name, SqlInjectionMatchSetId, and an array of SqlInjectionMatchTuple objects
- SqlInjectionMatchTuple (p. 942): Each SqlInjectionMatchTuple object contains FieldToMatch and TextTransformation
- FieldToMatch (p. 887): Contains Data and Type

Type: SqlInjectionMatchSet (p. 938) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetWebACL

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the WebACL (p. 951) that is specified by WebACLId.

Request Syntax

```json
{
    "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

WebACLId (p. 368)

The WebACLId of the WebACL (p. 951) that you want to get. WebACLId is returned by CreateWebACL (p. 277) and by ListWebACLs (p. 415).

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
    "WebACL": {
        "DefaultAction": {
            "Type": "string"
        },
        "MetricName": "string",
        "Name": "string",
        "Rules": [
            {
                "Action": {
                    "Type": "string"
                },
                "ExcludedRules": [
                    {
                        "RuleId": "string"
                    }
                ],
                "OverrideAction": {
```
"Type": "string",
},
"Priority": number,
"RuleId": "string",
"Type": "string"
}
],
"WebACLArn": "string",
"WebACLId": "string"
}

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### WebACL (p. 368)

Information about the WebACL (p. 951) that you specified in the GetWebACL request. For more information, see the following topics:

- **WebACL (p. 951):** Contains DefaultAction, MetricName, Name, an array of Rule objects, and WebACLId
- **DefaultAction** (Data type is WafAction (p. 949)): Contains Type
- **Rules:** Contains an array of ActivatedRule objects, which contain Action, Priority, and RuleId
- **Action:** Contains Type

Type: WebACL (p. 951) object

## Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

### WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

### WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

### WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
**GetXssMatchSet**

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the XssMatchSet (p. 955) that is specified by XssMatchSetId.

**Request Syntax**

```json
{
   "XssMatchSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters** (p. 1049).

The request accepts the following data in JSON format.

**XssMatchSetId (p. 371)**

The XssMatchSetId of the XssMatchSet (p. 955) that you want to get. XssMatchSetId is returned by CreateXssMatchSet (p. 286) and by ListXssMatchSets (p. 418).

Type: String


Pattern: .\S.*

Required: Yes

**Response Syntax**

```json
{
   "XssMatchSet": {
      "Name": "string",
      "XssMatchSetId": "string",
      "XssMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**XssMatchSet (p. 371)**

Information about the XssMatchSet (p. 955) that you specified in the GetXssMatchSet request. For more information, see the following topics:

- XssMatchSet (p. 955): Contains Name, XssMatchSetId, and an array of XssMatchTuple objects
- XssMatchTuple (p. 959): Each XssMatchTuple object contains FieldToMatch and TextTransformation
- FieldToMatch (p. 887): Contains Data and Type

Type: XssMatchSet (p. 955) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListActivatedRulesInRuleGroup

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of ActivatedRule (p. 875) objects.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string",
    "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 373)

Specifies the number of ActivatedRules that you want AWS WAF to return for this request. If you have more ActivatedRules than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of ActivatedRules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 373)

If you specify a value for Limit and you have more ActivatedRules than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of ActivatedRules. For the second and subsequent ListActivatedRulesInRuleGroup requests, specify the value of NextMarker from the previous response to get information about another batch of ActivatedRules.

Type: String


Pattern: .\S.*

Required: No

RuleGroupId (p. 373)

The RuleGroupId of the RuleGroup (p. 923) for which you want to get a list of ActivatedRule (p. 875) objects.
Response Syntax

```json
{
  "ActivatedRules": [
    {
      "Action": {
        "Type": "string"
      },
      "ExcludedRules": [
        {
          "RuleId": "string"
        }
      ],
      "OverrideAction": {
        "Type": "string"
      },
      "Priority": number,
      "RuleId": "string",
      "Type": "string"
    }
  ],
  "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ActivatedRules (p. 374)**

An array of `ActivatedRules` objects.

Type: Array of `ActivatedRule (p. 875)` objects

**NextMarker (p. 374)**

If you have more `ActivatedRules` than the number that you specified for Limit in the request, the response includes a `NextMarker` value. To list more `ActivatedRules`, submit another `ListActivatedRulesInRuleGroup` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String


Pattern: .*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListByteMatchSets

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of ByteMatchSetSummary (p. 880) objects.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 376)

Specifies the number of ByteMatchSet objects that you want AWS WAF to return for this request. If you have more ByteMatchSets objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of ByteMatchSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 376)

If you specify a value for Limit and you have more ByteMatchSets than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of ByteMatchSets. For the second and subsequent ListByteMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of ByteMatchSets.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
    
}
```
"ByteMatchSets": [
  {
    "ByteMatchSetId": "string",
    "Name": "string"
  }
],
"NextMarker": "string"

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ByteMatchSets (p. 376)**

An array of ByteMatchSetSummary (p. 880) objects.

Type: Array of ByteMatchSetSummary (p. 880) objects

**NextMarker (p. 376)**

If you have more ByteMatchSet objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more ByteMatchSet objects, submit another ListByteMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListGeoMatchSets
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of GeoMatchSetSummary (p. 893) objects in the response.

Request Syntax

```json
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 379)

Specifies the number of GeoMatchSet objects that you want AWS WAF to return for this request. If you have more GeoMatchSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of GeoMatchSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 379)

If you specify a value for Limit and you have more GeoMatchSets than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of GeoMatchSet objects. For the second and subsequent ListGeoMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of GeoMatchSet objects.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
}
```
"GeoMatchSets": [
    {
        "GeoMatchSetId": "string",
        "Name": "string"
    }
],
"NextMarker": "string"

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

GeoMatchSets (p. 379)

An array of GeoMatchSetSummary (p. 893) objects.

Type: Array of GeoMatchSetSummary (p. 893) objects

NextMarker (p. 379)

If you have more GeoMatchSet objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more GeoMatchSet objects, submit another ListGeoMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String
Pattern: .*[S.]*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListIPSets
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of IPSetSummary (p. 902) objects in the response.

Request Syntax

```json
{
  "Limit": number,
  "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 382)

Specifies the number of IPSet objects that you want AWS WAF to return for this request. If you have more IPSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of IPSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 382)

AWS WAF returns a NextMarker value in the response that allows you to list another group of IPSets. For the second and subsequent ListIPSets requests, specify the value of NextMarker from the previous response to get information about another batch of IPSets.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
  "IPSets": [
    
  
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**IPSets (p. 382)**

An array of **IPSetSummary (p. 902)** objects.

Type: Array of **IPSetSummary (p. 902)** objects

**NextMarker (p. 382)**

To list more **IPSet** objects, submit another **ListIPSets** request, and in the next request use the **NextMarker** response value as the **NextMarker** value.

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListLoggingConfigurations

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of LoggingConfiguration (p. 904) objects.

**Request Syntax**

```json
{
   "Limit": number,
   "NextMarker": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 385)**

Specifies the number of LoggingConfigurations that you want AWS WAF to return for this request. If you have more LoggingConfigurations than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of LoggingConfigurations.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

**NextMarker (p. 385)**

If you specify a value for Limit and you have more LoggingConfigurations than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of LoggingConfigurations. For the second and subsequent ListLoggingConfigurations requests, specify the value of NextMarker from the previous response to get information about another batch of ListLoggingConfigurations.

Type: String


Pattern: .\S.*

Required: No

**Response Syntax**

```json
{
}
```
"LoggingConfigurations": [
    {
        "LogDestinationConfigs": [ "string" ],
        "RedactedFields": [ {
            "Data": "string",
            "Type": "string"
        } ],
        "ResourceArn": "string"
    },
    "NextMarker": "string"
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfigurations (p. 385)

An array of LoggingConfiguration (p. 904) objects.

Type: Array of LoggingConfiguration (p. 904) objects

NextMarker (p. 385)

If you have more LoggingConfigurations than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more LoggingConfigurations, submit another ListLoggingConfigurations request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListRateBasedRules
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleSummary (p. 927) objects.

Request Syntax

```json
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 388)

Specifies the number of Rules that you want AWS WAF to return for this request. If you have more Rules than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of Rules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 388)

If you specify a value for Limit and you have more Rules than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of Rules. For the second and subsequent ListRateBasedRules requests, specify the value of NextMarker from the previous response to get information about another batch of Rules.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
   "NextMarker": "string",
}
```
"Rules": [
  {
    "Name": "string",
    "RuleId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 388)**

If you have more `Rules` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `Rules`, submit another `ListRateBasedRules` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String


Pattern: .\S.*

**Rules (p. 388)**

An array of `RuleSummary (p. 927)` objects.

Type: Array of `RuleSummary (p. 927)` objects

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)].

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListRegexMatchSets
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RegexMatchSetSummary (p. 912) objects.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 391)

Specifies the number of RegexMatchSet objects that you want AWS WAF to return for this request. If you have more RegexMatchSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of RegexMatchSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 391)

If you specify a value for Limit and you have more RegexMatchSet objects than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of ByteMatchSets. For the second and subsequent ListRegexMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of RegexMatchSet objects.

Type: String


Pattern: .*\S.*

Required: No

Response Syntax

```json
{
}
```
"NextMarker": "string",
"RegexMatchSets": [
  {
    "Name": "string",
    "RegexMatchSetId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 391)**

If you have more RegexMatchSet objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more RegexMatchSet objects, submit another ListRegexMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .*\S.*

**RegexMatchSets (p. 391)**

An array of RegexMatchSetSummary (p. 912) objects.

Type: Array of RegexMatchSetSummary (p. 912) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListRegexPatternSets
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RegexPatternSetSummary (p. 919) objects.

Request Syntax

```json
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 394)**

Specifies the number of RegexPatternSet objects that you want AWS WAF to return for this request. If you have more RegexPatternSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of RegexPatternSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

**NextMarker (p. 394)**

If you specify a value for Limit and you have more RegexPatternSet objects than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of RegexPatternSet objects. For the second and subsequent ListRegexPatternSets requests, specify the value of NextMarker from the previous response to get information about another batch of RegexPatternSet objects.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
}
```
"NextMarker": "string",
"RegexPatternSets": [
  {
    "Name": "string",
    "RegexPatternSetId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 394)

If you have more RegexPatternSet objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more RegexPatternSet objects, submit another ListRegexPatternSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .*

RegexPatternSets (p. 394)

An array of RegexPatternSetSummary (p. 919) objects.

Type: Array of RegexPatternSetSummary (p. 919) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListRuleGroups
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleGroup (p. 923) objects.

Request Syntax

```
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 397)

Specifies the number of RuleGroups that you want AWS WAF to return for this request. If you have more RuleGroups than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of RuleGroups.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 397)

If you specify a value for Limit and you have more RuleGroups than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of RuleGroups. For the second and subsequent ListRuleGroups requests, specify the value of NextMarker from the previous response to get information about another batch of RuleGroups.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```
{
    "NextMarker": "string",
}
```
"RuleGroups": [
  {
    "Name": "string",
    "RuleGroupId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 397)

If you have more RuleGroups than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more RuleGroups, submit another ListRuleGroups request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

RuleGroups (p. 397)

An array of RuleGroup (p. 923) objects.

Type: Array of RuleGroupSummary (p. 925) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
• AWS SDK for Ruby V3
ListRules
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleSummary (p. 927) objects.

Request Syntax

```json
{
  "Limit": number,
  "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 400)

Specifies the number of Rules that you want AWS WAF to return for this request. If you have more Rules than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of Rules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 400)

If you specify a value for Limit and you have more Rules than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of Rules. For the second and subsequent ListRules requests, specify the value of NextMarker from the previous response to get information about another batch of Rules.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
  "NextMarker": "string",
}
```
"Rules": [  
  {  
    "Name": "string",
    "RuleId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 400)

If you have more Rules than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more Rules, submit another ListRules request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

Rules (p. 400)

An array of RuleSummary (p. 927) objects.

Type: Array of RuleSummary (p. 927) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListSizeConstraintSets

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide. For the latest version of **AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of **SizeConstraintSetSummary (p. 936)** objects.

**Request Syntax**

```json
{
    "Limit": number,
    "NextMarker": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters (p. 1049)**.

The request accepts the following data in JSON format.

**Limit (p. 403)**

Specifies the number of **SizeConstraintSet** objects that you want AWS WAF to return for this request. If you have more **SizeConstraintSets** objects than the number you specify for Limit, the response includes a **NextMarker** value that you can use to get another batch of **SizeConstraintSet** objects.

- Type: Integer
- Valid Range: Minimum value of 0. Maximum value of 100.

- Required: No

**NextMarker (p. 403)**

If you specify a value for Limit and you have more **SizeConstraintSets** than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of **SizeConstraintSets**. For the second and subsequent **ListSizeConstraintSets** requests, specify the value of NextMarker from the previous response to get information about another batch of **SizeConstraintSets**.

- Type: String
- Pattern: .\S.*

- Required: No

**Response Syntax**

```json
{
}
```
"NextMarker": "string",
"SizeConstraintSets": [
  {
    "Name": "string",
    "SizeConstraintSetId": "string"
  }
]
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 403)**

If you have more SizeConstraintSet objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more SizeConstraintSet objects, submit another ListSizeConstraintSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

**SizeConstraintSets (p. 403)**

An array of SizeConstraintSetSummary (p. 936) objects.

Type: Array of SizeConstraintSetSummary (p. 936) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAValidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListSqlInjectionMatchSets
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of SqlInjectionMatchSet (p. 938) objects.

Request Syntax

```
{
  "Limit": number,
  "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 406)

Specifies the number of SqlInjectionMatchSet (p. 938) objects that you want AWS WAF to return for this request. If you have more SqlInjectionMatchSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of Rules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 406)

If you specify a value for Limit and you have more SqlInjectionMatchSet (p. 938) objects than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of SqlInjectionMatchSets. For the second and subsequent ListSqlInjectionMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of SqlInjectionMatchSets.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```
{
```

406
ListSqlInjectionMatchSets

"NextMarker": "string",
"SqlInjectionMatchSets": [
  {
    "Name": "string",
    "SqlInjectionMatchSetId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 406)**

If you have more SqlInjectionMatchSet (p. 938) objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more SqlInjectionMatchSet objects, submit another ListSqlInjectionMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

**SqlInjectionMatchSets (p. 406)**

An array of SqlInjectionMatchSetSummary (p. 940) objects.

Type: Array of SqlInjectionMatchSetSummary (p. 940) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListSubscribedRuleGroups

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleGroup (p. 923) objects that you are subscribed to.

**Request Syntax**

```json
{
   "Limit": number,
   "NextMarker": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 409)**

Specifies the number of subscribed rule groups that you want AWS WAF to return for this request. If you have more objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

**NextMarker (p. 409)**

If you specify a value for Limit and you have more ByteMatchSetssubscribed rule groups than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of subscribed rule groups. For the second and subsequent ListSubscribedRuleGroupsRequest requests, specify the value of NextMarker from the previous response to get information about another batch of subscribed rule groups.

Type: String


Pattern: .*

Required: No

**Response Syntax**

```json
{
}
```
"NextMarker": "string",
"RuleGroups": [
  {
    "MetricName": "string",
    "Name": "string",
    "RuleGroupId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 409)

If you have more objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more objects, submit another ListSubscribedRuleGroups request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

RuleGroups (p. 409)

An array of RuleGroup (p. 923) objects.

Type: Array of SubscribedRuleGroupSummary (p. 944) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalError Exception

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItem Exception

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListTagsForResource

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Retrieves the tags associated with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "ResourceARN": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 412)

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 412)

Type: String


Pattern: .*

Required: No

ResourceARN (p. 412)

Type: String

Response Syntax

```json
{
    "NextMarker": "string",
    "TagInfoForResource": {
        "ResourceARN": "string",
        "TagList": [
            {
                "Key": "string",
                "Value": "string"
            }
        ]
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 413)**

Type: String


Pattern: .*$

**TagInfoForResource (p. 413)**

Type: TagInfoForResource (p. 947) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFBadRequestException**

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidParameterValue**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
• You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFTagOperationException

HTTP Status Code: 400
WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListWebACLs

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of WebACLSummary (p. 953) objects in the response.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 415)

Specifies the number of WebACL objects that you want AWS WAF to return for this request. If you have more WebACL objects than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of WebACL objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 415)

If you specify a value for Limit and you have more WebACL objects than the number that you specify for Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of WebACL objects. For the second and subsequent ListWebACLs requests, specify the value of NextMarker from the previous response to get information about another batch of WebACL objects.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```
{
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 415)

If you have more WebACL objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more WebACL objects, submit another ListWebACLs request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

WebACLs (p. 415)

An array of WebACLSummary (p. 953) objects.

Type: Array of WebACLSummary (p. 953) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListXssMatchSets
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of XssMatchSet (p. 955) objects.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 418)

Specifies the number of XssMatchSet (p. 955) objects that you want AWS WAF to return for this request. If you have more XssMatchSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of Rules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 418)

If you specify a value for Limit and you have more XssMatchSet (p. 955) objects than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of XssMatchSets. For the second and subsequent ListXssMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of XssMatchSets.

Type: String


Pattern: .*

Required: No

Response Syntax

```json
{

```

418
"NextMarker": "string",
"XssMatchSets": [
  {
    "Name": "string",
    "XssMatchSetId": "string"
  }
]

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 418)**

If you have more XssMatchSet (p. 955) objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more XssMatchSet objects, submit another ListXssMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

**XssMatchSets (p. 418)**

An array of XssMatchSetSummary (p. 957) objects.

Type: Array of XssMatchSetSummary (p. 957) objects

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
PutLoggingConfiguration
Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://docs.aws.amazon.com/waf/latest/classic) in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates a [LoggingConfiguration](https://docs.aws.amazon.com/waf/latest/classic/preset-logging.html) with a specified web ACL.

You can access information about all traffic that AWS WAF inspects using the following steps:

1. **Create an Amazon Kinesis Data Firehose.**

   Create the data firehose with a PUT source and in the region that you are operating. However, if you are capturing logs for Amazon CloudFront, always create the firehose in US East (N. Virginia).

   Give the data firehose a name that starts with the prefix `aws-waf-logs-`. For example, `aws-waf-logs-us-east-2-analytics`.

   **Note**
   Do not create the data firehose using a Kinesis stream as your source.

2. **Associate that firehose to your web ACL using a PutLoggingConfiguration request.**

When you successfully enable logging using a PutLoggingConfiguration request, AWS WAF will create a service linked role with the necessary permissions to write logs to the Amazon Kinesis Data Firehose. For more information, see [Logging Web ACL Traffic Information](https://docs.aws.amazon.com/waf/latest/developerguide/logging.html) in the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/).

**Request Syntax**

```json
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [ {
         "Data": "string",
         "Type": "string"
      } ],
      "ResourceArn": "string"
   }
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters](https://docs.aws.amazon.com/waf/latest/developerguide/common-parameters.html).

The request accepts the following data in JSON format.

**LoggingConfiguration** ([p. 421](https://docs.aws.amazon.com/waf/latest/developerguide/logging-configuration.html))

The Amazon Kinesis Data Firehose that contains the inspected traffic information, the redacted fields details, and the Amazon Resource Name (ARN) of the web ACL to monitor.
Note
When specifying Type in RedactedFields, you must use one of the following values: URI, QUERY_STRING, HEADER, or METHOD.

Type: LoggingConfiguration (p. 904) object
Required: Yes

Response Syntax

```json
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [ {
         "Data": "string",
         "Type": "string"
      } ],
      "ResourceArn": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfiguration (p. 422)

The LoggingConfiguration (p. 904) that you submitted in the request.

Type: LoggingConfiguration (p. 904) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFServiceLinkedRoleErrorException

AWS WAF is not able to access the service linked role. This can be caused by a previous PutLoggingConfiguration request, which can lock the service linked role for about 20 seconds. Please try your request again. The service linked role can also be locked by a previous DeleteServiceLinkedRole request, which can lock the role for 15 minutes or more. If you recently made a DeleteServiceLinkedRole, wait at least 15 minutes and try the request again.
If you receive this same exception again, you will have to wait additional time until the role is unlocked.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
PutPermissionPolicy
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Attaches an IAM policy to the specified resource. The only supported use for this action is to share a RuleGroup across accounts.

The PutPermissionPolicy is subject to the following restrictions:

- You can attach only one policy with each PutPermissionPolicy request.
- The policy must include an Effect, Action and Principal.
- Effect must specify Allow.
- The Action in the policy must be waf:UpdateWebACL, waf-regional:UpdateWebACL, waf:GetRuleGroup and waf-regional:GetRuleGroup. Any extra or wildcard actions in the policy will be rejected.
- The policy cannot include a Resource parameter.
- The ARN in the request must be a valid RuleGroup ARN and the RuleGroup must exist in the same region.
- The user making the request must be the owner of the RuleGroup.
- Your policy must be composed using IAM Policy version 2012-10-17.

For more information, see Policies and permissions in IAM.

An example of a valid policy parameter is shown in the Examples section below.

Request Syntax

```
{
  "Policy": "string",
  "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Policy (p. 424)

The policy to attach to the specified RuleGroup.

Type: String


Pattern: .\S.*
Required: Yes

**ResourceArn (p. 424)**

The Amazon Resource Name (ARN) of the RuleGroup to which you want to attach the policy.

*Type: String*


*Pattern: .*\S.**

Required: Yes

### Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

### Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)].

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidPermissionPolicyException**

The operation failed because the specified policy is not in the proper format.

The policy is subject to the following restrictions:

- You can attach only one policy with each PutPermissionPolicy request.
- The policy must include an `Effect`, `Action` and `Principal`.
- `Effect` must specify `Allow`.
- The `Action` in the policy must be `waf:UpdateWebACL`, `waf-regional:UpdateWebACL`, `waf:GetRuleGroup` and `waf-regional:GetRuleGroup`. Any extra or wildcard actions in the policy will be rejected.
- The policy cannot include a `Resource` parameter.
- The ARN in the request must be a valid WAF RuleGroup ARN and the RuleGroup must exist in the same region.
- The user making the request must be the owner of the RuleGroup.
- Your policy must be composed using IAM Policy version 2012-10-17.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400
Examples

Example policy parameter - No escape characters

This example illustrates one usage of PutPermissionPolicy.

```json
{
   "Version": "2012-10-17",
   "Statement": [
      {
         "Effect": "Allow",
         "Principal": {
            "AWS": "arn:aws:iam::111111111111:user/MyUserName"
         },
         "Action": [
            "waf:UpdateWebACL",
            "waf-regional:UpdateWebACL",
            "waf:GetRuleGroup",
            "waf-regional:GetRuleGroup"
         ]
      }
   ]
}
```

Example policy parameter - ()

This example illustrates one usage of PutPermissionPolicy.

```json
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
TagResource
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates tags with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can use this action to tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Request Syntax

```
{
    "ResourceARN": "string",
    "Tags": [
        {
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceARN (p. 427)

Type: String


Pattern: .\S.*

Required: Yes

Tags (p. 427)

Type: Array of Tag (p. 946) objects

Array Members: Minimum number of 1 item.

Required: Yes
Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFBadRequestException

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UntagResource
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Request Syntax

```
{
   "ResourceARN": "string",
   "TagKeys": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceARN (p. 430)

Type: String


Pattern: .*\S.*

Required: Yes

TagKeys (p. 430)

Type: Array of strings

Array Members: Minimum number of 1 item.


Pattern: .*\S.*

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFBadRequestException
HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateByteMatchSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ByteMatchTuple (p. 882) objects (filters) in a ByteMatchSet (p. 878). For each ByteMatchTuple object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a ByteMatchSetUpdate object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the User-Agent header.
- The bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to look for. For more information, including how you specify the values for the AWS WAF API and the AWS CLI or AWS SDKs, see TargetString in the ByteMatchTuple (p. 882) data type.
- Where to look, such as at the beginning or the end of a query string.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

For example, you can add a ByteMatchSetUpdate object that matches web requests in which User-Agent headers contain the string BadBot. You can then configure AWS WAF to block those requests.

To create and configure a ByteMatchSet, perform the following steps:

1. Create a ByteMatchSet. For more information, see CreateByteMatchSet (p. 239).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of an UpdateByteMatchSet request.
3. Submit an UpdateByteMatchSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
  "ByteMatchSetId": "string",
  "ChangeToken": "string",
  "Updates": [
    {
      "Action": "string",
      "ByteMatchTuple": {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "PositionalConstraint": "string",
        "TargetString": blob,
        "TextTransformation": "string"
      }
    }
  ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ByteMatchSetId (p. 432)**

The `ByteMatchSetId` of the `ByteMatchSet (p. 878)` that you want to update. `ByteMatchSetId` is returned by `CreateByteMatchSet (p. 239)` and by `ListByteMatchSets (p. 376)`.

Type: String


Pattern: `.*\S.*`

Required: Yes

**ChangeToken (p. 432)**

The value returned by the most recent call to `GetChangeToken (p. 333)`.

Type: String


Pattern: `.*\S.*`

Required: Yes

**Updates (p. 432)**

An array of `ByteMatchSetUpdate` objects that you want to insert into or delete from a `ByteMatchSet (p. 878)`. For more information, see the applicable data types:

- `ByteMatchSetUpdate (p. 881)`: Contains `Action` and `ByteMatchTuple`
- `ByteMatchTuple (p. 882)`: Contains `FieldToMatch`, `PositionalConstraint`, `TargetString`, and `TextTransformation`
- `FieldToMatch (p. 887)`: Contains `Data` and `Type`

Type: Array of `ByteMatchSetUpdate (p. 881)` objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```json
{
    "ChangeToken": "string"
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 433)

The ChangeToken that you used to submit the UpdateByteMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
AWS WAFV2 API Reference
UpdateByteMatchSet

- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400
WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateGeoMatchSet

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes GeoMatchConstraint (p. 889) objects in a GeoMatchSet. For each GeoMatchConstraint object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change an GeoMatchConstraint object, you delete the existing object and add a new one.
- The Type. The only valid value for Type is Country.
- The Value, which is a two character code for the country to add to the GeoMatchConstraint object. Valid codes are listed in GeoMatchConstraint:Value (p. 889).

To create and configure a GeoMatchSet, perform the following steps:

1. Submit a CreateGeoMatchSet (p. 243) request.
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of an UpdateGeoMatchSet (p. 436) request.
3. Submit an UpdateGeoMatchSet request to specify the country that you want AWS WAF to watch for.

When you update a GeoMatchSet, you specify the country that you want to add and/or the country that you want to delete. If you want to change a country, you delete the existing country and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
    "ChangeToken": "string",
    "GeoMatchSetId": "string",
    "Updates": [
        {
            "Action": "string",
            "GeoMatchConstraint": {
                "Type": "string",
                "Value": "string"
            }
        }
    ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.
UpdateGeoMatchSet

**ChangeToken (p. 436)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**GeoMatchSetId (p. 436)**

The GeoMatchSetId of the GeoMatchSet (p. 891) that you want to update. GeoMatchSetId is returned by CreateGeoMatchSet (p. 243) and by ListGeoMatchSets (p. 379).

Type: String


Pattern: .\S.*

Required: Yes

**Updates (p. 436)**

An array of GeoMatchSetUpdate objects that you want to insert into or delete from an GeoMatchSet (p. 891). For more information, see the applicable data types:

- GeoMatchSetUpdate (p. 894): Contains Action and GeoMatchConstraint
- GeoMatchConstraint (p. 889): Contains Type and Value

You can have only one Type and Value per GeoMatchConstraint. To add multiple countries, include multiple GeoMatchSetUpdate objects in your request.

Type: Array of GeoMatchSetUpdate (p. 894) objects

Array Members: Minimum number of 1 item.

Required: Yes

**Response Syntax**

```json
{
   "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 437)**

The ChangeToken that you used to submit the UpdateGeoMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String
AWS WAFV2 API Reference
UpdateGeoMatchSet


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

• You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
• You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
• You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
• You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
• You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

• You specified an invalid parameter name.
• You specified an invalid value.
• You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.
HTTP Status Code: 400

**WAFNonexistentContainerException**

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateIPSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes IPSetDescriptor (p. 900) objects in an IPSet. For each IPSetDescriptor object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change an IPSetDescriptor object, you delete the existing object and add a new one.
- The IP address version, IPv4 or IPv6.
- The IP address in CIDR notation, for example, 192.0.2.0/24 (for the range of IP addresses from 192.0.2.0 to 192.0.2.255) or 192.0.2.44/32 (for the individual IP address 192.0.2.44).

AWS WAF supports IPv4 address ranges: /8 and any range between /16 through /32. AWS WAF supports IPv6 address ranges: /24, /32, /48, /56, /64, and /128. For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

IPv6 addresses can be represented using any of the following formats:

- 1111:0000:0000:0000:0000:0000:0000:0111/128
- 1111:0:0:0:0:0:0:0111/128
- 1111::0111/128
- 1111::111/128
- 1111::111/128

You use an IPSet to specify which web requests you want to allow or block based on the IP addresses that the requests originated from. For example, if you're receiving a lot of requests from one or a small number of IP addresses and you want to block the requests, you can create an IPSet that specifies those IP addresses, and then configure AWS WAF to block the requests.

To create and configure an IPSet, perform the following steps:

1. Submit a CreateIPSet (p. 247) request.
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of an UpdateIPSet (p. 440) request.
3. Submit an UpdateIPSet request to specify the IP addresses that you want AWS WAF to watch for.

When you update an IPSet, you specify the IP addresses that you want to add and the IP addresses that you want to delete. If you want to change an IP address, delete the existing IP address and add the new one.

You can update a maximum of 1,000 addresses in a single request.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

{  

"ChangeToken": "string",
"IPSetId": "string",
"Updates": [
  {
    "Action": "string",
    "IPSetDescriptor": {
      "Type": "string",
      "Value": "string"
    }
  }
]

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 440)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes

**IPSetId (p. 440)**

The IPSetId of the IPSet (p. 898) that you want to update. IPSetId is returned by CreateIPSet (p. 247) and by ListIPSets (p. 382).

Type: String


Pattern: .*\S.*

Required: Yes

**Updates (p. 440)**

An array of IPSetUpdate objects that you want to insert into or delete from an IPSet (p. 898). For more information, see the applicable data types:

- **IPSetUpdate (p. 903)**: Contains Action and IPSetDescriptor
- **IPSetDescriptor (p. 900)**: Contains Type and Value

You can specify a maximum of 1,000 addresses in a single request, for example, in a single request you can insert 999 addresses and delete 1 address, but you can’t insert 999 addresses and delete 2 addresses.

Type: Array of IPSetUpdate (p. 903) objects

Array Members: Minimum number of 1 item.

Required: Yes
Response Syntax

```json
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 442)**

The ChangeToken that you used to submit the UpdateIPSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S+. *

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
UpdateIPSet

- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:
- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
UpdateIPSet

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRateBasedRule

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes **Predicate** (p. 906) objects in a rule and updates the **RateLimit** in the rule.

Each **Predicate** object identifies a predicate, such as a **ByteMatchSet** (p. 878) or an **IPSet** (p. 898), that specifies the web requests that you want to block or count. The **RateLimit** specifies the number of requests every five minutes that triggers the rule.

If you add more than one predicate to a **RateBasedRule**, a request must match all the predicates and exceed the **RateLimit** to be counted or blocked. For example, suppose you add the following to a **RateBasedRule**:

- An **IPSet** that matches the IP address 192.0.2.44/32
- A **ByteMatchSet** that matches BadBot in the **User-Agent** header

Further, you specify a **RateLimit** of 1,000.

You then add the **RateBasedRule** to a **WebACL** and specify that you want to block requests that satisfy the rule. For a request to be blocked, it must come from the IP address 192.0.2.44 and the **User-Agent** header in the request must contain the value BadBot. Further, requests that match these two conditions must be received at a rate of more than 1,000 every five minutes. If the rate drops below this limit, AWS WAF no longer blocks the requests.

As a second example, suppose you want to limit requests to a particular page on your site. To do this, you could add the following to a **RateBasedRule**:

- A **ByteMatchSet** with **FieldToMatch** of URI
- A **PositionalConstraint** of STARTS_WITH
- A **TargetString** of login

Further, you specify a **RateLimit** of 1,000.

By adding this **RateBasedRule** to a **WebACL**, you could limit requests to your login page without affecting the rest of your site.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "RateLimit": number,
  "RuleId": "string",
  "Updates": [
    {
      "Action": "string",
      "Predicate": {
        "DataId": "string",
        "Negated": boolean,
        "Type": "string"
      }
    }
  ]
}
```

445
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 445)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes

**RateLimit (p. 445)**

The maximum number of requests, which have an identical value in the field specified by the RateKey, allowed in a five-minute period. If the number of requests exceeds the RateLimit and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

**RuleId (p. 445)**

The RuleId of the RateBasedRule that you want to update. RuleId is returned by CreateRateBasedRule and by ListRateBasedRules (p. 388).

Type: String


Pattern: .*\S.*

Required: Yes

**Updates (p. 445)**

An array of RuleUpdate objects that you want to insert into or delete from a RateBasedRule (p. 908).

Type: Array of RuleUpdate (p. 928) objects

Required: Yes

Response Syntax

```json
{
   "ChangeToken": "string"
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 446)

The ChangeToken that you used to submit the UpdateRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String
Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
• You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
• You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
• You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
• You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:
• You tried to delete a ByteMatchSet that is still referenced by a Rule.
• You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
UpdateRegexMatchSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes RegexMatchTuple (p. 914) objects (filters) in a RegexMatchSet (p. 910). For each RegexMatchSetUpdate object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a RegexMatchSetUpdate object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the User-Agent header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet (p. 917).
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

For example, you can create a RegexPatternSet that matches any requests with User-Agent headers that contain the string B[a@]dB[o0]t. You can then configure AWS WAF to reject those requests.

To create and configure a RegexMatchSet, perform the following steps:

1. Create a RegexMatchSet. For more information, see CreateRegexMatchSet (p. 255).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of an UpdateRegexMatchSet request.
3. Submit an UpdateRegexMatchSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the identifier of the RegexPatternSet that contain the regular expression patterns you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
    "ChangeToken": "string",
    "RegexMatchSetId": "string",
    "Updates": [
        {
            "Action": "string",
            "RegexMatchTuple": {
                "FieldToMatch": {
                    "Data": "string",
                    "Type": "string"
                },
                "RegexPatternSetId": "string",
                "TextTransformation": "string"
            }
        }
    ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 450)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

RegexMatchSetId (p. 450)

The RegexMatchSetId of the RegexMatchSet (p. 910) that you want to update. RegexMatchSetId is returned by CreateRegexMatchSet (p. 255) and by ListRegexMatchSets (p. 391).

Type: String


Pattern: .\S.*

Required: Yes

Updates (p. 450)

An array of RegexMatchSetUpdate objects that you want to insert into or delete from a RegexMatchSet (p. 910). For more information, see RegexMatchTuple (p. 914).

Type: Array of RegexMatchSetUpdate (p. 913) objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
"ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 451)

The ChangeToken that you used to submit the UpdateRegexMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).
Type: String
Pattern: .\S.*

Errors
For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFDisallowedNameException
The name specified is invalid.
HTTP Status Code: 400

WAFInternalErrorException
The operation failed because of a system problem, even though the request was valid. Retry your request.
HTTP Status Code: 500

WAFInvalidAccountException
The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.
HTTP Status Code: 400

WAFInvalidOperationException
The operation failed because there was nothing to do. For example:
- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.
HTTP Status Code: 400

WAFLimitsExceededException
The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.
HTTP Status Code: 400

WAFNonexistentContainerException
The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.
HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRegexPatternSet
Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes RegexPatternString objects in a RegexPatternSet (p. 917). For each RegexPatternString object, you specify the following values:

- Whether to insert or delete the RegexPatternString.
- The regular expression pattern that you want to insert or delete. For more information, see RegexPatternSet (p. 917).

For example, you can create a RegexPatternString such as B[a@]dB[o0]t. AWS WAF will match this RegexPatternString to:

- BadBot
- BadB0t
- B@dBot
- B@dB0t

To create and configure a RegexPatternSet, perform the following steps:

1. Create a RegexPatternSet. For more information, see CreateRegexPatternSet (p. 258).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of an UpdateRegexPatternSet request.
3. Submit an UpdateRegexPatternSet request to specify the regular expression pattern that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the **AWS WAF Developer Guide**.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "RegexPatternSetId": "string",
  "Updates": [
    {
      "Action": "string",
      "RegexPatternString": "string"
    }
  ]
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters (p. 1049)**.
The request accepts the following data in JSON format.

**ChangeToken (p. 454)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**RegexPatternSetId (p. 454)**

The RegexPatternSetId of the RegexPatternSet (p. 917) that you want to update. RegexPatternSetId is returned by CreateRegexPatternSet (p. 258) and by ListRegexPatternSets (p. 394).

Type: String


Pattern: .\S.*

Required: Yes

**Updates (p. 454)**

An array of RegexPatternSetUpdate objects that you want to insert into or delete from a RegexPatternSet (p. 917).

Type: Array of RegexPatternSetUpdate (p. 920) objects

Array Members: Minimum number of 1 item.

Required: Yes

**Response Syntax**

```json
{
  "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 455)**

The ChangeToken that you used to submit the UpdateRegexPatternSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFFatalInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFFatalInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFFatalInvalidTargetException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFFatalInvalidRegexPatternException**

The regular expression (regex) you specified in RegexPatternString is invalid.

HTTP Status Code: 400

**WAFFatalLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

**WAFFatalNonexistentTargetException**

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400
WAFNonexistentItemException
The operation failed because the referenced object doesn't exist.
HTTP Status Code: 400

WAFStaleDataException
The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.
HTTP Status Code: 400

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:
- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRule
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes Predicate (p. 906) objects in a Rule. Each Predicate object identifies a predicate, such as a ByteMatchSet (p. 878) or an IPSet (p. 898), that specifies the web requests that you want to allow, block, or count. If you add more than one predicate to a Rule, a request must match all of the specifications to be allowed, blocked, or counted. For example, suppose that you add the following to a Rule:

- A ByteMatchSet that matches the value BadBot in the User-Agent header
- An IPSet that matches the IP address 192.0.2.44

You then add the Rule to a WebACL and specify that you want to block requests that satisfy the Rule. For a request to be blocked, the User-Agent header in the request must contain the value BadBot and the request must originate from the IP address 192.0.2.44.

To create and configure a Rule, perform the following steps:

1. Create and update the predicates that you want to include in the Rule.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRule (p. 458) request.
4. Submit an UpdateRule request to add predicates to the Rule.

If you want to replace one ByteMatchSet or IPSet with another, you delete the existing one and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
  "ChangeToken": "string",
  "RuleId": "string",
  "Updates": [
    {
      "Action": "string",
      "Predicate": {
        "DataId": "string",
        "Negated": boolean,
        "Type": "string"
      }
    }
  ]
}
```
**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 458)**

- The value returned by the most recent call to GetChangeToken (p. 333).
- Type: String
- Pattern: .*\S.*
- Required: Yes

**RuleId (p. 458)**

- The RuleId of the Rule that you want to update. RuleId is returned by CreateRule and by ListRules (p. 400).
- Type: String
- Pattern: .*\S.*
- Required: Yes

**Updates (p. 458)**

- An array of RuleUpdate objects that you want to insert into or delete from a Rule (p. 921). For more information, see the applicable data types:
  - RuleUpdate (p. 928): Contains Action and Predicate
  - Predicate (p. 906): Contains DataId, Negated, and Type
  - FieldToMatch (p. 887): Contains Data and Type
- Type: Array of RuleUpdate (p. 928) objects
- Required: Yes

**Response Syntax**

```
{
  "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 459)**

- The ChangeToken that you used to submit the UpdateRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).
Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
**WAFLimitsExceeded**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

**WAFNonexistentContainerException**

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRuleGroup

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ActivatedRule (p. 875) objects in a RuleGroup.

You can only insert REGULAR rules into a rule group.

You can have a maximum of ten rules per rule group.

To create and configure a RuleGroup, perform the following steps:

1. Create and update the Rules that you want to include in the RuleGroup. See CreateRule (p. 261).
2. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRuleGroup (p. 462) request.
3. Submit an UpdateRuleGroup request to add Rules to the RuleGroup.

If you want to replace one Rule with another, you delete the existing one and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the **AWS WAF Developer Guide**.

**Request Syntax**

```
{
  "ChangeToken": "string",
  "RuleGroupId": "string",
  "Updates": [
    {
      "Action": "string",
      "ActivatedRule": {
        "Action": {
          "Type": "string"
        },
        "ExcludedRules": [
          {
            "RuleId": "string"
          }
        ],
        "OverrideAction": {
          "Type": "string"
        },
        "Priority": number,
        "RuleId": "string",
        "Type": "string"
      }
    }
  ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 462)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .\S.*

Required: Yes

**RuleGroupId (p. 462)**

The `RuleGroupId` of the `RuleGroup (p. 923)` that you want to update. `RuleGroupId` is returned by CreateRuleGroup (p. 265) and by ListRuleGroups (p. 397).

Type: String


Pattern: .\S.*

Required: Yes

**Updates (p. 462)**

An array of `RuleGroupUpdate (p. 926)` objects that you want to insert into or delete from a `RuleGroup (p. 923)`.

You can only insert REGULAR rules into a rule group.

ActivatedRule|OverrideAction applies only when updating or adding a RuleGroup to a `WebACL`. In this case you do not use ActivatedRule|Action. For all other update requests, ActivatedRule|Action is used instead of ActivatedRule|OverrideAction.

Type: Array of `RuleGroupUpdate (p. 926)` objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
    "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
**ChangeToken (p. 463)**

The ChangeToken that you used to submit the UpdateRuleGroup request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.
HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateSizeConstraintSet

Service: AWS WAF Classic

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes SizeConstraint (p. 931) objects (filters) in a SizeConstraintSet (p. 934). For each SizeConstraint object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a SizeConstraintSetUpdate object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to evaluate, such as the length of a query string or the length of the User-Agent header.
- Whether to perform any transformations on the request, such as converting it to lowercase, before checking its length. Note that transformations of the request body are not supported because the AWS resource forwards only the first 8192 bytes of your request to AWS WAF.

You can only specify a single type of TextTransformation.

- A ComparisonOperator used for evaluating the selected part of the request against the specified Size, such as equals, greater than, less than, and so on.
- The length, in bytes, that you want AWS WAF to watch for in selected part of the request. The length is computed after applying the transformation.

For example, you can add a SizeConstraintSetUpdate object that matches web requests in which the length of the User-Agent header is greater than 100 bytes. You can then configure AWS WAF to block those requests.

To create and configure a SizeConstraintSet, perform the following steps:

1. Create a SizeConstraintSet. For more information, see CreateSizeConstraintSet (p. 269).
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of an UpdateSizeConstraintSet request.
3. Submit an UpdateSizeConstraintSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "SizeConstraintSetId": "string",
  "Updates": [
    {
      "Action": "string",
      "SizeConstraint": {
        "ComparisonOperator": "string",
        "FieldToMatch": {
          "Data": "string"
        }
      }
    }
  ]
}
```
UpdateSizeConstraintSet

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 466)

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes

SizeConstraintSetId (p. 466)

The SizeConstraintSetId of the SizeConstraintSet (p. 934) that you want to update. SizeConstraintSetId is returned by CreateSizeConstraintSet (p. 269) and by ListSizeConstraintSets (p. 403).

Type: String


Pattern: .*\S.*

Required: Yes

Updates (p. 466)

An array of SizeConstraintSetUpdate objects that you want to insert into or delete from a SizeConstraintSet (p. 934). For more information, see the applicable data types:

- SizeConstraintSetUpdate (p. 937): Contains Action and SizeConstraint
- SizeConstraint (p. 931): Contains FieldToMatch, TextTransformation, ComparisonOperator, and Size
- FieldToMatch (p. 887): Contains Data and Type

Type: Array of SizeConstraintSetUpdate (p. 937) objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```json
{
```
"ChangeToken": "string"
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 467)

The ChangeToken that you used to submit the UpdateSizeConstraintSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

• You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
• You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
• You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
• You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

• You tried to delete a ByteMatchSet that is still referenced by a Rule.
• You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
UpdateSqlInjectionMatchSet
Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes SqlInjectionMatchTuple (p. 942) objects (filters) in a SqlInjectionMatchSet (p. 938). For each SqlInjectionMatchTuple object, you specify the following values:

- **Action**: Whether to insert the object into or delete the object from the array. To change a SqlInjectionMatchTuple, you delete the existing object and add a new one.
- **FieldToMatch**: The part of web requests that you want AWS WAF to inspect and, if you want AWS WAF to inspect a header or custom query parameter, the name of the header or parameter.
- **TextTransformation**: Which text transformation, if any, to perform on the web request before inspecting the request for snippets of malicious SQL code.

You can only specify a single type of TextTransformation.

You use SqlInjectionMatchSet objects to specify which Amazon CloudFront requests that you want to allow, block, or count. For example, if you’re receiving requests that contain snippets of SQL code in the query string and you want to block the requests, you can create a SqlInjectionMatchSet with the applicable settings, and then configure AWS WAF to block the requests.

To create and configure a SqlInjectionMatchSet, perform the following steps:

1. Submit a CreateSqlInjectionMatchSet (p. 273) request.
2. Use GetChangeToken (p. 333) to get the change token that you provide in the ChangeToken parameter of an UpdateIPSet (p. 440) request.
3. Submit an UpdateSqlInjectionMatchSet request to specify the parts of web requests that you want AWS WAF to inspect for snippets of SQL code.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the **AWS WAF Developer Guide**.

**Request Syntax**

```json
{
"ChangeToken": "string",
"SqlInjectionMatchSetId": "string",
"Updates": [
  {
    "Action": "string",
    "SqlInjectionMatchTuple": {
      "FieldToMatch": {
        "Data": "string",
        "Type": "string"
      },
      "TextTransformation": "string"
    }
  }
]}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 471)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes

**SqlInjectionMatchSetId (p. 471)**

The SqlInjectionMatchSetId of the SqlInjectionMatchSet that you want to update. SqlInjectionMatchSetId is returned by CreateSqlInjectionMatchSet (p. 273) and by ListSqlInjectionMatchSets (p. 406).

Type: String


Pattern: .*\S.*

Required: Yes

**Updates (p. 471)**

An array of SqlInjectionMatchSetUpdate objects that you want to insert into or delete from a SqlInjectionMatchSet (p. 938). For more information, see the applicable data types:

- SqlInjectionMatchSetUpdate (p. 941): Contains Action and SqlInjectionMatchTuple
- SqlInjectionMatchTuple (p. 942): Contains FieldToMatch and TextTransformation
- FieldToMatch (p. 887): Contains Data and Type

Type: Array of SqlInjectionMatchSetUpdate (p. 941) objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```json
{
    "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
**ChangeToken (p. 472)**

The `ChangeToken` that you used to submit the `UpdateSqlInjectionMatchSet` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 335)`.

Type: String


Pattern: .*\S.*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
• You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
• You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
• You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
• You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
Inserts or deletes ActivatedRule (p. 875) objects in a WebACL. Each Rule identifies web requests that you want to allow, block, or count. When you update a WebACL, you specify the following values:

- A default action for the WebACL, either ALLOW or BLOCK. AWS WAF performs the default action if a request doesn't match the criteria in any of the Rules in a WebACL.
- The Rules that you want to add or delete. If you want to replace one Rule with another, you delete the existing Rule and add the new one.
- For each Rule, whether you want AWS WAF to allow requests, block requests, or count requests that match the conditions in the Rule.
- The order in which you want AWS WAF to evaluate the Rules in a WebACL. If you add more than one Rule to a WebACL, AWS WAF evaluates each request against the Rules in order based on the value of Priority. (The Rule that has the lowest value for Priority is evaluated first.) When a web request matches all the predicates (such as ByteMatchSets and IPSets) in a Rule, AWS WAF immediately takes the corresponding action, allow or block, and doesn't evaluate the request against the remaining Rules in the WebACL, if any.

To create and configure a WebACL, perform the following steps:

1. Create and update the predicates that you want to include in Rules. For more information, see CreateByteMatchSet (p. 239), UpdateByteMatchSet (p. 432), CreateIPSet (p. 247), UpdateIPSet (p. 440), CreateSqlInjectionMatchSet (p. 273), and UpdateSqlInjectionMatchSet (p. 471).
2. Create and update the Rules that you want to include in the WebACL. For more information, see CreateRule (p. 261) and UpdateRule (p. 458).
4. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateWebACL (p. 475) request.
5. Submit an UpdateWebACL request to specify the Rules that you want to include in the WebACL, to specify the default action, and to associate the WebACL with an Amazon CloudFront distribution.

The ActivatedRule can be a rule group. If you specify a rule group as your ActivatedRule, you can exclude specific rules from that rule group.

If you already have a rule group associated with a web ACL and want to submit an UpdateWebACL request to exclude certain rules from that rule group, you must first remove the rule group from the web ACL, the re-insert it again, specifying the excluded rules. For details, see ActivatedRule:ExcludedRules (p. 875).

Be aware that if you try to add a RATE_BASED rule to a web ACL without setting the rule type when first creating the rule, the UpdateWebACL (p. 475) request will fail because the request tries to add a REGULAR rule (the default rule type) with the specified ID, which does not exist.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.
Request Syntax

```
{
    "ChangeToken": "string",
    "DefaultAction": {
        "Type": "string"
    },
    "Updates": [
        {
            "Action": "string",
            "ActivatedRule": {
                "Action": {
                    "Type": "string"
                },
                "ExcludedRules": [
                    {
                        "RuleId": "string"
                    }
                ],
                "OverrideAction": {
                    "Type": "string"
                },
                "Priority": number,
                "RuleId": "string",
                "Type": "string"
            }
        }
    ],
    "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 476)**

The value returned by the most recent call to `GetChangeToken (p. 333)`.

Type: String


Pattern: .*

Required: Yes

**DefaultAction (p. 476)**

Type: `WafAction (p. 949)` object

Required: No

**Updates (p. 476)**

An array of updates to make to the `WebACL (p. 951)`.

An array of `WebACLUpdate` objects that you want to insert into or delete from a `WebACL (p. 951)`.

For more information, see the applicable data types:
UpdateWebACL

- WebACLUpdate (p. 954): Contains Action and ActivatedRule
- ActivatedRule (p. 875): Contains Action, OverrideAction, Priority, RuleId, and Type. ActivatedRule|OverrideAction applies only when updating or adding a RuleGroup to a WebACL. In this case, you do not use ActivatedRule|Action. For all other update requests, ActivatedRule|Action is used instead of ActivatedRule|OverrideAction.
- WafAction (p. 949): Contains Type
  
  Type: Array of WebACLUpdate (p. 954) objects

  Required: No

WebACLId (p. 476)

The WebACLId of the WebACL (p. 951) that you want to update. WebACLId is returned by CreateWebACL (p. 277) and by ListWebACLs (p. 415).

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 477)

The ChangeToken that you used to submit the UpdateWebACL request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 335).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500
WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:
- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:
- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

The specified subscription does not exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
**UpdateXssMatchSet**

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](#) in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](#). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes XssMatchTuple (p. 959) objects (filters) in an XssMatchSet (p. 955). For each XssMatchTuple object, you specify the following values:

- **Action**: Whether to insert the object into or delete the object from the array. To change an XssMatchTuple, you delete the existing object and add a new one.
- **FieldToMatch**: The part of web requests that you want AWS WAF to inspect and, if you want AWS WAF to inspect a header or custom query parameter, the name of the header or parameter.
- **TextTransformation**: Which text transformation, if any, to perform on the web request before inspecting the request for cross-site scripting attacks.

You can only specify a single type of TextTransformation.

You use XssMatchSet objects to specify which Amazon CloudFront requests that you want to allow, block, or count. For example, if you’re receiving requests that contain cross-site scripting attacks in the request body and you want to block the requests, you can create an XssMatchSet with the applicable settings, and then configure AWS WAF to block the requests.

To create and configure an XssMatchSet, perform the following steps:

1. Submit a [CreateXssMatchSet](#) request.
2. Use [GetChangeToken](#) to get the change token that you provide in the ChangeToken parameter of an [UpdateIPSet](#) request.
3. Submit an [UpdateXssMatchSet](#) request to specify the parts of web requests that you want AWS WAF to inspect for cross-site scripting attacks.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the [AWS WAF Developer Guide](#).

**Request Syntax**

```json
{
    "ChangeToken": "string",
    "Updates": [
        {
            "Action": "string",
            "XssMatchTuple": {
                "FieldToMatch": {
                    "Data": "string",
                    "Type": "string"
                },
                "TextTransformation": "string"
            }
        },
        {
            "Action": "string",
            "XssMatchTuple": {
                "FieldToMatch": {
                    "Data": "string",
                    "Type": "string"
                },
                "TextTransformation": "string"
            }
        }
    ],
    "XssMatchSetId": "string"
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 480)**

The value returned by the most recent call to GetChangeToken (p. 333).

Type: String


Pattern: .*\S.*

Required: Yes

**Updates (p. 480)**

An array of XssMatchSetUpdate objects that you want to insert into or delete from an XssMatchSet (p. 955). For more information, see the applicable data types:

- XssMatchSetUpdate (p. 958): Contains Action and XssMatchTuple
- XssMatchTuple (p. 959): Contains FieldToMatch and TextTransformation
- FieldToMatch (p. 887): Contains Data and Type

Type: Array of XssMatchSetUpdate (p. 958) objects

Array Members: Minimum number of 1 item.

Required: Yes

**XssMatchSetId (p. 480)**

The XssMatchSetId of the XssMatchSet that you want to update. XssMatchSetId is returned by CreateXssMatchSet (p. 286) and by ListXssMatchSets (p. 418).

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
**ChangeToken (p. 481)**

The `ChangeToken` that you used to submit the `UpdateXssMatchSet` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 335)`.

Type: String


Pattern: .\S.*

**Errors**

For information about the errors that are common to all actions, see `Common Errors (p. 1051)`.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.
HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

AWS WAF Classic Regional

The following actions are supported by AWS WAF Classic Regional:
- AssociateWebACL (p. 486)
- CreateByteMatchSet (p. 489)
• CreateGeoMatchSet (p. 493)
• CreateIPSet (p. 497)
• CreateRateBasedRule (p. 500)
• CreateRegexMatchSet (p. 505)
• CreateRegexPatternSet (p. 508)
• CreateRule (p. 511)
• CreateRuleGroup (p. 515)
• CreateSizeConstraintSet (p. 519)
• CreateSqlInjectionMatchSet (p. 523)
• CreateWebACL (p. 527)
• CreateWebACLMigrationStack (p. 532)
• CreateXssMatchSet (p. 536)
• DeleteByteMatchSet (p. 540)
• DeleteGeoMatchSet (p. 543)
• DeleteIPSet (p. 546)
• DeleteLoggingConfiguration (p. 549)
• DeletePermissionPolicy (p. 551)
• DeleteRateBasedRule (p. 553)
• DeleteRegexMatchSet (p. 556)
• DeleteRegexPatternSet (p. 559)
• DeleteRule (p. 562)
• DeleteRuleGroup (p. 565)
• DeleteSizeConstraintSet (p. 568)
• DeleteSqlInjectionMatchSet (p. 571)
• DeleteWebACL (p. 574)
• DeleteXssMatchSet (p. 577)
• DisassociateWebACL (p. 580)
• GetByteMatchSet (p. 582)
• GetChangeToken (p. 585)
• GetChangeTokenStatus (p. 587)
• GetGeoMatchSet (p. 589)
• GetIPSet (p. 591)
• GetLoggingConfiguration (p. 593)
• GetPermissionPolicy (p. 595)
• GetRateBasedRule (p. 597)
• GetRateBasedRuleManagedKeys (p. 599)
• GetRegexMatchSet (p. 602)
• GetRegexPatternSet (p. 604)
• GetRule (p. 606)
• GetRuleGroup (p. 608)
• GetSampledRequests (p. 610)
• GetSizeConstraintSet (p. 614)
• GetSqlInjectionMatchSet (p. 617)
• GetWebACL (p. 620)
• GetWebACLForResource (p. 623)
• GetXssMatchSet (p. 626)
• ListActivatedRulesInRuleGroup (p. 628)
• ListByteMatchSets (p. 631)
• ListGeoMatchSets (p. 634)
• ListIPSets (p. 637)
• ListLoggingConfigurations (p. 640)
• ListRateBasedRules (p. 643)
• ListRegexMatchSets (p. 646)
• ListRegexPatternSets (p. 649)
• ListResourcesForWebACL (p. 652)
• ListRuleGroups (p. 655)
• ListRules (p. 658)
• ListSizeConstraintSets (p. 661)
• ListSqlInjectionMatchSets (p. 664)
• ListSubscribedRuleGroups (p. 667)
• ListTagsForResource (p. 670)
• ListWebACLs (p. 673)
• ListXssMatchSets (p. 676)
• PutLoggingConfiguration (p. 679)
• PutPermissionPolicy (p. 682)
• TagResource (p. 685)
• UntagResource (p. 688)
• UpdateByteMatchSet (p. 690)
• UpdateGeoMatchSet (p. 694)
• UpdateIPSet (p. 698)
• UpdateRateBasedRule (p. 703)
• UpdateRegexMatchSet (p. 708)
• UpdateRegexPatternSet (p. 712)
• UpdateRule (p. 716)
• UpdateRuleGroup (p. 720)
• UpdateSizeConstraintSet (p. 724)
• UpdateSqlInjectionMatchSet (p. 729)
• UpdateWebACL (p. 733)
• UpdateXssMatchSet (p. 738)
AssociateWebACL
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates a web ACL with a resource, either an application load balancer or Amazon API Gateway stage.

Request Syntax

```
{
    "ResourceArn": "string",
    "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceArn (p. 486)

The ARN (Amazon Resource Name) of the resource to be protected, either an application load balancer or Amazon API Gateway stage.

The ARN should be in one of the following formats:

- For an Amazon API Gateway stage: `arn:aws:apigateway:region::/restapis/api-id/stages/stage-name`

Type: String


Pattern: `.*\S.*`

Required: Yes

WebACLId (p. 486)

A unique identifier (ID) for the web ACL.

Type: String


Pattern: `.*\S.*`

Required: Yes
Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFUnavailableEntityException**

The operation failed because the entity referenced is temporarily unavailable. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateByteMatchSet

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a ByteMatchSet. You then use UpdateByteMatchSet (p. 690) to identify the part of a web request that you want AWS WAF to inspect, such as the values of the User-Agent header or the query string. For example, you can create a ByteMatchSet that matches any requests with User-Agent headers that contain the string BadBot. You can then configure AWS WAF to reject those requests.

To create and configure a ByteMatchSet, perform the following steps:

1. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateByteMatchSet request.
2. Submit a CreateByteMatchSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateByteMatchSet request.
4. Submit an UpdateByteMatchSet (p. 690) request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 489)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes
**Name (p. 489)**

A friendly name or description of the **ByteMatchSet (p. 966)**. You can't change Name after you create a ByteMatchSet.

Type: String


Pattern: .\S.*

Required: Yes

---

**Response Syntax**

```json
{
    "ByteMatchSet": {
        "ByteMatchSetId": "string",
        "ByteMatchTuples": [
            {
                "FieldToMatch": {
                    "Data": "string",
                    "Type": "string"
                },
                "PositionalConstraint": "string",
                "TargetString": blob,
                "TextTransformation": "string"
            }
        ],
        "Name": "string"
    },
    "ChangeToken": "string"
}
```

---

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ByteMatchSet (p. 490)**

A **ByteMatchSet (p. 966)** that contains no **ByteMatchTuple** objects.

Type: **ByteMatchSet (p. 966)** object

**ChangeToken (p. 490)**

The **ChangeToken** that you used to submit the **CreateByteMatchSet** request. You can also use this value to query the status of the request. For more information, see **GetChangeTokenStatus (p. 587)**.

Type: String


Pattern: .\S.*

---

**Errors**

For information about the errors that are common to all actions, see **Common Errors (p. 1051)**.
**CreateByteMatchSet**

- **WAFDisallowedNameException**
  - The name specified is invalid.
  - HTTP Status Code: 400

- **WAFInternalErrorException**
  - The operation failed because of a system problem, even though the request was valid. Retry your request.
  - HTTP Status Code: 500

- **WAFInvalidAccountException**
  - The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.
  - HTTP Status Code: 400

- **WAFInvalidParameterException**
  - The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
    - You specified an invalid parameter name.
    - You specified an invalid value.
    - You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
    - You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
    - You tried to create a RateBasedRule with a RateKey value other than IP.
    - You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
    - You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
    - You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
    - Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.
  - HTTP Status Code: 400

- **WAFLimitsExceededException**
  - The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.
  - HTTP Status Code: 400

- **WAFStaleDataException**
  - The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.
  - HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
AWS SDK for C++
AWS SDK for Go
AWS SDK for Java V2
AWS SDK for JavaScript
AWS SDK for PHP V3
AWS SDK for Python
AWS SDK for Ruby V3
CreateGeoMatchSet

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a GeoMatchSet (p. 979), which you use to specify which web requests you want to allow or block based on the country that the requests originate from. For example, if you're receiving a lot of requests from one or more countries and you want to block the requests, you can create a GeoMatchSet that contains those countries and then configure AWS WAF to block the requests.

To create and configure a GeoMatchSet, perform the following steps:

1. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateGeoMatchSet request.
2. Submit a CreateGeoMatchSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateGeoMatchSet (p. 694) request.
4. Submit an UpdateGeoMatchSet request to specify the countries that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
    "ChangeToken": "string",
    "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 493)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**Name (p. 493)**

A friendly name or description of the GeoMatchSet (p. 979). You can't change Name after you create the GeoMatchSet.
CreateGeoMatchSet

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
    "ChangeToken": "string",
    "GeoMatchSet": {
        "GeoMatchConstraints": [
            {
                "Type": "string",
                "Value": "string"
            }
        ],
        "GeoMatchSetId": "string",
        "Name": "string"
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken** *(p. 494)*

The ChangeToken that you used to submit the CreateGeoMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus *(p. 587).*

Type: String


Pattern: .*\S.*

**GeoMatchSet** *(p. 494)*

The GeoMatchSet returned in the CreateGeoMatchSet response. The GeoMatchSet contains no GeoMatchConstraints.

Type: GeoMatchSet *(p. 979) object

Errors

For information about the errors that are common to all actions, see Common Errors *(p. 1051).*

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400
WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateIPSet

Service: AWS WAF Classic Regional

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an IPSet (p. 986), which you use to specify which web requests that you want to allow or block based on the IP addresses that the requests originate from. For example, if you're receiving a lot of requests from one or more individual IP addresses or one or more ranges of IP addresses and you want to block the requests, you can create an IPSet that contains those IP addresses and then configure AWS WAF to block the requests.

To create and configure an IPSet, perform the following steps:

1. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateIPSet request.
2. Submit a CreateIPSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateIPSet (p. 698) request.
4. Submit an UpdateIPSet request to specify the IP addresses that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
    "ChangeToken": "string",
    "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 497)**

The value returned by the most recent call to GetChangeToken (p. 585).

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: .*
- **Required**: Yes

**Name (p. 497)**

A friendly name or description of the IPSet (p. 986). You can't change Name after you create the IPSet.
CreateIPSet

Type: String
Pattern: .*\S.*
Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string",
  "IPSet": {
    "IPSetDescriptors": [
      {
        "Type": "string",
        "Value": "string"
      }
    ],
    "IPSetId": "string",
    "Name": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**ChangeToken (p. 498)**

The ChangeToken that you used to submit the CreateIPSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String
Pattern: .*\S.*

**IPSet (p. 498)**

The IPSet (p. 986) returned in the CreateIPSet response.

Type: IPSet (p. 986) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.
HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateRateBasedRule

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RateBasedRule (p. 996). The RateBasedRule contains a RateLimit, which specifies the maximum number of requests that AWS WAF allows from a specified IP address in a five-minute period. The RateBasedRule also contains the IPSet objects, ByteMatchSet objects, and other predicates that identify the requests that you want to count or block if these requests exceed the RateLimit.

If you add more than one predicate to a RateBasedRule, a request not only must exceed the RateLimit, but it also must match all the conditions to be counted or blocked. For example, suppose you add the following to a RateBasedRule:

- An IPSet that matches the IP address 192.0.2.44/32
- A ByteMatchSet that matches BadBot in the User-Agent header

Further, you specify a RateLimit of 1,000.

You then add the RateBasedRule to a WebACL and specify that you want to block requests that meet the conditions in the rule. For a request to be blocked, it must come from the IP address 192.0.2.44 and the User-Agent header in the request must contain the value BadBot. Further, requests that match these two conditions must be received at a rate of more than 1,000 requests every five minutes. If both conditions are met and the rate is exceeded, AWS WAF blocks the requests. If the rate drops below 1,000 for a five-minute period, AWS WAF no longer blocks the requests.

As a second example, suppose you want to limit requests to a particular page on your site. To do this, you could add the following to a RateBasedRule:

- A ByteMatchSet with FieldToMatch of URI
  - A PositionalConstraint of STARTS_WITH
  - A TargetString of login

Further, you specify a RateLimit of 1,000.

By adding this RateBasedRule to a WebACL, you could limit requests to your login page without affecting the rest of your site.

To create and configure a RateBasedRule, perform the following steps:

1. Create and update the predicates that you want to include in the rule. For more information, see CreateByteMatchSet (p. 489), CreateIPSet (p. 497), and CreateSqlInjectionMatchSet (p. 523).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateRule request.
3. Submit a CreateRateBasedRule request.
4. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRule (p. 716) request.
5. Submit an UpdateRateBasedRule request to specify the predicates that you want to include in the rule.
6. Create and update a WebACL that contains the RateBasedRule. For more information, see CreateWebACL (p. 527).

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
    "ChangeToken": "string",
    "MetricName": "string",
    "Name": "string",
    "RateKey": "string",
    "RateLimit": number,
    "Tags": [
        {
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 501)**

The ChangeToken that you used to submit the CreateRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S.*

Required: Yes

**MetricName (p. 501)**

A friendly name or description for the metrics for this RateBasedRule. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RateBasedRule.

Type: String


Pattern: .\S.*

Required: Yes

**Name (p. 501)**

A friendly name or description of the RateBasedRule (p. 996). You can't change the name of a RateBasedRule after you create it.
Type: String
Pattern: .\S+.
Required: Yes

**RateKey (p. 501)**

The field that AWS WAF uses to determine if requests are likely arriving from a single source and thus subject to rate monitoring. The only valid value for RateKey is IP. IP indicates that requests that arrive from the same IP address are subject to the RateLimit that is specified in the RateBasedRule.

Type: String
Valid Values: IP
Required: Yes

**RateLimit (p. 501)**

The maximum number of requests, which have an identical value in the field that is specified by RateKey, allowed in a five-minute period. If the number of requests exceeds the RateLimit and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long
Valid Range: Minimum value of 100. Maximum value of 2000000000.
Required: Yes

**Tags (p. 501)**

Type: Array of Tag (p. 1034) objects
Array Members: Minimum number of 1 item.
Required: No

**Response Syntax**

```json
{
  "ChangeToken": "string",
  "Rule": {
    "MatchPredicates": [
      {
        "DataId": "string",
        "Negated": boolean,
        "Type": "string"
      }
    ],
    "MetricName": "string",
    "Name": "string",
    "RateKey": "string",
    "RateLimit": number,
    "RuleId": "string"
  }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 502)**

The ChangeToken that you used to submit the CreateRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S\.

**Rule (p. 502)**

The RateBasedRule (p. 996) that is returned in the CreateRateBasedRule response.

Type: RateBasedRule (p. 996) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFBadRequestException**

HTTP Status Code: 400

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateRegexMatchSet

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RegexMatchSet (p. 998). You then use UpdateRegexMatchSet (p. 708) to identify the part of a web request that you want AWS WAF to inspect, such as the values of the User-Agent header or the query string. For example, you can create a RegexMatchSet that contains a RegexMatchTuple that looks for any requests with User-Agent headers that match a RegexPatternSet with pattern B[a@]dB[o0]t. You can then configure AWS WAF to reject those requests.

To create and configure a RegexMatchSet, perform the following steps:

1. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateRegexMatchSet request.
2. Submit a CreateRegexMatchSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRegexMatchSet request.
4. Submit an UpdateRegexMatchSet (p. 708) request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value, using a RegexPatternSet, that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
   "ChangeToken": "string",
   "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 505)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes
Name (p. 505)

A friendly name or description of the RegexMatchSet (p. 998). You can't change Name after you create a RegexMatchSet.

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string",
  "RegexMatchSet": {
    "Name": "string",
    "RegexMatchSetId": "string",
    "RegexMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "RegexPatternSetId": "string",
        "TextTransformation": "string"
      }
    ]
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 506)

The ChangeToken that you used to submit the CreateRegexMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S.*

RegexMatchSet (p. 506)

A RegexMatchSet (p. 998) that contains no RegexMatchTuple objects.

Type: RegexMatchSet (p. 998) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFLimitsExceedededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateRegexPatternSet

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RegexPatternSet. You then use UpdateRegexPatternSet (p. 712) to specify the regular expression (regex) pattern that you want AWS WAF to search for, such as B[a@]dB[00]t. You can then configure AWS WAF to reject those requests.

To create and configure a RegexPatternSet, perform the following steps:

1. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateRegexPatternSet request.
2. Submit a CreateRegexPatternSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRegexPatternSet request.
4. Submit an UpdateRegexPatternSet (p. 712) request to specify the string that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
    "ChangeToken": "string",
    "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 508)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*

Required: Yes

**Name (p. 508)**

A friendly name or description of the RegexPatternSet (p. 1005). You can't change Name after you create a RegexPatternSet.
Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
    "ChangeToken": "string",
    "RegexPatternSet": {
        "Name": "string",
        "RegexPatternSetId": "string",
        "RegexPatternStrings": [ "string" ]
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 509)**

The ChangeToken that you used to submit the CreateRegexPatternSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

- Type: String
- Pattern: .*\S.*

**RegexPatternSet (p. 509)**

A RegexPatternSet (p. 1005) that contains no objects.

- Type: RegexPatternSet (p. 1005) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDisallowedNameException**

The name specified is invalid.

- HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

- HTTP Status Code: 500
WAFLimitsExceeded Exception

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleData Exception

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateRule
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a Rule, which contains the IPSet objects, ByteMatchSet objects, and other predicates that identify the requests that you want to block. If you add more than one predicate to a Rule, a request must match all of the specifications to be allowed or blocked. For example, suppose that you add the following to a Rule:

- An IPSet that matches the IP address 192.0.2.44/32
- A ByteMatchSet that matches BadBot in the User-Agent header

You then add the Rule to a WebACL and specify that you want to blocks requests that satisfy the Rule. For a request to be blocked, it must come from the IP address 192.0.2.44 and the User-Agent header in the request must contain the value BadBot.

To create and configure a Rule, perform the following steps:

1. Create and update the predicates that you want to include in the Rule. For more information, see CreateByteMatchSet (p. 489), CreateIPSet (p. 497), and CreateSqlInjectionMatchSet (p. 523).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateRule request.
3. Submit a CreateRule request.
4. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRule (p. 716) request.
5. Submit an UpdateRule request to specify the predicates that you want to include in the Rule.
6. Create and update a WebACL that contains the Rule. For more information, see CreateWebACL (p. 527).

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
  "ChangeToken": "string",
  "MetricName": "string",
  "Name": "string",
  "Tags": [
  {
    "Key": "string",
    "Value": "string"
  }
  ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 511)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*\S.*

Required: Yes

MetricName (p. 511)

A friendly name or description for the metrics for this Rule. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the Rule.

Type: String


Pattern: .*\S.*

Required: Yes

Name (p. 511)

A friendly name or description of the Rule (p. 1009). You can't change the name of a Rule after you create it.

Type: String


Pattern: .*\S.*

Required: Yes

Tags (p. 511)

Type: Array of Tag (p. 1034) objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```json
{
  "ChangeToken": "string",
  "Rule": {
    "MetricName": "string",
  }
}
```
"Name": "string",
"Predicates": [
  {
    "DataId": "string",
    "Negated": boolean,
    "Type": "string"
  }
],
"RuleId": "string"
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 512)**

The `ChangeToken` that you used to submit the `CreateRule` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 587)`.

Type: String


Pattern: .\S\.

**Rule (p. 512)**

The `Rule (p. 1009)` returned in the `CreateRule` response.

Type: `Rule (p. 1009)` object

Errors

For information about the errors that are common to all actions, see `Common Errors (p. 1051)`.

**WAFBadRequestException**

HTTP Status Code: 400

**WAFDisallowedNameException**

The name specified is invalid.

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.

You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.

You tried to create a RateBasedRule with a RateKey value other than IP.

You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.

You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.

You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.

Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateRuleGroup
CreateRuleGroup

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RuleGroup. A rule group is a collection of predefined rules that you add to a web ACL. You use UpdateRuleGroup (p. 720) to add rules to the rule group.

Rule groups are subject to the following limits:

- Three rule groups per account. You can request an increase to this limit by contacting customer support.
- One rule group per web ACL.
- Ten rules per rule group.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
   "ChangeToken": "string",
   "MetricName": "string",
   "Name": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 515)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

MetricName (p. 515)

A friendly name or description for the metrics for this RuleGroup. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't
contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RuleGroup.

Type: String
Pattern: .\S.*
Required: Yes

Name (p. 515)
A friendly name or description of the RuleGroup (p. 1011). You can't change Name after you create a RuleGroup.

Type: String
Pattern: .\S.*
Required: Yes

Tags (p. 515)
Type: Array of Tag (p. 1034) objects
Array Members: Minimum number of 1 item.
Required: No

Response Syntax

```json
{
  "ChangeToken": "string",
  "RuleGroup": {
    "MetricName": "string",
    "Name": "string",
    "RuleGroupId": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 516)
The ChangeToken that you used to submit the CreateRuleGroup request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String
Pattern: .\S.*
RuleGroup (p. 516)

An empty RuleGroup (p. 1011).

Type: RuleGroup (p. 1011) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateSizeConstraintSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a SizeConstraintSet. You then use UpdateSizeConstraintSet (p. 724) to identify the part of a web request that you want AWS WAF to check for length, such as the length of the User-Agent header or the length of the query string. For example, you can create a SizeConstraintSet that matches any requests that have a query string that is longer than 100 bytes. You can then configure AWS WAF to reject those requests.

To create and configure a SizeConstraintSet, perform the following steps:

1. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateSizeConstraintSet request.
2. Submit a CreateSizeConstraintSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateSizeConstraintSet request.
4. Submit an UpdateSizeConstraintSet (p. 724) request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 519)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes
Name (p. 519)
A friendly name or description of the SizeConstraintSet (p. 1022). You can't change Name after you create a SizeConstraintSet.

Type: String
Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
    "ChangeToken": "string",
    "SizeConstraintSet": {
        "Name": "string",
        "SizeConstraints": [
            {
                "ComparisonOperator": "string",
                "FieldToMatch": {
                    "Data": "string",
                    "Type": "string"
                },
                "Size": number,
                "TextTransformation": "string"
            }
        ],
        "SizeConstraintSetId": "string"
    }
}
```

Response Elements
If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

ChangeToken (p. 520)
The ChangeToken that you used to submit the CreateSizeConstraintSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String
Pattern: .*\S.*

SizeConstraintSet (p. 520)
A SizeConstraintSet (p. 1022) that contains no SizeConstraint objects.

Type: SizeConstraintSet (p. 1022) object

Errors
For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateSqlInjectionMatchSet

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a SqlInjectionMatchSet (p. 1026), which you use to allow, block, or count requests that contain snippets of SQL code in a specified part of web requests. AWS WAF searches for character sequences that are likely to be malicious strings.

To create and configure a SqlInjectionMatchSet, perform the following steps:

1. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateSqlInjectionMatchSet request.
2. Submit a CreateSqlInjectionMatchSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateSqlInjectionMatchSet (p. 729) request.
4. Submit an UpdateSqlInjectionMatchSet (p. 729) request to specify the parts of web requests in which you want to allow, block, or count malicious SQL code.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
  "ChangeToken": "string",
  "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 523)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*\S.*

Required: Yes

Name (p. 523)

A friendly name or description for the SqlInjectionMatchSet (p. 1026) that you're creating. You can't change Name after you create the SqlInjectionMatchSet.
Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string",
  "SqlInjectionMatchSet": {
    "Name": "string",
    "SqlInjectionMatchSetId": "string",
    "SqlInjectionMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "TextTransformation": "string"
      }
    ]
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 524)**

The ChangeToken that you used to submit the CreateSqlInjectionMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S.*

**SqlInjectionMatchSet (p. 524)**

A SqlInjectionMatchSet (p. 1026).

Type: SqlInjectionMatchSet (p. 1026) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDisallowedNameException**

The name specified is invalid.
HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn’t recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
**CreateWebACL**

Service: AWS WAF Classic Regional

**Note**

This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://aws.amazon.com/waf-classic/) in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a WebACL, which contains the Rules that identify the Amazon CloudFront web requests that you want to allow, block, or count. AWS WAF evaluates Rules in order based on the value of **Priority** for each Rule.

You also specify a default action, either **ALLOW** or **BLOCK**. If a web request doesn't match any of the Rules in a WebACL, AWS WAF responds to the request with the default action.

To create and configure a WebACL, perform the following steps:

1. Create and update the ByteMatchSet objects and other predicates that you want to include in Rules. For more information, see [CreateByteMatchSet](https://docs.aws.amazon.com/waf/latest/APIReference/API_CreateByteMatchSet.html), [UpdateByteMatchSet](https://docs.aws.amazon.com/waf/latest/APIReference/API_UpdateByteMatchSet.html), [CreateIPSet](https://docs.aws.amazon.com/waf/latest/APIReference/API_CreateIPSet.html), [UpdateIPSet](https://docs.aws.amazon.com/waf/latest/APIReference/API_UpdateIPSet.html), [CreateSqlInjectionMatchSet](https://docs.aws.amazon.com/waf/latest/APIReference/API_CreateSqlInjectionMatchSet.html), and [UpdateSqlInjectionMatchSet](https://docs.aws.amazon.com/waf/latest/APIReference/API_UpdateSqlInjectionMatchSet.html).

2. Create and update the Rules that you want to include in the WebACL. For more information, see [CreateRule](https://docs.aws.amazon.com/waf/latest/APIReference/API_CreateRule.html) and [UpdateRule](https://docs.aws.amazon.com/waf/latest/APIReference/API_UpdateRule.html).

3. Use [GetChangeToken](https://docs.aws.amazon.com/waf/latest/APIReference/API_GetChangeToken.html) to get the change token that you provide in the **ChangeToken** parameter of a CreateWebACL request.

4. Submit a CreateWebACL request.

5. Use [GetChangeToken](https://docs.aws.amazon.com/waf/latest/APIReference/API_GetChangeToken.html) to get the change token that you provide in the **ChangeToken** parameter of an UpdateWebACL request.

6. Submit an [UpdateWebACL](https://docs.aws.amazon.com/waf/latest/APIReference/API_UpdateWebACL.html) request to specify the Rules that you want to include in the WebACL, to specify the default action, and to associate the WebACL with an Amazon CloudFront distribution.

For more information about how to use the AWS WAF API, see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/).

**Request Syntax**

```json
{
    "ChangeToken": "string",
    "DefaultAction": {
        "Type": "string"
    },
    "MetricName": "string",
    "Name": "string",
    "Tags": [
        {
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters](https://docs.aws.amazon.com/waf/latest/APIReference/what-in-the-api.html).
The request accepts the following data in JSON format.

**ChangeToken (p. 527)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*

Required: Yes

**DefaultAction (p. 527)**

The action that you want AWS WAF to take when a request doesn't match the criteria specified in any of the Rule objects that are associated with the WebACL.

Type: WafAction (p. 1037) object

Required: Yes

**MetricName (p. 527)**

A friendly name or description for the metrics for this WebACL. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change MetricName after you create the WebACL.

Type: String


Pattern: .*

Required: Yes

**Name (p. 527)**

A friendly name or description of the WebACL (p. 1039). You can't change Name after you create the WebACL.

Type: String


Pattern: .*

Required: Yes

**Tags (p. 527)**

Type: Array of Tag (p. 1034) objects

Array Members: Minimum number of 1 item.

Required: No

**Response Syntax**

```json
{}
```
"ChangeToken": "string",
"WebACL": {
  "DefaultAction": {
    "Type": "string"
  },
  "MetricName": "string",
  "Name": "string",
  "Rules": [
    {
      "Action": {
        "Type": "string"
      },
      "ExcludedRules": [
        {
          "RuleId": "string"
        }
      ],
      "OverrideAction": {
        "Type": "string"
      },
      "Priority": number,
      "RuleId": "string",
      "Type": "string"
    }
  ],
  "WebACLArn": "string",
  "WebACLId": "string"
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 528)**

The `ChangeToken` that you used to submit the `CreateWebACL` request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 587)].

Type: `String`


Pattern: `.\s.*`

**WebACL (p. 528)**

The `WebACL` (p. 1039) returned in the `CreateWebACL` response.

Type: `WebACL (p. 1039)` object

**Errors**

For information about the errors that are common to all actions, see [Common Errors (p. 1051)].

**WAFBadRequestException**

HTTP Status Code: 400
WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateWebACLMigrationStack

Service: AWS WAF Classic Regional

Creates an AWS CloudFormation AWS WAFV2 template for the specified web ACL in the specified Amazon S3 bucket. Then, in CloudFormation, you create a stack from the template, to create the web ACL and its resources in AWS WAFV2. Use this to migrate your AWS WAF Classic web ACL to the latest version of AWS WAF.

This is part of a larger migration procedure for web ACLs from AWS WAF Classic to the latest version of AWS WAF. For the full procedure, including caveats and manual steps to complete the migration and switch over to the new web ACL, see Migrating your AWS WAF Classic resources to AWS WAF in the AWS WAF Developer Guide.

Request Syntax

```json
{
    "IgnoreUnsupportedType": boolean,
    "S3BucketName": "string",
    "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**IgnoreUnsupportedType (p. 532)**

Indicates whether to exclude entities that can't be migrated or to stop the migration. Set this to true to ignore unsupported entities in the web ACL during the migration. Otherwise, if AWS WAF encounters unsupported entities, it stops the process and throws an exception.

Type: Boolean

Required: Yes

**S3BucketName (p. 532)**

The name of the Amazon S3 bucket to store the AWS CloudFormation template in. The S3 bucket must be configured as follows for the migration:

- If the bucket is encrypted, the encryption must use Amazon S3 (SSE-S3) keys. The migration doesn't support encryption with AWS Key Management Service (SSE-KMS) keys.
- The bucket name must start with `aws-waf-migration-`. For example, `aws-waf-migration-my-web-acl`.
- The bucket must be in the Region where you are deploying the template. For example, for a web ACL in `us-west-2`, you must use an Amazon S3 bucket in `us-west-2` and you must deploy the template stack to `us-west-2`.
- The bucket policies must permit the migration process to write data. For listings of the bucket policies, see the Examples section.

Type: String


Pattern: ^aws-waf-migration-[0-9A-Za-z\._\-]*$
Required: Yes

**WebACLId** (p. 532)

The UUID of the WAF Classic web ACL that you want to migrate to WAF v2.

Type: String


Pattern: .*[\S]*

Required: Yes

**Response Syntax**

```json
{
    "S3ObjectUrl": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**S3ObjectUrl** (p. 533)

The URL of the template created in Amazon S3.

Type: String

Length Constraints: Minimum length of 1.

**Errors**

For information about the errors that are common to all actions, see *Common Errors* (p. 1051).

**WAFEntityMigrationException**

The operation failed due to a problem with the migration. The failure cause is provided in the exception, in the `MigrationErrorType`:

- **ENTITY_NOT_SUPPORTED** - The web ACL has an unsupported entity but the `IgnoreUnsupportedType` is not set to true.
- **ENTITY_NOT_FOUND** - The web ACL doesn't exist.
- **S3_BUCKET_NO_PERMISSION** - You don't have permission to perform the PutObject action to the specified Amazon S3 bucket.
- **S3_BUCKET_NOT_ACCESSIBLE** - The bucket policy doesn't allow AWS WAF to perform the PutObject action in the bucket.
- **S3_BUCKET_NOT_FOUND** - The S3 bucket doesn't exist.
- **S3_BUCKET_INVALID_REGION** - The S3 bucket is not in the same Region as the web ACL.
- **S3_INTERNAL_ERROR** - AWS WAF failed to create the template in the S3 bucket for another reason.

In addition, the exception includes specific details about the failure in the `MigrationErrorReason`.
HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

• You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
• You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
• You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
• You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
• You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

• You specified an invalid parameter name.
• You specified an invalid value.
• You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

Examples

Amazon S3 bucket policy for global Amazon CloudFront applications

This example illustrates one usage of CreateWebACLMigrationStack.

```json
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
```
Amazon S3 bucket policy for Amazon API Gateway API or Application Load Balancer applications

This example illustrates one usage of CreateWebACLMigrationStack.

```json
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
                "Service": "apiv2migration.waf-regional.amazonaws.com"
            },
            "Action": "s3:PutObject",
            "Resource": "arn:aws:s3::<BUCKET_NAME>/AWSWAF/<CUSTOMER_ACCOUNT_ID>/*"
        }
    ]
}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
**CreateXssMatchSet**

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an XssMatchSet (p. 1043), which you use to allow, block, or count requests that contain cross-site scripting attacks in the specified part of web requests. AWS WAF searches for character sequences that are likely to be malicious strings.

To create and configure an XssMatchSet, perform the following steps:

1. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a CreateXssMatchSet request.
2. Submit a CreateXssMatchSet request.
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateXssMatchSet (p. 738) request.
4. Submit an UpdateXssMatchSet (p. 738) request to specify the parts of web requests in which you want to allow, block, or count cross-site scripting attacks.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
   "ChangeToken": "string",
   "Name": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 536)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**Name (p. 536)**

A friendly name or description for the XssMatchSet (p. 1043) that you're creating. You can't change Name after you create the XssMatchSet.
Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string",
  "XssMatchSet": {
    "Name": "string",
    "XssMatchSetId": "string",
    "XssMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "TextTransformation": "string"
      }
    ]
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 537)**

The ChangeToken that you used to submit the CreateXssMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S.*

**XssMatchSet (p. 537)**

An XssMatchSet (p. 1043).

Type: XssMatchSet (p. 1043) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFDisallowedNameException**

The name specified is invalid.
HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
DeleteByteMatchSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a ByteMatchSet (p. 966). You can't delete a ByteMatchSet if it's still used in any Rules or if it still includes any ByteMatchTuple (p. 970) objects (any filters).

If you just want to remove a ByteMatchSet from a Rule, use UpdateRule (p. 716).

To permanently delete a ByteMatchSet, perform the following steps:
1. Update the ByteMatchSet to remove filters, if any. For more information, see UpdateByteMatchSet (p. 690).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteByteMatchSet request.
3. Submit a DeleteByteMatchSet request.

Request Syntax

```
{
  "ByteMatchSetId": "string",
  "ChangeToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ByteMatchSetId (p. 540)

The ByteMatchSetId of the ByteMatchSet (p. 966) that you want to delete. ByteMatchSetId is returned by CreateByteMatchSet (p. 489) and by ListByteMatchSets (p. 631).

Type: String


Pattern: .\S.*

Required: Yes

ChangeToken (p. 540)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String

Pattern: .*\S.*
Required: Yes

**Response Syntax**

```json
{
   "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 541)**

The `ChangeToken` that you used to submit the `DeleteByteMatchSet` request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 587)](https://docs.aws.amazon.com/waf/v2/APIReference/API_GetChangeTokenStatus.html).

Type: String


Pattern: .*\S.*

**Errors**

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](https://docs.aws.amazon.com/waf/v2/APIReference/API_CommonErrors.html).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn’t empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteGeoMatchSet

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a GeoMatchSet (p. 979). You can't delete a GeoMatchSet if it's still used in any Rules or if it still includes any countries.

If you just want to remove a GeoMatchSet from a Rule, use UpdateRule (p. 716).

To permanently delete a GeoMatchSet from AWS WAF, perform the following steps:

1. Update the GeoMatchSet to remove any countries. For more information, see UpdateGeoMatchSet (p. 694).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteGeoMatchSet request.
3. Submit a DeleteGeoMatchSet request.

**Request Syntax**

```
{
  "ChangeToken": "string",
  "GeoMatchSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 543)**

The value returned by the most recent call to GetChangeToken (p. 585).

- Type: String
- Pattern: .*\S.*
- Required: Yes

**GeoMatchSetId (p. 543)**

The GeoMatchSetId of the GeoMatchSet (p. 979) that you want to delete. GeoMatchSetId is returned by CreateGeoMatchSet (p. 493) and by ListGeoMatchSets (p. 634).

- Type: String
Pattern: .\S.*
Required: Yes

Response Syntax

```json
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 544)**

The ChangeToken that you used to submit the DeleteGeoMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteIPSet

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an IPSet (p. 986). You can't delete an IPSet if it's still used in any Rules or if it still includes any IP addresses.

If you just want to remove an IPSet from a Rule, use UpdateRule (p. 716).

To permanently delete an IPSet from AWS WAF, perform the following steps:

1. Update the IPSet to remove IP address ranges, if any. For more information, see UpdateIPSet (p. 698).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteIPSet request.
3. Submit a DeleteIPSet request.

Request Syntax

```json
{
    "ChangeToken": "string",
    "IPSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 546)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**IPSetId (p. 546)**

The IPSetId of the IPSet (p. 986) that you want to delete. IPSetId is returned by CreateIPSet (p. 497) and by ListIPSets (p. 637).

Type: String

DeleteIPSet

Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 547)**

The `ChangeToken` that you used to submit the `DeleteIPSet` request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 587)](https://docs.aws.amazon.com/waf/latest/APIReference/API_GetChangeTokenStatus.html).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](https://docs.aws.amazon.com/waf/latest/APIReference/API_CommonErrors.html).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.
HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteLoggingConfiguration
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes the LoggingConfiguration (p. 992) from the specified web ACL.

Request Syntax

```json
{
  "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceArn (p. 549)

The Amazon Resource Name (ARN) of the web ACL from which you want to delete the LoggingConfiguration (p. 992).

Type: String


Pattern: .\S. *

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeletePermissionPolicy

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an IAM policy from the specified RuleGroup.

The user making the request must be the owner of the RuleGroup.

**Request Syntax**

```json
{
   "ResourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 551)**

The Amazon Resource Name (ARN) of the RuleGroup from which you want to delete the policy.

The user making the request must be the owner of the RuleGroup.

Type: String


Pattern: .\s.*

Required: Yes

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRateBasedRule

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RateBasedRule (p. 996). You can't delete a rule if it's still used in any WebACL objects or if it still includes any predicates, such as ByteMatchSet objects.

If you just want to remove a rule from a WebACL, use UpdateWebACL (p. 733).

To permanently delete a RateBasedRule from AWS WAF, perform the following steps:

1. Update the RateBasedRule to remove predicates, if any. For more information, see UpdateRateBasedRule (p. 703).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteRateBasedRule request.
3. Submit a DeleteRateBasedRule request.

Request Syntax

```json
{
  "ChangeToken": "string",
  "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 553)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*\S.*

Required: Yes

RuleId (p. 553)

The RuleId of the RateBasedRule (p. 996) that you want to delete. RuleId is returned by CreateRateBasedRule (p. 500) and by ListRateBasedRules (p. 643).

Type: String

AWS WAFV2 API Reference
DeleteRateBasedRule

Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 554)**

The ChangeToken that you used to submit the DeleteRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:
- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

**WAFFStaleDataExchange**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**WAFFTagOperationException**

HTTP Status Code: 400

**WAFFTagOperationInternalErrorException**

HTTP Status Code: 500

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRegexMatchSet

Service: AWS WAF Classic Regional

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of **AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a **RegexMatchSet**. You can't delete a **RegexMatchSet** if it's still used in any **Rules** or if it still includes any **RegexMatchTuples** objects (any filters).

If you just want to remove a **RegexMatchSet** from a **Rule**, use **UpdateRule**.

To permanently delete a **RegexMatchSet**, perform the following steps:

1. Update the **RegexMatchSet** to remove filters, if any. For more information, see **UpdateRegexMatchSet**.
2. Use **GetChangeToken** to get the change token that you provide in the **ChangeToken** parameter of a **DeleteRegexMatchSet** request.
3. Submit a **DeleteRegexMatchSet** request.

**Request Syntax**

```
{
  "ChangeToken": "string",
  "RegexMatchSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters**.

The request accepts the following data in JSON format.

**ChangeToken**

The value returned by the most recent call to **GetChangeToken**.

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: .*
- **Required**: Yes

**RegexMatchSetId**

The **RegexMatchSetId** of the **RegexMatchSet** that you want to delete. **RegexMatchSetId** is returned by **CreateRegexMatchSet** and by **ListRegexMatchSets**.

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
Pattern: \.*\S.*
Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 557)**

The `ChangeToken` that you used to submit the `DeleteRegexMatchSet` request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 587)].

Type: String


Pattern: \.*\S.*

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)].

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRegexPatternSet
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RegexPatternSet (p. 1005). You can't delete a RegexPatternSet if it's still used in any RegexMatchSet or if the RegexPatternSet is not empty.

**Request Syntax**

```
{
  "ChangeToken": "string",
  "RegexPatternSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 559)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**RegexPatternSetId (p. 559)**

The RegexPatternSetId of the RegexPatternSet (p. 1005) that you want to delete. RegexPatternSetId is returned by CreateRegexPatternSet (p. 508) and by ListRegexPatternSets (p. 649).

Type: String


Pattern: .\S.*

Required: Yes

**Response Syntax**

```
{
  "ChangeToken": "string"
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

**ChangeToken (p. 559)**

The `ChangeToken` that you used to submit the `DeleteRegexPatternSet` request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 587)](#).

Type: String


Pattern: .\*\S\.*

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](#).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`. 
HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteRule

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a Rule (p. 1009). You can't delete a Rule if it's still used in any WebACL objects or if it still includes any predicates, such as ByteMatchSet objects.

If you just want to remove a Rule from a WebACL, use UpdateWebACL (p. 733).

To permanently delete a Rule from AWS WAF, perform the following steps:

1. Update the Rule to remove predicates, if any. For more information, see UpdateRule (p. 716).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteRule request.
3. Submit a DeleteRule request.

Request Syntax

```json
{
   "ChangeToken": "string",
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 562)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*

Required: Yes

RuleId (p. 562)

The RuleId of the Rule (p. 1009) that you want to delete. RuleId is returned by CreateRule (p. 511) and by ListRules (p. 658).

Type: String


Pattern: .*


Required: Yes

**Response Syntax**

```json
{
   "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 563)**

The ChangeToken that you used to submit the DeleteRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .*\S.*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn’t empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn’t exist.
HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:
- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**WAFTagOperationException**

HTTP Status Code: 400

**WAFTagOperationInternalErrorException**

HTTP Status Code: 500

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
**DeleteRuleGroup**

Service: AWS WAF Classic Regional

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RuleGroup (p. 1011). You can't delete a RuleGroup if it's still used in any WebACL objects or if it still includes any rules.

If you just want to remove a RuleGroup from a WebACL, use UpdateWebACL (p. 733).

To permanently delete a RuleGroup from AWS WAF, perform the following steps:

1. Update the RuleGroup to remove rules, if any. For more information, see UpdateRuleGroup (p. 720).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteRuleGroup request.
3. Submit a DeleteRuleGroup request.

**Request Syntax**

```json
{
   "ChangeToken": "string",
   "RuleGroupId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 565)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*

Required: Yes

**RuleGroupId (p. 565)**

The RuleGroupId of the RuleGroup (p. 1011) that you want to delete. RuleGroupId is returned by CreateRuleGroup (p. 515) and by ListRuleGroups (p. 655).

Type: String

Pattern: .*\S.*
Required: Yes

**Response Syntax**

```
{
   "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 566)**

The ChangeToken that you used to submit the DeleteRuleGroup request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .*\S.*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
• You tried to delete a **Rule** that still contains one or more **ByteMatchSet** objects or other predicates.
• You tried to delete a **ByteMatchSet** that contains one or more **ByteMatchTuple** objects.
• You tried to delete an **IPSet** that references one or more IP addresses.

**HTTP Status Code: 400**

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

**HTTP Status Code: 400**

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:
• You tried to delete a **ByteMatchSet** that is still referenced by a **Rule**.
• You tried to delete a **Rule** that is still referenced by a **WebACL**.

**HTTP Status Code: 400**

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

**HTTP Status Code: 400**

**WAFTagOperationException**

**HTTP Status Code: 400**

**WAFTagOperationInternalErrorException**

**HTTP Status Code: 500**

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• **AWS Command Line Interface**
• **AWS SDK for .NET**
• **AWS SDK for C++**
• **AWS SDK for Go**
• **AWS SDK for Java V2**
• **AWS SDK for JavaScript**
• **AWS SDK for PHP V3**
• **AWS SDK for Python**
• **AWS SDK for Ruby V3**
DeleteSizeConstraintSet

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a **SizeConstraintSet** (p. 1022). You can't delete a **SizeConstraintSet** if it's still used in any **Rules** or if it still includes any **SizeConstraint** (p. 1019) objects (any filters).

If you just want to remove a **SizeConstraintSet** from a **Rule**, use **UpdateRule** (p. 716).

To permanently delete a **SizeConstraintSet**, perform the following steps:

1. Update the **SizeConstraintSet** to remove filters, if any. For more information, see **UpdateSizeConstraintSet** (p. 724).
2. Use **GetChangeToken** (p. 585) to get the change token that you provide in the **ChangeToken** parameter of a **DeleteSizeConstraintSet** request.
3. Submit a **DeleteSizeConstraintSet** request.

**Request Syntax**

```json
{
    "ChangeToken": "string",
    "SizeConstraintSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters** (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken** (p. 568)

The value returned by the most recent call to **GetChangeToken** (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**SizeConstraintSetId** (p. 568)

The **SizeConstraintSetId** of the **SizeConstraintSet** (p. 1022) that you want to delete. **SizeConstraintSetId** is returned by **CreateSizeConstraintSet** (p. 519) and by **ListSizeConstraintSets** (p. 661).

Type: String

DeleteSizeConstraintSet

Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 569)**

The ChangeToken that you used to submit the DeleteSizeConstraintSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:
- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:
- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteSqlInjectionMatchSet

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a SqlInjectionMatchSet (p. 1026). You can’t delete a SqlInjectionMatchSet if it’s still used in any Rules or if it still contains any SqlInjectionMatchTuple (p. 1030) objects.

If you just want to remove a SqlInjectionMatchSet from a Rule, use UpdateRule (p. 716).

To permanently delete a SqlInjectionMatchSet from AWS WAF, perform the following steps:

1. Update the SqlInjectionMatchSet to remove filters, if any. For more information, see UpdateSqlInjectionMatchSet (p. 729).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteSqlInjectionMatchSet request.
3. Submit a DeleteSqlInjectionMatchSet request.

Request Syntax

```json
{
   "ChangeToken": "string",
   "SqlInjectionMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 571)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

SqlInjectionMatchSetId (p. 571)

The SqlInjectionMatchSetId of the SqlInjectionMatchSet (p. 1026) that you want to delete. SqlInjectionMatchSetId is returned by CreateSqlInjectionMatchSet (p. 523) and by ListSqlInjectionMatchSets (p. 664).

Type: String

DeleteSqlInjectionMatchSet

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```json
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 572)**

The `ChangeToken` that you used to submit the `DeleteSqlInjectionMatchSet` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 587)`.

Type: String


Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see `Common Errors (p. 1051)`.

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFAvailabilityZonedException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFAccessRestrictedException**

The operation is not permitted because you don't have access to the resource.

HTTP Status Code: 403

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a WebACL that still contains one or more Rule objects.
- You tried to delete a Rule that still contains one or more ByteMatchSet objects or other predicates.
- You tried to delete a ByteMatchSet that contains one or more ByteMatchTuple objects.
- You tried to delete an IPSet that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteWebACL
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a WebACL (p. 1039). You can't delete a WebACL if it still contains any Rules.

To delete a WebACL, perform the following steps:

1. Update the WebACL to remove Rules, if any. For more information, see UpdateWebACL (p. 733).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteWebACL request.
3. Submit a DeleteWebACL request.

Request Syntax

```
{
  "ChangeToken": "string",
  "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 574)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

WebACLId (p. 574)

The WebACLId of the WebACL (p. 1039) that you want to delete. WebACLId is returned by CreateWebACL (p. 527) and by ListWebACLs (p. 673).

Type: String


Pattern: .\S.*

Required: Yes
Response Syntax

```json
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 575)**

- The `ChangeToken` that you used to submit the `DeleteWebACL` request. You can also use this value to query the status of the request. For more information, see [GetChangeTokenStatus (p. 587)](#).
- **Type:** String
- **Length Constraints:** Minimum length of 1. Maximum length of 128.
- **Pattern:** .\s.*

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 1051)](#).

**WAFFInternalErrorException**

- The operation failed because of a system problem, even though the request was valid. Retry your request.
- **HTTP Status Code:** 500

**WAFFInvalidAccountException**

- The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.
- **HTTP Status Code:** 400

**WAFFNonEmptyEntityException**

- The operation failed because you tried to delete an object that isn't empty. For example:
  - You tried to delete a `WebACL` that still contains one or more `Rule` objects.
  - You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
  - You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
  - You tried to delete an `IPSet` that references one or more IP addresses.
- **HTTP Status Code:** 400

**WAFFNonexistentItemException**

- The operation failed because the referenced object doesn't exist.
- **HTTP Status Code:** 400
WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteXssMatchSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an XssMatchSet (p. 1043). You can't delete an XssMatchSet if it's still used in any Rules or if it still contains any XssMatchTuple (p. 1047) objects.

If you just want to remove an XssMatchSet from a Rule, use UpdateRule (p. 716).

To permanently delete an XssMatchSet from AWS WAF, perform the following steps:

1. Update the XssMatchSet to remove filters, if any. For more information, see UpdateXssMatchSet (p. 738).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of a DeleteXssMatchSet request.
3. Submit a DeleteXssMatchSet request.

Request Syntax

```
{
    "ChangeToken": "string",
    "XssMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 577)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

XssMatchSetId (p. 577)

The XssMatchSetId of the XssMatchSet (p. 1043) that you want to delete. XssMatchSetId is returned by CreateXssMatchSet (p. 536) and by ListXssMatchSets (p. 676).

Type: String

Pattern: \S.*

Required: Yes

Response Syntax

```json
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 578)**

The `ChangeToken` that you used to submit the `DeleteXssMatchSet` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 587)`.

Type: String


Pattern: \S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonEmptyEntityException**

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DisassociateWebACL
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Removes a web ACL from the specified resource, either an application load balancer or Amazon API Gateway stage.

**Request Syntax**

```
{
  "ResourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 580)**

The ARN (Amazon Resource Name) of the resource from which the web ACL is being removed, either an application load balancer or Amazon API Gateway stage.

The ARN should be in one of the following formats:

- For an Amazon API Gateway stage: `arn:aws:apigateway:region::/restapis/api-id/stages/stage-name`

Type: String


Pattern: `.*\S.*`

Required: Yes

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.
HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetByteMatchSet

Returns the ByteMatchSet (p. 966) specified by ByteMatchSetId.

Request Syntax

```json
{
  "ByteMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ByteMatchSetId (p. 582)**

The ByteMatchSetId of the ByteMatchSet (p. 966) that you want to get. ByteMatchSetId is returned by CreateByteMatchSet (p. 489) and by ListByteMatchSets (p. 631).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
  "ByteMatchSet": {
    "ByteMatchSetId": "string",
    "ByteMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "PositionalConstraint": "string",
        "TargetString": "blob",
        "TextTransformation": "string"
      }
    ],
    "Name": "string"
  }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ByteMatchSet (p. 582)**

Information about the ByteMatchSet (p. 966) that you specified in the GetByteMatchSet request. For more information, see the following topics:

- ByteMatchSet (p. 966): Contains ByteMatchSetId, ByteMatchTuples, and Name
- ByteMatchTuples: Contains an array of ByteMatchTuple (p. 970) objects. Each ByteMatchTuple object contains FieldToMatch (p. 975), PositionalConstraint, TargetString, and TextTransformation
- FieldToMatch (p. 975): Contains Data and Type

Type: ByteMatchSet (p. 966) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetChangeToken

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

When you want to create, update, or delete AWS WAF objects, get a change token and include the change token in the create, update, or delete request. Change tokens ensure that your application doesn't submit conflicting requests to AWS WAF.

Each create, update, or delete request must use a unique change token. If your application submits a GetChangeToken request and then submits a second GetChangeToken request before submitting a create, update, or delete request, the second GetChangeToken request returns the same value as the first GetChangeToken request.

When you use a change token in a create, update, or delete request, the status of the change token changes to PENDING, which indicates that AWS WAF is propagating the change to all AWS WAF servers. Use GetChangeTokenStatus to determine the status of your change token.

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 585)

The ChangeToken that you used in the request. Use this value in a GetChangeTokenStatus request to get the current status of the request.

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetChangeTokenStatus
Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide. **For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the status of a ChangeToken that you got by calling **GetChangeToken** (p. 585). ChangeTokenStatus is one of the following values:

- **PROVISIONED**: You requested the change token by calling **GetChangeToken**, but you haven't used it yet in a call to create, update, or delete an AWS WAF object.
- **PENDING**: AWS WAF is propagating the create, update, or delete request to all AWS WAF servers.
- **INSYNC**: Propagation is complete.

**Request Syntax**

```json
{
    "ChangeToken": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters** (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 587)**

The change token for which you want to get the status. This change token was previously returned in the **GetChangeToken** response.

Type: String


Pattern: .\S.*

Required: Yes

**Response Syntax**

```json
{
    "ChangeTokenStatus": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**ChangeTokenStatus (p. 587)**

The status of the change token.

- Type: String
- Valid Values: PROVISIONED | PENDING | INSYNC

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

- HTTP Status Code: 500

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

- HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetGeoMatchSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the GeoMatchSet (p. 979) that is specified by GeoMatchSetId.

Request Syntax

```
{
  "GeoMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

GeoMatchSetId (p. 589)

The GeoMatchSetId of the GeoMatchSet (p. 979) that you want to get. GeoMatchSetId is returned by CreateGeoMatchSet (p. 493) and by ListGeoMatchSets (p. 634).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
  "GeoMatchSet": {
    "GeoMatchConstraints": [
      {
        "Type": "string",
        "Value": "string"
      }
    ],
    "GeoMatchSetId": "string",
    "Name": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**GeoMatchSet (p. 589)**

Information about the GeoMatchSet (p. 979) that you specified in the GetGeoMatchSet request. This includes the Type, which for a GeoMatchConstraint is always Country, as well as the Value, which is the identifier for a specific country.

Type: GeoMatchSet (p. 979) object

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetIPSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the IPSet (p. 986) that is specified by IPSetId.

Request Syntax

```
{
  "IPSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**IPSetId (p. 591)**

The IPSetId of the IPSet (p. 986) that you want to get. IPSetId is returned by CreateIPSet (p. 497) and by ListIPSets (p. 637).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
  "IPSet": {
    "IPSetDescriptors": [
    {
      "Type": "string",
      "Value": "string"
    },
    "IPSetId": "string",
    "Name": "string"
    }
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**IPSet (p. 591)**

Information about the **IPSet (p. 986)** that you specified in the GetIPSet request. For more information, see the following topics:

- **IPSet (p. 986)**: Contains IPSetDescriptors, IPSetId, and Name
- **IPSetDescriptors**: Contains an array of **IPSetDescriptor (p. 988)** objects. Each IPSetDescriptor object contains Type and Value

Type: **IPSet (p. 986)** object

**Errors**

For information about the errors that are common to all actions, see **Common Errors (p. 1051)**.

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetLoggingConfiguration
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the LoggingConfiguration (p. 992) for the specified web ACL.

**Request Syntax**

```json
{
   "ResourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 593)**

The Amazon Resource Name (ARN) of the web ACL for which you want to get the LoggingConfiguration (p. 992).

Type: String


Pattern: .*\S.*

Required: Yes

**Response Syntax**

```json
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [ {
         "Data": "string",
         "Type": "string"
      } ],
      "ResourceArn": "string"
   }
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**LoggingConfiguration (p. 593)**

The LoggingConfiguration (p. 992) for the specified web ACL.

Type: LoggingConfiguration (p. 992) object

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3


GetPermissionPolicy
Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the IAM policy attached to the RuleGroup.

**Request Syntax**

```json
{
  "ResourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters (p. 1049)**.

The request accepts the following data in JSON format.

**ResourceArn (p. 595)**

The Amazon Resource Name (ARN) of the RuleGroup for which you want to get the policy.

Type: String


Pattern: `.\S.*`

Required: Yes

**Response Syntax**

```json
{
  "Policy": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**Policy (p. 595)**

The IAM policy attached to the specified RuleGroup.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRateBasedRule
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RateBasedRule (p. 996) that is specified by the RuleId that you included in the GetRateBasedRule request.

Request Syntax

```
{
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

RuleId (p. 597)

The RuleId of the RateBasedRule (p. 996) that you want to get. RuleId is returned by CreateRateBasedRule (p. 500) and by ListRateBasedRules (p. 643).

Type: String
Pattern: .\S.*
Required: Yes

Response Syntax

```
{
   "Rule": {
      "MatchPredicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "MetricName": "string",
      "Name": "string",
      "RateKey": "string",
      "RateLimit": number,
      "RuleId": "string"
   }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Rule (p. 597)

Information about the RateBasedRule (p. 996) that you specified in the GetRateBasedRule request.

Type: RateBasedRule (p. 996) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRateBasedRuleManagedKeys

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of IP addresses currently being blocked by the RateBasedRule (p. 996) that is specified by the RuleId. The maximum number of managed keys that will be blocked is 10,000. If more than 10,000 addresses exceed the rate limit, the 10,000 addresses with the highest rates will be blocked.

**Request Syntax**

```json
{
   "NextMarker": "string",
   "RuleId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**NextMarker (p. 599)**

A null value and not currently used. Do not include this in your request.

Type: String


Pattern: .\S.*

Required: No

**RuleId (p. 599)**

The RuleId of the RateBasedRule (p. 996) for which you want to get a list of ManagedKeys. RuleId is returned by CreateRateBasedRule (p. 500) and by ListRateBasedRules (p. 643).

Type: String


Pattern: .\S.*

Required: Yes

**Response Syntax**

```json
{
   "ManagedKeys": [ "string" ],
}```
"NextMarker": "string"
}

### Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ManagedKeys (p. 599)**

An array of IP addresses that currently are blocked by the specified RateBasedRule (p. 996).

Type: Array of strings

**NextMarker (p. 599)**

A null value and not currently used.

Type: String


Pattern: `.\S.*`

### Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultActionType other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafActionType other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.
HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRegexMatchSet

Returns the RegexMatchSet (p. 998) specified by RegexMatchSetId.

Request Syntax

```json
{
  "RegexMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**RegexMatchSetId (p. 602)**

The RegexMatchSetId of the RegexMatchSet (p. 998) that you want to get. RegexMatchSetId is returned by CreateRegexMatchSet (p. 505) and by ListRegexMatchSets (p. 646).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
  "RegexMatchSet": {
    "Name": "string",
    "RegexMatchSetId": "string",
    "RegexMatchTuples": [
      {
        "FieldToMatch": {
          "Data": "string",
          "Type": "string"
        },
        "RegexPatternSetId": "string",
        "TextTransformation": "string"
      }
    ]
  }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**RegexMatchSet (p. 602)**

Information about the RegexMatchSet (p. 998) that you specified in the GetRegexMatchSet request. For more information, see RegexMatchTuple (p. 1002).

Type: RegexMatchSet (p. 998) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRegexPatternSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RegexPatternSet (p. 1005) specified by RegexPatternSetId.

Request Syntax

```json
{
   "RegexPatternSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

RegexPatternSetId (p. 604)

The RegexPatternSetId of the RegexPatternSet (p. 1005) that you want to get. RegexPatternSetId is returned by CreateRegexPatternSet (p. 508) and by ListRegexPatternSets (p. 649).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
   "RegexPatternSet": {
      "Name": "string",
      "RegexPatternSetId": "string",
      "RegexPatternStrings": [ "string" ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
GetRegexPatternSet

RegexPatternSet (p. 604)

Information about the RegexPatternSet (p. 1005) that you specified in the GetRegexPatternSet request, including the identifier of the pattern set and the regular expression patterns you want AWS WAF to search for.

Type: RegexPatternSet (p. 1005) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRule
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the Rule (p. 1009) that is specified by the RuleId that you included in the GetRule request.

Request Syntax

```json
{
  "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

RuleId (p. 606)

The RuleId of the Rule (p. 1009) that you want to get. RuleId is returned by CreateRule (p. 511) and by ListRules (p. 658).

Type: String


Pattern: .*\S.*

Required: Yes

Response Syntax

```json
{
  "Rule": {
    "MetricName": "string",
    "Name": "string",
    "Predicates": [
      {
        "DataId": "string",
        "Negated": boolean,
        "Type": "string"
      }
    ],
    "RuleId": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

Rule (p. 606)

Information about the Rule (p. 1009) that you specified in the GetRule request. For more information, see the following topics:

- Rule (p. 1009): Contains MetricName, Name, an array of Predicate objects, and RuleId
- Predicate (p. 994): Each Predicate object contains DataId, Negated, and Type

Type: Rule (p. 1009) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetRuleGroup
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RuleGroup (p. 1011) that is specified by the RuleGroupId that you included in the GetRuleGroup request.

To view the rules in a rule group, use ListActivatedRulesInRuleGroup (p. 628).

**Request Syntax**

```json
{
  "RuleGroupId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**RuleGroupId (p. 608)**

The RuleGroupId of the RuleGroup (p. 1011) that you want to get. RuleGroupId is returned by CreateRuleGroup (p. 515) and by ListRuleGroups (p. 655).

Type: String


Pattern: .\S.*

Required: Yes

**Response Syntax**

```json
{
  "RuleGroup": {
    "MetricName": "string",
    "Name": "string",
    "RuleGroupId": "string"
  }
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
RuleGroup (p. 608)

Information about the RuleGroup (p. 1011) that you specified in the GetRuleGroup request.

Type: RuleGroup (p. 1011) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetSampledRequests
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Gets detailed information about a specified number of requests—a sample—that AWS WAF randomly selects from among the first 5,000 requests that your AWS resource received during a time range that you choose. You can specify a sample size of up to 500 requests, and you can specify any time range in the previous three hours.

GetSampledRequests returns a time range, which is usually the time range that you specified. However, if your resource (such as an Amazon CloudFront distribution) received 5,000 requests before the specified time range elapsed, GetSampledRequests returns an updated time range. This new time range indicates the actual period during which AWS WAF selected the requests in the sample.

Request Syntax

```json
{
   "MaxItems": number,
   "RuleId": "string",
   "TimeWindow": {
      "EndTime": number,
      "StartTime": number
   },
   "WebAclId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

MaxItems (p. 610)

The number of requests that you want AWS WAF to return from among the first 5,000 requests that your AWS resource received during the time range. If your resource received fewer requests than the value of MaxItems, GetSampledRequests returns information about all of them.

Type: Long


Required: Yes

RuleId (p. 610)

RuleId is one of three values:

- The RuleId of the Rule or the RuleGroupId of the RuleGroup for which you want GetSampledRequests to return a sample of requests.
- Default_Action, which causes GetSampledRequests to return a sample of the requests that didn't match any of the rules in the specified WebACL.
Type: String


Pattern: .\S.*

Required: Yes

TimeWindow (p. 610)

The start date and time and the end date and time of the range for which you want GetSampledRequests to return a sample of requests. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

Type: TimeWindow (p. 1036) object

Required: Yes

WebAclId (p. 610)

The WebACLId of the WebACL for which you want GetSampledRequests to return a sample of requests.

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
    "PopulationSize": number,
    "SampledRequests": [
        {
            "Action": "string",
            "Request": {
                "ClientIP": "string",
                "Country": "string",
                "Headers": [
                    {
                        "Name": "string",
                        "Value": "string"
                    }
                ],
                "HTTPVersion": "string",
                "Method": "string",
                "URI": "string"
            },
            "RuleWithinRuleGroup": "string",
            "Timestamp": number,
            "Weight": number
        }
    ],
    "TimeWindow": {
        "EndTime": number,
        "StartTime": number
    }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

PopulationSize (p. 611)

The total number of requests from which GetSampledRequests got a sample of MaxItems requests. If PopulationSize is less than MaxItems, the sample includes every request that your AWS resource received during the specified time range.

Type: Long

SampledRequests (p. 611)

A complex type that contains detailed information about each of the requests in the sample.

Type: Array of SampledHTTPRequest (p. 1017) objects

TimeWindow (p. 611)

Usually, TimeWindow is the time range that you specified in the GetSampledRequests request. However, if your AWS resource received more than 5,000 requests during the time range that you specified in the request, GetSampledRequests returns the time range for the first 5,000 requests.

Times are in Coordinated Universal Time (UTC) format.

Type: TimeWindow (p. 1036) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
GetSizeConstraintSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the SizeConstraintSet (p. 1022) specified by SizeConstraintSetId.

Request Syntax

```json
{
    "SizeConstraintSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**SizeConstraintSetId (p. 614)**

- The SizeConstraintSetId of the SizeConstraintSet (p. 1022) that you want to get. SizeConstraintSetId is returned by CreateSizeConstraintSet (p. 519) and by ListSizeConstraintSets (p. 661).

  Type: String


  Pattern: .*\S.*

  Required: Yes

Response Syntax

```json
{
    "SizeConstraintSet": {
        "Name": "string",
        "SizeConstraints": [
            {"ComparisonOperator": "string",
             "FieldToMatch": {
                "Data": "string",
                "Type": "string"
             },
            "Size": number,
            "TextTransformation": "string"
            },
            "SizeConstraintSetId": "string"
        ]
    }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

SizeConstraintSet (p. 614)

Information about the SizeConstraintSet (p. 1022) that you specified in the GetSizeConstraintSet request. For more information, see the following topics:

- SizeConstraintSet (p. 1022): Contains SizeConstraintSetId, SizeConstraints, and Name
- SizeConstraints: Contains an array of SizeConstraint (p. 1019) objects. Each SizeConstraint object contains FieldToMatch (p. 975), TextTransformation, ComparisonOperator, and Size
- FieldToMatch (p. 975): Contains Data and Type

Type: SizeConstraintSet (p. 1022) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
GetSqlInjectionMatchSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the SqlInjectionMatchSet (p. 1026) that is specified by SqlInjectionMatchSetId.

Request Syntax

```json
{
   "SqlInjectionMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

SqlInjectionMatchSetId (p. 617)

The SqlInjectionMatchSetId of the SqlInjectionMatchSet (p. 1026) that you want to get. SqlInjectionMatchSetId is returned by CreateSqlInjectionMatchSet (p. 523) and by ListSqlInjectionMatchSets (p. 664).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```json
{
   "SqlInjectionMatchSet": {
      "Name": "string",
      "SqlInjectionMatchSetId": "string",
      "SqlInjectionMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

SqlInjectionMatchSet (p. 617)

Information about the SqlInjectionMatchSet (p. 1026) that you specified in the GetSqlInjectionMatchSet request. For more information, see the following topics:

- SqlInjectionMatchSet (p. 1026): Contains Name, SqlInjectionMatchSetId, and an array of SqlInjectionMatchTuple objects
- SqlInjectionMatchTuple (p. 1030): Each SqlInjectionMatchTuple object contains FieldToMatch and TextTransformation
- FieldToMatch (p. 975): Contains Data and Type

Type: SqlInjectionMatchSet (p. 1026) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetWebACL
Service: AWS WAF Classic Regional

Note
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://docs.aws.amazon.com/waf/latest/developerguide/aws-waf-classic.html) in the developer guide.

For the latest version of **AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/getting-started-with-aws-wafv2.html). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the [WebACL](https://docs.aws.amazon.com/waf/latest/developerguide/webacl-concepts.html) that is specified by WebACLId.

**Request Syntax**

```json
{
  "WebACLId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters](https://docs.aws.amazon.com/waf/latest/developerguide/common-parameters.html).

The request accepts the following data in JSON format.

**WebACLId (p. 620)**

The WebACLId of the [WebACL](https://docs.aws.amazon.com/waf/latest/developerguide/webacl-concepts.html) that you want to get. WebACLId is returned by [CreateWebACL](https://docs.aws.amazon.com/waf/latest/APIReference/API_CreateWebACL.html) and by [ListWebACLs](https://docs.aws.amazon.com/waf/latest/APIReference/API_ListWebACLs.html).

Type: String


Pattern: .*\S.*

Required: Yes

**Response Syntax**

```json
{
  "WebACL": {
    "DefaultAction": {
      "Type": "string"
    },
    "MetricName": "string",
    "Name": "string",
    "Rules": [
      {
        "Action": {
          "Type": "string"
        },
        "ExcludedRules": [
          {
            "RuleId": "string"
          }
        ],
        "OverrideAction": {
```
"Type": "string"
},
"Priority": number,
"RuleId": "string",
"Type": "string"
}
],
"WebACLArn": "string",
"WebACLId": "string"
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

WebACL (p. 620)

Information about the WebACL (p. 1039) that you specified in the GetWebACL request. For more information, see the following topics:

- WebACL (p. 1039): Contains DefaultAction, MetricName, Name, an array of Rule objects, and WebACLId
- DefaultAction (Data type is WafAction (p. 1037)): Contains Type
- Rules: Contains an array of ActivatedRule objects, which contain Action, Priority, and RuleId
- Action: Contains Type

Type: WebACL (p. 1039) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
GetWebACLForResource
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the web ACL for the specified resource, either an application load balancer or Amazon API Gateway stage.

**Request Syntax**

```json
{
    "ResourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ResourceArn (p. 623)**

The ARN (Amazon Resource Name) of the resource for which to get the web ACL, either an application load balancer or Amazon API Gateway stage.

The ARN should be in one of the following formats:

- For an Amazon API Gateway stage: `arn:aws:apigateway:region::/restapis/api-id/stages/stage-name`

Type: String


Pattern: \.*\S.*

Required: Yes

**Response Syntax**

```json
{
    "WebACLSummary": {
        "Name": "string",
        "WebACLId": "string"
    }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

WebACLSummary (p. 623)

Information about the web ACL that you specified in the GetWebACLForResource request. If there is no associated resource, a null WebACLSummary is returned.

Type: WebACLSummary (p. 1041) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFUnavailableEntityException

The operation failed because the entity referenced is temporarily unavailable. Retry your request.
HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
GetXssMatchSet
Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide. **For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the **XssMatchSet** (p. 1043) that is specified by **XssMatchSetId**.

**Request Syntax**

```
{
    "XssMatchSetId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters** (p. 1049).

The request accepts the following data in JSON format.

**XssMatchSetId (p. 626)**

The **XssMatchSetId** of the **XssMatchSet** (p. 1043) that you want to get. **XssMatchSetId** is returned by **CreateXssMatchSet (p. 536)** and by **ListXssMatchSets (p. 676)**.

Type: String


Pattern: .\S.*

Required: Yes

**Response Syntax**

```
{
    "XssMatchSet": {
        "Name": "string",
        "XssMatchSetId": "string",
        "XssMatchTuples": [
        {
            "FieldToMatch": {
            "Data": "string",
            "Type": "string"
            },
            "TextTransformation": "string"
        }
        ]
    }
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**XssMatchSet (p. 626)**

Information about the XssMatchSet (p. 1043) that you specified in the GetXssMatchSet request. For more information, see the following topics:

- XssMatchSet (p. 1043): Contains Name, XssMatchSetId, and an array of XssMatchTuple objects
- XssMatchTuple (p. 1047): Each XssMatchTuple object contains FieldToMatch and TextTransformation
- FieldToMatch (p. 975): Contains Data and Type

Type: XssMatchSet (p. 1043) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListActivatedRulesInRuleGroup

Service: AWS WAF Classic Regional

**ListActivatedRulesInRuleGroup**

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of ActivatedRule (p. 963) objects.

**Request Syntax**

```json
{
    "Limit": number,
    "NextMarker": "string",
    "RuleGroupId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 628)**

Specifies the number of ActivatedRules that you want AWS WAF to return for this request. If you have more ActivatedRules than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of ActivatedRules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

**NextMarker (p. 628)**

If you specify a value for Limit and you have more ActivatedRules than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of ActivatedRules. For the second and subsequent ListActivatedRulesInRuleGroup requests, specify the value of NextMarker from the previous response to get information about another batch of ActivatedRules.

Type: String


Pattern: .\S.*

Required: No

**RuleGroupId (p. 628)**

The RuleGroupId of the RuleGroup (p. 1011) for which you want to get a list of ActivatedRule (p. 963) objects.
Type: String


Pattern: .\S.*

Required: No

Response Syntax

```
{
   "ActivatedRules": [
      {
         "Action": {
            "Type": "string"
         },
         "ExcludedRules": [
            {
               "RuleId": "string"
            }
         ],
         "OverrideAction": {
            "Type": "string"
         },
         "Priority": number,
         "RuleId": "string",
         "Type": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

**ActivatedRules (p. 629)**

An array of ActivatedRules objects.

Type: Array of ActivatedRule (p. 963) objects

**NextMarker (p. 629)**

If you have more ActivatedRules than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more ActivatedRules, submit another ListActivatedRulesInRuleGroup request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).
WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListByteMatchSets

Service: AWS WAF Classic Regional

Note

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of ByteMatchSetSummary (p. 968) objects.

Request Syntax

```
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 631)

Specifies the number of ByteMatchSet objects that you want AWS WAF to return for this request. If you have more ByteMatchSets objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of ByteMatchSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 631)

If you specify a value for Limit and you have more ByteMatchSets than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of ByteMatchSets. For the second and subsequent ListByteMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of ByteMatchSets.

Type: String


Pattern: .*

Required: No

Response Syntax

```
{
}
```
"ByteMatchSets": [ 
  
  "ByteMatchSetId": "string",
  "Name": "string"
  
],

"NextMarker": "string"

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ByteMatchSets (p. 631)**

An array of ByteMatchSetSummary (p. 968) objects.

Type: Array of ByteMatchSetSummary (p. 968) objects

**NextMarker (p. 631)**

If you have more ByteMatchSet objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more ByteMatchSet objects, submit another ListByteMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListGeoMatchSets
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of GeoMatchSetSummary (p. 981) objects in the response.

Request Syntax

```json
{
  "Limit": number,
  "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 634)

Specifies the number of GeoMatchSet objects that you want AWS WAF to return for this request. If you have more GeoMatchSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of GeoMatchSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 634)

If you specify a value for Limit and you have more GeoMatchSets than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of GeoMatchSet objects. For the second and subsequent ListGeoMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of GeoMatchSet objects.

Type: String


Pattern: .*

Required: No

Response Syntax

```json
{
}
```
"GeoMatchSets": [
    {
      "GeoMatchSetId": "string",
      "Name": "string"
    }
],
"NextMarker": "string"

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**GeoMatchSets** *(p. 634)*

An array of **GeoMatchSetSummary** *(p. 981)* objects.

Type: Array of **GeoMatchSetSummary** *(p. 981)* objects

**NextMarker** *(p. 634)*

If you have more **GeoMatchSet** objects than the number that you specified for **Limit** in the request, the response includes a **NextMarker** value. To list more **GeoMatchSet** objects, submit another **ListGeoMatchSets** request, and specify the **NextMarker** value from the response in the **NextMarker** value in the next request.

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see **Common Errors** *(p. 1051).*

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
AWS WAFV2 API Reference
ListGeoMatchSets

- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ListIPSets

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of IPSetSummary (p. 990) objects in the response.

Request Syntax

```
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 637)

- Specifies the number of IPSet objects that you want AWS WAF to return for this request. If you have more IPSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of IPSet objects.
- Type: Integer
- Valid Range: Minimum value of 0. Maximum value of 100.
- Required: No

NextMarker (p. 637)

- AWS WAF returns a NextMarker value in the response that allows you to list another group of IPSets. For the second and subsequent ListIPSets requests, specify the value of NextMarker from the previous response to get information about another batch of IPSets.
- Type: String
- Pattern: .\S.*
- Required: No

Response Syntax

```
{
    "IPSets": [
        
    ]
}
```
"IPSetId": "string",
"Name": "string"
},
"NextMarker": "string"
}

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**IPSets (p. 637)**

An array of IPSetSummary (p. 990) objects.

Type: Array of IPSetSummary (p. 990) objects

**NextMarker (p. 637)**

To list more IPSet objects, submit another ListIPSets request, and in the next request use the NextMarker response value as the NextMarker value.

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListLoggingConfigurations
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of LoggingConfiguration (p. 992) objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 640)

Specifies the number of LoggingConfigurations that you want AWS WAF to return for this request. If you have more LoggingConfigurations than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of LoggingConfigurations.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 640)

If you specify a value for Limit and you have more LoggingConfigurations than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of LoggingConfigurations. For the second and subsequent ListLoggingConfigurations requests, specify the value of NextMarker from the previous response to get information about another batch of ListLoggingConfigurations.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```
{
}
```

640
"LoggingConfigurations": [
    {
        "LogDestinationConfigs": [
            "string"
        ],
        "RedactedFields": [
            {
                "Data": "string",
                "Type": "string"
            }
        ],
        "ResourceArn": "string"
    },
    "NextMarker": "string"
]

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**LoggingConfigurations (p. 640)**

An array of LoggingConfiguration (p. 992) objects.

Type: Array of LoggingConfiguration (p. 992) objects

**NextMarker (p. 640)**

If you have more LoggingConfigurations than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more LoggingConfigurations, submit another ListLoggingConfigurations request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListRateBasedRules
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleSummary (p. 1015) objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 643)

Specifies the number of Rules that you want AWS WAF to return for this request. If you have more Rules than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of Rules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 643)

If you specify a value for Limit and you have more Rules than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of Rules. For the second and subsequent ListRateBasedRules requests, specify the value of NextMarker from the previous response to get information about another batch of Rules.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```
{
   "NextMarker": "string",
}
```
"Rules": [
  {
    "Name": "string",
    "RuleId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 643)**

If you have more Rules than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more Rules, submit another ListRateBasedRules request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .

**Rules (p. 643)**

An array of RuleSummary (p. 1015) objects.

Type: Array of RuleSummary (p. 1015) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListRegexMatchSets

Returns an array of RegexMatchSetSummary objects.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

**Limit**

Specifies the number of RegexMatchSet objects that you want AWS WAF to return for this request. If you have more RegexMatchSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of RegexMatchSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

**NextMarker**

If you specify a value for Limit and you have more RegexMatchSet objects than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of ByteMatchSets. For the second and subsequent ListRegexMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of RegexMatchSet objects.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{}
```
"NextMarker": "string",
"RegexMatchSets": [
  {
    "Name": "string",
    "RegexMatchSetId": "string"
  }
]

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 646)**

If you have more RegexMatchSet objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more RegexMatchSet objects, submit another ListRegexMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

**RegexMatchSets (p. 646)**

An array of RegexMatchSetSummary (p. 1000) objects.

Type: Array of RegexMatchSetSummary (p. 1000) objects

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListRegexPatternSets
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RegexPatternSetSummary objects.

**Request Syntax**

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

**Request Parameters**
For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

**Limit (p. 649)**

Specifies the number of RegexPatternSet objects that you want AWS WAF to return for this request. If you have more RegexPatternSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of RegexPatternSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

**NextMarker (p. 649)**

If you specify a value for Limit and you have more RegexPatternSet objects than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of RegexPatternSet objects. For the second and subsequent ListRegexPatternSets requests, specify the value of NextMarker from the previous response to get information about another batch of RegexPatternSet objects.

Type: String


Pattern: .\S.*

Required: No

**Response Syntax**

```
"NextMarker": "string",
"RegexPatternSets": [
  {
    "Name": "string",
    "RegexPatternSetId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 649)**

If you have more RegexPatternSet objects than the number that you specified for Limit in
the request, the response includes a NextMarker value. To list more RegexPatternSet objects,
submit another ListRegexPatternSets request, and specify the NextMarker value from the
response in the NextMarker value in the next request.

Type: String
Pattern: .\S.*

**RegexPatternSets (p. 649)**

An array of RegexPatternSetSummary (p. 1007) objects.
Type: Array of RegexPatternSetSummary (p. 1007) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your
request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid
account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
**ListResourcesForWebACL**

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide. **For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of resources associated with the specified web ACL.

**Request Syntax**

```json
{
    "ResourceType": "string",
    "WebACLId": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see **Common Parameters (p. 1049)**.

The request accepts the following data in JSON format.

**ResourceType** (p. 652)

The type of resource to list.

Type: String

Valid Values: `APPLICATION_LOAD_BALANCER` | `API_GATEWAY`

Required: No

**WebACLId** (p. 652)

The unique identifier (ID) of the web ACL for which to list the associated resources.

Type: String


Pattern: `.\S.*`

Required: Yes

**Response Syntax**

```json
{
    "ResourceArns": [ "string" ]
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

**ResourceArns (p. 652)**

An array of ARNs (Amazon Resource Names) of the resources associated with the specified web ACL. An array with zero elements is returned if there are no resources associated with the web ACL.

Type: Array of strings


Pattern: `.*\S.*`

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListRuleGroups
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleGroup (p. 1011) objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 655)

Specifies the number of RuleGroups that you want AWS WAF to return for this request. If you have more RuleGroups than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of RuleGroups.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 655)

If you specify a value for Limit and you have more RuleGroups than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of RuleGroups. For the second and subsequent ListRuleGroups requests, specify the value of NextMarker from the previous response to get information about another batch of RuleGroups.

Type: String


Pattern: .*\S.*

Required: No

Response Syntax

```
{
   "NextMarker": "string",
```
"RuleGroups": [  {
    "Name": "string",
    "RuleGroupId": "string"
  }
],

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 655)

If you have more RuleGroups than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more RuleGroups, submit another ListRuleGroups request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

RuleGroups (p. 655)

An array of RuleGroup (p. 1011) objects.

Type: Array of RuleGroupSummary (p. 1013) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
• AWS SDK for Ruby V3
ListRules

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleSummary (p. 1015) objects.

Request Syntax

```
{
  "Limit": number,
  "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 658)**

Specifies the number of Rules that you want AWS WAF to return for this request. If you have more Rules than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of Rules.

- Type: Integer
- Valid Range: Minimum value of 0. Maximum value of 100.
- Required: No

**NextMarker (p. 658)**

If you specify a value for Limit and you have more Rules than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of Rules. For the second and subsequent ListRules requests, specify the value of NextMarker from the previous response to get information about another batch of Rules.

- Type: String
- Pattern: .\S.*
- Required: No

Response Syntax

```
{
  "NextMarker": "string",
}
```
"Rules": [  
  {  
    "Name": "string",  
    "RuleId": "string"  
  }  
]

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 658)**

If you have more Rules than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more Rules, submit another ListRules request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

**Rules (p. 658)**

An array of RuleSummary (p. 1015) objects.

Type: Array of RuleSummary (p. 1015) objects

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListSizeConstraintSets

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of SizeConstraintSetSummary objects.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit (p. 661)

Specifies the number of SizeConstraintSet objects that you want AWS WAF to return for this request. If you have more SizeConstraintSets objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of SizeConstraintSet objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 661)

If you specify a value for Limit and you have more SizeConstraintSets than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of SizeConstraintSets. For the second and subsequent ListSizeConstraintSets requests, specify the value of NextMarker from the previous response to get information about another batch of SizeConstraintSets.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
}
```
"NextMarker": "string",
"SizeConstraintSets": [
  {
    "Name": "string",
    "SizeConstraintSetId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 661)

If you have more SizeConstraintSet objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more SizeConstraintSet objects, submit another ListSizeConstraintSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

SizeConstraintSets (p. 661)

An array of SizeConstraintSetSummary (p. 1024) objects.

Type: Array of SizeConstraintSetSummary (p. 1024) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListSqlInjectionMatchSets
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of SqlInjectionMatchSet (p. 1026) objects.

Request Syntax

```json
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters
For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 664)

Specifies the number of SqlInjectionMatchSet (p. 1026) objects that you want AWS WAF to return for this request. If you have more SqlInjectionMatchSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of Rules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 664)

If you specify a value for Limit and you have more SqlInjectionMatchSet (p. 1026) objects than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of SqlInjectionMatchSets. For the second and subsequent ListSqlInjectionMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of SqlInjectionMatchSets.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
}
```
"NextMarker": "string",
"SqlInjectionMatchSets": [ 
  { 
    "Name": "string",
    "SqlInjectionMatchSetId": "string"
  }
] 

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 664)
If you have more SqlInjectionMatchSet (p. 1026) objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more SqlInjectionMatchSet objects, submit another ListSqlInjectionMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String
Pattern: .\S.*
SqlInjectionMatchSets (p. 664)
An array of SqlInjectionMatchSetSummary (p. 1028) objects.
Type: Array of SqlInjectionMatchSetSummary (p. 1028) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException
The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException
The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListSubscribedRuleGroups

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleGroup (p. 1011) objects that you are subscribed to.

Request Syntax

```json
{
  "Limit": number,
  "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 667)**

Specifies the number of subscribed rule groups that you want AWS WAF to return for this request. If you have more objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

**NextMarker (p. 667)**

If you specify a value for Limit and you have more ByteMatchSets subscribed rule groups than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of subscribed rule groups. For the second and subsequent ListSubscribedRuleGroupsRequest requests, specify the value of NextMarker from the previous response to get information about another batch of subscribed rule groups.

Type: String


Pattern: .*\\S.*

Required: No

Response Syntax

```
{
}
```
"NextMarker": "string",
"RuleGroups": [
    {
        "MetricName": "string",
        "Name": "string",
        "RuleGroupId": "string"
    }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker (p. 667)

If you have more objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more objects, submit another ListSubscribedRuleGroups request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .*\s.*

RuleGroups (p. 667)

An array of RuleGroup (p. 1011) objects.

Type: Array of SubscribedRuleGroupSummary (p. 1032) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListTagsForResource

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Retrieves the tags associated with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Request Syntax

```json
{
   "Limit": number,
   "NextMarker": "string",
   "ResourceARN": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 670)

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 670)

Type: String


Pattern: .\S.*

Required: No

ResourceARN (p. 670)

Type: String

ListTagsForResource

Pattern: .*\S.*
Required: Yes

Response Syntax

```
{
   "NextMarker": "string",
   "TagInfoForResource": {
       "ResourceARN": "string",
       "TagList": [
           {
               "Key": "string",
               "Value": "string"
           }
       ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 671)**

Type: String


Pattern: .*\S.*

**TagInfoForResource (p. 671)**

Type: TagInfoForResource (p. 1035) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFBadRequestException**

HTTP Status Code: 400

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
• You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFTagOperationException

HTTP Status Code: 400
WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ListWebACLs

Service: AWS WAF Classic Regional

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of WebACLSummary (p. 1041) objects in the response.

**Request Syntax**

```json
{
    "Limit": number,
    "NextMarker": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**Limit (p. 673)**

Specifies the number of WebACL objects that you want AWS WAF to return for this request. If you have more WebACL objects than the number that you specify for Limit, the response includes a NextMarker value that you can use to get another batch of WebACL objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

**NextMarker (p. 673)**

If you specify a value for Limit and you have more WebACL objects than the number that you specify for Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of WebACL objects. For the second and subsequent ListWebACLs requests, specify the value of NextMarker from the previous response to get information about another batch of WebACL objects.

Type: String


Pattern: .*\S.*

Required: No

**Response Syntax**

```json
{
}
```
"NextMarker": "string",
"WebACLs": [ 
    { 
        "Name": "string",
        "WebACLId": "string"
    } 
] 
}

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 673)**

If you have more WebACL objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more WebACL objects, submit another `ListWebACLs` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String


Pattern: .*\S.*

**WebACLs (p. 673)**

An array of `WebACLSummary (p. 1041)` objects.

Type: Array of `WebACLSummary (p. 1041)` objects

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
ListXssMatchSets
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of XssMatchSet (p. 1043) objects.

Request Syntax

```json
{
    "Limit": number,
    "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

Limit (p. 676)

Specifies the number of XssMatchSet (p. 1043) objects that you want AWS WAF to return for this request. If you have more XssMatchSet objects than the number you specify for Limit, the response includes a NextMarker value that you can use to get another batch of Rules.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker (p. 676)

If you specify a value for Limit and you have more XssMatchSet (p. 1043) objects than the value of Limit, AWS WAF returns a NextMarker value in the response that allows you to list another group of XssMatchSets. For the second and subsequent ListXssMatchSets requests, specify the value of NextMarker from the previous response to get information about another batch of XssMatchSets.

Type: String


Pattern: .\S.*

Required: No

Response Syntax

```json
{
}
```
"NextMarker": "string",
"XssMatchSets": [
  {
    "Name": "string",
    "XssMatchSetId": "string"
  }
]

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**NextMarker (p. 676)**

If you have more XssMatchSet (p. 1043) objects than the number that you specified for Limit in the request, the response includes a NextMarker value. To list more XssMatchSet objects, submit another ListXssMatchSets request, and specify the NextMarker value from the response in the NextMarker value in the next request.

Type: String


Pattern: .\S.*

**XssMatchSets (p. 676)**

An array of XssMatchSetSummary (p. 1045) objects.

Type: Array of XssMatchSetSummary (p. 1045) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
PutLoggingConfiguration

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates a LoggingConfiguration (p. 992) with a specified web ACL.

You can access information about all traffic that AWS WAF inspects using the following steps:

1. Create an Amazon Kinesis Data Firehose.

   Create the data firehose with a PUT source and in the region that you are operating. However, if you are capturing logs for Amazon CloudFront, always create the firehose in US East (N. Virginia).

   Give the data firehose a name that starts with the prefix `aws-waf-logs-`. For example, `aws-waf-logs-us-east-2-analytics`.

   **Note**
   Do not create the data firehose using a Kinesis stream as your source.

2. Associate that firehose to your web ACL using a PutLoggingConfiguration request.

When you successfully enable logging using a PutLoggingConfiguration request, AWS WAF will create a service linked role with the necessary permissions to write logs to the Amazon Kinesis Data Firehose. For more information, see Logging Web ACL Traffic Information in the AWS WAF Developer Guide.

**Request Syntax**

```json
{
   "LoggingConfiguration": {
       "LogDestinationConfigs": [ "string" ],
       "RedactedFields": [
           {
               "Data": "string",
               "Type": "string"
           }
       ],
       "ResourceArn": "string"
   }
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**LoggingConfiguration (p. 679)**

The Amazon Kinesis Data Firehose that contains the inspected traffic information, the redacted fields details, and the Amazon Resource Name (ARN) of the web ACL to monitor.
Note
When specifying Type in RedactedFields, you must use one of the following values: URI, QUERY_STRING, HEADER, or METHOD.

Type: LoggingConfiguration (p. 992) object
Required: Yes

Response Syntax

```json
{
    "LoggingConfiguration": {
        "LogDestinationConfigs": [ "string" ],
        "RedactedFields": [
            {
                "Data": "string",
                "Type": "string"
            }
        ],
        "ResourceArn": "string"
    }
}
```

Response Elements
If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

LoggingConfiguration (p. 680)
The LoggingConfiguration (p. 992) that you submitted in the request.
Type: LoggingConfiguration (p. 992) object

Errors
For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException
The operation failed because of a system problem, even though the request was valid. Retry your request.
HTTP Status Code: 500

WAFNonexistentItemException
The operation failed because the referenced object doesn't exist.
HTTP Status Code: 400

WAFServiceLinkedRoleErrorException
AWS WAF is not able to access the service linked role. This can be caused by a previous PutLoggingConfiguration request, which can lock the service linked role for about 20 seconds. Please try your request again. The service linked role can also be locked by a previous DeleteServiceLinkedRole request, which can lock the role for 15 minutes or more. If you recently made a DeleteServiceLinkedRole, wait at least 15 minutes and try the request again.
If you receive this same exception again, you will have to wait additional time until the role is unlocked.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
PutPermissionPolicy

Service: AWS WAF Classic Regional

**Note**

This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](#) in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](#). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Attaches an IAM policy to the specified resource. The only supported use for this action is to share a RuleGroup across accounts.

The PutPermissionPolicy is subject to the following restrictions:

- You can attach only one policy with each `PutPermissionPolicy` request.
- The policy must include an `Effect`, `Action` and `Principal`.
- `Effect` must specify `Allow`.
- The `Action` in the policy must be `waf:UpdateWebACL`, `waf-regional:UpdateWebACL`, `waf:GetRuleGroup` and `waf-regional:GetRuleGroup`. Any extra or wildcard actions in the policy will be rejected.
- The policy cannot include a `Resource` parameter.
- The ARN in the request must be a valid RuleGroup ARN and the RuleGroup must exist in the same region.
- The user making the request must be the owner of the RuleGroup.
- Your policy must be composed using IAM Policy version 2012-10-17.

For more information, see [Policies and permissions in IAM](#).

An example of a valid policy parameter is shown in the Examples section below.

**Request Syntax**

```json
{
  "Policy": "string",
  "ResourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

**Policy** (p. 682)

The policy to attach to the specified RuleGroup.

Type: String


Pattern: .


Required: Yes

**ResourceArn (p. 682)**
The Amazon Resource Name (ARN) of the RuleGroup to which you want to attach the policy.

Type: String


Pattern: .*\S.*

Required: Yes

**Response Elements**
If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

**Errors**
For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**
The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidPermissionPolicyException**
The operation failed because the specified policy is not in the proper format.

The policy is subject to the following restrictions:
- You can attach only one policy with each PutPermissionPolicy request.
- The policy must include an `Effect`, `Action`, and `Principal`.
- `Effect` must specify `Allow`.
- The `Action` in the policy must be `waf:UpdateWebACL`, `waf-regional:UpdateWebACL`, `waf:GetRuleGroup`, and `waf-regional:GetRuleGroup`. Any extra or wildcard actions in the policy will be rejected.
- The policy cannot include a `Resource` parameter.
- The ARN in the request must be a valid WAF RuleGroup ARN and the RuleGroup must exist in the same region.
- The user making the request must be the owner of the RuleGroup.
- Your policy must be composed using IAM Policy version 2012-10-17.

HTTP Status Code: 400

**WAFNonexistentItemException**
The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFStaleDataException**
The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400
Examples

Example policy parameter - No escape characters

This example illustrates one usage of PutPermissionPolicy.

```json
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
                "AWS": "arn:aws:iam::111111111111:user/MyUserName"
            },
            "Action": [
                "waf:UpdateWebACL",
                "waf-regional:UpdateWebACL",
                "waf:GetRuleGroup",
                "waf-regional:GetRuleGroup"
            ]
        }
    ]
}
```

Example policy parameter - ()

This example illustrates one usage of PutPermissionPolicy.

```json
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
TagResource
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates tags with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can use this action to tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Request Syntax

```json
{
    "ResourceARN": "string",
    "Tags": [
        {
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceARN (p. 685)

Type: String


Pattern: .\S.*

Required: Yes

Tags (p. 685)

Type: Array of Tag (p. 1034) objects

Array Members: Minimum number of 1 item.

Required: Yes
Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFBadRequestException

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UntagResource
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Request Syntax

```
{
    "ResourceARN": "string",
    "TagKeys": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ResourceARN (p. 688)

Type: String


Pattern: .\S.*

Required: Yes

TagKeys (p. 688)

Type: Array of strings

Array Members: Minimum number of 1 item.


Pattern: .\S.*

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFBadRequestException
HTTP Status Code: 400

**WAFFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:
  - You specified an invalid parameter name.
  - You specified an invalid value.
  - You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
  - You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
  - You tried to create a RateBasedRule with a RateKey value other than IP.
  - You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
  - You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
  - You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
  - Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFFTagOperationException**

HTTP Status Code: 400

**WAFFTagOperationInternalErrorException**

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateByteMatchSet
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ByteMatchTuple (p. 970) objects (filters) in a ByteMatchSet (p. 966). For each ByteMatchTuple object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a ByteMatchSetUpdate object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the User-Agent header.
- The bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to look for. For more information, including how you specify the values for the AWS WAF API and the AWS CLI or AWS SDKs, see TargetString in the ByteMatchTuple (p. 970) data type.
- Where to look, such as at the beginning or the end of a query string.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

For example, you can add a ByteMatchSetUpdate object that matches web requests in which User-Agent headers contain the string BadBot. You can then configure AWS WAF to block those requests.

To create and configure a ByteMatchSet, perform the following steps:

1. Create a ByteMatchSet. For more information, see CreateByteMatchSet (p. 489).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of an UpdateByteMatchSet request.
3. Submit an UpdateByteMatchSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```
{  
  "ByteMatchSetId": "string",
  "ChangeToken": "string",
  "Updates": [  
    {  
      "Action": "string",
      "ByteMatchTuple": {  
        "FieldToMatch": {  
          "Data": "string",
          "Type": "string"
        },  
        "PositionalConstraint": "string",
        "TargetString": "string",
        "TextTransformation": "string"
      }
    }
  ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ByteMatchSetId (p. 690)**

The `ByteMatchSetId` of the `ByteMatchSet (p. 966)` that you want to update. `ByteMatchSetId` is returned by `CreateByteMatchSet (p. 489)` and by `ListByteMatchSets (p. 631)`.

Type: String


Pattern: `.*\S.*`

Required: Yes

**ChangeToken (p. 690)**

The value returned by the most recent call to `GetChangeToken (p. 585)`.

Type: String


Pattern: `.*\S.*`

Required: Yes

**Updates (p. 690)**

An array of `ByteMatchSetUpdate` objects that you want to insert into or delete from a `ByteMatchSet (p. 966)`.

For more information, see the applicable data types:
- `ByteMatchSetUpdate (p. 969)`: Contains `Action` and `ByteMatchTuple`
- `ByteMatchTuple (p. 970)`: Contains `FieldToMatch`, `PositionalConstraint`, `TargetString`, and `TextTransformation`
- `FieldToMatch (p. 975)`: Contains `Data` and `Type`

Type: Array of `ByteMatchSetUpdate (p. 969)` objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```json
{
    "ChangeToken": "string"
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 691)**

The ChangeToken that you used to submit the UpdateByteMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn’t in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn’t in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn’t in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn’t recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400
WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
• You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
• You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
• You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
• You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
UpdateGeoMatchSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes GeoMatchConstraint (p. 977) objects in a GeoMatchSet. For each GeoMatchConstraint object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change an GeoMatchConstraint object, you delete the existing object and add a new one.
- The Type. The only valid value for Type is Country.
- The Value, which is a two character code for the country to add to the GeoMatchConstraint object. Valid codes are listed in GeoMatchConstraint:Value (p. 977).

To create and configure an GeoMatchSet, perform the following steps:

1. Submit a CreateGeoMatchSet (p. 493) request.
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of an UpdateGeoMatchSet (p. 694) request.
3. Submit an UpdateGeoMatchSet request to specify the country that you want AWS WAF to watch for.

When you update an GeoMatchSet, you specify the country that you want to add and/or the country that you want to delete. If you want to change a country, you delete the existing country and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
  "ChangeToken": "string",
  "GeoMatchSetId": "string",
  "Updates": [
    {
      "Action": "string",
      "GeoMatchConstraint": {
        "Type": "string",
        "Value": "string"
      }
    }
  ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.
**ChangeToken (p. 694)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**GeoMatchSetId (p. 694)**

The GeoMatchSetId of the GeoMatchSet (p. 979) that you want to update. GeoMatchSetId is returned by CreateGeoMatchSet (p. 493) and by ListGeoMatchSets (p. 634).

Type: String


Pattern: .\S.*

Required: Yes

**Updates (p. 694)**

An array of GeoMatchSetUpdate objects that you want to insert into or delete from a GeoMatchSet (p. 979). For more information, see the applicable data types:

- GeoMatchSetUpdate (p. 982): Contains Action and GeoMatchConstraint
- GeoMatchConstraint (p. 977): Contains Type and Value

You can have only one Type and Value per GeoMatchConstraint. To add multiple countries, include multiple GeoMatchSetUpdate objects in your request.

Type: Array of GeoMatchSetUpdate (p. 982) objects

Array Members: Minimum number of 1 item.

Required: Yes

**Response Syntax**

```json
{
  "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 695)**

The ChangeToken that you used to submit the UpdateGeoMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String

Pattern: . * \S *

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn’t in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn’t in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn’t in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn’t recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.
HTTP Status Code: 400

**WAFNonexistentContainerException**

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFReferencedItemException**

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateIPSet

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes IPSetDescriptor (p. 988) objects in an IPSet. For each IPSetDescriptor object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change an IPSetDescriptor object, you delete the existing object and add a new one.
- The IP address version, IPv4 or IPv6.
- The IP address in CIDR notation, for example, 192.0.2.0/24 (for the range of IP addresses from 192.0.2.0 to 192.0.2.255) or 192.0.2.44/32 (for the individual IP address 192.0.2.44).

AWS WAF supports IPv4 address ranges: /8 and any range between /16 through /32. AWS WAF supports IPv6 address ranges: /24, /32, /48, /56, /64, and /128. For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

IPv6 addresses can be represented using any of the following formats:

- 1111:0000:0000:0000:0000:0000:0000:0111/128
- 1111:0:0:0:0:0:0:0111/128
- 1111::0111/128
- 1111::111/128
- 1111::111/128

You use an IPSet to specify which web requests you want to allow or block based on the IP addresses that the requests originated from. For example, if you’re receiving a lot of requests from one or a small number of IP addresses and you want to block the requests, you can create an IPSet that specifies those IP addresses, and then configure AWS WAF to block the requests.

To create and configure an IPSet, perform the following steps:

1. Submit a CreateIPSet (p. 497) request.
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of an UpdateIPSet (p. 698) request.
3. Submit an UpdateIPSet request to specify the IP addresses that you want AWS WAF to watch for.

When you update an IPSet, you specify the IP addresses that you want to add and the IP addresses that you want to delete. If you want to change an IP address, delete the existing IP address and add the new one.

You can update a maximum of 1,000 addresses in a single request.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```
```json
"ChangeToken": "string",
"IPSetId": "string",
"Updates": [
  {
    "Action": "string",
    "IPSetDescriptor": {
      "Type": "string",
      "Value": "string"
    }
  }
]
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](p. 1049).

The request accepts the following data in JSON format.

### ChangeToken (p. 698)

The value returned by the most recent call to GetChangeToken (p. 585).

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: `.*\S.*`
- **Required**: Yes

### IPSetId (p. 698)

The IPSetId of the IPSet (p. 986) that you want to update. IPSetId is returned by CreateIPSet (p. 497) and by ListIPSets (p. 637).

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: `.*\S.*`
- **Required**: Yes

### Updates (p. 698)

An array of IPSetUpdate objects that you want to insert into or delete from an IPSet (p. 986). For more information, see the applicable data types:
- **IPSetUpdate (p. 991)**: Contains Action and IPSetDescriptor
- **IPSetDescriptor (p. 988)**: Contains Type and Value

You can specify a maximum of 1,000 addresses in a single request, for example, in a single request you can insert 999 addresses and delete 1 address, but you can't insert 999 addresses and delete 2 addresses.

- **Type**: Array of IPSetUpdate (p. 991) objects
- **Array Members**: Minimum number of 1 item.
- **Required**: Yes
Response Syntax

```json
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 700)**

The ChangeToken that you used to submit the UpdateIPSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S .*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFLimitsExceededException
The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400
WAFNonexistentContainerException
The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400
WAFNonexistentItemException
The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFReferencedItemException
The operation failed because you tried to delete an object that is still in use. For example:
- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400
WAFStaleDataException
The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
UpdateRateBasedRule
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes Predicate (p. 994) objects in a rule and updates the RateLimit in the rule.

Each Predicate object identifies a predicate, such as a ByteMatchSet (p. 966) or an IPSet (p. 986), that specifies the web requests that you want to block or count. The RateLimit specifies the number of requests every five minutes that triggers the rule.

If you add more than one predicate to a RateBasedRule, a request must match all the predicates and exceed the RateLimit to be counted or blocked. For example, suppose you add the following to a RateBasedRule:

- An IPSet that matches the IP address 192.0.2.44/32
- A ByteMatchSet that matches BadBot in the User-Agent header

Further, you specify a RateLimit of 1,000.

You then add the RateBasedRule to a WebACL and specify that you want to block requests that satisfy the rule. For a request to be blocked, it must come from the IP address 192.0.2.44 and the User-Agent header in the request must contain the value BadBot. Further, requests that match these two conditions much be received at a rate of more than 1,000 every five minutes. If the rate drops below this limit, AWS WAF no longer blocks the requests.

As a second example, suppose you want to limit requests to a particular page on your site. To do this, you could add the following to a RateBasedRule:

- A ByteMatchSet with FieldToMatch of URI
- A PositionalConstraint of STARTS_WITH
- A TargetString of login

Further, you specify a RateLimit of 1,000.

By adding this RateBasedRule to a WebACL, you could limit requests to your login page without affecting the rest of your site.

Request Syntax

```json
{
    "ChangeToken": "string",
    "RateLimit": number,
    "RuleId": "string",
    "Updates": [
        {
            "Action": "string",
            "Predicate": {
                "DataId": "string",
                "Negated": boolean,
                "Type": "string"
            }
        }
    ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 703)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S\.

Required: Yes

**RateLimit (p. 703)**

The maximum number of requests, which have an identical value in the field specified by the RateKey, allowed in a five-minute period. If the number of requests exceeds the RateLimit and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

**RuleId (p. 703)**

The RuleId of the RateBasedRule that you want to update. RuleId is returned by CreateRateBasedRule and by ListRateBasedRules (p. 643).

Type: String


Pattern: .\S\.

Required: Yes

**Updates (p. 703)**

An array of RuleUpdate objects that you want to insert into or delete from a RateBasedRule (p. 996).

Type: Array of RuleUpdate (p. 1016) objects

Required: Yes

Response Syntax

```json
{
    "ChangeToken": "string"
}
```
Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 704)

The ChangeToken that you used to submit the UpdateRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
AWS WAFV2 API Reference
UpdateRateBasedRule

• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400
WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
• You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
• You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
• You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
• You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400
WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:
• You tried to delete a ByteMatchSet that is still referenced by a Rule.
• You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400
WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRegexMatchSet

Service: AWS WAF Classic Regional

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes RegexMatchTuple (p. 1002) objects (filters) in a RegexMatchSet (p. 998). For each RegexMatchSetUpdate object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a RegexMatchSetUpdate object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to inspect, update, such as a query string or the value of the User-Agent header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet (p. 1005).
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

For example, you can create a RegexPatternSet that matches any requests with User-Agent headers that contain the string B[a-zA-Z]dB[0-9]t. You can then configure AWS WAF to reject those requests.

To create and configure a RegexMatchSet, perform the following steps:

1. Create a RegexMatchSet. For more information, see CreateRegexMatchSet (p. 505).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of an UpdateRegexMatchSet request.
3. Submit an UpdateRegexMatchSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the identifier of the RegexPatternSet that contain the regular expression patterns you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

**Request Syntax**

```json
{
   "ChangeToken": "string",
   "RegexMatchSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "RegexMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "RegexPatternSetId": "string",
            "TextTransformation": "string"
         }
      }
   ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 708)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*

Required: Yes

**RegexMatchSetId (p. 708)**

The RegexMatchSetId of the RegexMatchSet (p. 998) that you want to update. RegexMatchSetId is returned by CreateRegexMatchSet (p. 505) and by ListRegexMatchSets (p. 646).

Type: String


Pattern: .*

Required: Yes

**Updates (p. 708)**

An array of RegexMatchSetUpdate objects that you want to insert into or delete from a RegexMatchSet (p. 998). For more information, see RegexMatchTuple (p. 1002).

Type: Array of RegexMatchSetUpdate (p. 1001) objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 709)**

The ChangeToken that you used to submit the UpdateRegexMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).
Type: String
Pattern: .*\S.*

Errors
For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFNotAllowedNameException
The name specified is invalid.
HTTP Status Code: 400

WAFInternalErrorException
The operation failed because of a system problem, even though the request was valid. Retry your request.
HTTP Status Code: 500

WAFInvalidAccountException
The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.
HTTP Status Code: 400

WAFInvalidOperationException
The operation failed because there was nothing to do. For example:
- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFLimitsExceededException
The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.
HTTP Status Code: 400

WAFNonexistentContainerException
The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.
HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRegexPatternSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes RegexPatternString objects in a RegexPatternSet (p. 1005). For each RegexPatternString object, you specify the following values:

- Whether to insert or delete the RegexPatternString.
- The regular expression pattern that you want to insert or delete. For more information, see RegexPatternSet (p. 1005).

For example, you can create a RegexPatternString such as B[a@]dB[oo]t. AWS WAF will match this RegexPatternString to:

- BadBot
- BadB0t
- B@dBot
- B@dB0t

To create and configure a RegexPatternSet, perform the following steps:

1. Create a RegexPatternSet. For more information, see CreateRegexPatternSet (p. 508).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of an UpdateRegexPatternSet request.
3. Submit an UpdateRegexPatternSet request to specify the regular expression pattern that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
  "ChangeToken": "string",
  "RegexPatternSetId": "string",
  "Updates": [
    {
      "Action": "string",
      "RegexPatternString": "string"
    }
  ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).
The request accepts the following data in JSON format.

**ChangeToken (p. 712)**

The value returned by the most recent call to `GetChangeToken (p. 585)`.

Type: String


Pattern: `.*\S.*`

Required: Yes

**RegexPatternSetId (p. 712)**

The RegexPatternSetId of the `RegexPatternSet (p. 1005)` that you want to update. RegexPatternSetId is returned by `CreateRegexPatternSet (p. 508)` and by `ListRegexPatternSets (p. 649)`.

Type: String


Pattern: `.*\S.*`

Required: Yes

**Updates (p. 712)**

An array of `RegexPatternSetUpdate` objects that you want to insert into or delete from a `RegexPatternSet (p. 1005)`.

Type: Array of `RegexPatternSetUpdate (p. 1008)` objects

Array Members: Minimum number of 1 item.

Required: Yes

**Response Syntax**

```
{
  "ChangeToken": "string"
}
```

**Response Elements**

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 713)**

The ChangeToken that you used to submit the `UpdateRegexPatternSet` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 587)`.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn’t in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn’t in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn’t in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidRegexPatternException

The regular expression (regex) you specified in RegexPatternString is invalid.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn’t exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn’t exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn’t exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn’t exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn’t exist.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRule
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes Predicate (p. 994) objects in a Rule. Each Predicate object identifies a predicate, such as a ByteMatchSet (p. 966) or an IPSet (p. 986), that specifies the web requests that you want to allow, block, or count. If you add more than one predicate to a Rule, a request must match all of the specifications to be allowed, blocked, or counted. For example, suppose that you add the following to a Rule:

- A ByteMatchSet that matches the value BadBot in the User-Agent header
- An IPSet that matches the IP address 192.0.2.44

You then add the Rule to a WebACL and specify that you want to block requests that satisfy the Rule. For a request to be blocked, the User-Agent header in the request must contain the value BadBot and the request must originate from the IP address 192.0.2.44.

To create and configure a Rule, perform the following steps:

1. Create and update the predicates that you want to include in the Rule.
2. Create the Rule. See CreateRule (p. 511).
3. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateRule (p. 716) request.
4. Submit an UpdateRule request to add predicates to the Rule.

If you want to replace one ByteMatchSet or IPSet with another, you delete the existing one and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
    "ChangeToken": "string",
    "RuleId": "string",
    "Updates": [
        {
            "Action": "string",
            "Predicate": {
                "DataId": "string",
                "Negated": boolean,
                "Type": "string"
            }
        }
    ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 716)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*\S.*

Required: Yes

**RuleId (p. 716)**

The RuleId of the Rule that you want to update. RuleId is returned by CreateRule and by ListRules (p. 658).

Type: String


Pattern: .*\S.*

Required: Yes

**Updates (p. 716)**

An array of RuleUpdate objects that you want to insert into or delete from a Rule (p. 1009). For more information, see the applicable data types:

- RuleUpdate (p. 1016): Contains Action and Predicate
- Predicate (p. 994): Contains DataId, Negated, and Type
- FieldToMatch (p. 975): Contains Data and Type

Type: Array of RuleUpdate (p. 1016) objects

Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 717)**

The ChangeToken that you used to submit the UpdateRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).
Type: String
Pattern: .\S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400
WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:
- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRuleGroup

Service: AWS WAF Classic Regional

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes **ActivatedRule (p. 963)** objects in a **RuleGroup**.

You can only insert **REGULAR** rules into a rule group.

You can have a maximum of ten rules per rule group.

To create and configure a **RuleGroup**, perform the following steps:

1. Create and update the **Rules** that you want to include in the **RuleGroup**. See **CreateRule (p. 511)**.
2. Use **GetChangeToken** to get the change token that you provide in the **ChangeToken** parameter of an **UpdateRuleGroup (p. 720)** request.
3. Submit an **UpdateRuleGroup** request to add **Rules** to the **RuleGroup**.
4. Create and update a **WebACL** that contains the **RuleGroup**. See **CreateWebACL (p. 527)**.

If you want to replace one **Rule** with another, you delete the existing one and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the **AWS WAF Developer Guide**.

**Request Syntax**

```json
{
  "ChangeToken": "string",
  "RuleGroupId": "string",
  "Updates": [
    {
      "Action": "string",
      "ActivatedRule": {
        "Action": {
          "Type": "string"
        },
        "ExcludedRules": [
          {
            "RuleId": "string"
          }
        ],
        "OverrideAction": {
          "Type": "string"
        },
        "Priority": number,
        "RuleId": "string",
        "Type": "string"
      }
    }
  ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 720)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**RuleGroupId (p. 720)**

The `RuleGroupId` of the RuleGroup (p. 1011) that you want to update. RuleGroupId is returned by CreateRuleGroup (p. 515) and by ListRuleGroups (p. 655).

Type: String


Pattern: .\S.*

Required: Yes

**Updates (p. 720)**

An array of RuleGroupUpdate objects that you want to insert into or delete from a RuleGroup (p. 1011).

You can only insert REGULAR rules into a rule group.

`ActivatedRule|OverrideAction` applies only when updating or adding a RuleGroup to a WebACL. In this case you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.

Type: Array of RuleGroupUpdate (p. 1014) objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
**ChangeToken (p. 721)**

The ChangeToken that you used to submit the UpdateRuleGroup request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S.*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.
HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateSizeConstraintSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the
developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer
Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global
use.

Inserts or deletes SizeConstraint (p. 1019) objects (filters) in a SizeConstraintSet (p. 1022). For each
SizeConstraint object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a
  SizeConstraintUpdate object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to evaluate, such as the length of a query string or
  the length of the User-Agent header.
- Whether to perform any transformations on the request, such as converting it to lowercase, before
  checking its length. Note that transformations of the request body are not supported because the AWS
  resource forwards only the first 8192 bytes of your request to AWS WAF.
  You can only specify a single type of TextTransformation.
- A ComparisonOperator used for evaluating the selected part of the request against the specified
  Size, such as equals, greater than, less than, and so on.
- The length, in bytes, that you want AWS WAF to watch for in selected part of the request. The length is
  computed after applying the transformation.

For example, you can add a SizeConstraintSetUpdate object that matches web requests in which
the length of the User-Agent header is greater than 100 bytes. You can then configure AWS WAF to
block those requests.

To create and configure a SizeConstraintSet, perform the following steps:

1. Create a SizeConstraintSet. For more information, see CreateSizeConstraintSet (p. 519).
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken
   parameter of an UpdateSizeConstraintSet request.
3. Submit an UpdateSizeConstraintSet request to specify the part of the request that you want
   AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF
   to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS
WAF Developer Guide.

Request Syntax

```json
{
    "ChangeToken": "string",
    "SizeConstraintSetId": "string",
    "Updates": [
        {
            "Action": "string",
            "SizeConstraint": {
                "ComparisonOperator": "string",
                "FieldToMatch": {
                    "Data": "string",
                }
            },
        },
```
AWS WAFV2 API Reference
UpdateSizeConstraintSet

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

ChangeToken (p. 724)

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*\S.*

Required: Yes

SizeConstraintSetId (p. 724)

The SizeConstraintSetId of the SizeConstraintSet (p. 1022) that you want to update. SizeConstraintSetId is returned by CreateSizeConstraintSet (p. 519) and by ListSizeConstraintSets (p. 661).

Type: String


Pattern: .*\S.*

Required: Yes

Updates (p. 724)

An array of SizeConstraintSetUpdate objects that you want to insert into or delete from a SizeConstraintSet (p. 1022). For more information, see the applicable data types:

- SizeConstraintSetUpdate (p. 1025): Contains Action and SizeConstraint
- SizeConstraint (p. 1019): Contains FieldToMatch, TextTransformation, ComparisonOperator, and Size
- FieldToMatch (p. 975): Contains Data and Type

Type: Array of SizeConstraintSetUpdate (p. 1025) objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```json
{
}
```
"ChangeToken": "string"

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken (p. 725)

The ChangeToken that you used to submit the UpdateSizeConstraintSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: \S.*

Errors

For information about the errors that are common to all actions, see Common Errors (p. 1051).

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
• You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to create a RateBasedRule with a RateKey value other than IP.
• You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
• You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
• You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
• Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:
• You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
• You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
• You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
• You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:
• You tried to delete a ByteMatchSet that is still referenced by a Rule.
• You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface
• AWS SDK for .NET
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
UpdateSqlInjectionMatchSet
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes SqlInjectionMatchTuple (p. 1030) objects (filters) in a SqlInjectionMatchSet (p. 1026). For each SqlInjectionMatchTuple object, you specify the following values:

- **Action**: Whether to insert the object into or delete the object from the array. To change a SqlInjectionMatchTuple, you delete the existing object and add a new one.
- **FieldToMatch**: The part of web requests that you want AWS WAF to inspect and, if you want AWS WAF to inspect a header or custom query parameter, the name of the header or parameter.
- **TextTransformation**: Which text transformation, if any, to perform on the web request before inspecting the request for snippets of malicious SQL code.

You can only specify a single type of TextTransformation.

You use SqlInjectionMatchSet objects to specify which Amazon CloudFront requests that you want to allow, block, or count. For example, if you're receiving requests that contain snippets of SQL code in the query string and you want to block the requests, you can create a SqlInjectionMatchSet with the applicable settings, and then configure AWS WAF to block the requests.

To create and configure a SqlInjectionMatchSet, perform the following steps:

1. Submit a CreateSqlInjectionMatchSet (p. 523) request.
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of an UpdateIPSet (p. 698) request.
3. Submit an UpdateSqlInjectionMatchSet request to specify the parts of web requests that you want AWS WAF to inspect for snippets of SQL code.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```json
{
   "ChangeToken": "string",
   "SqlInjectionMatchSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "SqlInjectionMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      }
   ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 729)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .*\S.*

Required: Yes

**SqlInjectionMatchSetId (p. 729)**

The SqlInjectionMatchSetId of the SqlInjectionMatchSet that you want to update. SqlInjectionMatchSetId is returned by CreateSqlInjectionMatchSet (p. 523) and by ListSqlInjectionMatchSets (p. 664).

Type: String


Pattern: .*\S.*

Required: Yes

**Updates (p. 729)**

An array of SqlInjectionMatchSetUpdate objects that you want to insert into or delete from a SqlInjectionMatchSet (p. 1026). For more information, see the applicable data types:

- SqlInjectionMatchSetUpdate (p. 1029): Contains Action and SqlInjectionMatchTuple
- SqlInjectionMatchTuple (p. 1030): Contains FieldToMatch and TextTransformation
- FieldToMatch (p. 975): Contains Data and Type

Type: Array of SqlInjectionMatchSetUpdate (p. 1029) objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
**ChangeToken (p. 730)**

The `ChangeToken` that you used to submit the `UpdateSqlInjectionMatchSet` request. You can also use this value to query the status of the request. For more information, see `GetChangeTokenStatus (p. 587)`.

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: `.\S.*`

**Errors**

For information about the errors that are common to all actions, see `Common Errors (p. 1051)`.

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

- **HTTP Status Code**: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

- **HTTP Status Code**: 400

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

- **HTTP Status Code**: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than `HEADER`, `METHOD`, `QUERY_STRING`, `URI`, or `BODY`.
- You tried to update a `ByteMatchSet` with a `Field of HEADER` but no value for `Data`.
* Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see [AWS WAF Classic quotas](https://docs.aws.amazon.com/waf/latest/developerguide/waf-limits.html) in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

**WAFNonexistentContainerException**

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

**WAFNonexistentItemException**

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

**WAFStaleDataException**

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateWebACL

Service: AWS WAF Classic Regional

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of **AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes **ActivatedRule** (p. 963) objects in a **WebACL**. Each Rule identifies web requests that you want to allow, block, or count. When you update a **WebACL**, you specify the following values:

- A default action for the **WebACL**, either **ALLOW** or **BLOCK**. AWS WAF performs the default action if a request doesn't match the criteria in any of the Rules in a **WebACL**.
- The Rules that you want to add or delete. If you want to replace one Rule with another, you delete the existing Rule and add the new one.
- For each Rule, whether you want AWS WAF to allow requests, block requests, or count requests that match the conditions in the Rule.
- The order in which you want AWS WAF to evaluate the Rules in a **WebACL**. If you add more than one Rule to a **WebACL**, AWS WAF evaluates each request against the Rules in order based on the value of Priority. (The Rule that has the lowest value for Priority is evaluated first.) When a web request matches all the predicates (such as **ByteMatchSets** and **IPSets**) in a Rule, AWS WAF immediately takes the corresponding action, allow or block, and doesn't evaluate the request against the remaining Rules in the **WebACL**, if any.

To create and configure a **WebACL**, perform the following steps:

1. Create and update the predicates that you want to include in Rules. For more information, see **CreateByteMatchSet** (p. 489), **UpdateByteMatchSet** (p. 690), **CreateIPSet** (p. 497), **UpdateIPSet** (p. 698), **CreateSqlInjectionMatchSet** (p. 523), and **UpdateSqlInjectionMatchSet** (p. 729).
2. Create and update the Rules that you want to include in the **WebACL**. For more information, see **CreateRule** (p. 511) and **UpdateRule** (p. 716).
3. Create a **WebACL**. See **CreateWebACL** (p. 527).
4. Use **GetChangeToken** to get the change token that you provide in the **ChangeToken** parameter of an **UpdateWebACL** (p. 733) request.
5. Submit an **UpdateWebACL** request to specify the Rules that you want to include in the **WebACL**, to specify the default action, and to associate the **WebACL** with an Amazon CloudFront distribution.

The ActivatedRule can be a rule group. If you specify a rule group as your ActivatedRule, you can exclude specific rules from that rule group.

If you already have a rule group associated with a web ACL and want to submit an **UpdateWebACL** request to exclude certain rules from that rule group, you must first remove the rule group from the web ACL, re-insert it again, specifying the excluded rules. For details, see **ActivatedRule:ExcludedRules** (p. 963).

Be aware that if you try to add a RATE_BASED rule to a web ACL without setting the rule type when first creating the rule, the **UpdateWebACL** (p. 733) request will fail because the request tries to add a REGULAR rule (the default rule type) with the specified ID, which does not exist.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the **AWS WAF Developer Guide**.
Request Syntax

```
{
  "ChangeToken": "string",
  "DefaultAction": {
    "Type": "string"
  },
  "Updates": [
    {
      "Action": "string",
      "ActivatedRule": {
        "Action": {
          "Type": "string"
        },
        "ExcludedRules": [
          {
            "RuleId": "string"
          }
        ],
        "OverrideAction": {
          "Type": "string"
        },
        "Priority": number,
        "RuleId": "string",
        "Type": "string"
      }
    }
  ],
  "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 734)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**DefaultAction (p. 734)**

Type: WafAction (p. 1037) object

Required: No

**Updates (p. 734)**

An array of updates to make to the WebACL (p. 1039).

An array of WebACLUpdate objects that you want to insert into or delete from a WebACL (p. 1039).

For more information, see the applicable data types:
• **WebACLUpdate (p. 1042)**: Contains Action and ActivatedRule
• **ActivatedRule (p. 963)**: Contains Action, OverrideAction, Priority, RuleId, and Type. ActivatedRule|OverrideAction applies only when updating or adding a RuleGroup to a WebACL. In this case, you do not use ActivatedRule|Action. For all other update requests, ActivatedRule|Action is used instead of ActivatedRule|OverrideAction.
• **WafAction (p. 1037)**: Contains Type

  Type: Array of **WebACLUpdate (p. 1042)** objects

  Required: No

**WebACLId (p. 734)**

  The WebACLId of the **WebACL (p. 1039)** that you want to update. WebACLId is returned by CreateWebACL (p. 527) and by ListWebACLs (p. 673).

  Type: String


  Pattern: .*\S.*

  Required: Yes

Response Syntax

```json
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

**ChangeToken (p. 735)**

  The ChangeToken that you used to submit the UpdateWebACL request. You can also use this value to query the status of the request. For more information, see **GetChangeTokenStatus (p. 587)**.

  Type: String


  Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see **Common Errors (p. 1051)**.

**WAFInternalErrorException**

  The operation failed because of a system problem, even though the request was valid. Retry your request.

  HTTP Status Code: 500
**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

**WAFLimitsExceededException**

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see [AWS WAF Classic quotas](https://docs.aws.amazon.com/waf/latest/developerguide/waf-classic-limits.html) in the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/).

HTTP Status Code: 400

**WAFNonexistentContainerException**

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn't exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn't exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn't exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn't exist.

HTTP Status Code: 400
WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a ByteMatchSet that is still referenced by a Rule.
- You tried to delete a Rule that is still referenced by a WebACL.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

The specified subscription does not exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateXssMatchSet
Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes XssMatchTuple (p. 1047) objects (filters) in an XssMatchSet (p. 1043). For each XssMatchTuple object, you specify the following values:

- **Action**: Whether to insert the object into or delete the object from the array. To change an XssMatchTuple, you delete the existing object and add a new one.
- **FieldToMatch**: The part of web requests that you want AWS WAF to inspect and, if you want AWS WAF to inspect a header or custom query parameter, the name of the header or parameter.
- **TextTransformation**: Which text transformation, if any, to perform on the web request before inspecting the request for cross-site scripting attacks.

You can only specify a single type of TextTransformation.

You use XssMatchSet objects to specify which Amazon CloudFront requests that you want to allow, block, or count. For example, if you're receiving requests that contain cross-site scripting attacks in the request body and you want to block the requests, you can create an XssMatchSet with the applicable settings, and then configure AWS WAF to block the requests.

To create and configure an XssMatchSet, perform the following steps:

1. Submit a CreateXssMatchSet (p. 536) request.
2. Use GetChangeToken (p. 585) to get the change token that you provide in the ChangeToken parameter of an UpdateIPSet (p. 698) request.
3. Submit an UpdateXssMatchSet request to specify the parts of web requests that you want AWS WAF to inspect for cross-site scripting attacks.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the **AWS WAF Developer Guide**.

**Request Syntax**

```json
{
    "ChangeToken": "string",
    "Updates": [
        {
            "Action": "string",
            "XssMatchTuple": {
                "FieldToMatch": {
                    "Data": "string",
                    "Type": "string"
                },
                "TextTransformation": "string"
            }
        },
        "XssMatchSetId": "string"
    ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 1049).

The request accepts the following data in JSON format.

**ChangeToken (p. 738)**

The value returned by the most recent call to GetChangeToken (p. 585).

Type: String


Pattern: .\S.*

Required: Yes

**Updates (p. 738)**

An array of XssMatchSetUpdate objects that you want to insert into or delete from an XssMatchSet (p. 1043). For more information, see the applicable data types:

- XssMatchSetUpdate (p. 1046): Contains Action and XssMatchTuple
- XssMatchTuple (p. 1047): Contains FieldToMatch and TextTransformation
- FieldToMatch (p. 975): Contains Data and Type

Type: Array of XssMatchSetUpdate (p. 1046) objects

Array Members: Minimum number of 1 item.

Required: Yes

**XssMatchSetId (p. 738)**

The XssMatchSetId of the XssMatchSet that you want to update. XssMatchSetId is returned by CreateXssMatchSet (p. 536) and by ListXssMatchSets (p. 676).

Type: String


Pattern: .\S.*

Required: Yes

Response Syntax

```
{
  "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
**ChangeToken (p. 739)**

The `ChangeToken` that you used to submit the `UpdateXssMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus (p. 587).

Type: String


Pattern: .\S.*

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 1051).

**WAFInternalErrorException**

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

**WAFInvalidAccountException**

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

**WAFInvalidOperationException**

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

**WAFInvalidParameterException**

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.
HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the AWS WAF Developer Guide.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn’t exist. For example:

- You tried to add a Rule to or delete a Rule from a WebACL that doesn’t exist.
- You tried to add a ByteMatchSet to or delete a ByteMatchSet from a Rule that doesn’t exist.
- You tried to add an IP address to or delete an IP address from an IPSet that doesn’t exist.
- You tried to add a ByteMatchTuple to or delete a ByteMatchTuple from a ByteMatchSet that doesn’t exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn’t exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
Data Types

The following data types are supported by AWS WAFV2:

- ActionCondition (p. 749)
- All (p. 750)
- AllowAction (p. 751)
- AllQueryArguments (p. 752)
- AndStatement (p. 753)
- BlockAction (p. 754)
- Body (p. 755)
- ByteMatchStatement (p. 756)
- CaptchaAction (p. 758)
- CaptchaConfig (p. 759)
- CaptchaResponse (p. 760)
- Condition (p. 761)
- CountAction (p. 762)
- CustomHTTPHeader (p. 763)
- CustomRequestHandling (p. 764)
- CustomResponse (p. 765)
- CustomResponseBody (p. 767)
- DefaultAction (p. 768)
- ExcludedRule (p. 769)
- FieldToMatch (p. 770)
- Filter (p. 772)
- FirewallManagerRuleGroup (p. 773)
- FirewallManagerStatement (p. 775)
- ForwardedIPConfig (p. 776)
- GeoMatchStatement (p. 778)
- HTTPHeader (p. 780)
- HTTPRequest (p. 781)
- ImmunityTimeProperty (p. 783)
- IPSet (p. 784)
- IPSetForwardedIPConfig (p. 786)
- IPSetReferenceStatement (p. 788)
- IPSetSummary (p. 789)
- JsonBody (p. 791)
- JsonMatchPattern (p. 793)
- Label (p. 794)
- LabelMatchStatement (p. 795)
- LabelNameCondition (p. 796)
- LabelSummary (p. 797)
- LoggingConfiguration (p. 798)
- LoggingFilter (p. 800)
The following data types are supported by AWS WAF Classic:

- ActivatedRule (p. 875)
- ByteMatchSet (p. 878)
- ByteMatchSetSummary (p. 880)
- ByteMatchSetUpdate (p. 881)
- ByteMatchTuple (p. 882)
- ExcludedRule (p. 886)
- FieldToMatch (p. 887)
- GeoMatchConstraint (p. 889)
- GeoMatchSet (p. 891)
- GeoMatchSetSummary (p. 893)
- GeoMatchSetUpdate (p. 894)
- HTTPHeader (p. 895)
- HTTPRequest (p. 896)
- IPSet (p. 898)
- IPSetDescriptor (p. 900)
- IPSetSummary (p. 902)
- IPSetUpdate (p. 903)
- LoggingConfiguration (p. 904)
- Predicate (p. 906)
- RateBasedRule (p. 908)
- RegexMatchSet (p. 910)
- RegexMatchSetSummary (p. 912)
- RegexMatchSetUpdate (p. 913)
- RegexMatchTuple (p. 914)
- RegexPatternSet (p. 917)
- RegexPatternSetSummary (p. 919)
- RegexPatternSetUpdate (p. 920)
- Rule (p. 921)
- RuleGroup (p. 923)
- RuleGroupSummary (p. 925)
- RuleGroupUpdate (p. 926)
- RuleSummary (p. 927)
- RuleUpdate (p. 928)
- SampledHTTPRequest (p. 929)
- SizeConstraint (p. 931)
- SizeConstraintSet (p. 934)
- SizeConstraintSetSummary (p. 936)
- SizeConstraintSetUpdate (p. 937)
- SqlInjectionMatchSet (p. 938)
- SqlInjectionMatchSetSummary (p. 940)
- SqlInjectionMatchSetUpdate (p. 941)
- SqlInjectionMatchTuple (p. 942)
- SubscribedRuleGroupSummary (p. 944)
- Tag (p. 946)
The following data types are supported by AWS WAF Classic Regional:

- ActivatedRule (p. 963)
- ByteMatchSet (p. 966)
- ByteMatchSetSummary (p. 968)
- ByteMatchSetUpdate (p. 969)
- ByteMatchTuple (p. 970)
- ExcludedRule (p. 974)
- FieldToMatch (p. 975)
- GeoMatchConstraint (p. 977)
- GeoMatchSet (p. 979)
- GeoMatchSetSummary (p. 981)
- GeoMatchSetUpdate (p. 982)
- HTTPHeader (p. 983)
- HTTPRequest (p. 984)
- IPSet (p. 986)
- IPSetDescriptor (p. 988)
- IPSetSummary (p. 990)
- IPSetUpdate (p. 991)
- LoggingConfiguration (p. 992)
- Predicate (p. 994)
- RateBasedRule (p. 996)
- RegexMatchSet (p. 998)
- RegexMatchSetSummary (p. 1000)
- RegexMatchSetUpdate (p. 1001)
- RegexMatchTuple (p. 1002)
- RegexPatternSet (p. 1005)
- RegexPatternSetSummary (p. 1007)
- RegexPatternSetUpdate (p. 1008)
- Rule (p. 1009)
- RuleGroup (p. 1011)
- RuleGroupSummary (p. 1013)
- RuleGroupUpdate (p. 1014)
- RuleSummary (p. 1015)
AWS WAFV2

The following data types are supported by AWS WAFV2:

- ActionCondition (p. 749)
- All (p. 750)
- AllowAction (p. 751)
- AllQueryArguments (p. 752)
- AndStatement (p. 753)
- BlockAction (p. 754)
- Body (p. 755)
- ByteMatchStatement (p. 756)
- CaptchaAction (p. 758)
- CaptchaConfig (p. 759)
- CaptchaResponse (p. 760)
- Condition (p. 761)
- CountAction (p. 762)
- CustomHTTPHeader (p. 763)
- CustomRequestHandling (p. 764)
- CustomResponse (p. 765)
- CustomResponseBody (p. 767)
• DefaultAction (p. 768)
• ExcludedRule (p. 769)
• FieldToMatch (p. 770)
• Filter (p. 772)
• FirewallManagerRuleGroup (p. 773)
• FirewallManagerStatement (p. 775)
• ForwardedIPConfig (p. 776)
• GeoMatchStatement (p. 778)
• HTTPHeader (p. 780)
• HTTPRequest (p. 781)
• ImmunityTimeProperty (p. 783)
• IPSet (p. 784)
• IPSetForwardedIPConfig (p. 786)
• IPSetReferenceStatement (p. 788)
• IPSetSummary (p. 789)
• JsonBody (p. 791)
• JsonMatchPattern (p. 793)
• Label (p. 794)
• LabelMatchStatement (p. 795)
• LabelNameCondition (p. 796)
• LabelSummary (p. 797)
• LoggingConfiguration (p. 798)
• LoggingFilter (p. 800)
• ManagedRuleGroupConfig (p. 801)
• ManagedRuleGroupStatement (p. 803)
• ManagedRuleGroupSummary (p. 805)
• ManagedRuleGroupVersion (p. 807)
• ManagedRuleSet (p. 808)
• ManagedRuleSetSummary (p. 811)
• ManagedRuleSetVersion (p. 813)
• Method (p. 815)
• MobileSdkRelease (p. 816)
• NoneAction (p. 817)
• NotStatement (p. 818)
• OrStatement (p. 819)
• OverrideAction (p. 820)
• PasswordField (p. 821)
• QueryString (p. 822)
• RateBasedStatement (p. 823)
• RateBasedStatementManagedKeysIPSet (p. 825)
• Regex (p. 826)
• RegexMatchStatement (p. 827)
• RegexPatternSet (p. 828)
• RegexPatternSetReferenceStatement (p. 830)
• RegexPatternSetSummary (p. 831)
• ReleaseSummary (p. 833)
• Rule (p. 834)
• RuleAction (p. 837)
• RuleGroup (p. 838)
• RuleGroupReferenceStatement (p. 841)
• RuleGroupSummary (p. 842)
• RuleSummary (p. 844)
• SampledHTTPRequest (p. 845)
• SingleHeader (p. 847)
• SingleQueryArgument (p. 848)
• SizeConstraintStatement (p. 849)
• SqlIdMatchStatement (p. 851)
• Statement (p. 852)
• Tag (p. 856)
• TagInfoForResource (p. 857)
• TextTransformation (p. 858)
• TimeWindow (p. 861)
• UriPath (p. 862)
• UsernameField (p. 863)
• VersionToPublish (p. 864)
• VisibilityConfig (p. 865)
• WebACL (p. 866)
• WebACLSummary (p. 870)
• XssMatchStatement (p. 872)
ActionCondition

Service: AWS WAFV2

A single action condition for a Condition (p. 761) in a logging filter.

Contents

Action

The action setting that a log record must contain in order to meet the condition.

Type: String

Valid Values: ALLOW | BLOCK | COUNT | CAPTCHA | EXCLUDED_AS_COUNT

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
All
Service: AWS WAFV2

Inspect all of the elements that AWS WAF has parsed and extracted from the web request JSON body that are within the JsonBody (p. 791) MatchScope. This is used with the FieldToMatch (p. 770) option JsonBody.

This is used only to indicate the web request component for AWS WAF to inspect, in the FieldToMatch (p. 770) specification.

JSON specification: "All" : {}  

Contents

The members of this structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
AllowAction
Service: AWS WAFV2

Specifies that AWS WAF should allow the request and optionally defines additional custom handling for the request.

This is used in the context of other settings, for example to specify values for RuleAction (p. 837) and web ACL DefaultAction (p. 768).

Contents

CustomRequestHandling

Defines custom handling for the web request.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

Type: CustomRequestHandling (p. 764) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
AllQueryArguments

Service: AWS WAFV2

All query arguments of a web request.

This is used only to indicate the web request component for AWS WAF to inspect, in the FieldToMatch (p. 770) specification.

JSON specification: "AllQueryArguments": {}

Contents

The members of this structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
AndStatement
Service: AWS WAFV2

A logical rule statement used to combine other rule statements with AND logic. You provide more than one Statement (p. 852) within the AndStatement.

Contents

Statements

The statements to combine with AND logic. You can use any statements that can be nested.

Type: Array of Statement (p. 852) objects

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
BlockAction

Service: AWS WAFV2

Specifies that AWS WAF should block the request and optionally defines additional custom handling for the response to the web request.

This is used in the context of other settings, for example to specify values for RuleAction (p. 837) and web ACL DefaultAction (p. 768).

Contents

CustomResponse

Defines a custom response for the web request.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

Type: CustomResponse (p. 765) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**Body**

*Service: AWS WAFV2*

The body of a web request. This immediately follows the request headers.

This is used only to indicate the web request component for AWS WAF to inspect, in the `FieldToMatch (p. 770)` specification.

**JSON specification:**

```
"Body": {}
```

**Contents**

The members of this structure are context-dependent.

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ByteMatchStatement

Service: AWS WAFV2

A rule statement that defines a string match search for AWS WAF to apply to web requests. The byte match statement provides the bytes to search for, the location in requests that you want AWS WAF to search, and other settings. The bytes to search for are typically a string that corresponds with ASCII characters. In the AWS WAF console and the developer guide, this is referred to as a string match statement.

Contents

FieldToMatch

The part of a web request that you want AWS WAF to inspect. For more information, see FieldToMatch (p. 770).

Type: FieldToMatch (p. 770) object

Required: Yes

PositionalConstraint

The area within the portion of a web request that you want AWS WAF to search for SearchString. Valid values include the following:

- CONTAINS
  - The specified part of the web request must include the value of SearchString, but the location doesn't matter.

- CONTAINS_WORD
  - The specified part of the web request must include the value of SearchString, and SearchString must contain only alphanumeric characters or underscore (A-Z, a-z, 0-9, or _). In addition, SearchString must be a word, which means that both of the following are true:
    - SearchString is at the beginning of the specified part of the web request or is preceded by a character other than an alphanumeric character or underscore (_). Examples include the value of a header and BadBot.
    - SearchString is at the end of the specified part of the web request or is followed by a character other than an alphanumeric character or underscore (_), for example, BadBot; and –BadBot;.

- EXACTLY
  - The value of the specified part of the web request must exactly match the value of SearchString.

- STARTS_WITH
  - The value of SearchString must appear at the beginning of the specified part of the web request.

- ENDS_WITH
  - The value of SearchString must appear at the end of the specified part of the web request.

Type: String

Valid Values: EXACTLY | STARTS_WITH | ENDS_WITH | CONTAINS | CONTAINS_WORD

Required: Yes
SearchString

A string value that you want AWS WAF to search for. AWS WAF searches only in the part of web requests that you designate for inspection in FieldToMatch (p. 770). The maximum length of the value is 50 bytes.

Valid values depend on the component that you specify for inspection in FieldToMatch:

- **Method**: The HTTP method that you want AWS WAF to search for. This indicates the type of operation specified in the request.
- **UriPath**: The value that you want AWS WAF to search for in the URI path, for example, /images/daily-ad.jpg.

If SearchString includes alphabetic characters A-Z and a-z, note that the value is case sensitive.

If you're using the AWS WAF API

Specify a base64-encoded version of the value. The maximum length of the value before you base64-encode it is 50 bytes.

For example, suppose the value of Type is HEADER and the value of Data is User-Agent. If you want to search the User-Agent header for the value BadBot, you base64-encode BadBot using MIME base64-encoding and include the resulting value, QmFkQm90, in the value of SearchString.

If you're using the AWS CLI or one of the AWS SDKs

The value that you want AWS WAF to search for. The SDK automatically base64 encodes the value.

Type: Base64-encoded binary data object

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. If you specify one or more transformations in a rule statement, AWS WAF performs all transformations on the content of the request component identified by FieldToMatch, starting from the lowest priority setting, before inspecting the content for a match.

Type: Array of TextTransformation (p. 858) objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
CaptchaAction

Service: AWS WAFV2

Specifies that AWS WAF should run a CAPTCHA check against the request:

- If the request includes a valid, unexpired CAPTCHA token, AWS WAF allows the web request inspection to proceed to the next rule, similar to a CountAction.
- If the request doesn't include a valid, unexpired CAPTCHA token, AWS WAF discontinues the web ACL evaluation of the request and blocks it from going to its intended destination.

AWS WAF generates a response that it sends back to the client, which includes the following:

- The header x-amzn-waf-action with a value of captcha.
- The HTTP status code 405 Method Not Allowed.
- If the request contains an Accept header with a value of text/html, the response includes a CAPTCHA challenge.

You can configure the expiration time in the CaptchaConfig ImmunityTimeProperty setting at the rule and web ACL level. The rule setting overrides the web ACL setting.

This action option is available for rules. It isn't available for web ACL default actions.

This is used in the context of other settings, for example to specify values for RuleAction (p. 837) and web ACL DefaultAction (p. 768).

Contents

CustomRequestHandling

Defines custom handling for the web request.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

Type: CustomRequestHandling (p. 764) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
CaptchaConfig

Service: AWS WAFV2

Specifies how AWS WAF should handle CAPTCHA evaluations. This is available at the web ACL level and in each rule.

Contents

ImmunityTimeProperty

Determines how long a CAPTCHA token remains valid after the client successfully solves a CAPTCHA puzzle.

Type: ImmunityTimeProperty (p. 783) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
CaptchaResponse
Service: AWS WAFV2

The result from the inspection of the web request for a valid CAPTCHA token.

Contents

FailureReason

The reason for failure, populated when the evaluation of the token fails.

Type: String

Valid Values: TOKEN_MISSING | TOKEN_EXPIRED

Required: No

ResponseCode

The HTTP response code indicating the status of the CAPTCHA token in the web request. If the token is missing, invalid, or expired, this code is 405 Method Not Allowed.

Type: Integer

Required: No

SolveTimestamp

The time that the CAPTCHA puzzle was solved for the supplied token.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Condition

Service: AWS WAFV2

A single match condition for a Filter (p. 772).

Contents

**ActionCondition**

A single action condition.

Type: ActionCondition (p. 749) object

Required: No

**LabelNameCondition**

A single label name condition.

Type: LabelNameCondition (p. 796) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
CountAction
Service: AWS WAFV2

Specifies that AWS WAF should count the request. Optionally defines additional custom handling for the request.

This is used in the context of other settings, for example to specify values for RuleAction (p. 837) and web ACL DefaultAction (p. 768).

Contents

CustomRequestHandling

Defines custom handling for the web request.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

Type: CustomRequestHandling (p. 764) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
CustomHTTPHeader

Service: AWS WAFV2

A custom header for custom request and response handling. This is used in CustomResponse (p. 765) and CustomRequestHandling (p. 764).

Contents

Name

The name of the custom header.

For custom request header insertion, when AWS WAF inserts the header into the request, it prefixes this name x-amzn-waf-, to avoid confusion with the headers that are already in the request. For example, for the header name sample, AWS WAF inserts the header x-amzn-waf-sample.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: ^[a-zA-Z0-9._$-]+$

Required: Yes

Value

The value of the custom header.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: .*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
CustomRequestHandling

Service: AWS WAFV2

Custom request handling behavior that inserts custom headers into a web request. You can add custom request handling for the rule actions allow and count.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

Contents

InsertHeaders

The HTTP headers to insert into the request. Duplicate header names are not allowed.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: Array of CustomHTTPHeader (p. 763) objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
CustomResponse
Service: AWS WAFV2

A custom response to send to the client. You can define a custom response for rule actions and default web ACL actions that are set to BlockAction (p. 754).

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

Contents

CustomResponseBodyKey

References the response body that you want AWS WAF to return to the web request client. You can define a custom response for a rule action or a default web ACL action that is set to block. To do this, you first define the response body key and value in the CustomResponseBody setting for the WebACL (p. 866) or RuleGroup (p. 838) where you want to use it. Then, in the rule action or web ACL default action BlockAction setting, you reference the response body using this key.

Type: String


Pattern: ^\[\w\-]+$

Required: No

ResponseCode

The HTTP status code to return to the client.

For a list of status codes that you can use in your custom responses, see Supported status codes for custom response in the AWS WAF Developer Guide.

Type: Integer


Required: Yes

ResponseHeaders

The HTTP headers to use in the response. Duplicate header names are not allowed.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: Array of CustomHTTPHeader (p. 763) objects

Array Members: Minimum number of 1 item.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
CustomResponseBody

Service: AWS WAFV2

The response body to use in a custom response to a web request. This is referenced by key from CustomResponse (p. 765) CustomResponseBodyKey.

Contents

Content

The payload of the custom response.

You can use JSON escape strings in JSON content. To do this, you must specify JSON content in the ContentType setting.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: String


Pattern: \[\s\S\]*

Required: Yes

ContentType

The type of content in the payload that you are defining in the Content string.

Type: String

Valid Values: TEXT_PLAIN | TEXT_HTML | APPLICATION_JSON

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**DefaultAction**

*Service: AWS WAFV2*

In a WebACL (p. 866), this is the action that you want AWS WAF to perform when a web request doesn't match any of the rules in the WebACL. The default action must be a terminating action, so you can't use count.

**Contents**

**Allow**

Specifies that AWS WAF should allow requests by default.

Type: [AllowAction](p. 751) object

Required: No

**Block**

Specifies that AWS WAF should block requests by default.

Type: [BlockAction](p. 754) object

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ExcludedRule

Service: AWS WAFV2

Specifies a single rule in a rule group whose action you want to override to Count. When you exclude a rule, AWS WAF evaluates it exactly as it would if the rule action setting were Count. This is a useful option for testing the rules in a rule group without modifying how they handle your web traffic.

Contents

Name

The name of the rule whose action you want to override to Count.

Type: String


Pattern: ^[^\w\-]+$  
Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**FieldToMatch**

Service: AWS WAFV2

The part of a web request that you want AWS WAF to inspect. Include the single `FieldToMatch` type that you want to inspect, with additional specifications as needed, according to the type. You specify a single request component in `FieldToMatch` for each rule statement that requires it. To inspect more than one component of a web request, create a separate rule statement for each component.

JSON specification for a `QueryString` field to match:

"FieldToMatch": { "QueryString": {} }

Example JSON for a `Method` field to match specification:

"FieldToMatch": { "Method": { "Name": "DELETE" } }

**Contents**

**AllQueryArguments**

Inspect all query arguments.

Type: `AllQueryArguments (p. 752)` object

Required: No

**Body**

Inspect the request body as plain text. The request body immediately follows the request headers. This is the part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form.

Note that only the first 8 KB (8192 bytes) of the request body are forwarded to AWS WAF for inspection by the underlying host service. If you don't need to inspect more than 8 KB, you can guarantee that you don't allow additional bytes in by combining a statement that inspects the body of the web request, such as `ByteMatchStatement (p. 756)` or `RegexPatternSetReferenceStatement (p. 830)`, with a `SizeConstraintStatement (p. 849)` that enforces an 8 KB size limit on the body of the request. AWS WAF doesn't support inspecting the entire contents of web requests whose bodies exceed the 8 KB limit.

Type: `Body (p. 755)` object

Required: No

**JsonBody**

Inspect the request body as JSON. The request body immediately follows the request headers. This is the part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form.

Note that only the first 8 KB (8192 bytes) of the request body are forwarded to AWS WAF for inspection by the underlying host service. If you don't need to inspect more than 8 KB, you can guarantee that you don't allow additional bytes in by combining a statement that inspects the body of the web request, such as `ByteMatchStatement (p. 756)` or `RegexPatternSetReferenceStatement (p. 830)`, with a `SizeConstraintStatement (p. 849)` that enforces an 8 KB size limit on the body of the request. AWS WAF doesn't support inspecting the entire contents of web requests whose bodies exceed the 8 KB limit.

Type: `JsonBody (p. 791)` object

Required: No
Method

Inspect the HTTP method. The method indicates the type of operation that the request is asking the origin to perform.

Type: Method (p. 815) object

Required: No

QueryString

Inspect the query string. This is the part of a URL that appears after a ? character, if any.

Type: QueryString (p. 822) object

Required: No

SingleHeader

Inspect a single header. Provide the name of the header to inspect, for example, User-Agent or Referer. This setting isn't case sensitive.

Example JSON: "SingleHeader": { "Name": "haystack" }

Type: SingleHeader (p. 847) object

Required: No

SingleQueryArgument

Inspect a single query argument. Provide the name of the query argument to inspect, such as UserName or SalesRegion. The name can be up to 30 characters long and isn't case sensitive.

This is used only to indicate the web request component for AWS WAF to inspect, in the FieldToMatch (p. 770) specification.

Example JSON: "SingleQueryArgument": { "Name": "myArgument" }

Type: SingleQueryArgument (p. 848) object

Required: No

UriPath

Inspect the request URI path. This is the part of a web request that identifies a resource, for example, /images/daily-ad.jpg.

Type: UriPath (p. 862) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Filter
Service: AWS WAFV2

A single logging filter, used in LoggingFilter (p. 800).

Contents

Behavior

How to handle logs that satisfy the filter's conditions and requirement.
Type: String
Valid Values: KEEP | DROP
Required: Yes

Conditions

Match conditions for the filter.
Type: Array of Condition (p. 761) objects
Array Members: Minimum number of 1 item.
Required: Yes

Requirement

Logic to apply to the filtering conditions. You can specify that, in order to satisfy the filter, a log must match all conditions or must match at least one condition.
Type: String
Valid Values: MEETS_ALL | MEETS_ANY
Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
FirewallManagerRuleGroup
Service: AWS WAFV2

A rule group that's defined for an AWS Firewall Manager WAF policy.

Contents

FirewallManagerStatement

The processing guidance for an AWS Firewall Manager rule. This is like a regular rule Statement (p. 852), but it can only contain a rule group reference.

Type: FirewallManagerStatement (p. 775) object

Required: Yes

Name

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String


Pattern: ^[-\w\-]+$  

Required: Yes

OverrideAction

The action to use in the place of the action that results from the rule group evaluation. Set the override action to none to leave the result of the rule group alone. Set it to count to override the result to count only.

You can only use this for rule statements that reference a rule group, like RuleGroupReferenceStatement and ManagedRuleGroupStatement.

Note

This option is usually set to none. It does not affect how the rules in the rule group are evaluated. If you want the rules in the rule group to only count matches, do not use this and instead exclude those rules in your rule group reference statement settings.

Type: OverrideAction (p. 820) object

Required: Yes

Priority

If you define more than one rule group in the first or last Firewall Manager rule groups, AWS WAF evaluates each request against the rule groups in order, starting from the lowest priority setting. The priorities don't need to be consecutive, but they must all be different.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig (p. 865) object
Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
FirewallManagerStatement

Service: AWS WAFV2

The processing guidance for an AWS Firewall Manager rule. This is like a regular rule Statement (p. 852), but it can only contain a rule group reference.

Contents

ManagedRuleGroupStatement

A rule statement used to run the rules that are defined in a managed rule group. To use this, provide the vendor name and the name of the rule group in this statement. You can retrieve the required names by calling ListAvailableManagedRuleGroups (p. 152).

You cannot nest a ManagedRuleGroupStatement, for example for use inside a NotStatement or OrStatement. It can only be referenced as a top-level statement within a rule.

Type: ManagedRuleGroupStatement (p. 803) object

Required: No

RuleGroupReferenceStatement

A rule statement used to run the rules that are defined in a RuleGroup (p. 838). To use this, create a rule group with your rules, then provide the ARN of the rule group in this statement.

You cannot nest a RuleGroupReferenceStatement, for example for use inside a NotStatement or OrStatement. You can only use a rule group reference statement at the top level inside a web ACL.

Type: RuleGroupReferenceStatement (p. 841) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ForwardedIPConfig

Service: AWS WAFV2

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

**Note**
If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

This configuration is used for GeoMatchStatement (p. 778) and RateBasedStatement (p. 823). For IPSetReferenceStatement (p. 788), use IPSetForwardedIPConfig (p. 786) instead.

AWS WAF only evaluates the first IP address found in the specified HTTP header.

**Contents**

**FallbackBehavior**

The match status to assign to the web request if the request doesn't have a valid IP address in the specified position.

**Note**
If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

You can specify the following fallback behaviors:
- **MATCH** - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- **NO_MATCH** - Treat the web request as not matching the rule statement.

Type: String

Valid Values: **MATCH** | **NO_MATCH**

Required: Yes

**HeaderName**

The name of the HTTP header to use for the IP address. For example, to use the X-Forwarded-For (XFF) header, set this to `X-Forwarded-For`.

**Note**
If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[a-zA-Z0-9-]+$`

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
GeoMatchStatement

Service: AWS WAFV2

A rule statement used to identify web requests based on country of origin.

Contents

CountryCodes

An array of two-character country codes, for example, ["US", "CN"], from the alpha-2 country ISO codes of the ISO 3166 international standard.

Type: Array of strings

Array Members: Minimum number of 1 item.

Valid Values: AF | AX | AL | DZ | AS | AD | AO | AI | AQ | AG | AR | AM | AW |
AU | AT | AZ | BS | BH | BD | BB | BY | BE | BZ | BJ | BM | BT | BO | BQ |
BA | BW | BV | BR | IO | BN | BG | BF | BI | KH | CM | CA | CV | KY | CF |
TD | CL | CN | CX | CC | CO | KM | CG | CD | CK | CR | CI | HR | CU | CW |
CY | CZ | DK | DJ | DM | DO | EC | EG | SV | GQ | ER | EE | ET | FK | FO |
FJ | FI | FR | GP | PF | TF | GA | GM | GE | DE | GH | GI | GR | GL | GD |
GP | GU | GT | GG | GN | GW | GL | HT | HM | VA | HN | HK | HU | IS | IN |
ID | IR | IQ | IE | IM | IL | IT | JM | JP | JE | JO | KZ | KE | KR | KP |
KR | KW | KG | LA | LV | LB | LS | LR | LY | LI | LT | LU | MO | MK | MG |
MW | MY | MV | ML | MT | MH | MQ | MR | MU | YT | MX | FM | MD | MC | MN |
ME | MS | MA | MZ | MM | NA | NR | NP | NL | NC | NZ | NI | NE | NG | NU |
NF | MP | NO | OM | PK | PW | PS | PA | PG | PY | PE | PH | PN | PL | PT |
PR | QA | RE | RO | RU | RW | BL | SH | KN | LC | MF | PM | VC | WS | SM |
ST | SA | SN | RS | SC | SL | SG | SX | SK | SI | SB | SO | ZA | GS | SS |
ES | LT | SD | SR | SJ | SZ | SE | CH | SY | TW | TJ | TZ | TH | TL | TG |
TK | TO | TT | TN | TR | TM | TC | TV | UG | UA | AE | GB | US | UM | UY |
UZ | VU | VE | VN | VG | VI | WF | EH | YE | ZM | ZW |

Required: No

ForwardedIPConfig

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

Note
If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

Type: ForwardedIPConfig (p. 776) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
HTTPHeader
Service: AWS WAFV2

Part of the response from GetSampledRequests (p. 110). This is a complex type that appears as Headers in the response syntax. HTTPHeader contains the names and values of all of the headers that appear in one of the web requests.

Contents

Name

The name of the HTTP header.
Type: String
Required: No

Value

The value of the HTTP header.
Type: String
Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
HTTPRequest

Service: AWS WAFV2

Part of the response from GetSampledRequests (p. 110). This is a complex type that appears as Request in the response syntax. HTTPRequest contains information about one of the web requests.

Contents

ClientIP

The IP address that the request originated from. If the web ACL is associated with a CloudFront distribution, this is the value of one of the following fields in CloudFront access logs:

- c-ip, if the viewer did not use an HTTP proxy or a load balancer to send the request
- x-forwarded-for, if the viewer did use an HTTP proxy or a load balancer to send the request

Type: String

Required: No

Country

The two-letter country code for the country that the request originated from. For a current list of country codes, see the Wikipedia entry ISO 3166-1 alpha-2.

Type: String

Required: No

Headers

A complex type that contains the name and value for each header in the sampled web request.

Type: Array of HTTPHeader (p. 780) objects

Required: No

HTTPVersion

The HTTP version specified in the sampled web request, for example, HTTP/1.1.

Type: String

Required: No

Method

The HTTP method specified in the sampled web request.

Type: String

Required: No

URI

The URI path of the request, which identifies the resource, for example, /images/daily-ad.jpg.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:
AWS SDK for C++
AWS SDK for Go
AWS SDK for Java V2
AWS SDK for Ruby V3
ImmunityTimeProperty

Service: AWS WAFV2

Determines how long a CAPTCHA token remains valid after the client successfully solves a CAPTCHA puzzle.

Contents

ImmunityTime

The amount of time, in seconds, that a CAPTCHA token is valid. The default setting is 300.

Type: Long

Valid Range: Minimum value of 60. Maximum value of 259200.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
IPSet

Service: AWS WAFV2

Contains zero or more IP addresses or blocks of IP addresses specified in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports all IPv4 and IPv6 CIDR ranges except for /0. For information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

AWS WAF assigns an ARN to each IPSet that you create. To use an IP set in a rule, you provide the ARN to the Rule (p. 834) statement IPSetReferenceStatement (p. 788).

Contents

Addresses

Contains an array of strings that specifies zero or more IP addresses or blocks of IP addresses in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports all IPv4 and IPv6 CIDR ranges except for /0.

Example address strings:

- To configure AWS WAF to allow, block, or count requests that originated from the IP address 192.0.2.44, specify 192.0.2.44/32.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify 192.0.2.0/24.
- To configure AWS WAF to allow, block, or count requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify 1111:0000:0000:0000:0000:0000:0000:0111/128.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Example JSON Addresses specifications:

- Empty array: "Addresses": []
- Array with one address: "Addresses": ["192.0.2.44/32"]
- Array with three addresses: "Addresses": ["192.0.2.44/32", "192.0.2.0/24", "192.0.0.0/16"]
- INVALID specification: "Addresses": ["""] INVALID

Type: Array of strings


Pattern: .\S.*

Required: Yes

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: .\S.*

Required: Yes
Description
A description of the IP set that helps with identification.

Type: String
Length Constraints: Minimum length of 1. Maximum length of 256.
Pattern: ^\[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]+$
Required: No

Id
A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String
Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$
Required: Yes

IPAddressVersion
The version of the IP addresses, either IPV4 or IPV6.

Type: String
Valid Values: IPV4 | IPV6
Required: Yes

Name
The name of the IP set. You cannot change the name of an IPSet after you create it.

Type: String
Pattern: ^[^\w\-]+$  
Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
IPSetForwardedIPConfig

**Service:** AWS WAFV2

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that’s reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

**Note**
If the specified header isn’t present in the request, AWS WAF doesn’t apply the rule to the web request at all.

This configuration is used only for IPSetReferenceStatement (p. 788). For GeoMatchStatement (p. 778) and RateBasedStatement (p. 823), use ForwardedIPConfig (p. 776) instead.

**Contents**

**FallbackBehavior**

The match status to assign to the web request if the request doesn’t have a valid IP address in the specified position.

**Note**
If the specified header isn’t present in the request, AWS WAF doesn’t apply the rule to the web request at all.

You can specify the following fallback behaviors:

- **MATCH** - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- **NO_MATCH** - Treat the web request as not matching the rule statement.

Type: String

Valid Values: MATCH | NO_MATCH

Required: Yes

**HeaderName**

The name of the HTTP header to use for the IP address. For example, to use the X-Forwarded-For (XFF) header, set this to X-Forwarded-For.

**Note**
If the specified header isn’t present in the request, AWS WAF doesn’t apply the rule to the web request at all.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: \^[a-zA-Z0-9-]+\$

Required: Yes

**Position**

The position in the header to search for the IP address. The header can contain IP addresses of the original client and also of proxies. For example, the header value could be 10.1.1.1, 127.0.0.0, 10.10.10.10 where the first IP address identifies the original client and the rest identify proxies that the request went through.

The options for this setting are the following:
• **FIRST** - Inspect the first IP address in the list of IP addresses in the header. This is usually the client's original IP.
• **LAST** - Inspect the last IP address in the list of IP addresses in the header.
• **ANY** - Inspect all IP addresses in the header for a match. If the header contains more than 10 IP addresses, AWS WAF inspects the last 10.

Type: String

Valid Values: **FIRST | LAST | ANY**

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
IPSetReferenceStatement

Service: AWS WAFV2

A rule statement used to detect web requests coming from particular IP addresses or address ranges. To use this, create an IPSet (p. 784) that specifies the addresses you want to detect, then use the ARN of that set in this statement. To create an IP set, see CreateIPSet (p. 21).

Each IP set rule statement references an IP set. You create and maintain the set independent of your rules. This allows you to use the single set in multiple rules. When you update the referenced set, AWS WAF automatically updates all rules that reference it.

Contents

ARN

The Amazon Resource Name (ARN) of the IPSet (p. 784) that this statement references.

Type: String


Pattern: .*\s.*

Required: Yes

IPSetForwardedIPConfig

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

Note

If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

Type: IPSetForwardedIPConfig (p. 786) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**IPSetSummary**

Service: AWS WAFV2

High-level information about an IPSet (p. 784), returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage an IPSet, and the ARN, that you provide to the IPSetReferenceStatement (p. 788) to use the address set in a Rule (p. 834).

**Contents**

**ARN**

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: .\S.*

Required: No

**Description**

A description of the IP set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^\[\w+=:#@/\-,.\]+\[\w+=:#@/\-,.\s\]+\[\w+=:#@/\-,.\]$\n
Required: No

**Id**

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: No

**LockToken**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: No
Name
The name of the IP set. You cannot change the name of an IPSet after you create it.

Type: String
Pattern: ^\[\w\-]+$
Required: No

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**JsonBody**

Service: AWS WAFV2

The body of a web request, inspected as JSON. The body immediately follows the request headers. This is used in the [FieldToMatch](#) specification.

Use the specifications in this object to indicate which parts of the JSON body to inspect using the rule's inspection criteria. AWS WAF inspects only the parts of the JSON that result from the matches that you indicate.

Example JSON: "JsonBody": { "MatchPattern": { "All": {} }, "MatchScope": "ALL" }

**Contents**

**InvalidFallbackBehavior**

What AWS WAF should do if it fails to completely parse the JSON body. The options are the following:

- **EVALUATE_AS_STRING** - Inspect the body as plain text. AWS WAF applies the text transformations and inspection criteria that you defined for the JSON inspection to the body text string.
- **MATCH** - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- **NO_MATCH** - Treat the web request as not matching the rule statement.

If you don't provide this setting, AWS WAF parses and evaluates the content only up to the first parsing failure that it encounters.

AWS WAF does its best to parse the entire JSON body, but might be forced to stop for reasons such as invalid characters, duplicate keys, truncation, and any content whose root node isn't an object or an array.

AWS WAF parses the JSON in the following examples as two valid key, value pairs:

- Missing comma: `{"key1":"value1","key2":"value2"}`
- Missing colon: `{"key1":"value1","key2":"value2"}`
- Extra colons: `{"key1::"value1","key2::"value2"}`

**MatchPattern**

The patterns to look for in the JSON body. AWS WAF inspects the results of these pattern matches against the rule inspection criteria.

Type: JsonMatchPattern (p. 793) object

Required: Yes

**MatchScope**

The parts of the JSON to match against using the MatchPattern. If you specify All, AWS WAF matches against keys and values.

Type: String
Valid Values: ALL | KEY | VALUE

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
JsonMatchPattern

Service: AWS WAFV2

The patterns to look for in the JSON body. AWS WAF inspects the results of these pattern matches against the rule inspection criteria. This is used with the FieldToMatch (p. 770) option JsonBody.

Contents

All

Match all of the elements. See also MatchScope in JsonBody (p. 791).

You must specify either this setting or the IncludedPaths setting, but not both.

Type: All (p. 750) object

Required: No

IncludedPaths

Match only the specified include paths. See also MatchScope in JsonBody (p. 791).

Provide the include paths using JSON Pointer syntax. For example, "IncludedPaths": ["/dogs/0/name", "/dogs/1/name"]). For information about this syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

You must specify either this setting or the All setting, but not both.

Note

Don’t use this option to include all paths. Instead, use the All setting.

Type: Array of strings

Array Members: Minimum number of 1 item.


Pattern: ([/])|([/](((^~)|(~[01]))+))

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Label
Service: AWS WAFV2

A single label container. This is used as an element of a label array in multiple contexts, for example, in RuleLabels inside a Rule (p. 834) and in Labels inside a SampledHTTPRequest (p. 845).

Contents

Name

The label string.
Type: String

Pattern: ^[0-9A-Za-z_\-:]+$

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
LabelMatchStatement

Service: AWS WAFV2

A rule statement that defines a string match search against labels that have been added to the web request by rules that have already run in the web ACL.

The label match statement provides the label or namespace string to search for. The label string can represent a part or all of the fully qualified label name that had been added to the web request. Fully qualified labels have a prefix, optional namespaces, and label name. The prefix identifies the rule group or web ACL context of the rule that added the label. If you do not provide the fully qualified name in your label match string, AWS WAF performs the search for labels that were added in the same context as the label match statement.

Contents

Key

The string to match against. The setting you provide for this depends on the match statement's Scope setting:

- If the Scope indicates LABEL, then this specification must include the name and can include any number of preceding namespace specifications and prefix up to providing the fully qualified label name.
- If the Scope indicates NAMESPACE, then this specification can include any number of contiguous namespace strings, and can include the entire label namespace prefix from the rule group or web ACL where the label originates.

Labels are case sensitive and components of a label must be separated by colon, for example NS1:NS2:name.

Type: String


Pattern: ^[0-9A-Za-z_\-:]++$

Required: Yes

Scope

Specify whether you want to match using the label name or just the namespace.

Type: String

Valid Values: LABEL | NAMESPACE

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
LabelNameCondition
Service: AWS WAFV2

A single label name condition for a Condition (p. 761) in a logging filter.

Contents

LabelName

The label name that a log record must contain in order to meet the condition. This must be a fully qualified label name. Fully qualified labels have a prefix, optional namespaces, and label name. The prefix identifies the rule group or web ACL context of the rule that added the label.

Type: String


Pattern: `^[0-9A-Za-z_\-:\]+`$

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
LabelSummary

Service: AWS WAFV2

List of labels used by one or more of the rules of a RuleGroup (p. 838). This summary object is used for the following rule group lists:

- **AvailableLabels** - Labels that rules add to matching requests. These labels are defined in the RuleLabels for a Rule (p. 834).
- **ConsumedLabels** - Labels that rules match against. These labels are defined in a LabelMatchStatement specification, in the Statement (p. 852) definition of a rule.

Contents

**Name**

An individual label specification.

Type: String


Pattern: `^[0-9A-Za-z_\-:]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
LoggingConfiguration

Service: AWS WAFV2

Defines an association between logging destinations and a web ACL resource, for logging from AWS WAF. As part of the association, you can specify parts of the standard logging fields to keep out of the logs and you can specify filters so that you log only a subset of the logging records.

**Note**

You can define one logging destination per web ACL.

You can access information about the traffic that AWS WAF inspects using the following steps:

1. Create your logging destination. You can use an Amazon CloudWatch Logs log group, an Amazon Simple Storage Service (Amazon S3) bucket, or an Amazon Kinesis Data Firehose. For information about configuring logging destinations and the permissions that are required for each, see Logging web ACL traffic information in the *AWS WAF Developer Guide*.
2. Associate your logging destination to your web ACL using a **PutLoggingConfiguration** request.

When you successfully enable logging using a **PutLoggingConfiguration** request, AWS WAF creates an additional role or policy that is required to write logs to the logging destination. For an Amazon CloudWatch Logs log group, AWS WAF creates a resource policy on the log group. For an Amazon S3 bucket, AWS WAF creates a bucket policy. For an Amazon Kinesis Data Firehose, AWS WAF creates a service-linked role.

For additional information about web ACL logging, see Logging web ACL traffic information in the *AWS WAF Developer Guide*.

**Contents**

**LogDestinationConfigs**

The logging destination configuration that you want to associate with the web ACL.

**Note**

You can associate one logging destination to a web ACL.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 100 items.


Pattern: .\S.*

Required: Yes

**LoggingFilter**

Filtering that specifies which web requests are kept in the logs and which are dropped. You can filter on the rule action and on the web request labels that were applied by matching rules during web ACL evaluation.

Type: **LoggingFilter** (p. 800) object

Required: No

**ManagedByFirewallManager**

Indicates whether the logging configuration was created by AWS Firewall Manager, as part of an AWS WAF policy configuration. If true, only Firewall Manager can modify or delete the configuration.
Type: Boolean

Required: No

**RedactedFields**

The parts of the request that you want to keep out of the logs. For example, if you redact the `SingleHeader` field, the `HEADER` field in the logs will be `xxx`.

**Note**

You can specify only the following fields for redaction: `UriPath`, `QueryString`, `SingleHeader`, `Method`, and `JsonBody`.

Type: Array of `FieldToMatch` (p. 770) objects

Array Members: Maximum number of 100 items.

Required: No

**ResourceArn**

The Amazon Resource Name (ARN) of the web ACL that you want to associate with `LogDestinationConfigs`.

Type: String


Pattern: `.*\S.*`

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
LoggingFilter
Service: AWS WAFV2

Filtering that specifies which web requests are kept in the logs and which are dropped, defined for a web ACL's LoggingConfiguration (p. 798).

You can filter on the rule action and on the web request labels that were applied by matching rules during web ACL evaluation.

Contents

DefaultBehavior

Default handling for logs that don’t match any of the specified filtering conditions.

Type: String

Valid Values: KEEP | DROP

Required: Yes

Filters

The filters that you want to apply to the logs.

Type: Array of Filter (p. 772) objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ManagedRuleGroupConfig

Service: AWS WAFV2

Additional information that's used by a managed rule group. Most managed rule groups don't require this.

Use this for the account takeover prevention managed rule group AWSManagedRulesATPRuleSet, to provide information about the sign-in page of your application.

You can provide multiple individual ManagedRuleGroupConfig objects for any rule group configuration, for example UsernameField and PasswordField. The configuration that you provide depends on the needs of the managed rule group. For the ATP managed rule group, you provide the following individual configuration objects: LoginPath, PasswordField, PayloadType and UsernameField.

Contents

LoginPath

The path of the login endpoint for your application. For example, for the URL https://example.com/web/login, you would provide the path /web/login.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: .\S.*

Required: No

PasswordField

Details about your login page password field.

Type: PasswordField (p. 821) object

Required: No

PayloadType

The payload type for your login endpoint, either JSON or form encoded.

Type: String

Valid Values: JSON | FORM_ENCODED

Required: No

UsernameField

Details about your login page username field.

Type: UsernameField (p. 863) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
ManagedRuleGroupStatement
Service: AWS WAFV2

A rule statement used to run the rules that are defined in a managed rule group. To use this, provide the vendor name and the name of the rule group in this statement. You can retrieve the required names by calling ListAvailableManagedRuleGroups (p. 152).

You cannot nest a ManagedRuleGroupStatement, for example for use inside a NotStatement or OrStatement. It can only be referenced as a top-level statement within a rule.

Contents

ExcludedRules

The rules in the referenced rule group whose actions are set to Count. When you exclude a rule, AWS WAF evaluates it exactly as it would if the rule action setting were Count. This is a useful option for testing the rules in a rule group without modifying how they handle your web traffic.

Type: Array of ExcludedRule (p. 769) objects

Array Members: Maximum number of 100 items.

Required: No

ManagedRuleGroupConfig

Additional information that's used by a managed rule group. Most managed rule groups don't require this.

Use this for the account takeover prevention managed rule group AWSManagedRulesATPRuleSet, to provide information about the sign-in page of your application.

You can provide multiple individual ManagedRuleGroupConfig objects for any rule group configuration, for example UsernameField and PasswordField. The configuration that you provide depends on the needs of the managed rule group. For the ATP managed rule group, you provide the following individual configuration objects: LoginPath, PasswordField, PayloadType and UsernameField.

Type: Array of ManagedRuleGroupConfig (p. 801) objects

Array Members: Minimum number of 1 item.

Required: No

Name

The name of the managed rule group. You use this, along with the vendor name, to identify the rule group.

Type: String


Pattern: ^[\w\-]+$

Required: Yes

ScopeDownStatement

An optional nested statement that narrows the scope of the web requests that are evaluated by the managed rule group. Requests are only evaluated by the rule group if they match the scope-down
statement. You can use any nestable `Statement (p. 852)` in the scope-down statement, and you can nest statements at any level, the same as you can for a rule statement.

Type: `Statement (p. 852)` object

Required: No

**VendorName**

The name of the managed rule group vendor. You use this, along with the rule group name, to identify the rule group.

Type: String


Pattern: `.*\S.*`

Required: Yes

**Version**

The version of the managed rule group to use. If you specify this, the version setting is fixed until you change it. If you don't specify this, AWS WAF uses the vendor's default version, and then keeps the version at the vendor's default when the vendor updates the managed rule group settings.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-_/]+$`

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ManagedRuleGroupSummary
Service: AWS WAF

High-level information about a managed rule group, returned by ListAvailableManagedRuleGroups (p. 152). This provides information like the name and vendor name, that you provide when you add a ManagedRuleGroupStatement (p. 803) to a web ACL. Managed rule groups include AWS Managed Rules rule groups, which are free of charge to AWS WAF customers, and AWS Marketplace managed rule groups, which you can subscribe to through AWS Marketplace.

Contents

Description
The description of the managed rule group, provided by AWS Managed Rules or the AWS Marketplace seller who manages it.
Type: String
Length Constraints: Minimum length of 1. Maximum length of 256.
Pattern: ^\[\w+=:#@/\-,.\]+\[\w+=:#@/\-,.\s\]+[\w+=:#@/\-,.\]$ Required: No

Name
The name of the managed rule group. You use this, along with the vendor name, to identify the rule group.
Type: String
Pattern: ^\[\w\-]+$ Required: No

VendorName
The name of the managed rule group vendor. You use this, along with the rule group name, to identify the rule group.
Type: String
Pattern: .\S.* Required: No

VersioningSupported
Indicates whether the managed rule group is versioned. If it is, you can retrieve the versions list by calling ListAvailableManagedRuleGroupVersions (p. 155).
Type: Boolean
Required: No

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
ManagedRuleGroupVersion

Service: AWS WAFV2

Describes a single version of a managed rule group.

Contents

LastUpdateTimestamp

The date and time that the managed rule group owner updated the rule group version information.

Type: Timestamp

Required: No

Name

The version name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: ^[\w#:\.:\-\ ]+$

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ManagedRuleSet
Service: AWS WAFV2

A set of rules that is managed by AWS and AWS Marketplace sellers to provide versioned managed rule groups for customers of AWS WAF.

**Note**
This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are ListManagedRuleSets, GetManagedRuleSet, PutManagedRuleSetVersions, and UpdateManagedRuleSetVersionExpiryDate.

**Contents**

**ARN**
The Amazon Resource Name (ARN) of the entity.

Type: String
Pattern: .*$
Required: Yes

**Description**
A description of the set that helps with identification.

Type: String
Length Constraints: Minimum length of 1. Maximum length of 256.
Pattern: ^[^\w+=:#@/\-,.][\w+=:#@/\-,.]+[^\w+=:#@/\-,.]+$
Required: No

**Id**
A unique identifier for the managed rule set. The ID is returned in the responses to commands like list. You provide it to operations like get and update.

Type: String
Pattern: ^[0-9a-f]{8}(-[0-9a-f]{4}-){3}[0-9a-f]{12}$
Required: Yes

**LabelNamespace**
The label namespace prefix for the managed rule groups that are offered to customers from this managed rule set. All labels that are added by rules in the managed rule group have this prefix.

- The syntax for the label namespace prefix for a managed rule group is the following:

  `awswaf:managed:<vendor>:<rule group name>`
When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:

<label namespace>::<label from rule>

Type: String


Pattern: ^[0-9A-Za-z_\-:]++$

Required: No

**Name**

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set. This name is assigned to the corresponding managed rule group, which your customers can access and use.

Type: String


Pattern: ^[\w\-]+$

Required: Yes

**PublishedVersions**

The versions of this managed rule set that are available for use by customers.

Type: String to ManagedRuleSetVersion (p. 813) object map

Key Length Constraints: Minimum length of 1. Maximum length of 64.

Key Pattern: ^[\w#:\.\-\/]+$

Required: No

**RecommendedVersion**

The version that you would like your customers to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: ^[\w#:\.\-]+$

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ManagedRuleSetSummary

Service: AWS WAFV2

High-level information for a managed rule set.

Note
This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.

Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are ListManagedRuleSets, GetManagedRuleSet, PutManagedRuleSetVersions, and UpdateManagedRuleSetVersionExpiryDate.

Contents

ARN
The Amazon Resource Name (ARN) of the entity.

Type: String
Pattern: .\s.*
Required: No

Description
A description of the set that helps with identification.

Type: String
Length Constraints: Minimum length of 1. Maximum length of 256.
Pattern: ^[\w+=:#@/-,\s]*[\w+=:#@/-,\s]+[\w+=:#@/-,\s]*$ Required: No

Id
A unique identifier for the managed rule set. The ID is returned in the responses to commands like list. You provide it to operations like get and update.

Type: String
Pattern: ^[0-9a-f]{8}-\{?:[0-9a-f]{4}-\{3}[0-9a-f]{12}\}$ Required: No

LabelNamespace
The label namespace prefix for the managed rule groups that are offered to customers from this managed rule set. All labels that are added by rules in the managed rule group have this prefix.
- The syntax for the label namespace prefix for a managed rule group is the following:

  awswaf:managed:<vendor>:<rule group name>:
- When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:
<label namespace>:<label from rule>

Type: String
Pattern: ^[0-9A-Za-z_\-:]+$ 
Required: No

LockToken

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String
Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$
Required: No

Name

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set. This name is assigned to the corresponding managed rule group, which your customers can access and use.

Type: String
Pattern: ^[\w\-]+$
Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ManagedRuleSetVersion

Information for a single version of a managed rule set.

**Note**
This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers. Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are ListManagedRuleSets, GetManagedRuleSet, PutManagedRuleSetVersions, and UpdateManagedRuleSetVersionExpiryDate.

**Contents**

**AssociatedRuleGroupArn**

The Amazon Resource Name (ARN) of the vendor rule group that's used to define the published version of your managed rule group.

Type: String


Pattern: .\S.*

Required: No

**Capacity**

The web ACL capacity units (WCUs) required for this rule group.

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. The WCU limit for web ACLs is 1,500.

Type: Long

Valid Range: Minimum value of 1.

Required: No

**ExpiryTimestamp**

The time that this version is set to expire.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

Required: No

**ForecastedLifetime**

The amount of time you expect this version of your managed rule group to last, in days.

Type: Integer
Valid Range: Minimum value of 1.

Required: No

**LastUpdateTimestamp**

The last time that you updated this version.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

Required: No

**PublishTimestamp**

The time that you first published this version.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Method

Service: AWS WAFV2

The HTTP method of a web request. The method indicates the type of operation that the request is asking the origin to perform.

This is used only to indicate the web request component for AWS WAF to inspect, in the FieldToMatch (p. 770) specification.

JSON specification: "Method": {} 

Contents

The members of this structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
MobileSdkRelease

Information for a release of the mobile SDK, including release notes and tags.

The mobile SDK is not generally available. Customers who have access to the mobile SDK can use it to establish and manage AWS Security Token Service (AWS STS) security tokens for use in HTTP(S) requests from a mobile device to AWS WAF. For more information, see AWS WAF client application integration in the AWS WAF Developer Guide.

Contents

ReleaseNotes

Notes describing the release.

Type: String

Required: No

ReleaseVersion

The release version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: ^[^\w/:\./-]+$

Required: No

Tags

Tags that are associated with the release.

Type: Array of Tag (p. 856) objects

Array Members: Minimum number of 1 item.

Required: No

Timestamp

The timestamp of the release.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
NoneAction

Service: AWS WAFV2

Specifies that AWS WAF should do nothing. This is used for the OverrideAction setting on a Rule (p. 834) when the rule uses a rule group reference statement.

This is used in the context of other settings, for example to specify values for RuleAction (p. 837) and web ACL DefaultAction (p. 768).

JSON specification: "None" : {}  

Contents

The members of this structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**NotStatement**

*Service: AWS WAFV2*

A logical rule statement used to negate the results of another rule statement. You provide one `Statement` within the `NotStatement`.

**Contents**

**Statement**

The statement to negate. You can use any statement that can be nested.

Type: `Statement` object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
OrStatement
Service: AWS WAFV2

A logical rule statement used to combine other rule statements with OR logic. You provide more than one Statement (p. 852) within the OrStatement.

Contents

Statements

The statements to combine with OR logic. You can use any statements that can be nested.

Type: Array of Statement (p. 852) objects

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
OverrideAction

Service: AWS WAFV2

The action to use in the place of the action that results from the rule group evaluation. Set the override action to none to leave the result of the rule group alone. Set it to count to override the result to count only.

You can only use this for rule statements that reference a rule group, like RuleGroupReferenceStatement and ManagedRuleGroupStatement.

Note
This option is usually set to none. It does not affect how the rules in the rule group are evaluated. If you want the rules in the rule group to only count matches, do not use this and instead exclude those rules in your rule group reference statement settings.

Contents

Count

Override the rule group evaluation result to count only.

Note
This option is usually set to none. It does not affect how the rules in the rule group are evaluated. If you want the rules in the rule group to only count matches, do not use this and instead exclude those rules in your rule group reference statement settings.

Type: CountAction (p. 762) object

Required: No

None

Don't override the rule group evaluation result. This is the most common setting.

Type: NoneAction (p. 817) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
PasswordField
Service: AWS WAFV2

Details about your login page password field, used in a ManagedRuleGroupConfig.

Contents

Identifier

The name of the password field. For example /form/password.

Type: String
Pattern: .*[^\s]*
Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**QueryString**

Service: AWS WAFV2

The query string of a web request. This is the part of a URL that appears after a ? character, if any.

This is used only to indicate the web request component for AWS WAF to inspect, in the `FieldToMatch (p. 770)` specification.

JSON specification: "QueryString": {}  

**Contents**

The members of this structure are context-dependent.

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RateBasedStatement
Service: AWS WAFV2

A rate-based rule tracks the rate of requests for each originating IP address, and triggers the rule action when the rate exceeds a limit that you specify on the number of requests in any 5-minute time span. You can use this to put a temporary block on requests from an IP address that is sending excessive requests.

AWS WAF tracks and manages web requests separately for each instance of a rate-based rule that you use. For example, if you provide the same rate-based rule settings in two web ACLs, each of the two rule statements represents a separate instance of the rate-based rule and gets its own tracking and management by AWS WAF. If you define a rate-based rule inside a rule group, and then use that rule group in multiple places, each use creates a separate instance of the rate-based rule that gets its own tracking and management by AWS WAF.

When the rule action triggers, AWS WAF blocks additional requests from the IP address until the request rate falls below the limit.

You can optionally nest another statement inside the rate-based statement, to narrow the scope of the rule so that it only counts requests that match the nested statement. For example, based on recent requests that you have seen from an attacker, you might create a rate-based rule with a nested AND rule statement that contains the following nested statements:

- An IP match statement with an IP set that specified the address 192.0.2.44.
- A string match statement that searches in the User-Agent header for the string BadBot.

In this rate-based rule, you also define a rate limit. For this example, the rate limit is 1,000. Requests that meet both of the conditions in the statements are counted. If the count exceeds 1,000 requests per five minutes, the rule action triggers. Requests that do not meet both conditions are not counted towards the rate limit and are not affected by this rule.

You cannot nest a RateBasedStatement inside another statement, for example inside a NotStatement or OrStatement. You can define a RateBasedStatement inside a web ACL and inside a rule group.

Contents

AggregateKeyType

Setting that indicates how to aggregate the request counts. The options are the following:

- IP - Aggregate the request counts on the IP address from the web request origin.
- FORWARDED_IP - Aggregate the request counts on the first IP address in an HTTP header. If you use this, configure the ForwardedIPConfig, to specify the header to use.

Type: String

Valid Values: IP | FORWARDED_IP

Required: Yes

ForwardedIPConfig

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

Note
If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.
This is required if `AggregateKeyType` is set to `FORWARDED_IP`.

Type: `ForwardedIPConfig (p. 776)` object

Required: No

**Limit**

The limit on requests per 5-minute period for a single originating IP address. If the statement includes a `ScopeDownStatement`, this limit is applied only to the requests that match the statement.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

**ScopeDownStatement**

An optional nested statement that narrows the scope of the web requests that are evaluated by the rate-based statement. Requests are only tracked by the rate-based statement if they match the scope-down statement. You can use any nestable `Statement (p. 852)` in the scope-down statement, and you can nest statements at any level, the same as you can for a rule statement.

Type: `Statement (p. 852)` object

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RateBasedStatementManagedKeysIPSet**

Service: AWS WAFV2

The set of IP addresses that are currently blocked for a RateBasedStatement (p. 823).

**Contents**

**Addresses**

The IP addresses that are currently blocked.

Type: Array of strings


Pattern: .\S. *

Required: No

**IPAddressVersion**

The version of the IP addresses, either IPV4 or IPV6.

Type: String

Valid Values: IPV4 | IPV6

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Regex
Service: AWS WAFV2

A single regular expression. This is used in a RegexPatternSet (p. 828).

Contents

RegexString

The string representing the regular expression.
Type: String
Pattern: . *
Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexMatchStatement**

Service: AWS WAFV2

A rule statement used to search web request components for a match against a single regular expression.

**Contents**

**FieldToMatch**

The part of a web request that you want AWS WAF to inspect. For more information, see FieldToMatch (p. 770).

Type: FieldToMatch (p. 770) object

Required: Yes

**RegexString**

The string representing the regular expression.

Type: String


Pattern: .*

Required: Yes

**TextTransformations**

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. If you specify one or more transformations in a rule statement, AWS WAF performs all transformations on the content of the request component identified by FieldToMatch, starting from the lowest priority setting, before inspecting the content for a match.

Type: Array of TextTransformation (p. 858) objects

Array Members: Minimum number of 1 item.

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexPatternSet**

Service: AWS WAFV2

Contains one or more regular expressions.

AWS WAF assigns an ARN to each `RegexPatternSet` that you create. To use a set in a rule, you provide the ARN to the Rule (p. 834) statement `RegexPatternSetReferenceStatement` (p. 830).

**Contents**

**ARN**

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: `.\S.*`

Required: No

**Description**

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/-,\s]+[\w+=:#@/-,\s]+[\w+=:#@/-,\s]+$`

Required: No

**Id**

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

**Name**

The name of the set. You cannot change the name after you create the set.

Type: String


Pattern: `^[\w\-]+$`

Required: No

**RegularExpressionList**

The regular expression patterns in the set.

Type: Array of `Regex` (p. 826) objects
Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexPatternSetReferenceStatement**

Service: AWS WAFV2

A rule statement used to search web request components for matches with regular expressions. To use this, create a [RegexPatternSet](#) that specifies the expressions that you want to detect, then use the ARN of that set in this statement. A web request matches the pattern set rule statement if the request component matches any of the patterns in the set. To create a regex pattern set, see [CreateRegexPatternSet](#).

Each regex pattern set rule statement references a regex pattern set. You create and maintain the set independent of your rules. This allows you to use the single set in multiple rules. When you update the referenced set, AWS WAF automatically updates all rules that reference it.

**Contents**

**ARN**

The Amazon Resource Name (ARN) of the [RegexPatternSet](#) that this statement references.

- Type: String
- Pattern: `.\S.*`
- Required: Yes

**FieldToMatch**

The part of a web request that you want AWS WAF to inspect. For more information, see [FieldToMatch](#).

- Type: [FieldToMatch](#) object
- Required: Yes

**TextTransformations**

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. If you specify one or more transformations in a rule statement, AWS WAF performs all transformations on the content of the request component identified by FieldToMatch, starting from the lowest priority setting, before inspecting the content for a match.

- Type: Array of [TextTransformation](#) objects
- Array Members: Minimum number of 1 item.
- Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RegexPatternSetSummary

Service: AWS WAFV2

High-level information about a RegexPatternSet (p. 828), returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a RegexPatternSet, and the ARN, that you provide to the RegexPatternSetReferenceStatement (p. 830) to use the pattern set in a Rule (p. 834).

Contents

AR

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: .\S.*

Required: No

Description

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^\[\w+=:#@/\-,.\]\[\w+=:#@/\-,.\\s\]+\[\w+=:#@/\-,.\]\$

Required: No

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: ^[0-9a-f]{8}-\(?[0-9a-f]{4}-\)\{3\}[0-9a-f]{12}$

Required: No

LockToken

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-\(?[0-9a-f]{4}-\)\{3\}[0-9a-f]{12}$
Required: No

Name

The name of the data type instance. You cannot change the name after you create the instance.

Type: String


Pattern: ^\[\w\-]+$

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ReleaseSummary
Service: AWS WAFV2

High level information for an SDK release.

Contents

ReleaseVersion
The release version.
Type: String
Length Constraints: Minimum length of 1. Maximum length of 64.
Pattern: ^[\w#:\.:\-/]+$
Required: No

Timestamp
The timestamp of the release.
Type: Timestamp
Required: No

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Rule

Service: AWS WAFV2

A single rule, which you can use in a WebACL (p. 866) or RuleGroup (p. 838) to identify web requests that you want to allow, block, or count. Each rule includes one top-level Statement (p. 852) that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Contents

Action

The action that AWS WAF should take on a web request when it matches the rule statement. Settings at the web ACL level can override the rule action setting.

This is used only for rules whose statements do not reference a rule group. Rule statements that reference a rule group include RuleGroupReferenceStatement and ManagedRuleGroupStatement.

You must specify either this Action setting or the rule OverrideAction setting, but not both:
• If the rule statement does not reference a rule group, use this rule action setting and not the rule override action setting.
• If the rule statement references a rule group, use the override action setting and not this action setting.

Type: RuleAction (p. 837) object

Required: No

CaptchaConfig

Specifies how AWS WAF should handle CAPTCHA evaluations. If you don't specify this, AWS WAF uses the CAPTCHA configuration that's defined for the web ACL.

Type: CaptchaConfig (p. 759) object

Required: No

Name

The name of the rule. You can't change the name of a Rule after you create it.

Type: String


Pattern: ^[\w\-]+$

Required: Yes

OverrideAction

The action to use in the place of the action that results from the rule group evaluation. Set the override action to none to leave the result of the rule group alone. Set it to count to override the result to count only.

You can only use this for rule statements that reference a rule group, like RuleGroupReferenceStatement and ManagedRuleGroupStatement.

Note

This option is usually set to none. It does not affect how the rules in the rule group are evaluated. If you want the rules in the rule group to only count matches, do not use this and instead exclude those rules in your rule group reference statement settings.
Type: OverrideAction (p. 820) object

Required: No

Priority

If you define more than one Rule in a WebACL, AWS WAF evaluates each request against the Rules in order based on the value of Priority. AWS WAF processes rules with lower priority first. The priorities don't need to be consecutive, but they must all be different.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

RuleLabels

Labels to apply to web requests that match the rule match statement. AWS WAF applies fully qualified labels to matching web requests. A fully qualified label is the concatenation of a label namespace and a rule label. The rule's rule group or web ACL defines the label namespace.

Rules that run after this rule in the web ACL can match against these labels using a LabelMatchStatement.

For each label, provide a case-sensitive string containing optional namespaces and a label name, according to the following guidelines:

- Separate each component of the label with a colon.
- Each namespace or name can have up to 128 characters.
- You can specify up to 5 namespaces in a label.
- Don't use the following reserved words in your label specification: aws, waf, managed, rulegroup, webacl, regexpatternset, or ipset.

For example, myLabelName or nameSpace1:nameSpace2:myLabelName.

Type: Array of Label (p. 794) objects

Required: No

Statement

The AWS WAF processing statement for the rule, for example ByteMatchStatement (p. 756) or SizeConstraintStatement (p. 849).

Type: Statement (p. 852) object

Required: Yes

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig (p. 865) object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
RuleAction
Service: AWS WAFV2

The action that AWS WAF should take on a web request when it matches a rule's statement. Settings at the web ACL level can override the rule action setting.

Contents

Allow

Instructs AWS WAF to allow the web request.

Type: AllowAction (p. 751) object

Required: No

Block

Instructs AWS WAF to block the web request.

Type: BlockAction (p. 754) object

Required: No

Captcha

Instructs AWS WAF to run a CAPTCHA check against the web request.

Type: CaptchaAction (p. 758) object

Required: No

Count

Instructs AWS WAF to count the web request and allow it.

Type: CountAction (p. 762) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleGroup
Service: AWS WAFV2

A rule group defines a collection of rules to inspect and control web requests that you can use in a WebACL (p. 866). When you create a rule group, you define an immutable capacity limit. If you update a rule group, you must stay within the capacity. This allows others to reuse the rule group with confidence in its capacity requirements.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: .*\S.*

Required: Yes

AvailableLabels

The labels that one or more rules in this rule group add to matching web requests. These labels are defined in the RuleLabels for a Rule (p. 834).

Type: Array of LabelSummary (p. 797) objects

Required: No

Capacity

The web ACL capacity units (WCUs) required for this rule group.

When you create your own rule group, you define this, and you cannot change it after creation. When you add or modify the rules in a rule group, AWS WAF enforces this limit. You can check the capacity for a set of rules using CheckCapacity (p. 12).

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. The WCU limit for web ACLs is 1,500.

Type: Long

Valid Range: Minimum value of 1.

Required: Yes

ConsumedLabels

The labels that one or more rules in this rule group match against in label match statements. These labels are defined in a LabelMatchStatement specification, in the Statement (p. 852) definition of a rule.

Type: Array of LabelSummary (p. 797) objects

Required: No
**CustomResponseBodies**

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the rule group, and then use them in the rules that you define in the rule group.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: String to CustomResponseBody (p. 767) object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^[\w\-]+$`

Required: No

**Description**

A description of the rule group that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/-,\s]+[\w+=:#@/-,\s]+$`

Required: No

**Id**

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

**LabelNamespace**

The label namespace prefix for this rule group. All labels added by rules in this rule group have this prefix.

- The syntax for the label namespace prefix for your rule groups is the following:
  
  `awswaf:<account ID>:rulegroup:<rule group name>:`

- When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:
  
  `<label namespace>:<label from rule>`

Type: String

Pattern: ^[0-9A-Za-z_\-:]+$  
Required: No

**Name**  
The name of the rule group. You cannot change the name of a rule group after you create it.  
Type: String  
Pattern: ^[^\\\s-]+$  
Required: Yes

**Rules**  
The Rule (p. 834) statements used to identify the web requests that you want to allow, block, or count. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.  
Type: Array of Rule (p. 834) objects  
Required: No

**VisibilityConfig**  
Defines and enables Amazon CloudWatch metrics and web request sample collection.  
Type: VisibilityConfig (p. 865) object  
Required: Yes

**See Also**  
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleGroupReferenceStatement

Service: AWS WAFV2

A rule statement used to run the rules that are defined in a RuleGroup (p. 838). To use this, create a rule group with your rules, then provide the ARN of the rule group in this statement.

You cannot nest a RuleGroupReferenceStatement, for example for use inside a NotStatement or OrStatement. You can only use a rule group reference statement at the top level inside a web ACL.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: .*\S.*

Required: Yes

ExcludedRules

The rules in the referenced rule group whose actions are set to Count. When you exclude a rule, AWS WAF evaluates it exactly as it would if the rule action setting were Count. This is a useful option for testing the rules in a rule group without modifying how they handle your web traffic.

Type: Array of ExcludedRule (p. 769) objects

Array Members: Maximum number of 100 items.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleGroupSummary

Service: AWS WAFV2

High-level information about a RuleGroup (p. 838), returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a RuleGroup, and the ARN, that you provide to the RuleGroupReferenceStatement (p. 841) to use the rule group in a Rule (p. 834).

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: .\S.*

Required: No

Description

A description of the rule group that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^[\w+=:#@/-,\s]+[\w+=:#@/-,\.]+$

Required: No

Id

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: ^[0-9a-f]{8}(-[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: No

LockToken

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}(-[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: No
Name

The name of the data type instance. You cannot change the name after you create the instance.

Type: String
Pattern: ^[\w\-]+$
Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleSummary
Service: AWS WAFV2

High-level information about a Rule (p. 834), returned by operations like DescribeManagedRuleGroup (p. 71). This provides information like the ID, that you can use to retrieve and manage a RuleGroup, and the ARN, that you provide to the RuleGroupReferenceStatement (p. 841) to use the rule group in a Rule (p. 834).

Contents

Action
The action that AWS WAF should take on a web request when it matches a rule's statement. Settings at the web ACL level can override the rule action setting.

Type: RuleAction (p. 837) object

Required: No

Name
The name of the rule.

Type: String


Pattern: ^[\w\-]*$ 

Required: No

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**SampledHTTPRequest**

Service: AWS WAFV2

Represents a single sampled web request. The response from `GetSampledRequests (p. 110)` includes a `SampledHTTPRequests` complex type that appears as `SampledRequests` in the response syntax. `SampledHTTPRequests` contains an array of `SampledHTTPRequest` objects.

**Contents**

**Action**

The action for the `Rule` that the request matched: Allow, Block, or Count.

Type: String

Required: No

**CaptchaResponse**

The CAPTCHA response for the request.

Type: CaptchaResponse (p. 760) object

Required: No

**Labels**

Labels applied to the web request by matching rules. AWS WAF applies fully qualified labels to matching web requests. A fully qualified label is the concatenation of a label namespace and a rule label. The rule's rule group or web ACL defines the label namespace.


Type: Array of `Label (p. 794)` objects

Required: No

**Request**

A complex type that contains detailed information about the request.

Type: `HTTPRequest (p. 781)` object

Required: Yes

**RequestHeadersInserted**

Custom request headers inserted by AWS WAF into the request, according to the custom request configuration for the matching rule action.

Type: Array of `HTTPHeader (p. 780)` objects

Required: No

**ResponseCodeSent**

The response code that was sent for the request.

Type: Integer

Required: No

**RuleNameWithinRuleGroup**

The name of the Rule that the request matched. For managed rule groups, the format for this name is `<vendor name>#$<managed rule group name>#$<rule name>`. For your own rule groups, the format for this name is `<rule group name>#$<rule name>`. If the rule is not in a rule group, this field is absent.

Type: String


Pattern: `^[\w\-]+$`

Required: No

**Timestamp**

The time at which AWS WAF received the request from your AWS resource, in Unix time format (in seconds).

Type: Timestamp

Required: No

**Weight**

A value that indicates how one result in the response relates proportionally to other results in the response. For example, a result that has a weight of 2 represents roughly twice as many web requests as a result that has a weight of 1.

Type: Long

Valid Range: Minimum value of 0.

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**SingleHeader**

Service: AWS WAFV2

One of the headers in a web request, identified by name, for example, User-Agent or Referer. This setting isn't case sensitive.

This is used only to indicate the web request component for AWS WAF to inspect, in the FieldToMatch (p. 770) specification.

Example JSON: "SingleHeader": { "Name": "haystack" }

**Contents**

**Name**

The name of the query header to inspect.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: .*\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**SingleQueryArgument**

*Service: AWS WAFV2*

One query argument in a web request, identified by name, for example `UserName` or `SalesRegion`. The name can be up to 30 characters long and isn't case sensitive.

Example JSON:
```
"SingleQueryArgument": { "Name": "myArgument" }
```

**Contents**

**Name**

The name of the query argument to inspect.

- **Type:** String
- **Length Constraints:** Minimum length of 1. Maximum length of 64.
- **Pattern:** `.\S.*`
- **Required:** Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**SizeConstraintStatement**

Service: AWS WAFV2

A rule statement that compares a number of bytes against the size of a request component, using a comparison operator, such as greater than (>) or less than (<). For example, you can use a size constraint statement to look for query strings that are longer than 100 bytes.

If you configure AWS WAF to inspect the request body, AWS WAF inspects only the first 8192 bytes (8 KB). If the request body for your web requests never exceeds 8192 bytes, you can create a size constraint condition and block requests that have a request body greater than 8192 bytes.

If you choose URI for the value of Part of the request to filter on, the slash (/) in the URI counts as one character. For example, the URI `/logo.jpg` is nine characters long.

**Contents**

**ComparisonOperator**

The operator to use to compare the request part to the size setting.

Type: String

Valid Values: `EQ | NE | LE | LT | GE | GT`

Required: Yes

**FieldToMatch**

The part of a web request that you want AWS WAF to inspect. For more information, see `FieldToMatch (p. 770)`.

Type: `FieldToMatch (p. 770)` object

Required: Yes

**Size**

The size, in byte, to compare to the request part, after any transformations.

Type: Long

Valid Range: Minimum value of 0. Maximum value of 21474836480.

Required: Yes

**TextTransformations**

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. If you specify one or more transformations in a rule statement, AWS WAF performs all transformations on the content of the request component identified by `FieldToMatch`, starting from the lowest priority setting, before inspecting the content for a match.

Type: Array of `TextTransformation (p. 858)` objects

Array Members: Minimum number of 1 item.

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
SqliMatchStatement

Service: AWS WAFV2

Attackers sometimes insert malicious SQL code into web requests in an effort to extract data from your database. To allow or block web requests that appear to contain malicious SQL code, create one or more SQL injection match conditions. An SQL injection match condition identifies the part of web requests, such as the URI or the query string, that you want AWS WAF to inspect. Later in the process, when you create a web ACL, you specify whether to allow or block requests that appear to contain malicious SQL code.

Contents

FieldToMatch

The part of a web request that you want AWS WAF to inspect. For more information, see FieldToMatch (p. 770).

Type: FieldToMatch (p. 770) object

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. If you specify one or more transformations in a rule statement, AWS WAF performs all transformations on the content of the request component identified by FieldToMatch, starting from the lowest priority setting, before inspecting the content for a match.

Type: Array of TextTransformation (p. 858) objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**Statement**  
*Service: AWS WAFV2*

The processing guidance for a Rule (p. 834), used by AWS WAF to determine whether a web request matches the rule.

**Contents**

**AndStatement**

A logical rule statement used to combine other rule statements with AND logic. You provide more than one Statement (p. 852) within the AndStatement.

Type: AndStatement (p. 753) object  
Required: No

**ByteMatchStatement**

A rule statement that defines a string match search for AWS WAF to apply to web requests. The byte match statement provides the bytes to search for, the location in requests that you want AWS WAF to search, and other settings. The bytes to search for are typically a string that corresponds with ASCII characters. In the AWS WAF console and the developer guide, this is refered to as a string match statement.

Type: ByteMatchStatement (p. 756) object  
Required: No

**GeoMatchStatement**

A rule statement used to identify web requests based on country of origin.

Type: GeoMatchStatement (p. 778) object  
Required: No

**IPSetReferenceStatement**

A rule statement used to detect web requests coming from particular IP addresses or address ranges. To use this, create an IPSet (p. 784) that specifies the addresses you want to detect, then use the ARN of that set in this statement. To create an IP set, see CreateIPSet (p. 21).

Each IP set rule statement references an IP set. You create and maintain the set independent of your rules. This allows you to use the single set in multiple rules. When you update the referenced set, AWS WAF automatically updates all rules that reference it.

Type: IPSetReferenceStatement (p. 788) object  
Required: No

**LabelMatchStatement**

A rule statement that defines a string match search against labels that have been added to the web request by rules that have already run in the web ACL.

The label match statement provides the label or namespace string to search for. The label string can represent a part or all of the fully qualified label name that had been added to the web request. Fully qualified labels have a prefix, optional namespaces, and label name. The prefix identifies the rule group or web ACL context of the rule that added the label. If you do not provide the fully qualified name in your label match string, AWS WAF performs the search for labels that were added in the same context as the label match statement.
Type: LabelMatchStatement (p. 795) object
Required: No

ManagedRuleGroupStatement
A rule statement used to run the rules that are defined in a managed rule group. To use this, provide the vendor name and the name of the rule group in this statement. You can retrieve the required names by calling ListAvailableManagedRuleGroups (p. 152).

You cannot nest a ManagedRuleGroupStatement, for example for use inside a NotStatement or OrStatement. It can only be referenced as a top-level statement within a rule.

Type: ManagedRuleGroupStatement (p. 803) object
Required: No

NotStatement
A logical rule statement used to negate the results of another rule statement. You provide one Statement (p. 852) within the NotStatement.

Type: NotStatement (p. 818) object
Required: No

OrStatement
A logical rule statement used to combine other rule statements with OR logic. You provide more than one Statement (p. 852) within the OrStatement.

Type: OrStatement (p. 819) object
Required: No

RateBasedStatement
A rate-based rule tracks the rate of requests for each originating IP address, and triggers the rule action when the rate exceeds a limit that you specify on the number of requests in any 5-minute time span. You can use this to put a temporary block on requests from an IP address that is sending excessive requests.

AWS WAF tracks and manages web requests separately for each instance of a rate-based rule that you use. For example, if you provide the same rate-based rule settings in two web ACLs, each of the two rule statements represents a separate instance of the rate-based rule and gets its own tracking and management by AWS WAF. If you define a rate-based rule inside a rule group, and then use that rule group in multiple places, each use creates a separate instance of the rate-based rule that gets its own tracking and management by AWS WAF.

When the rule action triggers, AWS WAF blocks additional requests from the IP address until the request rate falls below the limit.

You can optionally nest another statement inside the rate-based statement, to narrow the scope of the rule so that it only counts requests that match the nested statement. For example, based on recent requests that you have seen from an attacker, you might create a rate-based rule with a nested AND rule statement that contains the following nested statements:

- An IP match statement with an IP set that specified the address 192.0.2.44.
- A string match statement that searches in the User-Agent header for the string BadBot.

In this rate-based rule, you also define a rate limit. For this example, the rate limit is 1,000. Requests that meet both of the conditions in the statements are counted. If the count exceeds 1,000 requests per five minutes, the rule action triggers. Requests that do not meet both conditions are not counted towards the rate limit and are not affected by this rule.
You cannot nest a RateBasedStatement inside another statement, for example inside a NotStatement or OrStatement. You can define a RateBasedStatement inside a web ACL and inside a rule group.

Type: RateBasedStatement (p. 823) object

Required: No

**RegexMatchStatement**

A rule statement used to search web request components for a match against a single regular expression.

Type: RegexMatchStatement (p. 827) object

Required: No

**RegexPatternSetReferenceStatement**

A rule statement used to search web request components for matches with regular expressions. To use this, create a RegexPatternSet (p. 828) that specifies the expressions that you want to detect, then use the ARN of that set in this statement. A web request matches the pattern set rule statement if the request component matches any of the patterns in the set. To create a regex pattern set, see CreateRegexPatternSet (p. 25).

Each regex pattern set rule statement references a regex pattern set. You create and maintain the set independent of your rules. This allows you to use the single set in multiple rules. When you update the referenced set, AWS WAF automatically updates all rules that reference it.

Type: RegexPatternSetReferenceStatement (p. 830) object

Required: No

**RuleGroupReferenceStatement**

A rule statement used to run the rules that are defined in a RuleGroup (p. 838). To use this, create a rule group with your rules, then provide the ARN of the rule group in this statement.

You cannot nest a RuleGroupReferenceStatement, for example for use inside a NotStatement or OrStatement. You can only use a rule group reference statement at the top level inside a web ACL.

Type: RuleGroupReferenceStatement (p. 841) object

Required: No

**SizeConstraintStatement**

A rule statement that compares a number of bytes against the size of a request component, using a comparison operator, such as greater than (>) or less than (<). For example, you can use a size constraint statement to look for query strings that are longer than 100 bytes.

If you configure AWS WAF to inspect the request body, AWS WAF inspects only the first 8192 bytes (8 KB). If the request body for your web requests never exceeds 8192 bytes, you can create a size constraint condition and block requests that have a request body greater than 8192 bytes.

If you choose URI for the value of Part of the request to filter on, the slash (/) in the URI counts as one character. For example, the URI /logo.jpg is nine characters long.

Type: SizeConstraintStatement (p. 849) object

Required: No
SqliMatchStatement

Attackers sometimes insert malicious SQL code into web requests in an effort to extract data from your database. To allow or block web requests that appear to contain malicious SQL code, create one or more SQL injection match conditions. An SQL injection match condition identifies the part of web requests, such as the URI or the query string, that you want AWS WAF to inspect. Later in the process, when you create a web ACL, you specify whether to allow or block requests that appear to contain malicious SQL code.

Type: SqliMatchStatement (p. 851) object

Required: No

XssMatchStatement

A rule statement that defines a cross-site scripting (XSS) match search for AWS WAF to apply to web requests. XSS attacks are those where the attacker uses vulnerabilities in a benign website as a vehicle to inject malicious client-site scripts into other legitimate web browsers. The XSS match statement provides the location in requests that you want AWS WAF to search and text transformations to use on the search area before AWS WAF searches for character sequences that are likely to be malicious strings.

Type: XssMatchStatement (p. 872) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Tag
Service: AWS WAFV2

A tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing or other management. Typically, the tag key represents a category, such as "environment", and the tag value represents a specific value within that category, such as "test," "development," or "production". Or you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

You can tag the AWS resources that you manage through AWS WAF: web ACLs, rule groups, IP sets, and regex pattern sets. You can't manage or view tags through the AWS WAF console.

Contents

Key

Part of the key:value pair that defines a tag. You can use a tag key to describe a category of information, such as "customer." Tag keys are case-sensitive.

Type: String
Pattern: ^([\p{L}\p{Z}\p{N}_.:/=+-@]*\.)$ Required: Yes

Value

Part of the key:value pair that defines a tag. You can use a tag value to describe a specific value within a category, such as "companyA" or "companyB." Tag values are case-sensitive.

Type: String
Length Constraints: Minimum length of 0. Maximum length of 256.
Pattern: ^([\p{L}\p{Z}\p{N}_.:/=+-@]*\.)$ Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
TagInfoForResource
Service: AWS WAFV2

The collection of tagging definitions for an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing or other management. Typically, the tag key represents a category, such as "environment", and the tag value represents a specific value within that category, such as "test," "development," or "production". Or you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

You can tag the AWS resources that you manage through AWS WAF: web ACLs, rule groups, IP sets, and regex pattern sets. You can't manage or view tags through the AWS WAF console.

Contents

ResourceARN
The Amazon Resource Name (ARN) of the resource.
Type: String
Pattern: .\S+. *
Required: No

TagList
The array of Tag (p. 856) objects defined for the resource.
Type: Array of Tag (p. 856) objects
Array Members: Minimum number of 1 item.
Required: No

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
TextTransformation

Service: AWS WAFV2

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection.

Contents

Priority

Sets the relative processing order for multiple transformations that are defined for a rule statement. AWS WAF processes all transformations, from lowest priority to highest, before inspecting the transformed content. The priorities don't need to be consecutive, but they must all be different.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

Type

You can specify the following transformation types:

- **BASE64_DECODE** - Decode a Base64-encoded string.
- **BASE64_DECODE_EXT** - Decode a Base64-encoded string, but use a forgiving implementation that ignores characters that aren't valid.
- **CMD_LINE** - Command-line transformations. These are helpful in reducing effectiveness of attackers who inject an operating system command-line command and use unusual formatting to disguise some or all of the command.
  - Delete the following characters: \ " ' ^
  - Delete spaces before the following characters: / ( 
  - Replace the following characters with a space: , ;
  - Replace multiple spaces with one space
  - Convert uppercase letters (A-Z) to lowercase (a-z)
- **COMPRESS_WHITE_SPACE** - Replace these characters with a space character (decimal 32):
  - \f, formfeed, decimal 12
  - \t, tab, decimal 9
  - \n, newline, decimal 10
  - \r, carriage return, decimal 13
  - \v, vertical tab, decimal 11
  - Non-breaking space, decimal 160
  COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.
- **CSS_DECODE** - Decode characters that were encoded using CSS 2.x escape rules. This function uses up to two bytes in the decoding process, so it can help to uncover ASCII characters that were encoded using CSS encoding that wouldn’t typically be encoded. It’s also useful in countering evasion, which is a combination of a backslash and non-hexadecimal characters. For example, ja\vascript for javascript.
- **ESCAPE_SEQ_DECODE** - Decode the following ANSI C escape sequences: \a, \b, \f, \n, \r, \t, \v, \", \", \", \xHH (hexadecimal), \0000 (octal). Encodings that aren’t valid remain in the output.
**HEX_DECODE** - Decode a string of hexadecimal characters into a binary.

**HTML_ENTITY_DECODE** - Replace HTML-encoded characters with unencoded characters.

*HTML_ENTITY_DECODE* performs these operations:

- Replaces `(ampersand)`quot; with "
- Replaces `(ampersand)`nbsp; with a non-breaking space, decimal 160
- Replaces `(ampersand)`lt; with a "less than" symbol
- Replaces `(ampersand)`gt; with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)`#xhhhh; with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)`#nnnn; with the corresponding characters

**JS_DECODE** - Decode JavaScript escape sequences. If a `\\uHHHH` code is in the full-width ASCII code range of FF01–FF5E, then the higher byte is used to detect and adjust the lower byte. If not, only the lower byte is used and the higher byte is zeroed, causing a possible loss of information.

**LOWERCASE** - Convert uppercase letters (A-Z) to lowercase (a-z).

**MD5** - Calculate an MD5 hash from the data in the input. The computed hash is in a raw binary form.

**NONE** - Specify NONE if you don't want any text transformations.

**NORMALIZE_PATH** - Remove multiple slashes, directory self-references, and directory back-references that are not at the beginning of the input from an input string.

**NORMALIZE_PATH_WIN** - This is the same as NORMALIZE_PATH, but first converts backslash characters to forward slashes.

**REMOVE_NULLS** - Remove all NULL bytes from the input.

**REPLACE_COMMENTS** - Replace each occurrence of a C-style comment (`/* ... */`) with a single space. Multiple consecutive occurrences are not compressed. Unterminated comments are also replaced with a space (ASCII 0x20). However, a standalone termination of a comment (`*/`) is not acted upon.

**REPLACE_NULLS** - Replace NULL bytes in the input with space characters (ASCII 0x20).

**SQL_HEX_DECODE** - Decode SQL hex data. Example (0x414243) will be decoded to (ABC).

**URL_DECODE** - Decode a URL-encoded value.

**URL_DECODE_UNI** - Like URL_DECODE, but with support for Microsoft-specific `%u` encoding. If the code is in the full-width ASCII code range of FF01–FF5E, the higher byte is used to detect and adjust the lower byte. Otherwise, only the lower byte is used and the higher byte is zeroed.

**UTF8_TO_UNICODE** - Convert all UTF-8 character sequences to Unicode. This helps input normalization, and minimizing false-positives and false-negatives for non-English languages.

**Type**: String

**Valid Values**: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE | BASE64_DECODE | HEX_DECODE | MD5 | REPLACE_COMMENTS | ESCAPE_SEQ_DECODE | SQL_HEX_DECODE | CSS_DECODE | JS_DECODE | NORMALIZE_PATH | NORMALIZE_PATH_WIN | REMOVE_NULLS | REPLACE_NULLS | BASE64_DECODE_EXT | URL_DECODE_UNI | UTF8_TO_UNICODE

**Required**: Yes
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**TimeWindow**

Service: AWS WAFV2

In a GetSampledRequests (p. 110) request, the StartTime and EndTime objects specify the time range for which you want AWS WAF to return a sample of web requests.

You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

In a GetSampledRequests (p. 110) response, the StartTime and EndTime objects specify the time range for which AWS WAF actually returned a sample of web requests. AWS WAF gets the specified number of requests from among the first 5,000 requests that your AWS resource receives during the specified time period. If your resource receives more than 5,000 requests during that period, AWS WAF stops sampling after the 5,000th request. In that case, EndTime is the time that AWS WAF received the 5,000th request.

**Contents**

**EndTime**

The end of the time range from which you want GetSampledRequests to return a sample of the requests that your AWS resource received. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

**StartTime**

The beginning of the time range from which you want GetSampledRequests to return a sample of the requests that your AWS resource received. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
UriPath
Service: AWS WAFV2

The path component of the URI of a web request. This is the part of a web request that identifies a resource. For example, `/images/daily-ad.jpg`.

This is used only to indicate the web request component for AWS WAF to inspect, in the `FieldToMatch (p. 770)` specification.

JSON specification: "UriPath": {}
UsernameField

Service: AWS WAFV2

Details about your login page username field, used in a ManagedRuleGroupConfig.

Contents

Identifier

The name of the username field. For example /form/username.

Type: String


Pattern: .\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
VersionToPublish

Service: AWS WAFV2

A version of the named managed rule group, that the rule group's vendor publishes for use by customers.

**Note**
This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are ListManagedRuleSets, GetManagedRuleSet, PutManagedRuleSetVersions, and UpdateManagedRuleSetVersionExpiryDate.

**Contents**

**AssociatedRuleGroupArn**

The Amazon Resource Name (ARN) of the vendor's rule group that's used in the published managed rule group version.

Type: String


Pattern: .\S.*

Required: No

**ForecastedLifetime**

The amount of time the vendor expects this version of the managed rule group to last, in days.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
VisibilityConfig
Service: AWS WAFV2

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Contents

CloudWatchMetricsEnabled
A boolean indicating whether the associated resource sends metrics to Amazon CloudWatch. For the list of available metrics, see AWS WAF Metrics.

Type: Boolean
Required: Yes

MetricName
A name of the Amazon CloudWatch metric. The name can contain only the characters: A-Z, a-z, 0-9, - (hyphen), and _ (underscore). The name can be from one to 128 characters long. It can't contain whitespace or metric names reserved for AWS WAF, for example "All" and "Default_Action."

Type: String
Length Constraints: Minimum length of 1. Maximum length of 255.
Pattern: ^[^\w#:\.\-\/]+#
Required: Yes

SampledRequestsEnabled
A boolean indicating whether AWS WAF should store a sampling of the web requests that match the rules. You can view the sampled requests through the AWS WAF console.

Type: Boolean
Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WebACL

Service: AWS WAFV2

A web ACL defines a collection of rules to use to inspect and control web requests. Each rule has an action defined (allow, block, or count) for requests that match the statement of the rule. In the web ACL, you assign a default action to take (allow, block) for any request that does not match any of the rules. The rules in a web ACL can be a combination of the types Rule (p. 834), RuleGroup (p. 838), and managed rule group. You can associate a web ACL with one or more AWS resources to protect. The resources can be an Amazon CloudFront distribution, an Amazon API Gateway REST API, an Application Load Balancer, or an AWS AppSync GraphQL API.

Contents

ARN

The Amazon Resource Name (ARN) of the web ACL that you want to associate with the resource.

Type: String


Pattern: .*\s.*

Required: Yes

Capacity

The web ACL capacity units (WCUs) currently being used by this web ACL.

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. The WCU limit for web ACLs is 1,500.

Type: Long

Valid Range: Minimum value of 0.

Required: No

CaptchaConfig

Specifies how AWS WAF should handle CAPTCHA evaluations for rules that don't have their own CaptchaConfig settings. If you don't specify this, AWS WAF uses its default settings for CaptchaConfig.

Type: CaptchaConfig (p. 759) object

Required: No

CustomResponseBodies

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the web ACL, and then use them in the rules and default actions that you define in the web ACL.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the AWS WAF Developer Guide.
For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the AWS WAF Developer Guide.

Type: String to CustomResponseBody (p. 767) object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: ^\[ \w\- \]+$ 

Required: No

**DefaultAction**

The action to perform if none of the Rules contained in the WebACL match.

Type: DefaultAction (p. 768) object

Required: Yes

**Description**

A description of the web ACL that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^\[ \w+=:#@/\-\,\ .\ [\w+=:#@/\-\,\ .\ ]\]+\[ \w+=:#@/\-\,\ .\ ]$ 

Required: No

**Id**

A unique identifier for the WebACL. This ID is returned in the responses to create and list commands. You use this ID to do things like get, update, and delete a WebACL.

Type: String


Pattern: ^[0-9a-f]{8}-([0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: Yes

**LabelNamespace**

The label namespace prefix for this web ACL. All labels added by rules in this web ACL have this prefix.

- The syntax for the label namespace prefix for a web ACL is the following:

  awswaf:<account ID>:webacl:<web ACL name>:

- When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:

  <label namespace>:<label from rule>

Type: String


Pattern: ^[0-9A-Za-z\-_\:]+$
AWS WAFV2 API Reference
WebACL

Required: No

**ManagedByFirewallManager**

Indicates whether this web ACL is managed by AWS Firewall Manager. If true, then only AWS Firewall Manager can delete the web ACL or any Firewall Manager rule groups in the web ACL.

Type: Boolean

Required: No

**Name**

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String


Pattern: ^\[\w\-\]+$  

Required: Yes

**PostProcessFirewallManagerRuleGroups**

The last set of rules for AWS WAF to process in the web ACL. This is defined in an AWS Firewall Manager WAF policy and contains only rule group references. You can't alter these. Any rules and rule groups that you define for the web ACL are prioritized before these.

In the Firewall Manager WAF policy, the Firewall Manager administrator can define a set of rule groups to run first in the web ACL and a set of rule groups to run last. Within each set, the administrator prioritizes the rule groups, to determine their relative processing order.

Type: Array of `FirewallManagerRuleGroup (p. 773)` objects

Required: No

**PreProcessFirewallManagerRuleGroups**

The first set of rules for AWS WAF to process in the web ACL. This is defined in an AWS Firewall Manager WAF policy and contains only rule group references. You can't alter these. Any rules and rule groups that you define for the web ACL are prioritized after these.

In the Firewall Manager WAF policy, the Firewall Manager administrator can define a set of rule groups to run first in the web ACL and a set of rule groups to run last. Within each set, the administrator prioritizes the rule groups, to determine their relative processing order.

Type: Array of `FirewallManagerRuleGroup (p. 773)` objects

Required: No

**Rules**

The `Rule (p. 834)` statements used to identify the web requests that you want to allow, block, or count. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of `Rule (p. 834)` objects

Required: No

**VisibilityConfig**

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: `VisibilityConfig (p. 865)` object
Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WebACLSummary
Service: AWS WAFV2

High-level information about a WebACL (p. 866), returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a WebACL, and the ARN, that you provide to operations like AssociateWebACL (p. 9).

Contents

**ARN**

The Amazon Resource Name (ARN) of the entity.

Type: String


Pattern: .\S.*

Required: No

**Description**

A description of the web ACL that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^[^\w+=:#@/\-,.\]\[^\w+=:#@/\-,.\s\]+[^\w+=:#@/\-,.\]$?

Required: No

**Id**

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: No

**LockToken**

A token used for optimistic locking. AWS WAF returns a token to your get and list requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like update and delete. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a WAFOptimisticLockException. If this happens, perform another get, and use the new token returned by that operation.

Type: String


Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Required: No
Name

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String


Pattern: ^[\w\-]+$

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
XssMatchStatement

Service: AWS WAFV2

A rule statement that defines a cross-site scripting (XSS) match search for AWS WAF to apply to web requests. XSS attacks are those where the attacker uses vulnerabilities in a benign website as a vehicle to inject malicious client-site scripts into other legitimate web browsers. The XSS match statement provides the location in requests that you want AWS WAF to search and text transformations to use on the search area before AWS WAF searches for character sequences that are likely to be malicious strings.

Contents

FieldToMatch

The part of a web request that you want AWS WAF to inspect. For more information, see FieldToMatch (p. 770).

Type: FieldToMatch (p. 770) object

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. If you specify one or more transformations in a rule statement, AWS WAF performs all transformations on the content of the request component identified by FieldToMatch, starting from the lowest priority setting, before inspecting the content for a match.

Type: Array of TextTransformation (p. 858) objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AWS WAF Classic

The following data types are supported by AWS WAF Classic:

- ActivatedRule (p. 875)
- ByteMatchSet (p. 878)
- ByteMatchSetSummary (p. 880)
- ByteMatchSetUpdate (p. 881)
- ByteMatchTuple (p. 882)
- ExcludedRule (p. 886)
- FieldToMatch (p. 887)
• GeoMatchConstraint (p. 889)
• GeoMatchSet (p. 891)
• GeoMatchSetSummary (p. 893)
• GeoMatchSetUpdate (p. 894)
• HTTPHeader (p. 895)
• HTTPRequest (p. 896)
• IPSet (p. 898)
• IPSetDescriptor (p. 900)
• IPSetSummary (p. 902)
• IPSetUpdate (p. 903)
• LoggingConfiguration (p. 904)
• Predicate (p. 906)
• RateBasedRule (p. 908)
• RegexMatchSet (p. 910)
• RegexMatchSetSummary (p. 912)
• RegexMatchSetUpdate (p. 913)
• RegexMatchTuple (p. 914)
• RegexPatternSet (p. 917)
• RegexPatternSetSummary (p. 919)
• RegexPatternSetUpdate (p. 920)
• Rule (p. 921)
• RuleGroup (p. 923)
• RuleGroupSummary (p. 925)
• RuleGroupUpdate (p. 926)
• RuleSummary (p. 927)
• RuleUpdate (p. 928)
• SampledHTTPRequest (p. 929)
• SizeConstraint (p. 931)
• SizeConstraintSet (p. 934)
• SizeConstraintSetSummary (p. 936)
• SizeConstraintSetUpdate (p. 937)
• SqlInjectionMatchSet (p. 938)
• SqlInjectionMatchSetSummary (p. 940)
• SqlInjectionMatchSetUpdate (p. 941)
• SqlInjectionMatchTuple (p. 942)
• SubscribedRuleGroupSummary (p. 944)
• Tag (p. 946)
• TagInfoForResource (p. 947)
• TimeWindow (p. 948)
• WafAction (p. 949)
• WafOverrideAction (p. 950)
• WebACL (p. 951)
• WebACLSummary (p. 953)
• WebACLUpdate (p. 954)
• XssMatchSet (p. 955)
• XssMatchSetSummary (p. 957)
• XssMatchSetUpdate (p. 958)
• XssMatchTuple (p. 959)
**ActivatedRule**

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The ActivatedRule object in an UpdateWebACL request specifies a Rule that you want to insert or delete, the priority of the Rule in the WebACL, and the action that you want AWS WAF to take when a web request matches the Rule (ALLOW, BLOCK, or COUNT).

To specify whether to insert or delete a Rule, use the Action parameter in the WebACLUpdate data type.

**Contents**

**Action**

Specifies the action that Amazon CloudFront or AWS WAF takes when a web request matches the conditions in the Rule. Valid values for Action include the following:

- **ALLOW**: CloudFront responds with the requested object.
- **BLOCK**: CloudFront responds with an HTTP 403 (Forbidden) status code.
- **COUNT**: AWS WAF increments a counter of requests that match the conditions in the rule and then continues to inspect the web request based on the remaining rules in the web ACL.

ActivatedRule|OverrideAction applies only when updating or adding a RuleGroup to a WebACL. In this case, you do not use ActivatedRule|Action. For all other update requests, ActivatedRule|Action is used instead of ActivatedRule|OverrideAction.

Type: WafAction object

Required: No

**ExcludedRules**

An array of rules to exclude from a rule group. This is applicable only when the ActivatedRule refers to a RuleGroup.

Sometimes it is necessary to troubleshoot rule groups that are blocking traffic unexpectedly (false positives). One troubleshooting technique is to identify the specific rule within the rule group that is blocking the legitimate traffic and then disable (exclude) that particular rule. You can exclude rules from both your own rule groups and AWS Marketplace rule groups that have been associated with a web ACL.

Specifying ExcludedRules does not remove those rules from the rule group. Rather, it changes the action for the rules to COUNT. Therefore, requests that match an ExcludedRule are counted but not blocked. The RuleGroup owner will receive COUNT metrics for each ExcludedRule.

If you want to exclude rules from a rule group that is already associated with a web ACL, perform the following steps:

1. Use the AWS WAF logs to identify the IDs of the rules that you want to exclude. For more information about the logs, see Logging Web ACL Traffic Information.
2. Submit an UpdateWebACL request that has two actions:
   - The first action deletes the existing rule group from the web ACL. That is, in the UpdateWebACL request, the first Update:Action should be DELETE and...
Updates:ActivatedRule:RuleId should be the rule group that contains the rules that you want to exclude.

- The second action inserts the same rule group back in, but specifying the rules to exclude. That is, the second Updates:Action should be INSERT, Updates:ActivatedRule:RuleId should be the rule group that you just removed, and ExcludedRules should contain the rules that you want to exclude.

Type: Array of ExcludedRule (p. 886) objects

Required: No

OverrideAction

Use the OverrideAction to test your RuleGroup.

Any rule in a RuleGroup can potentially block a request. If you set the OverrideAction to None, the RuleGroup will block a request if any individual rule in the RuleGroup matches the request and is configured to block that request. However if you first want to test the RuleGroup, set the OverrideAction to Count. The RuleGroup will then override any block action specified by individual rules contained within the group. Instead of blocking matching requests, those requests will be counted. You can view a record of counted requests using GetSampledRequests (p. 358).

ActivatedRule|OverrideAction applies only when updating or adding a RuleGroup to a WebACL. In this case you do not use ActivatedRule|Action. For all other update requests, ActivatedRule|Action is used instead of ActivatedRule|OverrideAction.

Type: WafOverrideAction (p. 950) object

Required: No

Priority

Specifies the order in which the Rules in a WebACL are evaluated. Rules with a lower value for Priority are evaluated before Rules with a higher value. The value must be a unique integer. If you add multiple Rules to a WebACL, the values don't need to be consecutive.

Type: Integer

Required: Yes

RuleId

The RuleId for a Rule. You use RuleId to get more information about a Rule (see GetRule (p. 354)), update a Rule (see UpdateRule (p. 458)), insert a Rule into a WebACL or delete a one from a WebACL (see UpdateWebACL (p. 475)), or delete a Rule from AWS WAF (see DeleteRule (p. 312)).

RuleId is returned by CreateRule (p. 261) and by ListRules (p. 400).

Type: String


Pattern: .\S.*

Required: Yes

Type

The rule type, either REGULAR, as defined by Rule (p. 921), RATE_BASED, as defined by RateBasedRule (p. 908), or GROUP, as defined by RuleGroup (p. 923). The default is REGULAR. Although this field is optional, be aware that if you try to add a RATE_BASED rule to a web ACL
without setting the type, the UpdateWebACL (p. 475) request will fail because the request tries to add a REGULAR rule with the specified ID, which does not exist.

Type: String

Valid Values: REGULAR | RATE_BASED | GROUP

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**ByteMatchSet**

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://aws.amazon.com/documentation/waf/classic/) in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://aws.amazon.com/documentation/wafv2/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a [GetByteMatchSet](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_GetByteMatchSet.html) request, `ByteMatchSet` is a complex type that contains the `ByteMatchSetId` and `Name` of a `ByteMatchSet`, and the values that you specified when you updated the `ByteMatchSet`.

A complex type that contains `ByteMatchTuple` objects, which specify the parts of web requests that you want AWS WAF to inspect and the values that you want AWS WAF to search for. If a `ByteMatchSet` contains more than one `ByteMatchTuple` object, a request needs to match the settings in only one `ByteMatchTuple` to be considered a match.

**Contents**

**ByteMatchSetId**

The `ByteMatchSetId` for a `ByteMatchSet`. You use `ByteMatchSetId` to get information about a `ByteMatchSet` (see [GetByteMatchSet](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_GetByteMatchSet.html)), update a `ByteMatchSet` (see [UpdateByteMatchSet](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_UpdateByteMatchSet.html)), insert a `ByteMatchSet` into a `Rule` or delete one from a `Rule` (see [UpdateRule](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_UpdateRule.html)), and delete a `ByteMatchSet` from AWS WAF (see [DeleteByteMatchSet](https://docs.aws.amazon.com/wafv2/latest/APIReference/API_DeleteByteMatchSet.html)).

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: .*
- **Required**: Yes

**ByteMatchTuples**

Specifies the bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings.

- **Type**: Array of `ByteMatchTuple` objects
- **Required**: Yes

**Name**

A friendly name or description of the `ByteMatchSet`. You can't change `Name` after you create a `ByteMatchSet`.

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: .*
- **Required**: No
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ByteMatchSetSummary

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by ListByteMatchSets (p. 376). Each ByteMatchSetSummary object includes the Name and ByteMatchSetId for one ByteMatchSet (p. 878).

Contents

ByteMatchSetId

The ByteMatchSetId for a ByteMatchSet. You use ByteMatchSetId to get information about a ByteMatchSet, update a ByteMatchSet, remove a ByteMatchSet from a Rule, and delete a ByteMatchSet from AWS WAF.

ByteMatchSetId is returned by CreateByteMatchSet (p. 239) and by ListByteMatchSets (p. 376).

Type: String


Pattern: .*\S.*

Required: Yes

Name

A friendly name or description of the ByteMatchSet (p. 878). You can't change Name after you create a ByteMatchSet.

Type: String


Pattern: .*\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**ByteMatchSetUpdate**

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an **UpdateByteMatchSet** (p. 432) request, **ByteMatchSetUpdate** specifies whether to insert or delete a **ByteMatchTuple** (p. 882) and includes the settings for the **ByteMatchTuple**.

**Contents**

**Action**

Specifies whether to insert or delete a **ByteMatchTuple** (p. 882).

*Type: String*

*Valid Values: INSERT | DELETE*

*Required: Yes*

**ByteMatchTuple**

Information about the part of a web request that you want AWS WAF to inspect and the value that you want AWS WAF to search for. If you specify DELETE for the value of **Action**, the **ByteMatchTuple** values must exactly match the values in the **ByteMatchTuple** that you want to delete from the **ByteMatchSet**.

*Type: **ByteMatchTuple** (p. 882) object*

*Required: Yes*

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ByteMatchTuple

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings.

**Contents**

FieldToMatch

The part of a web request that you want AWS WAF to search, such as a specified header or a query string. For more information, see FieldToMatch (p. 887).

Type: FieldToMatch (p. 887) object

Required: Yes

PositionalConstraint

Within the portion of a web request that you want to search (for example, in the query string, if any), specify where you want AWS WAF to search. Valid values include the following:

**CONTAINS**

The specified part of the web request must include the value of TargetString, but the location doesn't matter.

**CONTAINS_WORD**

The specified part of the web request must include the value of TargetString, and TargetString must contain only alphanumeric characters or underscore (A-Z, a-z, 0-9, or _). In addition, TargetString must be a word, which means one of the following:

- **TargetString** exactly matches the value of the specified part of the web request, such as the value of a header.
- **TargetString** is at the beginning of the specified part of the web request and is followed by a character other than an alphanumeric character or underscore (_), for example, BadBot;
- **TargetString** is at the end of the specified part of the web request and is preceded by a character other than an alphanumeric character or underscore (_), for example, ;BadBot.
- **TargetString** is in the middle of the specified part of the web request and is preceded and followed by characters other than alphanumeric characters or underscore (_), for example, –BadBot;.

**EXACTLY**

The value of the specified part of the web request must exactly match the value of TargetString.

**STARTS_WITH**

The value of TargetString must appear at the beginning of the specified part of the web request.

**ENDS_WITH**
The value of TargetString must appear at the end of the specified part of the web request.

Type: String

Valid Values: EXACTLY | STARTS_WITH | ENDS_WITH | CONTAINS | CONTAINS_WORD

Required: Yes

TargetString

The value that you want AWS WAF to search for. AWS WAF searches for the specified string in the part of web requests that you specified in FieldToMatch. The maximum length of the value is 50 bytes.

Valid values depend on the values that you specified for FieldToMatch:

- **HEADER**: The value that you want AWS WAF to search for in the request header that you specified in FieldToMatch (p. 887), for example, the value of the User-Agent or Referer header.
- **METHOD**: The HTTP method, which indicates the type of operation specified in the request. Amazon CloudFront supports the following methods: DELETE, GET, HEAD, OPTIONS, PATCH, POST, and PUT.
- **QUERY_STRING**: The value that you want AWS WAF to search for in the query string, which is the part of a URL that appears after a ? character.
- **URI**: The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.
- **BODY**: The part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form. The request body immediately follows the request headers. Note that only the first 8192 bytes of the request body are forwarded to AWS WAF for inspection. To allow or block requests based on the length of the body, you can create a size constraint set. For more information, see CreateSizeConstraintSet (p. 269).
- **SINGLE_QUERY_ARG**: The parameter in the query string that you will inspect, such as UserName or SalesRegion. The maximum length for SINGLE_QUERY_ARG is 30 characters.
- **ALL_QUERY_ARGS**: Similar to SINGLE_QUERY_ARG, but instead of inspecting a single parameter, AWS WAF inspects all parameters within the query string for the value or regex pattern that you specify in TargetString.

If TargetString includes alphabetic characters A-Z and a-z, note that the value is case sensitive.

If you're using the AWS WAF API

Specify a base64-encoded version of the value. The maximum length of the value before you base64-encode it is 50 bytes.

For example, suppose the value of Type is HEADER and the value of Data is User-Agent. If you want to search the User-Agent header for the value BadBot, you base64-encode BadBot using MIME base64-encoding and include the resulting value, QmFkQm90, in the value of TargetString.

If you're using the AWS CLI or one of the AWS SDKs

The value that you want AWS WAF to search for. The SDK automatically base64 encodes the value.

Type: Base64-encoded binary data object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on FieldToMatch before inspecting it for a match.
You can only specify a single type of TextTransformation.

**CMD_LINE**

When you’re concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:
- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / ( 
- Replace the following characters with a space: ; ,
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

**COMPRESS_WHITE_SPACE**

Use this option to replace the following characters with a space character (decimal 32):
- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

**HTML_ENTITY_DECODE**

Use this option to replace HTML-encoded characters with unencoded characters. HTML_ENTITY_DECODE performs the following operations:
- Replaces (ampersand)quot; with "
- Replaces (ampersand)nbsp; with a non-breaking space, decimal 160
- Replaces (ampersand)lt; with a "less than" symbol
- Replaces (ampersand)gt; with >
- Replaces characters that are represented in hexadecimal format, (ampersand)#xhhhh; , with the corresponding characters
- Replaces characters that are represented in decimal format, (ampersand)#nnnn;, with the corresponding characters

**LOWERCASE**

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

**URL_DECODE**

Use this option to decode a URL-encoded value.

**NONE**

Specify NONE if you don’t want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ExcludedRule

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The rule to exclude from a rule group. This is applicable only when the ActivatedRule refers to a RuleGroup. The rule must belong to the RuleGroup that is specified by the ActivatedRule.

Contents

RuleId

The unique identifier for the rule to exclude from the rule group.

Type: String


Pattern: .\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
FieldToMatch

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies where in a web request to look for TargetString.

**Contents**

**Data**

When the value of **Type** is **HEADER**, enter the name of the header that you want AWS WAF to search, for example, **User-Agent** or **Referer**. The name of the header is not case sensitive.

When the value of **Type** is **SINGLE_QUERY_ARG**, enter the name of the parameter that you want AWS WAF to search, for example, **UserName** or **SalesRegion**. The parameter name is not case sensitive.

If the value of **Type** is any other value, omit **Data**.

**Type**: String


**Pattern**: .*\S.*

Required: No

**Type**

The part of the web request that you want AWS WAF to search for a specified string. Parts of a request that you can search include the following:

- **HEADER**: A specified request header, for example, the value of the **User-Agent** or **Referer** header. If you choose **HEADER** for the type, specify the name of the header in **Data**.
- **METHOD**: The HTTP method, which indicated the type of operation that the request is asking the origin to perform. Amazon CloudFront supports the following methods: **DELETE**, **GET**, **HEAD**, **OPTIONS**, **PATCH**, **POST**, and **PUT**.
- **QUERY_STRING**: A query string, which is the part of a URL that appears after a ? character, if any.
- **URI**: The path component of the URI. This does not include the query string or fragment components of the URI. For information, see **Uniform Resource Identifier (URI): Generic Syntax**.
- **BODY**: The part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form. The request body immediately follows the request headers. Note that only the first 8192 bytes of the request body are forwarded to AWS WAF for inspection. To allow or block requests based on the length of the body, you can create a size constraint set. For more information, see **CreateSizeConstraintSet** (p. 269).
- **SINGLE_QUERY_ARG**: The parameter in the query string that you will inspect, such as **UserName** or **SalesRegion**. The maximum length for **SINGLE_QUERY_ARG** is 30 characters.
- **ALL_QUERY_ARGS**: Similar to **SINGLE_QUERY_ARG**, but rather than inspecting a single parameter, AWS WAF will inspect all parameters within the query for the value or regex pattern that you specify in **TargetString**.

**Type**: String
Valid Values: URI | QUERY_STRING | HEADER | METHOD | BODY | SINGLE_QUERY_ARG | ALL_QUERY_ARGS

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
GeoMatchConstraint

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of **AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The country from which web requests originate that you want AWS WAF to search for.

**Contents**

**Type**

The type of geographical area you want AWS WAF to search for. Currently **Country** is the only valid value.

Type: String

Valid Values: **Country**

Required: Yes

**Value**

The country that you want AWS WAF to search for.

Type: String


Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
**GeoMatchSet**
Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://docs.aws.amazon.com/waf/latest/developerguide/what-is-waf.html) in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains one or more countries that AWS WAF will search for.

## Contents

### GeoMatchConstraints

An array of [GeoMatchConstraint](https://docs.aws.amazon.com/waf/latest/developerguide/geo-match-set-objects.html) objects, which contain the country that you want AWS WAF to search for.

Type: Array of [GeoMatchConstraint](https://docs.aws.amazon.com/waf/latest/developerguide/geo-match-set-objects.html) objects

Required: Yes

### GeoMatchSetId

The GeoMatchSetId for an GeoMatchSet. You use GeoMatchSetId to get information about a GeoMatchSet (see [GeoMatchSet](https://docs.aws.amazon.com/waf/latest/developerguide/)), update a GeoMatchSet (see [UpdateGeoMatchSet](https://docs.aws.amazon.com/waf/latest/developerguide/)), insert a GeoMatchSet into a Rule or delete one from a Rule (see [UpdateRule](https://docs.aws.amazon.com/waf/latest/developerguide/)), and delete a GeoMatchSet from AWS WAF (see [DeleteGeoMatchSet](https://docs.aws.amazon.com/waf/latest/developerguide/)).

GeoMatchSetId is returned by [CreateGeoMatchSet](https://docs.aws.amazon.com/waf/latest/developerguide/) and by [ListGeoMatchSets](https://docs.aws.amazon.com/waf/latest/developerguide/).

Type: String


Pattern: `.\S.*`

Required: Yes

### Name

A friendly name or description of the GeoMatchSet. You can't change the name of an GeoMatchSet after you create it.

Type: String


Pattern: `.\S.*`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
GeoMatchSetSummary

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name of the GeoMatchSet.

**Contents**

**GeoMatchSetId**

The GeoMatchSetId for a GeoMatchSet (p. 891). You can use GeoMatchSetId in a GetGeoMatchSet (p. 337) request to get detailed information about an GeoMatchSet (p. 891).

Type: String


Pattern: .\S.*

Required: Yes

**Name**

A friendly name or description of the GeoMatchSet (p. 891). You can't change the name of an GeoMatchSet after you create it.

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
GeoMatchSetUpdate
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the type of update to perform to an GeoMatchSet (p. 891) with UpdateGeoMatchSet (p. 436).

Contents

Action
Specifies whether to insert or delete a country with UpdateGeoMatchSet (p. 436).

Type: String

Valid Values: INSERT | DELETE

Required: Yes

GeoMatchConstraint
The country from which web requests originate that you want AWS WAF to search for.

Type: GeoMatchConstraint (p. 889) object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
HTTPHeader

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a GetSampledRequests (p. 358) request includes an HTTPHeader complex type that appears as Headers in the response syntax. HTTPHeader contains the names and values of all of the headers that appear in one of the web requests that were returned by GetSampledRequests.

**Contents**

**Name**

The name of one of the headers in the sampled web request.

Type: String

Required: No

**Value**

The value of one of the headers in the sampled web request.

Type: String

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
HTTPRequest
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a GetSampledRequests (p. 358) request includes an HTTPRequest complex type that appears as Request in the response syntax. HTTPRequest contains information about one of the web requests that were returned by GetSampledRequests.

Contents

ClientIP
The IP address that the request originated from. If the WebACL is associated with an Amazon CloudFront distribution, this is the value of one of the following fields in CloudFront access logs:
- c-ip, if the viewer did not use an HTTP proxy or a load balancer to send the request
- x-forwarded-for, if the viewer did use an HTTP proxy or a load balancer to send the request

Type: String
Required: No

Country
The two-letter country code for the country that the request originated from. For a current list of country codes, see the Wikipedia entry ISO 3166-1 alpha-2.

Type: String
Required: No

Headers
A complex type that contains two values for each header in the sampled web request: the name of the header and the value of the header.

Type: Array of HTTPHeader (p. 895) objects
Required: No

HTTPVersion
The HTTP version specified in the sampled web request, for example, HTTP/1.1.

Type: String
Required: No

Method
The HTTP method specified in the sampled web request. Amazon CloudFront supports the following methods: DELETE, GET, HEAD, OPTIONS, PATCH, POST, and PUT.

Type: String
Required: No
URI

The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.

Type: String
Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**IPSet**

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains one or more IP addresses or blocks of IP addresses specified in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports IPv4 address ranges: /8 and any range between /16 through /32. AWS WAF supports IPv6 address ranges: /24, /32, /48, /56, /64, and /128.

To specify an individual IP address, you specify the four-part IP address followed by a /32, for example, 192.0.2.0/32. To block a range of IP addresses, you can specify /8 or any range between /16 through /32 (for IPv4) or /24, /32, /48, /56, /64, or /128 (for IPv6). For more information about CIDR notation, see the Wikipedia entry **Classless Inter-Domain Routing**.

**Contents**

**IPSetDescriptors**

The IP address type (**IPV4** or **IPV6**) and the IP address range (in CIDR notation) that web requests originate from. If the **WebACL** is associated with an Amazon CloudFront distribution and the viewer did not use an HTTP proxy or a load balancer to send the request, this is the value of the c-ip field in the CloudFront access logs.

Type: Array of **IPSetDescriptor** (p. 900) objects

Required: Yes

**IPSetId**

The **IPSetId** for an **IPSet**. You use **IPSetId** to get information about an **IPSet** (see **GetIPSet** (p. 339)), update an **IPSet** (see **UpdateIPSet** (p. 440)), insert an **IPSet** into a **Rule** or delete one from a **Rule** (see **UpdateRule** (p. 458)), and delete an **IPSet** from **AWS WAF** (see **DeleteIPSet** (p. 296)).

**IPSetId** is returned by **CreateIPSet** (p. 247) and by **ListIPSets** (p. 382).

Type: String


Pattern: .*

Required: Yes

**Name**

A friendly name or description of the **IPSet** (p. 898). You can't change the name of an **IPSet** after you create it.

Type: String


Pattern: .*

Required: No
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
IPSetDescriptor
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the IP address type (IPV4 or IPV6) and the IP address range (in CIDR format) that web requests originate from.

Contents

Type
Specify IPV4 or IPV6.
Type: String
Valid Values: IPV4 | IPV6
Required: Yes

Value
Specify an IPv4 address by using CIDR notation. For example:
- To configure AWS WAF to allow, block, or count requests that originated from the IP address 192.0.2.44, specify 192.0.2.44/32.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify 192.0.2.0/24.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Specify an IPv6 address by using CIDR notation. For example:
- To configure AWS WAF to allow, block, or count requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify 1111:0000:0000:0000:0000:0000:0000:0111/128.

Type: String
Pattern: .\S.*
Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:
- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
IPSetSummary
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name of the IPSet.

Contents

IPSetId

The IPSetId for an IPSet (p. 898). You can use IPSetId in a GetIPSet (p. 339) request to get detailed information about an IPSet (p. 898).

Type: String
Pattern: .*\S.*
Required: Yes

Name

A friendly name or description of the IPSet (p. 898). You can't change the name of an IPSet after you create it.

Type: String
Pattern: .*\S.*
Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
IPSetUpdate
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the type of update to perform to an IPSet (p. 898) with UpdateIPSet (p. 440).

Contents

Action

Specifies whether to insert or delete an IP address with UpdateIPSet (p. 440).

Type: String

Valid Values: INSERT | DELETE

Required: Yes

IPSetDescriptor

The IP address type (IPV4 or IPV6) and the IP address range (in CIDR notation) that web requests originate from.

Type: IPSetDescriptor (p. 900) object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**LoggingConfiguration**

*Service: AWS WAF Classic*

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of **AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The Amazon Kinesis Data Firehose, **RedactedFields** information, and the web ACL Amazon Resource Name (ARN).

**Contents**

**LogDestinationConfigs**

An array of Amazon Kinesis Data Firehose ARNs.

Type: Array of strings

Array Members: Fixed number of 1 item.


Pattern: .\S.*

Required: Yes

**RedactedFields**

The parts of the request that you want redacted from the logs. For example, if you redact the cookie field, the cookie field in the firehose will be xxx.

Type: Array of **FieldToMatch (p. 887)** objects

Required: No

**ResourceArn**

The Amazon Resource Name (ARN) of the web ACL that you want to associate with LogDestinationConfigs.

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Predicates

Service: AWS WAF Classic

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the ByteMatchSet (p. 878), IPSet (p. 898), SqlInjectionMatchSet (p. 938), XssMatchSet (p. 955), RegexMatchSet (p. 910), GeoMatchSet (p. 891), and SizeConstraintSet (p. 934) objects that you want to add to a Rule and, for each object, indicates whether you want to negate the settings, for example, requests that do NOT originate from the IP address 192.0.2.44.

**Contents**

**DataId**

A unique identifier for a predicate in a Rule, such as ByteMatchSetId or IPSetId. The ID is returned by the corresponding Create or List command.

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: .*
- **Required**: Yes

**Negated**

Set Negated to False if you want AWS WAF to allow, block, or count requests based on the settings in the specified ByteMatchSet (p. 878), IPSet (p. 898), SqlInjectionMatchSet (p. 938), XssMatchSet (p. 955), RegexMatchSet (p. 910), GeoMatchSet (p. 891), or SizeConstraintSet (p. 934). For example, if an IPSet includes the IP address 192.0.2.44, AWS WAF will allow or block requests based on that IP address.

Set Negated to True if you want AWS WAF to allow or block a request based on the negation of the settings in the ByteMatchSet (p. 878), IPSet (p. 898), SqlInjectionMatchSet (p. 938), XssMatchSet (p. 955), RegexMatchSet (p. 910), GeoMatchSet (p. 891), or SizeConstraintSet (p. 934). For example, if an IPSet includes the IP address 192.0.2.44, AWS WAF will allow, block, or count requests based on all IP addresses except 192.0.2.44.

- **Type**: Boolean
- **Required**: Yes

**Type**

The type of predicate in a Rule, such as ByteMatch or IPSet.

- **Type**: String
- **Valid Values**: IPMatch | ByteMatch | SqlInjectionMatch | GeoMatch | SizeConstraint | XssMatch | RegexMatch
- **Required**: Yes
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RateBasedRule**

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A RateBasedRule is identical to a regular Rule, with one addition: a RateBasedRule counts the number of requests that arrive from a specified IP address every five minutes. For example, based on recent requests that you've seen from an attacker, you might create a RateBasedRule that includes the following conditions:

- The requests come from 192.0.2.44.
- They contain the value BadBot in the User-Agent header.

In the rule, you also define the rate limit as 1,000.

Requests that meet both of these conditions and exceed 1,000 requests every five minutes trigger the rule's action (block or count), which is defined in the web ACL.

**Contents**

**MatchPredicates**

The Predicates object contains one Predicate element for each ByteMatchSet, IPSet, or SqlInjectionMatchSet object that you want to include in a RateBasedRule.

Type: Array of Predicate objects

Required: No

**MetricName**

A friendly name or description for the metrics for a RateBasedRule. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RateBasedRule.

Type: String


Pattern: .\S.*

Required: Yes

**Name**

A friendly name or description for a RateBasedRule. You can't change the name of a RateBasedRule after you create it.

Type: String


Pattern: .\S.*
RateBasedRule

Required: Yes

**RateKey**

The field that AWS WAF uses to determine if requests are likely arriving from single source and thus subject to rate monitoring. The only valid value for RateKey is IP. IP indicates that requests arriving from the same IP address are subject to the RateLimit that is specified in the RateBasedRule.

Type: String

Valid Values: IP

Required: Yes

**RateLimit**

The maximum number of requests, which have an identical value in the field specified by the RateKey, allowed in a five-minute period. If the number of requests exceeds the RateLimit and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

**RuleId**

A unique identifier for a RateBasedRule. You use RuleId to get more information about a RateBasedRule (see GetRateBasedRule(p. 345)), update a RateBasedRule (see UpdateRateBasedRule(p. 445)), insert a RateBasedRule into a WebACL or delete one from a WebACL (see UpdateWebACL(p. 475)), or delete a RateBasedRule from AWS WAF (see DeleteRateBasedRule(p. 303)).

Type: String


Pattern: .*\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexMatchSet**

*Service: AWS WAF Classic*

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetRegexMatchSet (p. 350) request, RegexMatchSet is a complex type that contains the RegexMatchSetId and Name of a RegexMatchSet, and the values that you specified when you updated the RegexMatchSet.

The values are contained in a RegexMatchTuple object, which specify the parts of web requests that you want AWS WAF to inspect and the values that you want AWS WAF to search for. If a RegexMatchSet contains more than one RegexMatchTuple object, a request needs to match the settings in only one ByteMatchTuple to be considered a match.

**Contents**

**Name**

A friendly name or description of the RegexMatchSet (p. 910). You can't change Name after you create a RegexMatchSet.

Type: String


Pattern: .\S.*

Required: No

**RegexMatchSetId**

The RegexMatchSetId for a RegexMatchSet. You use RegexMatchSetId to get information about a RegexMatchSet (see GetRegexMatchSet (p. 350)), update a RegexMatchSet (see UpdateRegexMatchSet (p. 450)), insert a RegexMatchSet into a Rule or delete one from a Rule (see UpdateRule (p. 458)), and delete a RegexMatchSet from AWS WAF (see DeleteRegexMatchSet (p. 306)).

RegexMatchSetId is returned by CreateRegexMatchSet (p. 255) and by ListRegexMatchSets (p. 391).

Type: String


Pattern: .\S.*

Required: No

**RegexMatchTuples**

Contains an array of RegexMatchTuple (p. 914) objects. Each RegexMatchTuple object contains:

- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the User-Agent header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet (p. 917).
• Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

Type: Array of RegexMatchTuple (p. 914) objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
**RegexMatchSetSummary**

*Service: AWS WAF Classic*

**Note**
This is *AWS WAF Classic* documentation. For more information, see *AWS WAF Classic* in the developer guide.

*For the latest version of AWS WAF*, use the AWS WAFV2 API and see the *AWS WAF Developer Guide*. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by ListRegexMatchSets (p. 391). Each RegexMatchSetSummary object includes the Name and RegexMatchSetId for one RegexMatchSet (p. 910).

**Contents**

**Name**
A friendly name or description of the RegexMatchSet (p. 910). You can't change Name after you create a RegexMatchSet.

Type: String


Pattern: .*\S.*

Required: Yes

**RegexMatchSetId**
The RegexMatchSetId for a RegexMatchSet. You use RegexMatchSetId to get information about a RegexMatchSet, update a RegexMatchSet, remove a RegexMatchSet from a Rule, and delete a RegexMatchSet from AWS WAF.

RegexMatchSetId is returned by CreateRegexMatchSet (p. 255) and by ListRegexMatchSets (p. 391).

Type: String


Pattern: .*\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexMatchSetUpdate**

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an `UpdateRegexMatchSet` request, `RegexMatchSetUpdate` specifies whether to insert or delete a `RegexMatchTuple` and includes the settings for the `RegexMatchTuple`.

**Contents**

**Action**

Specifies whether to insert or delete a `RegexMatchTuple`.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

**RegexMatchTuple**

Information about the part of a web request that you want AWS WAF to inspect and the identifier of the regular expression (regex) pattern that you want AWS WAF to search for. If you specify DELETE for the value of `Action`, the `RegexMatchTuple` values must exactly match the values in the `RegexMatchTuple` that you want to delete from the `RegexMatchSet`.

Type: `RegexMatchTuple` object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexMatchTuple**

*Service: AWS WAF Classic*

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of **AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The regular expression pattern that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings. Each `RegexMatchTuple` object contains:

- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see **RegexPatternSet** (p. 917).
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

**Contents**

**FieldToMatch**

Specifies where in a web request to look for the `RegexPatternSet`.

Type: `FieldToMatch` (p. 887) object

Required: Yes

**RegexPatternSetId**

The `RegexPatternSetId` for a `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet` (see `GetRegexPatternSet` (p. 352)), update a `RegexPatternSet` (see `UpdateRegexPatternSet` (p. 454)), insert a `RegexPatternSet` into a `RegexMatchSet` or delete one from a `RegexMatchSet` (see `UpdateRegexMatchSet` (p. 450)), and delete an `RegexPatternSet` from AWS WAF (see `DeleteRegexPatternSet` (p. 309)).

`RegexPatternSetId` is returned by `CreateRegexPatternSet` (p. 258) and by `ListRegexPatternSets` (p. 394).

Type: String


Pattern: `.\S.*`

Required: Yes

**TextTransformation**

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `RegexPatternSet` before inspecting a request for a match.

You can only specify a single type of `TextTransformation`.  

**CMD_LINE**
When you're concerned that attackers are injecting an operating system commandline command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \\ " ' ^
- Delete spaces before the following characters: / ( 
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

**COMPRESS_WHITE_SPACE**

Use this option to replace the following characters with a space character (decimal 32):
- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

**COMPRESS_WHITE_SPACE** also replaces multiple spaces with one space.

**HTML_ENTITY_DECODE**

Use this option to replace HTML-encoded characters with unencoded characters. **HTML_ENTITY_DECODE** performs the following operations:
- Replaces (ampersand)quot; with "
- Replaces (ampersand)nbsp; with a non-breaking space, decimal 160
- Replaces (ampersand)lt; with a "less than" symbol
- Replaces (ampersand)gt; with >
- Replaces characters that are represented in hexadecimal format, (ampersand)#xhhhh;, with the corresponding characters
- Replaces characters that are represented in decimal format, (ampersand)#nnnn;, with the corresponding characters

**LOWERCASE**

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

**URL_DECODE**

Use this option to decode a URL-encoded value.

**NONE**

Specify NONE if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:
AWS WAFV2 API Reference
RegexMatchTuple

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexPatternSet**

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The RegexPatternSet specifies the regular expression (regex) pattern that you want AWS WAF to search for, such as `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

**Contents**

**Name**
A friendly name or description of the `RegexPatternSet` (p. 917). You can’t change Name after you create a `RegexPatternSet`.

Type: String


Pattern: `.*\S.*`

Required: No

**RegexPatternSetId**

The identifier for the `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet`, update a `RegexPatternSet`, remove a `RegexPatternSet` from a `RegexMatchSet`, and delete a `RegexPatternSet` from AWS WAF.

`RegexMatchSetId` is returned by `CreateRegexPatternSet` (p. 258) and by `ListRegexPatternSets` (p. 394).

Type: String


Pattern: `.*\S.*`

Required: Yes

**RegexPatternStrings**

Specifies the regular expression (regex) patterns that you want AWS WAF to search for, such as `B[a@]dB[o0]t`.

Type: Array of strings

Array Members: Maximum number of 10 items.


Pattern: `.*`

Required: Yes
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexPatternSetSummary**

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by ListRegexPatternSets (p. 394). Each RegexPatternSetSummary object includes the Name and RegexPatternSetId for one RegexPatternSet (p. 917).

**Contents**

**Name**

A friendly name or description of the RegexPatternSet (p. 917). You can’t change Name after you create a RegexPatternSet.

Type: String


Pattern: .*\S.*

Required: Yes

**RegexPatternSetId**

The RegexPatternSetId for a RegexPatternSet. You use RegexPatternSetId to get information about a RegexPatternSet, update a RegexPatternSet, remove a RegexPatternSet from a RegexMatchSet, and delete a RegexPatternSet from AWS WAF.

RegexPatternSetId is returned by CreateRegexPatternSet (p. 258) and by ListRegexPatternSets (p. 394).

Type: String


Pattern: .*\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RegexPatternSetUpdate
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an UpdateRegexPatternSet (p. 454) request, RegexPatternSetUpdate specifies whether to insert or delete a RegexPatternString and includes the settings for the RegexPatternString.

Contents

Action
Specifies whether to insert or delete a RegexPatternString.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

RegexPatternString
Specifies the regular expression (regex) pattern that you want AWS WAF to search for, such as B[a@]dB[o0]t.

Type: String


Pattern: .*

Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Rule

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A combination of ByteMatchSet (p. 878), IPSet (p. 898), and/or SqlInjectionMatchSet (p. 938) objects that identify the web requests that you want to allow, block, or count. For example, you might create a Rule that includes the following predicates:

• An IPSet that causes AWS WAF to search for web requests that originate from the IP address 192.0.2.44
• A ByteMatchSet that causes AWS WAF to search for web requests for which the value of the User-Agent header is BadBot.

To match the settings in this Rule, a request must originate from 192.0.2.44 AND include a User-Agent header for which the value is BadBot.

Contents

MetricName
A friendly name or description for the metrics for this Rule. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change MetricName after you create the Rule.

Type: String
Pattern: .\S.*
Required: No

Name
The friendly name or description for the Rule. You can't change the name of a Rule after you create it.

Type: String
Pattern: .\S.*
Required: No

Predicates
The Predicates object contains one Predicate element for each ByteMatchSet (p. 878), IPSet (p. 898), or SqlInjectionMatchSet (p. 938) object that you want to include in a Rule.

Type: Array of Predicate (p. 906) objects
Required: Yes
RuleId

A unique identifier for a Rule. You use RuleId to get more information about a Rule (see GetRule (p. 354)), update a Rule (see UpdateRule (p. 458)), insert a Rule into a WebACL or delete a one from a WebACL (see UpdateWebACL (p. 475)), or delete a Rule from AWS WAF (see DeleteRule (p. 312)).

RuleId is returned by CreateRule (p. 261) and by ListRules (p. 400).

Type: String


Pattern: .*\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleGroup
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A collection of predefined rules that you can add to a web ACL.

Rule groups are subject to the following limits:

- Three rule groups per account. You can request an increase to this limit by contacting customer support.
- One rule group per web ACL.
- Ten rules per rule group.

Contents

MetricName

A friendly name or description for the metrics for this RuleGroup. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RuleGroup.

Type: String
Pattern: .*\S.*
Required: No

Name

The friendly name or description for the RuleGroup. You can't change the name of a RuleGroup after you create it.

Type: String
Pattern: .*\S.*
Required: No

RuleGroupId

A unique identifier for a RuleGroup. You use RuleGroupId to get more information about a RuleGroup (see GetRuleGroup (p. 356)), update a RuleGroup (see UpdateRuleGroup (p. 462)), insert a RuleGroup into a WebACL or delete a one from a WebACL (see UpdateWebACL (p. 475)), or delete a RuleGroup from AWS WAF (see DeleteRuleGroup (p. 315)).

RuleGroupId is returned by CreateRuleGroup (p. 265) and by ListRuleGroups (p. 397).

Type: String

Pattern: .*\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleGroupSummary

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://aws.amazon.com/waf-classic) in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the friendly name or description of the `RuleGroup`.

**Contents**

**Name**

A friendly name or description of the `RuleGroup` ([p. 923](#)). You can't change the name of a `RuleGroup` after you create it.

- **Type:** String
- **Length Constraints:** Minimum length of 1. Maximum length of 128.
- **Pattern:** `.\S.*`
- **Required:** Yes

**RuleGroupId**


- **Type:** String
- **Length Constraints:** Minimum length of 1. Maximum length of 128.
- **Pattern:** `.\S.*`
- **Required:** Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](https://aws.amazon.com/sdk-for-cpp/)
- [AWS SDK for Go](https://github.com/aws/aws-sdk-go)
- [AWS SDK for Java V2](https://aws.amazon.com/sdk-for-java/)
- [AWS SDK for Ruby V3](https://aws.amazon.com/sdk-for-ruby/)

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RuleGroupUpdate

Service: AWS WAF Classic

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies an ActivatedRule and indicates whether you want to add it to a RuleGroup or delete it from a RuleGroup.

**Contents**

**Action**

Specify INSERT to add an ActivatedRule to a RuleGroup. Use DELETE to remove an ActivatedRule from a RuleGroup.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

**ActivatedRule**

The ActivatedRule object specifies a Rule that you want to insert or delete, the priority of the Rule in the WebACL, and the action that you want AWS WAF to take when a web request matches the Rule (ALLOW, BLOCK, or COUNT).

Type: ActivatedRule (p. 875) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleSummary

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the friendly name or description of the Rule.

Contents

Name
A friendly name or description of the Rule (p. 921). You can’t change the name of a Rule after you create it.

Type: String
Pattern: .

Required: Yes

RuleId
A unique identifier for a Rule. You use RuleId to get more information about a Rule (see GetRule (p. 354)), update a Rule (see UpdateRule (p. 458)), insert a Rule into a WebACL or delete one from a WebACL (see UpdateWebACL (p. 475)), or delete a Rule from AWS WAF (see DeleteRule (p. 312)).

RuleId is returned by CreateRule (p. 261) and by ListRules (p. 400).

Type: String
Pattern: .

Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
RuleUpdate

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies a Predicate (such as an IPSet) and indicates whether you want to add it to a Rule or delete it from a Rule.

**Contents**

**Action**

Specify INSERT to add a Predicate to a Rule. Use DELETE to remove a Predicate from a Rule.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

**Predicate**

The ID of the Predicate (such as an IPSet) that you want to add to a Rule.

Type: Predicate (p. 906) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SampledHTTPRequest

Service: AWS WAF Classic

**Note**

This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a `GetSampledRequests` request includes a `SampledHTTPRequest` complex type that appears as `SampledRequests` in the response syntax. `SampledHTTPRequest` contains one `SampledHTTPRequest` object for each web request that is returned by `GetSampledRequests`.

**Contents**

**Action**

The action for the `Rule` that the request matched: ALLOW, BLOCK, or COUNT.

- Type: String
- Required: No

**Request**

A complex type that contains detailed information about the request.

- Type: `HTTPRequest` object
- Required: Yes

**RuleWithinRuleGroup**

This value is returned if the `GetSampledRequests` request specifies the ID of a `RuleGroup` rather than the ID of an individual rule. `RuleWithinRuleGroup` is the rule within the specified `RuleGroup` that matched the request listed in the response.

- Type: String
- Pattern: `.*\S.*`
- Required: No

**Timestamp**

The time at which AWS WAF received the request from your AWS resource, in Unix time format (in seconds).

- Type: `Timestamp`
- Required: No

**Weight**

A value that indicates how one result in the response relates proportionally to other results in the response. A result that has a weight of 2 represents roughly twice as many Amazon CloudFront web requests as a result that has a weight of 1.

- Type: Long
Valid Range: Minimum value of 0.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SizeConstraint

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies a constraint on the size of a part of the web request. AWS WAF uses the Size, ComparisonOperator, and FieldToMatch to build an expression in the form of "Size ComparisonOperator size in bytes of FieldToMatch". If that expression is true, the SizeConstraint is considered to match.

Contents

ComparisonOperator

The type of comparison you want AWS WAF to perform. AWS WAF uses this in combination with the provided Size and FieldToMatch to build an expression in the form of "Size ComparisonOperator size in bytes of FieldToMatch". If that expression is true, the SizeConstraint is considered to match.

EQ: Used to test if the Size is equal to the size of the FieldToMatch
NE: Used to test if the Size is not equal to the size of the FieldToMatch
LE: Used to test if the Size is less than or equal to the size of the FieldToMatch
LT: Used to test if the Size is strictly less than the size of the FieldToMatch
GE: Used to test if the Size is greater than or equal to the size of the FieldToMatch
GT: Used to test if the Size is strictly greater than the size of the FieldToMatch

Type: String

Valid Values: EQ | NE | LE | LT | GE | GT

Required: Yes

FieldToMatch

Specifies where in a web request to look for the size constraint.

Type: FieldToMatch (p. 887) object

Required: Yes

Size

The size in bytes that you want AWS WAF to compare against the size of the specified FieldToMatch. AWS WAF uses this in combination with ComparisonOperator and FieldToMatch to build an expression in the form of "Size ComparisonOperator size in bytes of FieldToMatch". If that expression is true, the SizeConstraint is considered to match.

Valid values for size are 0 - 21474836480 bytes (0 - 20 GB).

If you specify URI for the value of Type, the / in the URI path that you specify counts as one character. For example, the URI /logo.jpg is nine characters long.
Type: Long

Valid Range: Minimum value of 0. Maximum value of 21474836480.

Required: Yes

**TextTransformation**

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on FieldToMatch before inspecting it for a match.

You can only specify a single type of TextTransformation.

**NONE**

Specify NONE if you don't want to perform any text transformations.

**CMD_LINE**

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: ", '^
- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

**COMPRESS_WHITE_SPACE**

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

**HTML_ENTITY_DECODE**

Use this option to replace HTML-encoded characters with unencoded characters. HTML_ENTITY_DECODE performs the following operations:

- Replaces &quot; with "
- Replaces &nbsp; with a non-breaking space, decimal 160
- Replaces &lt; with a "less than" symbol
- Replaces &gt; with >
- Replaces characters that are represented in hexadecimal format, &#xhhhh;, with the corresponding characters
• Replaces characters that are represented in decimal format, \( (\text{ampersand})\#\text{nnnn;} \), with the corresponding characters

**LOWERCASE**

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

**URL_DECODE**

Use this option to decode a URL-encoded value.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
SizeConstraintSet
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains SizeConstraint objects, which specify the parts of web requests that you want AWS WAF to inspect the size of. If a SizeConstraintSet contains more than one SizeConstraint object, a request only needs to match one constraint to be considered a match.

Contents

Name
The name, if any, of the SizeConstraintSet.

Type: String


Pattern: .*\S.*

Required: No

SizeConstraints
Specifies the parts of web requests that you want to inspect the size of.

Type: Array of SizeConstraint (p. 931) objects

Required: Yes

SizeConstraintSetId
A unique identifier for a SizeConstraintSet. You use SizeConstraintSetId to get information about a SizeConstraintSet (see GetSizeConstraintSet (p. 362)), update a SizeConstraintSet (see UpdateSizeConstraintSet (p. 466)), insert a SizeConstraintSet into a Rule or delete one from a Rule (see UpdateRule (p. 458)), and delete a SizeConstraintSet from AWS WAF (see DeleteSizeConstraintSet (p. 318)).

SizeConstraintSetId is returned by CreateSizeConstraintSet (p. 269) and by ListSizeConstraintSets (p. 403).

Type: String


Pattern: .*\S.*

Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SizeConstraintSetSummary
Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The Id and Name of a SizeConstraintSet.

**Contents**

**Name**

The name of the SizeConstraintSet, if any.

Type: String


Pattern: .\S.*

Required: Yes

**SizeConstraintSetId**

A unique identifier for a SizeConstraintSet. You use SizeConstraintSetId to get information about a SizeConstraintSet (see GetSizeConstraintSet (p. 362)), update a SizeConstraintSet (see UpdateSizeConstraintSet (p. 466)), insert a SizeConstraintSet into a Rule or delete one from a Rule (see UpdateRule (p. 458)), and delete a SizeConstraintSet from AWS WAF (see DeleteSizeConstraintSet (p. 318)).

SizeConstraintSetId is returned by CreateSizeConstraintSet (p. 269) and by ListSizeConstraintSets (p. 403).

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SizeConstraintSetUpdate

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect the size of and indicates whether you want to add the specification to a SizeConstraintSet (p. 934) or delete it from a SizeConstraintSet.

**Contents**

**Action**

Specify `INSERT` to add a SizeConstraintSetUpdate (p. 937) to a SizeConstraintSet (p. 934). Use `DELETE` to remove a SizeConstraintSetUpdate from a SizeConstraintSet.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

**SizeConstraint**

Specifies a constraint on the size of a part of the web request. AWS WAF uses the Size, ComparisonOperator, and FieldToMatch to build an expression in the form of "Size ComparisonOperator size in bytes of FieldToMatch". If that expression is true, the SizeConstraint is considered to match.

Type: SizeConstraint (p. 931) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SqlInjectionMatchSet

**Service:** AWS WAF Classic

**Note**
This is *AWS WAF Classic* documentation. For more information, see [AWS WAF Classic](#) in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](#). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains `SqlInjectionMatchTuple` objects, which specify the parts of web requests that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header. If a `SqlInjectionMatchSet` contains more than one `SqlInjectionMatchTuple` object, a request needs to include snippets of SQL code in only one of the specified parts of the request to be considered a match.

**Contents**

**Name**

The name, if any, of the `SqlInjectionMatchSet`.

Type: String


Pattern: `.*\S.*`

Required: No

**SqlInjectionMatchSetId**

A unique identifier for a `SqlInjectionMatchSet`. You use `SqlInjectionMatchSetId` to get information about a `SqlInjectionMatchSet` (see [GetSqlInjectionMatchSet](#)), update a `SqlInjectionMatchSet` (see [UpdateSqlInjectionMatchSet](#)), insert a `SqlInjectionMatchSet` into a Rule or delete one from a Rule (see [UpdateRule](#)), and delete a `SqlInjectionMatchSet` from AWS WAF (see [DeleteSqlInjectionMatchSet](#)).

`SqlInjectionMatchSetId` is returned by [CreateSqlInjectionMatchSet](#) and by [ListSqlInjectionMatchSets](#).

Type: String


Pattern: `.*\S.*`

Required: Yes

**SqlInjectionMatchTuples**

Specifies the parts of web requests that you want to inspect for snippets of malicious SQL code.

Type: Array of `SqlInjectionMatchTuple` objects

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:
AWS SDK for C++
AWS SDK for Go
AWS SDK for Java V2
AWS SDK for Ruby V3
SqlInjectionMatchSetSummary
Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The Id and Name of a SqlInjectionMatchSet.

**Contents**

**Name**

The name of the SqlInjectionMatchSet, if any, specified by Id.

Type: String


Pattern: .\S.*

Required: Yes

**SqlInjectionMatchSetId**

A unique identifier for a SqlInjectionMatchSet. You use SqlInjectionMatchSetId to get information about a SqlInjectionMatchSet (see GetSqlInjectionMatchSet (p. 365)), update a SqlInjectionMatchSet (see UpdateSqlInjectionMatchSet (p. 471)), insert a SqlInjectionMatchSet into a Rule or delete one from a Rule (see UpdateRule (p. 458)), and delete a SqlInjectionMatchSet from AWS WAF (see DeleteSqlInjectionMatchSet (p. 321)). SqlInjectionMatchSetId is returned by CreateSqlInjectionMatchSet (p. 273) and by ListSqlInjectionMatchSets (p. 406).

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SqlInjectionMatchSetUpdate

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://aws.amazon.com/waf-classic/) in the developer guide.

**For the latest version of AWS WAF,** use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://aws.amazon.com/waf/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect for snippets of malicious SQL code and indicates whether you want to add the specification to a SqlInjectionMatchSet (p. 938) or delete it from a SqlInjectionMatchSet.

**Contents**

**Action**

Specify **INSERT** to add a SqlInjectionMatchSetUpdate (p. 941) to a SqlInjectionMatchSet (p. 938). Use **DELETE** to remove a SqlInjectionMatchSetUpdate from a SqlInjectionMatchSet.

*Type:* String

*Valid Values:* INSERT | DELETE

*Required:* Yes

**SqlInjectionMatchTuple**

Specifies the part of a web request that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header.

*Type:* SqlInjectionMatchTuple (p. 942) object

*Required:* Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](https://aws.amazon.com/cplusplus-sdk/)
- [AWS SDK for Go](https://aws.amazon.com/go-sdk/)
- [AWS SDK for Java V2](https://aws.amazon.com/java-sdk/)
- [AWS SDK for Ruby V3](https://aws.amazon.com/ruby-sdk/)
SqlInjectionMatchTuple

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header.

Contents

FieldToMatch

Specifies where in a web request to look for snippets of malicious SQL code.

Type: FieldToMatch (p. 887) object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on FieldToMatch before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:
• Delete the following characters: \ " ' ^
• Delete spaces before the following characters: / (  
• Replace the following characters with a space: ; , ;
• Replace multiple spaces with one space
• Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):
• \f, formfeed, decimal 12
• \t, tab, decimal 9
• \n, newline, decimal 10
• \r, carriage return, decimal 13
• \v, vertical tab, decimal 11
• non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

HTML_ENTITY_DECODE
Use this option to replace HTML-encoded characters with unencoded characters. HTML_ENTITY_DECODE performs the following operations:

- Replaces \( \text{ampersand} \text{quot;} \) with "
- Replaces \( \text{ampersand} \text{nbsp;} \) with a non-breaking space, decimal 160
- Replaces \( \text{ampersand} \text{lt;} \) with a "less than" symbol
- Replaces \( \text{ampersand} \text{gt;} \) with >
- Replaces characters that are represented in hexadecimal format, \( \text{ampersand} \#xhhhh; \), with the corresponding characters
- Replaces characters that are represented in decimal format, \( \text{ampersand} \#nnnn; \), with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify NONE if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SubscribedRuleGroupSummary

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A summary of the rule groups you are subscribed to.

Contents

MetricName
A friendly name or description for the metrics for this RuleGroup. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RuleGroup.

Type: String

Pattern: .\S.*

Required: Yes

Name
A friendly name or description of the RuleGroup. You can't change the name of a RuleGroup after you create it.

Type: String

Pattern: .\S.*

Required: Yes

RuleGroupId
A unique identifier for a RuleGroup.

Type: String

Pattern: .\S.*

Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
Tag
Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://docs.aws.amazon.com/waf/latest/developerguide/aws-waf.html) in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/aws-waf.html). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

**Contents**

**Key**

- **Type**: String
  - **Length Constraints**: Minimum length of 1. Maximum length of 128.
  - **Pattern**: .\s.*
  - **Required**: Yes

**Value**

- **Type**: String
  - **Length Constraints**: Minimum length of 0. Maximum length of 256.
  - **Pattern**: .*
  - **Required**: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](https://docs.aws.amazon.com/sdk-for-cpp/v1/developer-guide/aws-cpp-sdk-api.html)
- [AWS SDK for Go](https://docs.aws.amazon.com/sdk-for-golang/v1/developer-guide/aws-api-guide.html)
- [AWS SDK for Java V2](https://docs.aws.amazon.com/AmazonWebServices/latest/APIReference/Welcome.html)
TagInfoForResource

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Information for a tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Contents

ResourceARN

Type: String


Pattern: .*\S.*

Required: No

TagList

Type: Array of Tag (p. 946) objects

Array Members: Minimum number of 1 item.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**TimeWindow**

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetSampledRequests request, the StartTime and EndTime objects specify the time range for which you want AWS WAF to return a sample of web requests.

You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

In a GetSampledRequests response, the StartTime and EndTime objects specify the time range for which AWS WAF actually returned a sample of web requests. AWS WAF gets the specified number of requests from among the first 5,000 requests that your AWS resource receives during the specified time period. If your resource receives more than 5,000 requests during that period, AWS WAF stops sampling after the 5,000th request. In that case, EndTime is the time that AWS WAF received the 5,000th request.

**Contents**

**EndTime**

The end of the time range from which you want GetSampledRequests to return a sample of the requests that your AWS resource received. You must specify the date and time in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

**StartTime**

The beginning of the time range from which you want GetSampledRequests to return a sample of the requests that your AWS resource received. You must specify the date and time in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WafAction

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](#) in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](#). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

For the action that is associated with a rule in a `WebACL`, specifies the action that you want AWS WAF to perform when a web request matches all of the conditions in a rule. For the default action in a `WebACL`, specifies the action that you want AWS WAF to take when a web request doesn't match all of the conditions in any of the rules in a `WebACL`.

**Contents**

**Type**

Specifies how you want AWS WAF to respond to requests that match the settings in a `Rule`. Valid settings include the following:

- **ALLOW**: AWS WAF allows requests
- **BLOCK**: AWS WAF blocks requests
- **COUNT**: AWS WAF increments a counter of the requests that match all of the conditions in the rule. AWS WAF then continues to inspect the web request based on the remaining rules in the web ACL.

You can't specify `COUNT` for the default action for a `WebACL`.

Type: String

Valid Values: **BLOCK | ALLOW | COUNT**

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Waf OVERRIDE ACTION

Service: AWS WAF Classic

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The action to take if any rule within the RuleGroup matches a request.

**Contents**

**Type**

COUNT overrides the action specified by the individual rule within a RuleGroup. If set to NONE, the rule's action will take place.

Type: String

Valid Values: NONE | COUNT

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WebACL
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the Rules that identify the requests that you want to allow, block, or count. In a WebACL, you also specify a default action (ALLOW or BLOCK), and the action for each Rule that you add to a WebACL, for example, block requests from specified IP addresses or block requests from specified referrers. You also associate the WebACL with an Amazon CloudFront distribution to identify the requests that you want AWS WAF to filter. If you add more than one Rule to a WebACL, a request needs to match only one of the specifications to be allowed, blocked, or counted. For more information, see UpdateWebACL (p. 475).

Contents

DefaultAction
The action to perform if none of the Rules contained in the WebACL match. The action is specified by the WafAction (p. 949) object.

Type: WafAction (p. 949) object

Required: Yes

MetricName
A friendly name or description for the metrics for this WebACL. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change MetricName after you create the WebACL.

Type: String


Pattern: .\S.*

Required: No

Name
A friendly name or description of the WebACL. You can't change the name of a WebACL after you create it.

Type: String


Pattern: .\S.*

Required: No

Rules
An array that contains the action for each Rule in a WebACL, the priority of the Rule, and the ID of the Rule.
Type: Array of `ActivatedRule (p. 875)` objects

Required: Yes

**WebACLArn**

The Amazon Resource Name (ARN) of the web ACL.

Type: String


Pattern: `.*\S.*`

Required: No

**WebACLId**

A unique identifier for a WebACL. You use `WebACLId` to get information about a WebACL (see `GetWebACL (p. 368)`), update a WebACL (see `UpdateWebACL (p. 475)`), and delete a WebACL from AWS WAF (see `DeleteWebACL (p. 324)`).

`WebACLId` is returned by `CreateWebACL (p. 277)` and by `ListWebACLs (p. 415)`.

Type: String


Pattern: `.*\S.*`

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WebACLSummary
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name or description of the WebACL (p. 951).

Contents

Name
A friendly name or description of the WebACL (p. 951). You can't change the name of a WebACL after you create it.

Type: String


Pattern: .\S+. *

Required: Yes

WebACLId
A unique identifier for a WebACL. You use WebACLId to get information about a WebACL (see GetWebACL (p. 368)), update a WebACL (see UpdateWebACL (p. 475)), and delete a WebACL from AWS WAF (see DeleteWebACL (p. 324)).

WebACLId is returned by CreateWebACL (p. 277) and by ListWebACLs (p. 415).

Type: String


Pattern: .\S+. *

Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WebACLUpdate
Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies whether to insert a Rule into or delete a Rule from a WebACL.

Contents

Action

Specifies whether to insert a Rule into or delete a Rule from a WebACL.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

ActivatedRule

The ActivatedRule object in an UpdateWebACL request specifies a Rule that you want to insert or delete, the priority of the Rule in the WebACL, and the action that you want AWS WAF to take when a web request matches the Rule (ALLOW, BLOCK, or COUNT).

Type: ActivatedRule (p. 875) object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**XssMatchSet**

Service: AWS WAF Classic

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.
**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains **XssMatchTuple** objects, which specify the parts of web requests that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header. If a **XssMatchSet** contains more than one **XssMatchTuple** object, a request needs to include cross-site scripting attacks in only one of the specified parts of the request to be considered a match.

**Contents**

**Name**
- The name, if any, of the **XssMatchSet**.
  - Type: String
  - Pattern: `.*\S.*`
  - Required: No

**XssMatchSetId**
- A unique identifier for an **XssMatchSet**. You use **XssMatchSetId** to get information about an **XssMatchSet** (see **GetXssMatchSet** (p. 371)), update an **XssMatchSet** (see **UpdateXssMatchSet** (p. 480)), insert an **XssMatchSet** into a **Rule** or delete one from a **Rule** (see **UpdateRule** (p. 458)), and delete an **XssMatchSet** from AWS WAF (see **DeleteXssMatchSet** (p. 327)).
  - Type: String
  - Pattern: `.*\S.*`
  - Required: Yes

**XssMatchTuples**
- Specifies the parts of web requests that you want to inspect for cross-site scripting attacks.
  - Type: Array of **XssMatchTuple** (p. 959) objects
  - Required: Yes

**See Also**
For more information about using this API in one of the language-specific AWS SDKs, see the following:
- **AWS SDK for C++**
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
XssMatchSetSummary

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The Id and Name of an XssMatchSet.

Contents

Name

The name of the XssMatchSet, if any, specified by Id.

Type: String


Pattern: .*\S.*

Required: Yes

XssMatchSetId

A unique identifier for an XssMatchSet. You use XssMatchSetId to get information about a XssMatchSet (see GetXssMatchSet (p. 371)), update an XssMatchSet (see UpdateXssMatchSet (p. 480)), insert an XssMatchSet into a Rule or delete one from a Rule (see UpdateRule (p. 458)), and delete an XssMatchSet from AWS WAF (see DeleteXssMatchSet (p. 327)).

XssMatchSetId is returned by CreateXssMatchSet (p. 286) and by ListXssMatchSets (p. 418).

Type: String


Pattern: .*\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
XssMatchSetUpdate

Service: AWS WAF Classic

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect for cross-site scripting attacks and indicates whether you want to add the specification to an XssMatchSet (p. 955) or delete it from an XssMatchSet.

Contents

Action

Specify INSERT to add an XssMatchSetUpdate (p. 958) to an XssMatchSet (p. 955). Use DELETE to remove an XssMatchSetUpdate from an XssMatchSet.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

XssMatchTuple

Specifies the part of a web request that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header.

Type: XssMatchTuple (p. 959) object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
XssMatchTuple

Service: AWS WAF Classic

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide. **For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header.

**Contents**

**FieldToMatch**

Specifies where in a web request to look for cross-site scripting attacks.

Type: FieldToMatch (p. 887) object

Required: Yes

**TextTransformation**

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on FieldToMatch before inspecting it for a match.

You can only specify a single type of TextTransformation.

**CMD_LINE**

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: `\ " ' ^`
- Delete spaces before the following characters: `/ (`
- Replace the following characters with a space: `, ;`
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

**COMPRESS_WHITE_SPACE**

Use this option to replace the following characters with a space character (decimal 32):

- `\f`, formfeed, decimal 12
- `\t`, tab, decimal 9
- `\n`, newline, decimal 10
- `\r`, carriage return, decimal 13
- `\v`, vertical tab, decimal 11
- non-breaking space, decimal 160

**COMPRESS_WHITE_SPACE** also replaces multiple spaces with one space.

**HTML_ENTITY_DECODE**
Use this option to replace HTML-encoded characters with unencoded characters. 

**HTML_ENTITY_DECODE** performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

**LOWERCASE**

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

**URL_DECODE**

Use this option to decode a URL-encoded value.

**NONE**

Specify **NONE** if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

**AWS WAF Classic Regional**

The following data types are supported by AWS WAF Classic Regional:

- ActivatedRule (p. 963)
- ByteMatchSet (p. 966)
- ByteMatchSetSummary (p. 968)
- ByteMatchSetUpdate (p. 969)
- ByteMatchTuple (p. 970)
- ExcludedRule (p. 974)
- FieldToMatch (p. 975)
- GeoMatchConstraint (p. 977)
- GeoMatchSet (p. 979)
- GeoMatchSetSummary (p. 981)
- GeoMatchSetUpdate (p. 982)
- HTTPHeader (p. 983)
- HTTPRequest (p. 984)
- IPSet (p. 986)
- IPSetDescriptor (p. 988)
- IPSetSummary (p. 990)
- IPSetUpdate (p. 991)
- LoggingConfiguration (p. 992)
- Predicate (p. 994)
- RateBasedRule (p. 996)
- RegexMatchSet (p. 998)
- RegexMatchSetSummary (p. 1000)
- RegexMatchSetUpdate (p. 1001)
- RegexMatchTuple (p. 1002)
- RegexPatternSet (p. 1005)
- RegexPatternSetSummary (p. 1007)
- RegexPatternSetUpdate (p. 1008)
- Rule (p. 1009)
- RuleGroup (p. 1011)
- RuleGroupSummary (p. 1013)
- RuleGroupUpdate (p. 1014)
- RuleSummary (p. 1015)
- RuleUpdate (p. 1016)
- SampledHTTPRequest (p. 1017)
- SizeConstraint (p. 1019)
- SizeConstraintSet (p. 1022)
- SizeConstraintSetSummary (p. 1024)
- SizeConstraintSetUpdate (p. 1025)
- SqlInjectionMatchSet (p. 1026)
- SqlInjectionMatchSetSummary (p. 1028)
- SqlInjectionMatchSetUpdate (p. 1029)
- SqlInjectionMatchTuple (p. 1030)
- SubscribedRuleGroupSummary (p. 1032)
- Tag (p. 1034)
- TagInfoForResource (p. 1035)
- TimeWindow (p. 1036)
- WafAction (p. 1037)
- WafOverrideAction (p. 1038)
- WebACL (p. 1039)
- WebACLSummary (p. 1041)
- WebACLUpdate (p. 1042)
- XssMatchSet (p. 1043)
- XssMatchSetSummary (p. 1045)
- XssMatchSetUpdate (p. 1046)
- XssMatchTuple (p. 1047)
ActivatedRule

Service: AWS WAF Classic Regional

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `ActivatedRule` object in an `UpdateWebACL` request specifies a `Rule` that you want to insert or delete, the priority of the `Rule` in the `WebACL`, and the action that you want AWS WAF to take when a web request matches the `Rule` (ALLOW, BLOCK, or COUNT).

To specify whether to insert or delete a `Rule`, use the `Action` parameter in the `WebACLUpdate` data type.

**Contents**

**Action**

Specifies the action that Amazon CloudFront or AWS WAF takes when a web request matches the conditions in the `Rule`. Valid values for `Action` include the following:

- **ALLOW**: CloudFront responds with the requested object.
- **BLOCK**: CloudFront responds with an HTTP 403 (Forbidden) status code.
- **COUNT**: AWS WAF increments a counter of requests that match the conditions in the rule and then continues to inspect the web request based on the remaining rules in the web ACL.

`ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case, you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.

- **Type**: `WafAction (p. 1037)` object
- **Required**: No

**ExcludedRules**

An array of rules to exclude from a rule group. This is applicable only when the `ActivatedRule` refers to a `RuleGroup`.

Sometimes it is necessary to troubleshoot rule groups that are blocking traffic unexpectedly (false positives). One troubleshooting technique is to identify the specific rule within the rule group that is blocking the legitimate traffic and then disable (exclude) that particular rule. You can exclude rules from both your own rule groups and AWS Marketplace rule groups that have been associated with a web ACL.

Specifying `ExcludedRules` does not remove those rules from the rule group. Rather, it changes the action for the rules to COUNT. Therefore, requests that match an `ExcludedRule` are counted but not blocked. The `RuleGroup` owner will receive COUNT metrics for each `ExcludedRule`.

If you want to exclude rules from a rule group that is already associated with a web ACL, perform the following steps:

1. Use the AWS WAF logs to identify the IDs of the rules that you want to exclude. For more information about the logs, see `Logging Web ACL Traffic Information`.
2. Submit an `UpdateWebACL` request that has two actions:
   - The first action deletes the existing rule group from the web ACL. That is, in the `UpdateWebACL` request, the first `Updates:Action` should be **DELETE** and
Updates:ActivatedRule:RuleId should be the rule group that contains the rules that you want to exclude.

- The second action inserts the same rule group back in, but specifying the rules to exclude. That is, the second Updates:Action should be INSERT, Updates:ActivatedRule:RuleId should be the rule group that you just removed, and ExcludedRules should contain the rules that you want to exclude.

Type: Array of ExcludedRule (p. 974) objects

Required: No

OverrideAction

Use the OverrideAction to test your RuleGroup.

Any rule in a RuleGroup can potentially block a request. If you set the OverrideAction to None, the RuleGroup will block a request if any individual rule in the RuleGroup matches the request and is configured to block that request. However if you first want to test the RuleGroup, set the OverrideAction to Count. The RuleGroup will then override any block action specified by individual rules contained within the group. Instead of blocking matching requests, those requests will be counted. You can view a record of counted requests using GetSampledRequests (p. 610).

ActivatedRule|OverrideAction applies only when updating or adding a RuleGroup to a WebACL. In this case you do not use ActivatedRule|Action. For all other update requests, ActivatedRule|Action is used instead of ActivatedRule|OverrideAction.

Type: WafOverrideAction (p. 1038) object

Required: No

Priority

Specifies the order in which the Rules in a WebACL are evaluated. Rules with a lower value for Priority are evaluated before Rules with a higher value. The value must be a unique integer. If you add multiple Rules to a WebACL, the values don't need to be consecutive.

Type: Integer

Required: Yes

RuleId

The RuleId for a Rule. You use RuleId to get more information about a Rule (see GetRule (p. 606)), update a Rule (see UpdateRule (p. 716)), insert a Rule into a WebACL or delete a one from a WebACL (see UpdateWebACL (p. 733)), or delete a Rule from AWS WAF (see DeleteRule (p. 562)).

RuleId is returned by CreateRule (p. 511) and by ListRules (p. 658).

Type: String


Pattern: .\S.*

Required: Yes

Type

The rule type, either REGULAR, as defined by Rule (p. 1009), RATE_BASED, as defined by RateBasedRule (p. 996), or GROUP, as defined by RuleGroup (p. 1011). The default is REGULAR. Although this field is optional, be aware that if you try to add a RATE_BASED rule to a web ACL
without setting the type, the UpdateWebACL (p. 733) request will fail because the request tries to add a REGULAR rule with the specified ID, which does not exist.

Type: String
Valid Values: REGULAR | RATE_BASED | GROUP
Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ByteMatchSet

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetByteMatchSet (p. 582) request, ByteMatchSet is a complex type that contains the ByteMatchSetId and Name of a ByteMatchSet, and the values that you specified when you updated the ByteMatchSet.

A complex type that contains ByteMatchTuple objects, which specify the parts of web requests that you want AWS WAF to inspect and the values that you want AWS WAF to search for. If a ByteMatchSet contains more than one ByteMatchTuple object, a request needs to match the settings in only one ByteMatchTuple to be considered a match.

Contents

ByteMatchSetId

The ByteMatchSetId for a ByteMatchSet. You use ByteMatchSetId to get information about a ByteMatchSet (see GetByteMatchSet (p. 582)), update a ByteMatchSet (see UpdateByteMatchSet (p. 690)), insert a ByteMatchSet into a Rule or delete one from a Rule (see UpdateRule (p. 716)), and delete a ByteMatchSet from AWS WAF (see DeleteByteMatchSet (p. 540)).

ByteMatchSetId is returned by CreateByteMatchSet (p. 489) and by ListByteMatchSets (p. 631).

Type: String


Pattern: .\S.*

Required: Yes

ByteMatchTuples

Specifies the bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings.

Type: Array of ByteMatchTuple (p. 970) objects

Required: Yes

Name

A friendly name or description of the ByteMatchSet (p. 966). You can't change Name after you create a ByteMatchSet.

Type: String


Pattern: .\S.*

Required: No
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ByteMatchSetSummary

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by ListByteMatchSets (p. 631). Each ByteMatchSetSummary object includes the Name and ByteMatchSetId for one ByteMatchSet (p. 966).

**Contents**

**ByteMatchSetId**

The ByteMatchSetId for a ByteMatchSet. You use ByteMatchSetId to get information about a ByteMatchSet, update a ByteMatchSet, remove a ByteMatchSet from a Rule, and delete a ByteMatchSet from AWS WAF.

ByteMatchSetId is returned by CreateByteMatchSet (p. 489) and by ListByteMatchSets (p. 631).

Type: String


Pattern: .\S.*

Required: Yes

**Name**

A friendly name or description of the ByteMatchSet (p. 966). You can't change Name after you create a ByteMatchSet.

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ByteMatchSetUpdate
Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an UpdateByteMatchSet (p. 690) request, ByteMatchSetUpdate specifies whether to insert or delete a ByteMatchTuple (p. 970) and includes the settings for the ByteMatchTuple.

**Contents**

**Action**

Specifies whether to insert or delete a ByteMatchTuple (p. 970).

Type: String

Valid Values: INSERT | DELETE

Required: Yes

**ByteMatchTuple**

Information about the part of a web request that you want AWS WAF to inspect and the value that you want AWS WAF to search for. If you specify DELETE for the value of **Action**, the ByteMatchTuple values must exactly match the values in the ByteMatchTuple that you want to delete from the ByteMatchSet.

Type: ByteMatchTuple (p. 970) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ByteMatchTuple

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings.

**Contents**

*FieldToMatch*

The part of a web request that you want AWS WAF to search, such as a specified header or a query string. For more information, see FieldToMatch (p. 975).

Type: FieldToMatch (p. 975) object

Required: Yes

*PositionalConstraint*

Within the portion of a web request that you want to search (for example, in the query string, if any), specify where you want AWS WAF to search. Valid values include the following:

**CONTAINS**

The specified part of the web request must include the value of TargetString, but the location doesn't matter.

**CONTAINS_WORD**

The specified part of the web request must include the value of TargetString, and TargetString must contain only alphanumeric characters or underscore (A-Z, a-z, 0-9, or _). In addition, TargetString must be a word, which means one of the following:

- TargetString exactly matches the value of the specified part of the web request, such as the value of a header.
- TargetString is at the beginning of the specified part of the web request and is followed by a character other than an alphanumeric character or underscore (_), for example, BadBot;.
- TargetString is at the end of the specified part of the web request and is preceded by a character other than an alphanumeric character or underscore (_), for example, ;BadBot.
- TargetString is in the middle of the specified part of the web request and is preceded and followed by characters other than alphanumeric characters or underscore (_), for example, –BadBot;.

**EXACTLY**

The value of the specified part of the web request must exactly match the value of TargetString.

**STARTS_WITH**

The value of TargetString must appear at the beginning of the specified part of the web request.

**ENDS_WITH**
The value of TargetString must appear at the end of the specified part of the web request.

Type: String

Valid Values: EXACTLY | STARTS_WITH | ENDS_WITH | CONTAINS | CONTAINS_WORD

Required: Yes

**TargetString**

The value that you want AWS WAF to search for. AWS WAF searches for the specified string in the part of web requests that you specified in FieldToMatch. The maximum length of the value is 50 bytes.

Valid values depend on the values that you specified for FieldToMatch:

- **HEADER**: The value that you want AWS WAF to search for in the request header that you specified in FieldToMatch (p. 975), for example, the value of the User-Agent or Referer header.
- **METHOD**: The HTTP method, which indicates the type of operation specified in the request. Amazon CloudFront supports the following methods: DELETE, GET, HEAD, OPTIONS, PATCH, POST, and PUT.
- **QUERY_STRING**: The value that you want AWS WAF to search for in the query string, which is the part of a URL that appears after a ? character.
- **URI**: The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.
- **BODY**: The part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form. The request body immediately follows the request headers. Note that only the first 8192 bytes of the request body are forwarded to AWS WAF for inspection. To allow or block requests based on the length of the body, you can create a size constraint set. For more information, see CreateSizeConstraintSet (p. 519).
- **SINGLE_QUERY_ARG**: The parameter in the query string that you will inspect, such as UserName or SalesRegion. The maximum length for SINGLE_QUERY_ARG is 30 characters.
- **ALL_QUERY_ARGS**: Similar to SINGLE_QUERY_ARG, but instead of inspecting a single parameter, AWS WAF inspects all parameters within the query string for the value or regex pattern that you specify in TargetString.

If TargetString includes alphabetic characters A-Z and a-z, note that the value is case sensitive.

**If you're using the AWS WAF API**

Specify a base64-encoded version of the value. The maximum length of the value before you base64-encode it is 50 bytes.

For example, suppose the value of Type is HEADER and the value of Data is User-Agent. If you want to search the User-Agent header for the value BadBot, you base64-encode BadBot using MIME base64-encoding and include the resulting value, QmFkQm90, in the value of TargetString.

**If you're using the AWS CLI or one of the AWS SDKs**

The value that you want AWS WAF to search for. The SDK automatically base64 encodes the value.

Type: Base64-encoded binary data object

Required: Yes

**TextTransformation**

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on FieldToMatch before inspecting it for a match.
You can only specify a single type of TextTransformation.

CMD_LINE

When you’re concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

• Delete the following characters: \\ " ' ^
• Delete spaces before the following characters: / ( 
• Replace the following characters with a space: , ;
• Replace multiple spaces with one space
• Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

• \f, formfeed, decimal 12
• \t, tab, decimal 9
• \n, newline, decimal 10
• \r, carriage return, decimal 13
• \v, vertical tab, decimal 11
• non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. HTML_ENTITY_DECODE performs the following operations:

• Replaces (`ampersand`)quot; with "
• Replaces (`ampersand`)nbsp; with a non-breaking space, decimal 160
• Replaces (`ampersand`)lt; with a "less than" symbol
• Replaces (`ampersand`)gt; with >
• Replaces characters that are represented in hexadecimal format, (`ampersand`)#xhhhh;, with the corresponding characters
• Replaces characters that are represented in decimal format, (`ampersand`)#nnnn;, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify NONE if you don’t want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ExcludedRule

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The rule to exclude from a rule group. This is applicable only when the `ActivatedRule` refers to a `RuleGroup`. The rule must belong to the `RuleGroup` that is specified by the `ActivatedRule`.

**Contents**

**RuleId**

The unique identifier for the rule to exclude from the rule group.

Type: String


Pattern: .\s.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
FieldToMatch

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies where in a web request to look for TargetString.

**Contents**

**Data**

When the value of Type is HEADER, enter the name of the header that you want AWS WAF to search, for example, User-Agent or Referer. The name of the header is not case sensitive.

When the value of Type is SINGLE_QUERY_ARG, enter the name of the parameter that you want AWS WAF to search, for example, UserName or SalesRegion. The parameter name is not case sensitive.

If the value of Type is any other value, omit Data.

Type: String


Pattern: .*\S.*

Required: No

**Type**

The part of the web request that you want AWS WAF to search for a specified string. Parts of a request that you can search include the following:

- **HEADER**: A specified request header, for example, the value of the User-Agent or Referer header. If you choose HEADER for the type, specify the name of the header in Data.
- **METHOD**: The HTTP method, which indicated the type of operation that the request is asking the origin to perform. Amazon CloudFront supports the following methods: DELETE, GET, HEAD, OPTIONS, PATCH, POST, and PUT.
- **QUERY_STRING**: A query string, which is the part of a URL that appears after a ? character, if any.
- **URI**: The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.
- **BODY**: The part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form. The request body immediately follows the request headers. Note that only the first 8192 bytes of the request body are forwarded to AWS WAF for inspection. To allow or block requests based on the length of the body, you can create a size constraint set. For more information, see CreateSizeConstraintSet (p. 519).
- **SINGLE_QUERY_ARG**: The parameter in the query string that you will inspect, such as UserName or SalesRegion. The maximum length for SINGLE_QUERY_ARG is 30 characters.
- **ALL_QUERY_ARGS**: Similar to SINGLE_QUERY_ARG, but rather than inspecting a single parameter, AWS WAF will inspect all parameters within the query for the value or regex pattern that you specify in TargetString.

Type: String
Valid Values: URI | QUERY_STRING | HEADER | METHOD | BODY | SINGLE_QUERY_ARG | ALL_QUERY_ARGS

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
GeoMatchConstraint

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The country from which web requests originate that you want AWS WAF to search for.

## Contents

### Type

The type of geographical area you want AWS WAF to search for. Currently **Country** is the only valid value.

Type: String

Valid Values: **Country**

Required: Yes

### Value

The country that you want AWS WAF to search for.

Type: String


Required: Yes

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**GeoMatchSet**

*Service: AWS WAF Classic Regional*

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains one or more countries that AWS WAF will search for.

**Contents**

**GeoMatchConstraints**

An array of **GeoMatchConstraint (p. 977)** objects, which contain the country that you want AWS WAF to search for.

Type: Array of **GeoMatchConstraint (p. 977)** objects

Required: Yes

**GeoMatchSetId**

The **GeoMatchSetId** for an **GeoMatchSet**. You use **GeoMatchSetId** to get information about a **GeoMatchSet** (see **GeoMatchSet (p. 979)**), update a **GeoMatchSet** (see **UpdateGeoMatchSet (p. 694)**), insert a **GeoMatchSet** into a **Rule** or delete one from a **Rule** (see **UpdateRule (p. 716)**), and delete a **GeoMatchSet** from AWS WAF (see **DeleteGeoMatchSet (p. 543)**).

**GeoMatchSetId** is returned by **CreateGeoMatchSet (p. 493)** and by **ListGeoMatchSets (p. 634)**.

Type: String


Pattern: .*\S.*

Required: Yes

**Name**

A friendly name or description of the **GeoMatchSet (p. 979)**. You can't change the name of an **GeoMatchSet** after you create it.

Type: String


Pattern: .*\S.*

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- **AWS SDK for C++**
- **AWS SDK for Go**
• AWS SDK for Java V2
• AWS SDK for Ruby V3
**GeoMatchSetSummary**

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name of the GeoMatchSet.

**Contents**

**GeoMatchSetId**

The GeoMatchSetId for a GeoMatchSet (p. 979). You can use GeoMatchSetId in a `GetGeoMatchSet (p. 589)` request to get detailed information about a GeoMatchSet (p. 979).

Type: String


Pattern: .\S.*

Required: Yes

**Name**

A friendly name or description of the GeoMatchSet (p. 979). You can't change the name of a GeoMatchSet after you create it.

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
GeoMatchSetUpdate

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the type of update to perform to an GeoMatchSet (p. 979) with UpdateGeoMatchSet (p. 694).

**Contents**

**Action**

Specifies whether to insert or delete a country with UpdateGeoMatchSet (p. 694).

Type: String

Valid Values: INSERT | DELETE

Required: Yes

**GeoMatchConstraint**

The country from which web requests originate that you want AWS WAF to search for.

Type: GeoMatchConstraint (p. 977) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
HTTPHeader

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a GetSampledRequests request includes an HTTPHeader complex type that appears as Headers in the response syntax. HTTPHeader contains the names and values of all of the headers that appear in one of the web requests that were returned by GetSampledRequests.

Contents

Name

The name of one of the headers in the sampled web request.

Type: String

Required: No

Value

The value of one of the headers in the sampled web request.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
HTTPRequest

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a GetSampledRequests request includes an HTTPRequest complex type that appears as Request in the response syntax. HTTPRequest contains information about one of the web requests that were returned by GetSampledRequests.

Contents

ClientIP

The IP address that the request originated from. If the WebACL is associated with an Amazon CloudFront distribution, this is the value of one of the following fields in CloudFront access logs:

- c-ip, if the viewer did not use an HTTP proxy or a load balancer to send the request
- x-forwarded-for, if the viewer did use an HTTP proxy or a load balancer to send the request

Type: String
Required: No

Country

The two-letter country code for the country that the request originated from. For a current list of country codes, see the Wikipedia entry ISO 3166-1 alpha-2.

Type: String
Required: No

Headers

A complex type that contains two values for each header in the sampled web request: the name of the header and the value of the header.

Type: Array of HTTPHeader objects
Required: No

HTTPVersion

The HTTP version specified in the sampled web request, for example, HTTP/1.1.

Type: String
Required: No

Method

The HTTP method specified in the sampled web request. Amazon CloudFront supports the following methods: DELETE, GET, HEAD, OPTIONS, PATCH, POST, and PUT.

Type: String
Required: No
**URI**

The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.

Type: String

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
### IPSet

**Service:** AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see [AWS WAF Classic](https://docs.aws.amazon.com/waf/latest/developerguide/) in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains one or more IP addresses or blocks of IP addresses specified in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports IPv4 address ranges: /8 and any range between /16 through /32. AWS WAF supports IPv6 address ranges: /24, /32, /48, /56, /64, and /128.

To specify an individual IP address, you specify the four-part IP address followed by a /32, for example, 192.0.2.0/32. To block a range of IP addresses, you can specify /8 or any range between /16 through /32 (for IPv4) or /24, /32, /48, /56, /64, or /128 (for IPv6). For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

**Contents**

**IPSetDescriptors**

The IP address type (IPv4 or IPv6) and the IP address range (in CIDR notation) that web requests originate from. If the `WebACL` is associated with an Amazon CloudFront distribution and the viewer did not use an HTTP proxy or a load balancer to send the request, this is the value of the c-ip field in the CloudFront access logs.

Type: Array of [IPSetDescriptor](https://docs.aws.amazon.com/waf/latest/developerguide/) objects

Required: Yes

**IPSetId**

The IPSetId for an IPSet. You use IPSetId to get information about an IPSet (see [GetIPSet](https://docs.aws.amazon.com/waf/latest/developerguide/)), update an IPSet (see [UpdateIPSet](https://docs.aws.amazon.com/waf/latest/developerguide/)), insert an IPSet into a Rule or delete one from a Rule (see [UpdateRule](https://docs.aws.amazon.com/waf/latest/developerguide/)), and delete an IPSet from AWS WAF (see [DeleteIPSet](https://docs.aws.amazon.com/waf/latest/developerguide/)).

IPSetId is returned by [CreateIPSet](https://docs.aws.amazon.com/waf/latest/developerguide/) and by [ListIPSets](https://docs.aws.amazon.com/waf/latest/developerguide/).

Type: String


Pattern: .\S.*

Required: Yes

**Name**

A friendly name or description of the IPSet. You can't change the name of an IPSet after you create it.

Type: String


Pattern: .\S.*

Required: No
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
### IPSetDescriptor

**Service:** AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://docs.aws.amazon.com/waf/latest/developerguide/) in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the IP address type (**IPV4** or **IPV6**) and the IP address range (in CIDR format) that web requests originate from.

### Contents

**Type**

Specify **IPV4** or **IPV6**.

Type: String

Valid Values: **IPV4** | **IPV6**

Required: Yes

**Value**

Specify an IPv4 address by using CIDR notation. For example:

- To configure AWS WAF to allow, block, or count requests that originated from the IP address 192.0.2.44, specify 192.0.2.44/32.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify 192.0.2.0/24.

For more information about CIDR notation, see the Wikipedia entry [Classless Inter-Domain Routing](https://en.wikipedia.org/wiki/Classless_Inter-Domain_Routing).

Specify an IPv6 address by using CIDR notation. For example:

- To configure AWS WAF to allow, block, or count requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify 1111:0000:0000:0000:0000:0000:0000:0111/128.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses 1111:0000:0000:0000:0000:0000:0000:0000 to 1111:0000:0000:0000:0000:0000:0000:0000, specify 1111:0000:0000:0000:0000:0000:0000:0000/64.

Type: String


Pattern: .*\S.*

Required: Yes

### See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
**IPSetSummary**

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name of the IPSet.

**Contents**

**IPSetId**

The IPSetId for an IPSet. You can use IPSetId in a GetIPSet request to get detailed information about an IPSet.

Type: String


Pattern: .\S.*

Required: Yes

**Name**

A friendly name or description of the IPSet. You can't change the name of an IPSet after you create it.

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
IPSetUpdate
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the type of update to perform to an IPSet (p. 986) with UpdateIPSet (p. 698).

Contents

Action

Specifies whether to insert or delete an IP address with UpdateIPSet (p. 698).

Type: String

Valid Values: INSERT | DELETE

Required: Yes

IPSetDescriptor

The IP address type (IPV4 or IPV6) and the IP address range (in CIDR notation) that web requests originate from.

Type: IPSetDescriptor (p. 988) object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
LoggingConfiguration
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The Amazon Kinesis Data Firehose, RedactedFields information, and the web ACL Amazon Resource Name (ARN).

Contents

LogDestinationConfigs
An array of Amazon Kinesis Data Firehose ARNs.
Type: Array of strings
Array Members: Fixed number of 1 item.
Pattern: .*\S.*
Required: Yes

RedactedFields
The parts of the request that you want redacted from the logs. For example, if you redact the cookie field, the cookie field in the firehose will be xxx.
Type: Array of FieldToMatch (p. 975) objects
Required: No

ResourceArn
The Amazon Resource Name (ARN) of the web ACL that you want to associate with LogDestinationConfigs.
Type: String
Pattern: .*\S.*
Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Predicate

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the ByteMatchSet (p. 966), IPSet (p. 986), SqlInjectionMatchSet (p. 1026), XssMatchSet (p. 1043), RegexMatchSet (p. 998), GeoMatchSet (p. 979), and SizeConstraintSet (p. 1022) objects that you want to add to a Rule and, for each object, indicates whether you want to negate the settings, for example, requests that do NOT originate from the IP address 192.0.2.44.

**Contents**

**DataId**
A unique identifier for a predicate in a Rule, such as ByteMatchSetId or IPSetId. The ID is returned by the corresponding Create or List command.

Type: String


Pattern: .*\S.*

Required: Yes

**Negated**
Set Negated to False if you want AWS WAF to allow, block, or count requests based on the settings in the specified ByteMatchSet (p. 966), IPSet (p. 986), SqlInjectionMatchSet (p. 1026), XssMatchSet (p. 1043), RegexMatchSet (p. 998), GeoMatchSet (p. 979), or SizeConstraintSet (p. 1022). For example, if an IPSet includes the IP address 192.0.2.44, AWS WAF will allow or block requests based on that IP address.

Set Negated to True if you want AWS WAF to allow or block a request based on the negation of the settings in the ByteMatchSet (p. 966), IPSet (p. 986), SqlInjectionMatchSet (p. 1026), XssMatchSet (p. 1043), RegexMatchSet (p. 998), GeoMatchSet (p. 979), or SizeConstraintSet (p. 1022). For example, if an IPSet includes the IP address 192.0.2.44, AWS WAF will allow, block, or count requests based on all IP addresses except 192.0.2.44.

Type: Boolean

Required: Yes

**Type**
The type of predicate in a Rule, such as ByteMatch or IPSet.

Type: String

Valid Values: IPMatch | ByteMatch | SqlInjectionMatch | GeoMatch | SizeConstraint | XssMatch | RegexMatch

Required: Yes
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RateBasedRule

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide. For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A RateBasedRule is identical to a regular Rule (p. 1009), with one addition: a RateBasedRule counts the number of requests that arrive from a specified IP address every five minutes. For example, based on recent requests that you’ve seen from an attacker, you might create a RateBasedRule that includes the following conditions:

- The requests come from 192.0.2.44.
- They contain the value BadBot in the User-Agent header.

In the rule, you also define the rate limit as 1,000.

Requests that meet both of these conditions and exceed 1,000 requests every five minutes trigger the rule's action (block or count), which is defined in the web ACL.

**Contents**

**MatchPredicates**

The Predicates object contains one Predicate element for each ByteMatchSet (p. 966), IPSet (p. 986), or SqlInjectionMatchSet (p. 1026) object that you want to include in a RateBasedRule.

Type: Array of Predicate (p. 994) objects

Required: No

**MetricName**

A friendly name or description for the metrics for a RateBasedRule. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RateBasedRule.

Type: String


Pattern: .*\S.*

Required: Yes

**Name**

A friendly name or description for a RateBasedRule. You can't change the name of a RateBasedRule after you create it.

Type: String


Pattern: .*\S.*
RateBasedRule

Required: Yes

RateKey

The field that AWS WAF uses to determine if requests are likely arriving from single source and thus subject to rate monitoring. The only valid value for RateKey is IP. IP indicates that requests arriving from the same IP address are subject to the RateLimit that is specified in the RateBasedRule.

Type: String

Valid Values: IP

Required: Yes

RateLimit

The maximum number of requests, which have an identical value in the field specified by the RateKey, allowed in a five-minute period. If the number of requests exceeds the RateLimit and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

RuleId

A unique identifier for a RateBasedRule. You use RuleId to get more information about a RateBasedRule (see GetRateBasedRule (p. 597)), update a RateBasedRule (see UpdateRateBasedRule (p. 703)), insert a RateBasedRule into a WebACL or delete one from a WebACL (see UpdateWebACL (p. 733)), or delete a RateBasedRule from AWS WAF (see DeleteRateBasedRule (p. 553)).

Type: String


Pattern: .\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegExMatchSet**

*Service: AWS WAF Classic Regional*

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a **GetRegExMatchSet** (p. 602) request, **RegExMatchSet** is a complex type that contains the **RegExMatchSetId** and **Name** of a **RegExMatchSet**, and the values that you specified when you updated the **RegExMatchSet**.

The values are contained in a **RegExMatchTuple** object, which specify the parts of web requests that you want AWS WAF to inspect and the values that you want AWS WAF to search for. If a **RegExMatchSet** contains more than one **RegExMatchTuple** object, a request needs to match the settings in only one **ByteMatchTuple** to be considered a match.

**Contents**

**Name**

A friendly name or description of the **RegExMatchSet** (p. 998). You can't change **Name** after you create a **RegExMatchSet**.

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: .*
- **Required**: No

**RegExMatchSetId**

The **RegExMatchSetId** for a **RegExMatchSet**. You use **RegExMatchSetId** to get information about a **RegExMatchSet** (see **GetRegExMatchSet** (p. 602)), update a **RegExMatchSet** (see **UpdateRegExMatchSet** (p. 708)), insert a **RegExMatchSet** into a **Rule** or delete one from a **Rule** (see **UpdateRule** (p. 716)), and delete a **RegExMatchSet** from AWS WAF (see **DeleteRegExMatchSet** (p. 556)).

**RegExMatchSetId** is returned by **CreateRegExMatchSet** (p. 505) and by **ListRegExMatchSets** (p. 646).

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 128.
- **Pattern**: .*
- **Required**: No

**RegExMatchTuples**

Contains an array of **RegExMatchTuple** (p. 1002) objects. Each **RegExMatchTuple** object contains:

- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the **User-Agent** header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see **RegexPatternSet** (p. 1005).
• Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

Type: Array of RegexMatchTuple (p. 1002) objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
**RegexMatchSetSummary**

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](http://aws.amazon.com/waf/classic/) in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](http://aws.amazon.com/waf/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by ListRegexMatchSets (p. 646). Each RegexMatchSetSummary object includes the Name and RegexMatchSetId for one RegexMatchSet (p. 998).

**Contents**

**Name**

A friendly name or description of the RegexMatchSet (p. 998). You can't change Name after you create a RegexMatchSet.

Type: String


Pattern: `.\S.*`

Required: Yes

**RegexMatchSetId**

The RegexMatchSetId for a RegexMatchSet. You use RegexMatchSetId to get information about a RegexMatchSet, update a RegexMatchSet, remove a RegexMatchSet from a Rule, and delete a RegexMatchSet from AWS WAF.

RegexMatchSetId is returned by CreateRegexMatchSet (p. 505) and by ListRegexMatchSets (p. 646).

Type: String


Pattern: `.\S.*`

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](http://aws.amazon.com/cþþ/)
- [AWS SDK for Go](http://aws.amazon.com/go/)
- [AWS SDK for Java V2](http://aws.amazon.com/java/)
- [AWS SDK for Ruby V3](http://aws.amazon.com/ruby/)

1000
RegexMatchSetUpdate
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an UpdateRegexMatchSet (p. 708) request, RegexMatchSetUpdate specifies whether to insert or delete a RegexMatchTuple (p. 1002) and includes the settings for the RegexMatchTuple.

Contents

Action
Specifies whether to insert or delete a RegexMatchTuple (p. 1002).

Type: String

Valid Values: INSERT | DELETE

Required: Yes

RegexMatchTuple
Information about the part of a web request that you want AWS WAF to inspect and the identifier of the regular expression (regex) pattern that you want AWS WAF to search for. If you specify DELETE for the value of Action, the RegexMatchTuple values must exactly match the values in the RegexMatchTuple that you want to delete from the RegexMatchSet.

Type: RegexMatchTuple (p. 1002) object

Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexMatchTuple**

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The regular expression pattern that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings. Each RegexMatchTuple object contains:

- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the User-Agent header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet (p. 1005).
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

**Contents**

**FieldToMatch**

Specifies where in a web request to look for the RegexPatternSet.

Type: FieldToMatch (p. 975) object

Required: Yes

**RegexPatternSetId**

The RegexPatternSetId for a RegexPatternSet. You use RegexPatternSetId to get information about a RegexPatternSet (see GetRegexPatternSet (p. 604)), update a RegexPatternSet (see UpdateRegexPatternSet (p. 712)), insert a RegexPatternSet into a RegexMatchSet or delete one from a RegexMatchSet (see UpdateRegexMatchSet (p. 708)), and delete an RegexPatternSet from AWS WAF (see DeleteRegexPatternSet (p. 559)).

RegexPatternSetId is returned by CreateRegexPatternSet (p. 508) and by ListRegexPatternSets (p. 649).

Type: String


Pattern: .\S.*

Required: Yes

**TextTransformation**

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on RegexPatternSet before inspecting a request for a match.

You can only specify a single type of TextTransformation.

**CMD_LINE**
When you're concerned that attackers are injecting an operating system commandline command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: `\ " ' ^`
- Delete spaces before the following characters: `/ (`
- Replace the following characters with a space: `, ;`
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

**COMPRESS_WHITE_SPACE**

Use this option to replace the following characters with a space character (decimal 32):

- `\f`, formfeed, decimal 12
- `\t`, tab, decimal 9
- `\n`, newline, decimal 10
- `\r`, carriage return, decimal 13
- `\v`, vertical tab, decimal 11
- non-breaking space, decimal 160

**COMPRESS_WHITE_SPACE** also replaces multiple spaces with one space.

**HTML_ENTITY_DECODE**

Use this option to replace HTML-encoded characters with unencoded characters. **HTML_ENTITY_DECODE** performs the following operations:

- Replaces `(ampersand)`quot; with `"`
- Replaces `(ampersand)`nbsp; with a non-breaking space, decimal 160
- Replaces `(ampersand)`lt; with a "less than" symbol
- Replaces `(ampersand)`gt; with `>`
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

**LOWERCASE**

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

**URL_DECODE**

Use this option to decode a URL-encoded value.

**NONE**

Specify **NONE** if you don't want to perform any text transformations.

Type: String

Valid Values: **NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE**

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
**RegexPatternSet**

Service: AWS WAF Classic Regional

*Note*

This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://docs.aws.amazon.com/waf/latest/developerguide) in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/wafv2/latest/developerguide/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `RegexPatternSet` specifies the regular expression (regex) pattern that you want AWS WAF to search for, such as `B[a@]dB[00]t`. You can then configure AWS WAF to reject those requests.

**Contents**

**Name**

A friendly name or description of the `RegexPatternSet` (p. 1005). You can't change `Name` after you create a `RegexPatternSet`.

Type: String


Pattern: `.*\S.*`

Required: No

**RegexPatternSetId**

The identifier for the `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet`, update a `RegexPatternSet`, remove a `RegexPatternSet` from a `RegexMatchSet`, and delete a `RegexPatternSet` from AWS WAF.

`RegexMatchSetId` is returned by `CreateRegexPatternSet` (p. 508) and by `ListRegexPatternSets` (p. 649).

Type: String


Pattern: `.*\S.*`

Required: Yes

**RegexPatternStrings**

Specifies the regular expression (regex) patterns that you want AWS WAF to search for, such as `B[a@]dB[00]t`.

Type: Array of strings

Array Members: Maximum number of 10 items.


Pattern: `.*`

Required: Yes
See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexPatternSetSummary**

*Service: AWS WAF Classic Regional*

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by **ListRegexPatternSets (p. 649)**. Each **RegexPatternSetSummary** object includes the **Name** and **RegexPatternSetId** for one **RegexPatternSet (p. 1005)**.

**Contents**

**Name**

A friendly name or description of the **RegexPatternSet (p. 1005)**. You can't change **Name** after you create a **RegexPatternSet**.

Type: String


Pattern: .\S. *

Required: Yes

**RegexPatternSetId**

The **RegexPatternSetId** for a **RegexPatternSet**. You use **RegexPatternSetId** to get information about a **RegexPatternSet**, update a **RegexPatternSet**, remove a **RegexPatternSet** from a **RegexMatchSet**, and delete a **RegexPatternSet** from AWS WAF.

**RegexPatternSetId** is returned by **CreateRegexPatternSet (p. 508)** and by **ListRegexPatternSets (p. 649)**.

Type: String


Pattern: .\S. *

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**RegexPatternSetUpdate**

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an UpdateRegexPatternSet (p. 712) request, RegexPatternSetUpdate specifies whether to insert or delete a RegexPatternString and includes the settings for the RegexPatternString.

## Contents

### Action

Specifies whether to insert or delete a RegexPatternString.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

### RegexPatternString

Specifies the regular expression (regex) pattern that you want AWS WAF to search for, such as B[a@]dB[00]t.

Type: String


Pattern: .*

Required: Yes

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Rule
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A combination of ByteMatchSet (p. 966), IPSet (p. 986), and/or SqlInjectionMatchSet (p. 1026) objects that identify the web requests that you want to allow, block, or count. For example, you might create a Rule that includes the following predicates:

- An IPSet that causes AWS WAF to search for web requests that originate from the IP address 192.0.2.44
- A ByteMatchSet that causes AWS WAF to search for web requests for which the value of the User-Agent header is BadBot.

To match the settings in this Rule, a request must originate from 192.0.2.44 AND include a User-Agent header for which the value is BadBot.

Contents

MetricName
A friendly name or description for the metrics for this Rule. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change MetricName after you create the Rule.

Type: String
Pattern: .\S.*
Required: No

Name
The friendly name or description for the Rule. You can't change the name of a Rule after you create it.

Type: String
Pattern: .\S.*
Required: No

Predicates
The Predicates object contains one Predicate element for each ByteMatchSet (p. 966), IPSet (p. 986), or SqlInjectionMatchSet (p. 1026) object that you want to include in a Rule.

Type: Array of Predicate (p. 994) objects
Required: Yes
RuleId

A unique identifier for a Rule. You use RuleId to get more information about a Rule (see GetRule (p. 606)), update a Rule (see UpdateRule (p. 716)), insert a Rule into a WebACL or delete a one from a WebACL (see UpdateWebACL (p. 733)), or delete a Rule from AWS WAF (see DeleteRule (p. 562)).

RuleId is returned by CreateRule (p. 511) and by ListRules (p. 658).

Type: String
Pattern: .*
Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleGroup
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A collection of predefined rules that you can add to a web ACL.

Rule groups are subject to the following limits:

• Three rule groups per account. You can request an increase to this limit by contacting customer support.
• One rule group per web ACL.
• Ten rules per rule group.

Contents

MetricName
A friendly name or description for the metrics for this RuleGroup. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RuleGroup.

Type: String
Pattern: .\S. *
Required: No

Name
The friendly name or description for the RuleGroup. You can't change the name of a RuleGroup after you create it.

Type: String
Pattern: .\S. *
Required: No

RuleGroupId
A unique identifier for a RuleGroup. You use RuleGroupId to get more information about a RuleGroup (see GetRuleGroup (p. 608)), update a RuleGroup (see UpdateRuleGroup (p. 720)), insert a RuleGroup into a WebACL or delete a one from a WebACL (see UpdateWebACL (p. 733)), or delete a RuleGroup from AWS WAF (see DeleteRuleGroup (p. 565)).

RuleGroupId is returned by CreateRuleGroup (p. 515) and by ListRuleGroups (p. 655).

Type: String

Pattern: .\S\.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
RuleGroupSummary

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

*For the latest version of AWS WAF*, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the friendly name or description of the RuleGroup.

**Contents**

**Name**

A friendly name or description of the RuleGroup (p. 1011). You can't change the name of a RuleGroup after you create it.

Type: String


Pattern: .\S.*

Required: Yes

**RuleGroupId**

A unique identifier for a RuleGroup. You use RuleGroupId to get more information about a RuleGroup (see GetRuleGroup (p. 608)), update a RuleGroup (see UpdateRuleGroup (p. 720)), insert a RuleGroup into a WebACL or delete one from a WebACL (see UpdateWebACL (p. 733)), or delete a RuleGroup from AWS WAF (see DeleteRuleGroup (p. 565)).

RuleGroupId is returned by CreateRuleGroup (p. 515) and by ListRuleGroups (p. 655).

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleGroupUpdate

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies an ActivatedRule and indicates whether you want to add it to a RuleGroup or delete it from a RuleGroup.

Contents

Action

Specify INSERT to add an ActivatedRule to a RuleGroup. Use DELETE to remove an ActivatedRule from a RuleGroup.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

ActivatedRule

The ActivatedRule object specifies a Rule that you want to insert or delete, the priority of the Rule in the WebACL, and the action that you want AWS WAF to take when a web request matches the Rule (ALLOW, BLOCK, or COUNT).

Type: ActivatedRule (p. 963) object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleSummary
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the friendly name or description of the Rule.

Contents

Name
A friendly name or description of the Rule (p. 1009). You can't change the name of a Rule after you create it.

Type: String
Pattern: .*\S.*
Required: Yes

RuleId
A unique identifier for a Rule. You use RuleId to get more information about a Rule (see GetRule (p. 606)), update a Rule (see UpdateRule (p. 716)), insert a Rule into a WebACL or delete one from a WebACL (see UpdateWebACL (p. 733)), or delete a Rule from AWS WAF (see DeleteRule (p. 562)).

RuleId is returned by CreateRule (p. 511) and by ListRules (p. 658).

Type: String
Pattern: .*\S.*
Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
RuleUpdate
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies a Predicate (such as an IPSet) and indicates whether you want to add it to a Rule or delete it from a Rule.

**Contents**

**Action**

Specify **INSERT** to add a Predicate to a Rule. **DELETE** to remove a Predicate from a Rule.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

**Predicate**

The ID of the Predicate (such as an IPSet) that you want to add to a Rule.

Type: Predicate (p. 994) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SampledHTTPRequest

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a GetSampledRequests (p. 610) request includes a SampledHTTPRequest complex type that appears as SampledRequests in the response syntax. SampledHTTPRequest contains one SampledHTTPRequest object for each web request that is returned by GetSampledRequests.

Contents

Action
The action for the Rule that the request matched: ALLOW, BLOCK, or COUNT.
Type: String
Required: No
Request
A complex type that contains detailed information about the request.
Type: HTTPRequest (p. 984) object
Required: Yes
RuleWithinRuleGroup
This value is returned if the GetSampledRequests request specifies the ID of a RuleGroup rather than the ID of an individual rule. RuleWithinRuleGroup is the rule within the specified RuleGroup that matched the request listed in the response.
Type: String
Pattern: .\S.*
Required: No
Timestamp
The time at which AWS WAF received the request from your AWS resource, in Unix time format (in seconds).
Type: Timestamp
Required: No
Weight
A value that indicates how one result in the response relates proportionally to other results in the response. A result that has a weight of 2 represents roughly twice as many Amazon CloudFront web requests as a result that has a weight of 1.
Type: Long
Valid Range: Minimum value of 0.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**SizeConstraint**

**Service:** AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies a constraint on the size of a part of the web request. AWS WAF uses the `Size`, `ComparisonOperator`, and `FieldToMatch` to build an expression in the form of "Size ComparisonOperator size in bytes of FieldToMatch". If that expression is true, the `SizeConstraint` is considered to match.

**Contents**

**ComparisonOperator**

The type of comparison you want AWS WAF to perform. AWS WAF uses this in combination with the provided `Size` and `FieldToMatch` to build an expression in the form of "Size ComparisonOperator size in bytes of FieldToMatch". If that expression is true, the `SizeConstraint` is considered to match.

- **EQ**: Used to test if the `Size` is equal to the size of the `FieldToMatch`
- **NE**: Used to test if the `Size` is not equal to the size of the `FieldToMatch`
- **LE**: Used to test if the `Size` is less than or equal to the size of the `FieldToMatch`
- **LT**: Used to test if the `Size` is strictly less than the size of the `FieldToMatch`
- **GE**: Used to test if the `Size` is greater than or equal to the size of the `FieldToMatch`
- **GT**: Used to test if the `Size` is strictly greater than the size of the `FieldToMatch`

**Type:** String

**Valid Values:** EQ | NE | LE | LT | GE | GT

**Required:** Yes

**FieldToMatch**

Specifies where in a web request to look for the size constraint.

**Type:** [FieldToMatch](https://docs.aws.amazon.com/waf(v2) /DeveloperGuide/field-to-match.html) object

**Required:** Yes

**Size**

The size in bytes that you want AWS WAF to compare against the size of the specified `FieldToMatch`. AWS WAF uses this in combination with `ComparisonOperator` and `FieldToMatch` to build an expression in the form of "Size ComparisonOperator size in bytes of FieldToMatch". If that expression is true, the `SizeConstraint` is considered to match.

**Valid values for size are 0 - 21474836480 bytes (0 - 20 GB).**

If you specify `URI` for the value of `Type`, the `/` in the URI path that you specify counts as one character. For example, the URI `/logo.jpg` is nine characters long.
TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on FieldToMatch before inspecting it for a match.

You can only specify a single type of TextTransformation.

Note that if you choose BODY for the value of Type, you must choose NONE for TextTransformation because Amazon CloudFront forwards only the first 8192 bytes for inspection.

NONE

Specify NONE if you don’t want to perform any text transformations.

CMD_LINE

When you’re concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / ( 
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters.

HTML_ENTITY_DECODE performs the following operations:

- Replaces \" with "
- Replaces \nbsp; with a non-breaking space, decimal 160
- Replaces \lt; with a "less than" symbol
- Replaces \gt; with >
- Replaces characters that are represented in hexadecimal format, \#xhhhh;, with the corresponding characters
• Replaces characters that are represented in decimal format, \(\text{ampersand}\#nnnn;\), with the corresponding characters

**LOWERCASE**

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

**URL_DECODE**

Use this option to decode a URL-encoded value.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
SizeConstraintSet

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains SizeConstraint objects, which specify the parts of web requests that you want AWS WAF to inspect the size of. If a SizeConstraintSet contains more than one SizeConstraint object, a request only needs to match one constraint to be considered a match.

**Contents**

**Name**

The name, if any, of the SizeConstraintSet.

Type: String


Pattern: .*\S.*

Required: No

**SizeConstraints**

Specifies the parts of web requests that you want to inspect the size of.

Type: Array of SizeConstraint (p. 1019) objects

Required: Yes

**SizeConstraintSetId**

A unique identifier for a SizeConstraintSet. You use SizeConstraintSetId to get information about a SizeConstraintSet (see GetSizeConstraintSet (p. 614)), update a SizeConstraintSet (see UpdateSizeConstraintSet (p. 724)), insert a SizeConstraintSet into a Rule or delete one from a Rule (see UpdateRule (p. 716)), and delete a SizeConstraintSet from AWS WAF (see DeleteSizeConstraintSet (p. 568)).

SizeConstraintSetId is returned by CreateSizeConstraintSet (p. 519) and by ListSizeConstraintSets (p. 661).

Type: String


Pattern: .*\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
SizeConstraintSetSummary

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The Id and Name of a SizeConstraintSet.

**Contents**

**Name**

The name of the SizeConstraintSet, if any.

Type: String


Pattern: .*\s.*

Required: Yes

**SizeConstraintSetId**

A unique identifier for a SizeConstraintSet. You use SizeConstraintSetId to get information about a SizeConstraintSet (see **GetSizeConstraintSet** (p. 614)), update a SizeConstraintSet (see **UpdateSizeConstraintSet** (p. 724)), insert a SizeConstraintSet into a Rule or delete one from a Rule (see **UpdateRule** (p. 716)), and delete a SizeConstraintSet from AWS WAF (see **DeleteSizeConstraintSet** (p. 568)).

SizeConstraintSetId is returned by **CreateSizeConstraintSet** (p. 519) and by **ListSizeConstraintSets** (p. 661).

Type: String


Pattern: .*\s.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**SizeConstraintSetUpdate**

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect the size of and indicates whether you want to add the specification to a **SizeConstraintSet** (p. 1022) or delete it from a **SizeConstraintSet**.

**Contents**

**Action**

Specify **INSERT** to add a **SizeConstraintSetUpdate** (p. 1025) to a **SizeConstraintSet** (p. 1022). Use **DELETE** to remove a **SizeConstraintSetUpdate** from a **SizeConstraintSet**.

Type: String

Valid Values: **INSERT** | **DELETE**

Required: Yes

**SizeConstraint**

Specifies a constraint on the size of a part of the web request. AWS WAF uses the **Size**, **ComparisonOperator**, and **FieldToMatch** to build an expression in the form of "**Size ComparisonOperator** size in bytes of **FieldToMatch**". If that expression is true, the **SizeConstraint** is considered to match.

Type: **SizeConstraint** (p. 1019) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SqlInjectionMatchSet
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains SqlInjectionMatchTuple objects, which specify the parts of web requests that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header. If a SqlInjectionMatchSet contains more than one SqlInjectionMatchTuple object, a request needs to include snippets of SQL code in only one of the specified parts of the request to be considered a match.

**Contents**

**Name**

The name, if any, of the SqlInjectionMatchSet.

Type: String


Pattern: .*

Required: No

**SqlInjectionMatchSetId**

A unique identifier for a SqlInjectionMatchSet. You use SqlInjectionMatchSetId to get information about a SqlInjectionMatchSet (see GetSqlInjectionMatchSet (p. 617)), update a SqlInjectionMatchSet (see UpdateSqlInjectionMatchSet (p. 729)), insert a SqlInjectionMatchSet into a Rule or delete one from a Rule (see UpdateRule (p. 716)), and delete a SqlInjectionMatchSet from AWS WAF (see DeleteSqlInjectionMatchSet (p. 571)).

SqlInjectionMatchSetId is returned by CreateSqlInjectionMatchSet (p. 523) and by ListSqlInjectionMatchSets (p. 664).

Type: String


Pattern: .*

Required: Yes

**SqlInjectionMatchTuples**

Specifies the parts of web requests that you want to inspect for snippets of malicious SQL code.

Type: Array of SqlInjectionMatchTuple (p. 1030) objects

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:
• AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
SqlInjectionMatchSetSummary

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The Id and Name of a SqlInjectionMatchSet.

Contents

Name

The name of the SqlInjectionMatchSet, if any, specified by Id.

Type: String


Pattern: .*\S.*

Required: Yes

SqlInjectionMatchSetId

A unique identifier for a SqlInjectionMatchSet. You use SqlInjectionMatchSetId to get information about a SqlInjectionMatchSet (see GetSqlInjectionMatchSet (p. 617)), update a SqlInjectionMatchSet (see UpdateSqlInjectionMatchSet (p. 729)), insert a SqlInjectionMatchSet into a Rule or delete one from a Rule (see UpdateRule (p. 716)), and delete a SqlInjectionMatchSet from AWS WAF (see DeleteSqlInjectionMatchSet (p. 571)).

SqlInjectionMatchSetId is returned by CreateSqlInjectionMatchSet (p. 523) and by ListSqlInjectionMatchSets (p. 664).

Type: String


Pattern: .*\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SqlInjectionMatchSetUpdate
Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect for snippets of malicious SQL code and indicates whether you want to add the specification to a SqlInjectionMatchSet (p. 1026) or delete it from a SqlInjectionMatchSet.

**Contents**

**Action**

Specify `INSERT` to add a SqlInjectionMatchSetUpdate (p. 1029) to a SqlInjectionMatchSet (p. 1026). Use `DELETE` to remove a SqlInjectionMatchSetUpdate from a SqlInjectionMatchSet.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

**SqlInjectionMatchTuple**

Specifies the part of a web request that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header.

Type: SqlInjectionMatchTuple (p. 1030) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SqlInjectionMatchTuple
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header.

Contents

FieldToMatch
Specifies where in a web request to look for snippets of malicious SQL code.

Type: FieldToMatch (p. 975) object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on FieldToMatch before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:
- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / ( 
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):
- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

HTML_ENTITY_DECODE
Use this option to replace HTML-encoded characters with unencoded characters. HTML_ENTITY_DECODE performs the following operations:

- Replaces \( (\text{ampersand})\text{quot;} \) with "
- Replaces \( (\text{ampersand})\text{nbsp;} \) with a non-breaking space, decimal 160
- Replaces \( (\text{ampersand})\text{lt;} \) with a "less than" symbol
- Replaces \( (\text{ampersand})\text{gt;} \) with >
- Replaces characters that are represented in hexadecimal format, \( (\text{ampersand})\#xhhhh; \), with the corresponding characters
- Replaces characters that are represented in decimal format, \( (\text{ampersand})\#nnnn; \), with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify NONE if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
SubscribedRuleGroupSummary

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A summary of the rule groups you are subscribed to.

Contents

MetricName

A friendly name or description for the metrics for this RuleGroup. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the RuleGroup.

Type: String


Pattern: .*\S.*

Required: Yes

Name

A friendly name or description of the RuleGroup. You can't change the name of a RuleGroup after you create it.

Type: String


Pattern: .*\S.*

Required: Yes

RuleGroupId

A unique identifier for a RuleGroup.

Type: String


Pattern: .*\S.*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++
• AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Tag

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

**Contents**

**Key**

Type: String


Pattern: .\S.*

Required: Yes

**Value**

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
TagInfoForResource

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Information for a tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

**Contents**

*ResourceARN*

Type: String


Pattern: .\*\S\.*

Required: No

*TagList*

Type: Array of Tag (p. 1034) objects

Array Members: Minimum number of 1 item.

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
TimeWindow
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetSampledRequests (p. 610) request, the StartTime and EndTime objects specify the time range for which you want AWS WAF to return a sample of web requests.

You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

In a GetSampledRequests (p. 610) response, the StartTime and EndTime objects specify the time range for which AWS WAF actually returned a sample of web requests. AWS WAF gets the specified number of requests from among the first 5,000 requests that your AWS resource receives during the specified time period. If your resource receives more than 5,000 requests during that period, AWS WAF stops sampling after the 5,000th request. In that case, EndTime is the time that AWS WAF received the 5,000th request.

Contents

EndTime
The end of the time range from which you want GetSampledRequests to return a sample of the requests that your AWS resource received. You must specify the date and time in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

Type: Timestamp
Required: Yes

StartTime
The beginning of the time range from which you want GetSampledRequests to return a sample of the requests that your AWS resource received. You must specify the date and time in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z". You can specify any time range in the previous three hours.

Type: Timestamp
Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WafAction

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

For the action that is associated with a rule in a WebACL, specifies the action that you want AWS WAF to perform when a web request matches all of the conditions in a rule. For the default action in a WebACL, specifies the action that you want AWS WAF to take when a web request doesn't match all of the conditions in any of the rules in a WebACL.

Contents

Type

Specifies how you want AWS WAF to respond to requests that match the settings in a Rule. Valid settings include the following:

- **ALLOW**: AWS WAF allows requests
- **BLOCK**: AWS WAF blocks requests
- **COUNT**: AWS WAF increments a counter of the requests that match all of the conditions in the rule. AWS WAF then continues to inspect the web request based on the remaining rules in the web ACL. You can't specify COUNT for the default action for a WebACL.

Type: String

Valid Values: BLOCK | ALLOW | COUNT

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WafOverrideAction

Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The action to take if any rule within the RuleGroup matches a request.

Contents

Type

COUNT overrides the action specified by the individual rule within a RuleGroup. If set to NONE, the rule's action will take place.

Type: String

Valid Values: NONE | COUNT

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WebACL

Service: AWS WAF Classic Regional

**Note**
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the Rules that identify the requests that you want to allow, block, or count. In a WebACL, you also specify a default action (ALLOW or BLOCK), and the action for each Rule that you add to a WebACL, for example, block requests from specified IP addresses or block requests from specified referrers. You also associate the WebACL with an Amazon CloudFront distribution to identify the requests that you want AWS WAF to filter. If you add more than one Rule to a WebACL, a request needs to match only one of the specifications to be allowed, blocked, or counted. For more information, see UpdateWebACL (p. 733).

**Contents**

**DefaultAction**

The action to perform if none of the Rules contained in the WebACL match. The action is specified by the WafAction (p. 1037) object.

Type: WafAction (p. 1037) object

Required: Yes

**MetricName**

A friendly name or description for the metrics for this WebACL. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change MetricName after you create the WebACL.

Type: String


Pattern: .*=\S.*

Required: No

**Name**

A friendly name or description of the WebACL. You can't change the name of a WebACL after you create it.

Type: String


Pattern: .*=\S.*

Required: No

**Rules**

An array that contains the action for each Rule in a WebACL, the priority of the Rule, and the ID of the Rule.
Type: Array of ActivatedRule (p. 963) objects
Required: Yes

WebACLArn

The Amazon Resource Name (ARN) of the web ACL.

Type: String

Pattern: .*\S.*
Required: No

WebACLId

A unique identifier for a WebACL. You use WebACLId to get information about a WebACL (see GetWebACL (p. 620)), update a WebACL (see UpdateWebACL (p. 733)), and delete a WebACL from AWS WAF (see DeleteWebACL (p. 574)).

WebACLId is returned by CreateWebACL (p. 527) and by ListWebACLs (p. 673).

Type: String

Pattern: .*\S.*
Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WebACLSummary
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name or description of the WebACL (p. 1039).

Contents

Name
A friendly name or description of the WebACL (p. 1039). You can't change the name of a WebACL after you create it.

Type: String
Pattern: .*\s.*
Required: Yes

WebACLId
A unique identifier for a WebACL. You use WebACLId to get information about a WebACL (see GetWebACL (p. 620)), update a WebACL (see UpdateWebACL (p. 733)), and delete a WebACL from AWS WAF (see DeleteWebACL (p. 574)).

WebACLId is returned by CreateWebACL (p. 527) and by ListWebACLs (p. 673).

Type: String
Pattern: .*\s.*
Required: Yes

See Also
For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
WebACLUpdate
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies whether to insert a Rule into or delete a Rule from a WebACL.

Contents

Action

Specifies whether to insert a Rule into or delete a Rule from a WebACL.

Type: String

Valid Values: INSERT | DELETE

Required: Yes

ActivatedRule

The ActivatedRule object in an UpdateWebACL request specifies a Rule that you want to insert or delete, the priority of the Rule in the WebACL, and the action that you want AWS WAF to take when a web request matches the Rule (ALLOW, BLOCK, or COUNT).

Type: ActivatedRule (p. 963) object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**XssMatchSet**

Service: AWS WAF Classic Regional

**Note**

This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.

**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains **XssMatchTuple** objects, which specify the parts of web requests that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header. If a **XssMatchSet** contains more than one **XssMatchTuple** object, a request needs to include cross-site scripting attacks in only one of the specified parts of the request to be considered a match.

**Contents**

**Name**

The name, if any, of the **XssMatchSet**.

Type: String


Pattern: .\S.*

Required: No

**XssMatchSetId**

A unique identifier for an **XssMatchSet**. You use **XssMatchSetId** to get information about an **XssMatchSet** (see **GetXssMatchSet** (p. 626)), update an **XssMatchSet** (see **UpdateXssMatchSet** (p. 738)), insert an **XssMatchSet** into a **Rule** or delete one from a **Rule** (see **UpdateRule** (p. 716)), and delete an **XssMatchSet** from AWS WAF (see **DeleteXssMatchSet** (p. 577)).

**XssMatchSetId** is returned by **CreateXssMatchSet** (p. 536) and by **ListXssMatchSets** (p. 676).

Type: String


Pattern: .\S.*

Required: Yes

**XssMatchTuples**

Specifies the parts of web requests that you want to inspect for cross-site scripting attacks.

Type: Array of **XssMatchTuple** (p. 1047) objects

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java V2
• AWS SDK for Ruby V3
XssMatchSetSummary

Service: AWS WAF Classic Regional

**Note**
This is **AWS WAF Classic** documentation. For more information, see **AWS WAF Classic** in the developer guide.
**For the latest version of AWS WAF**, use the AWS WAFV2 API and see the **AWS WAF Developer Guide**. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The Id and Name of an XssMatchSet.

**Contents**

**Name**

The name of the XssMatchSet, if any, specified by Id.

Type: String


Pattern: .\S.*

Required: Yes

**XssMatchSetId**

A unique identifier for an XssMatchSet. You use XssMatchSetId to get information about a XssMatchSet (see **GetXssMatchSet** (p. 626)), update an XssMatchSet (see **UpdateXssMatchSet** (p. 738)), insert an XssMatchSet into a Rule or delete one from a Rule (see **UpdateRule** (p. 716)), and delete an XssMatchSet from AWS WAF (see **DeleteXssMatchSet** (p. 577)).

XssMatchSetId is returned by **CreateXssMatchSet** (p. 536) and by **ListXssMatchSets** (p. 676).

Type: String


Pattern: .\S.*

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
**XssMatchSetUpdate**

*Service: AWS WAF Classic Regional*

**Note**
This is **AWS WAF Classic** documentation. For more information, see [AWS WAF Classic](https://aws.amazon.com/documentation/waf-classic/) in the developer guide.

*For the latest version of AWS WAF*, use the AWS WAFV2 API and see the [AWS WAF Developer Guide](https://docs.aws.amazon.com/waf/latest/developerguide/). With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect for cross-site scripting attacks and indicates whether you want to add the specification to an [XssMatchSet](#) or delete it from an XssMatchSet.

**Contents**

**Action**

Specify **INSERT** to add an [XssMatchSetUpdate](#) to an [XssMatchSet](#). Use **DELETE** to remove an XssMatchSetUpdate from an XssMatchSet.

Type: String

Valid Values: **INSERT | DELETE**

Required: Yes

**XssMatchTuple**

Specifies the part of a web request that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header.

Type: [XssMatchTuple](#) object

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
XssMatchTuple
Service: AWS WAF Classic Regional

Note
This is AWS WAF Classic documentation. For more information, see AWS WAF Classic in the developer guide.
For the latest version of AWS WAF, use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header.

Contents

FieldToMatch
Specifies where in a web request to look for cross-site scripting attacks.

Type: FieldToMatch (p. 975) object

Required: Yes

TextTransformation
Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on FieldToMatch before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE
When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:
• Delete the following characters: \\ " ' ^
• Delete spaces before the following characters: / ( 
• Replace the following characters with a space: , ;
• Replace multiple spaces with one space
• Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE
Use this option to replace the following characters with a space character (decimal 32):
• \f, formfeed, decimal 12
• \t, tab, decimal 9
• \n, newline, decimal 10
• \r, carriage return, decimal 13
• \v, vertical tab, decimal 11
• non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

HTML_ENTITY_DECODE
Use this option to replace HTML-encoded characters with unencoded characters. 
**HTML_ENTITY_DECODE** performs the following operations:
- Replaces (ampersand)quot; with "
- Replaces (ampersand)nbsp; with a non-breaking space, decimal 160
- Replaces (ampersand)lt; with a "less than" symbol
- Replaces (ampersand)gt; with >
- Replaces characters that are represented in hexadecimal format, (ampersand)#xhhhh;, with the corresponding characters
- Replaces characters that are represented in decimal format, (ampersand)#nnnn;, with the corresponding characters

**LOWERCASE**

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

**URL_DECODE**

Use this option to decode a URL-encoded value.

**NONE**

Specify **NONE** if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see Signature Version 4 Signing Process in the Amazon Web Services General Reference.

**Action**

The action to be performed.

Type: string

Required: Yes

**Version**

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

**X-Amz-Algorithm**

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

**X-Amz-Credential**

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: access_key/YYYYMMDD/region/service/aws4_request.

For more information, see Task 2: Create a String to Sign for Signature Version 4 in the Amazon Web Services General Reference.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

**X-Amz-Date**

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is
not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Handling Dates in Signature Version 4 in the Amazon Web Services General Reference.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS Security Token Service, go to AWS Services That Work with IAM in the IAM User Guide.

Condition: If you're using temporary security credentials from the AWS Security Token Service, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see Task 1: Create a Canonical Request For Signature Version 4 in the Amazon Web Services General Reference.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional
Common Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

InvalidClientTokenId

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400
**MissingAuthenticationToken**

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

**MissingParameter**

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

**NotAuthorized**

You do not have permission to perform this action.

HTTP Status Code: 400

**OptInRequired**

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

**RequestExpired**

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

**ServiceUnavailable**

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

**ThrottlingException**

The request was denied due to request throttling.

HTTP Status Code: 400

**ValidationError**

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400