



User Guide

# AWS Resource Groups



# AWS Resource Groups: User Guide

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# Table of Contents

<b>Resource groups</b> .....	<b>1</b>
What are resource groups? .....	1
Use cases for resource groups .....	3
AWS Resource Groups and permissions .....	3
AWS Resource Groups resources .....	4
How tagging works .....	4
Getting started .....	5
Prerequisites .....	5
Creating groups .....	12
Types of resource group queries .....	12
Build a tag-based query and create a group .....	16
Create an AWS CloudFormation stack-based group .....	19
Updating groups .....	21
Update tag-based query groups .....	21
Update an AWS CloudFormation stack-based group .....	24
Monitoring resource groups for changes .....	26
Turning on group lifecycle events .....	28
Creating a group lifecycle events rule .....	31
Turning off group lifecycle events .....	34
Structure and syntax of events .....	36
Deleting groups .....	47
AWS services that work with AWS Resource Groups .....	48
Service configurations .....	52
Accessing .....	53
Syntax & structure .....	53
Configuration types and parameters .....	54
<b>Supported resource types</b> .....	<b>71</b>
Amazon API Gateway .....	72
IAM Access Analyzer .....	73
AWS Amplify .....	73
AWS App Mesh .....	74
Amazon AppStream .....	74
AWS AppSync .....	75
AWS Backup .....	75

---

AWS Batch .....	75
AWS Billing Conductor .....	76
Amazon Braket .....	77
AWS Certificate Manager .....	77
AWS Certificate Manager Private Certificate Authority .....	77
AWS Cloud9 .....	78
AWS CloudFormation .....	78
Amazon CloudFront .....	78
AWS CloudTrail .....	79
Amazon CloudWatch .....	79
Amazon CloudWatch Logs .....	80
Amazon CloudWatch Synthetics .....	80
AWS CodeArtifact .....	81
AWS CodeBuild .....	81
AWS CodeCommit .....	81
AWS CodeDeploy .....	82
Amazon CodeGuru Reviewer .....	82
Amazon CodeGuru Profiler .....	82
AWS CodePipeline .....	83
AWS CodeConnections .....	83
Amazon Cognito .....	83
Amazon Comprehend .....	84
AWS Config .....	84
Amazon Connect Wisdom .....	84
AWS Data Exchange .....	85
AWS Data Pipeline .....	85
AWS DataSync .....	86
AWS Database Migration Service .....	86
Amazon DynamoDB .....	87
Amazon EMR .....	87
Amazon EMR Containers .....	87
Amazon EMR Serverless .....	88
Amazon ElastiCache .....	88
AWS Elastic Beanstalk .....	89
Amazon Elastic Compute Cloud (Amazon EC2) .....	89
Amazon Elastic Container Registry .....	94

Amazon Elastic Container Service .....	94
Amazon Elastic File System .....	95
Amazon Elastic Inference .....	95
Amazon Elastic Kubernetes Service (Amazon EKS) .....	96
Elastic Load Balancing .....	96
Amazon OpenSearch Service .....	97
Amazon CloudWatch Events .....	97
Amazon EventBridge Schemas .....	98
Amazon FSx .....	98
Amazon Forecast .....	98
Amazon Fraud Detector .....	99
Amazon GameLift .....	100
AWS Global Accelerator .....	101
AWS Glue .....	101
AWS Glue DataBrew .....	102
AWS Ground Station .....	102
Amazon GuardDuty .....	103
Amazon Interactive Video Service .....	103
AWS Identity and Access Management .....	104
EC2 Image Builder .....	105
Amazon Inspector .....	105
AWS IoT .....	106
AWS IoT Analytics .....	106
AWS IoT Events .....	107
AWS IoT FleetWise .....	107
AWS IoT Greengrass .....	108
AWS IoT SiteWise console .....	109
AWS Key Management Service .....	109
Amazon Keyspaces (for Apache Cassandra) .....	109
Amazon Kinesis .....	110
Amazon Managed Service for Apache Flink .....	110
Amazon Data Firehose .....	111
AWS Lambda .....	111
Amazon MQ .....	112
Amazon Macie .....	112
Amazon Managed Streaming for Apache Kafka .....	113

AWS Elemental MediaConnect .....	113
AWS Elemental MediaPackage .....	113
AWS Network Manager .....	114
Amazon OpenSearch Service OpenSearch .....	115
AWS OpsWorks .....	115
AWS Organizations .....	115
Amazon Pinpoint .....	116
Amazon Pinpoint SMS and Voice API .....	117
Amazon Quantum Ledger Database (Amazon QLDB) .....	117
Amazon Redshift .....	117
Amazon Relational Database Service (Amazon RDS) .....	119
AWS Resource Access Manager .....	120
AWS Resource Groups .....	120
AWS Robomaker .....	121
Amazon Route 53 .....	121
Amazon Route 53 Resolver .....	122
Amazon S3 Glacier .....	123
Amazon SageMaker .....	123
AWS Secrets Manager .....	124
AWS Service Catalog .....	125
AWS Service Catalog AppRegistry .....	125
Service Quotas .....	126
Amazon Simple Email Service .....	126
Amazon Simple Notification Service .....	126
Amazon Simple Queue Service .....	127
Amazon Simple Storage Service (Amazon S3) .....	127
AWS Step Functions .....	127
Storage Gateway .....	128
AWS Systems Manager .....	128
AWS Systems Manager for SAP .....	129
Amazon Timestream .....	129
AWS Transfer Family .....	129
AWS WAF .....	130
Amazon WorkSpaces .....	130
AWS X-Ray .....	130
Deprecated resource types .....	131

---

<b>AWS CloudFormation resources</b> .....	<b>132</b>
Resource Groups and AWS CloudFormation templates .....	132
Learn more about AWS CloudFormation .....	132
<b>Security</b> .....	<b>133</b>
Data protection .....	134
Data encryption .....	134
Internet traffic privacy .....	135
Identity and access management .....	135
Audience .....	136
Authenticating with identities .....	136
Managing access using policies .....	139
How Resource Groups works with IAM .....	142
AWS managed policies .....	146
Using service-linked roles .....	149
Identity-based policy examples .....	152
Troubleshooting .....	156
Logging and monitoring .....	158
CloudTrail Integration .....	158
Compliance validation .....	161
Resilience .....	162
Infrastructure security .....	162
Security best practices .....	163
<b>Service quotas</b> .....	<b>165</b>
<b>Reference</b> .....	<b>166</b>
Service quotas for Resource Groups .....	166
AWS managed policies available for use with AWS Resource Groups .....	166
<b>Document history</b> .....	<b>168</b>
Earlier updates .....	177
<b>AWS Glossary</b> .....	<b>178</b>

# What are resource groups?

You can use *resource groups* to organize your AWS resources. AWS Resource Groups is the service that lets you manage and automate tasks on large numbers of resources at one time. This guide shows you how to create and manage resource groups in AWS Resource Groups. The tasks that you can perform on a resource vary based on the AWS service you're using. For a list of the services that support AWS Resource Groups and a brief description of what each service allows you to do with a resource group, see [AWS services that work with AWS Resource Groups](#).

You can access Resource Groups through any of the following entry points.

- In the [AWS Management Console](#), in the top navigation bar, choose **Services**. Then, under **Management & Governance**, choose **Resource Groups & Tag Editor**.

Direct link: [AWS Resource Groups console](#)

- By using the Resource Groups API, in AWS CLI commands or AWS SDK programming languages. See the [AWS Resource Groups API Reference](#) for more information.

## To work with resource groups on the AWS Management Console home

1. Sign in to the AWS Management Console.
2. On the navigation bar, choose **Services**.
3. Under **Management & Governance**, choose **Resource Groups & Tag Editor**.
4. In the navigation pane on the left, choose **Saved Resource Groups** to work with an existing group, or **Create a Group** to create a new one.

# What are resource groups?

In AWS, a *resource* is an entity that you can work with. Examples include an Amazon EC2 instance, an AWS CloudFormation stack, or an Amazon S3 bucket. If you work with multiple resources, you might find it useful to manage them as a group rather than move from one AWS service to another for each task. If you manage large numbers of related resources, such as EC2 instances that make up an application layer, you likely need to perform bulk actions on these resources at one time. Examples of bulk actions include:

- Applying updates or security patches.

- Upgrading applications.
- Opening or closing ports to network traffic.
- Collecting specific log and monitoring data from your fleet of instances.

A *resource group* is a collection of AWS resources that are all in the same AWS Region, and that match the criteria specified in the group's query. In Resource Groups, there are two types of queries you can use to build a group. Both query types include resources that are specified in the format `AWS::service::resource`.

- **Tag-based**

A tag-based resource group bases its membership on a query that specifies a list of resource types and tags. *Tags* are keys that help identify and sort your resources within your organization. Optionally, tags include values for keys.

**⚠ Important**

Do not store personally identifiable information (PII) or other confidential or sensitive information in tags. We use tags to provide you with billing and administration services. Tags are not intended to be used for private or sensitive data.

- **AWS CloudFormation stack-based**

An AWS CloudFormation stack-based resource group bases its membership on a query that specifies an AWS CloudFormation stack in your account in the current region. You can optionally choose resource types within the stack that you want to be in the group. You can base your query on only one AWS CloudFormation stack.

## Service-linked resource groups

Some AWS services define resource groups that you can create and manage only by using that service's console and APIs. You are limited in what you can do with these groups in the Resource Groups console. For more information, see [Service configurations for resource groups](#) in the *AWS Resource Groups API Reference Guide*.

Resource groups can be *nested*; a resource group can contain existing resource groups in the same region.

## Use cases for resource groups

By default, the AWS Management Console is organized by AWS service. But with Resource Groups, you can create a custom console that organizes and consolidates information based on criteria specified in tags, or the resources in an AWS CloudFormation stack. The following list describes some of the cases in which resource grouping can help organize your resources.

- An application that has different phases, such as development, staging, and production.
- Projects managed by multiple departments or individuals.
- A set of AWS resources that you use together for a common project or that you want to manage or monitor as a group.
- A set of resources related to applications that run on a specific platform, such as Android or iOS.

For example, you are developing a web application, and you are maintaining separate sets of resources for your alpha, beta, and release stages. Each version runs on Amazon EC2 with an Amazon Elastic Block Store storage volume. You use Elastic Load Balancing to manage traffic and Route 53 to manage your domain. Without Resource Groups, you might have to access multiple consoles just to check the status of your services or modify the settings for one version of your application.

With Resource Groups, you use a single page to view and manage your resources. For example, let's say you use the tool to create a resource group for each version—alpha, beta, and release—of your application. To check your resources for the alpha version of your application, open your resource group. Then view the consolidated information on your resource group page. To modify a specific resource, choose the resource's links on your resource group page to access the service console that has the settings that you need.

## AWS Resource Groups and permissions

Resource Groups feature permissions are at the account level. As long as IAM principals, such as roles and users, who are sharing your account have the correct IAM permissions, they can work with resource groups that you create.

Tags are properties of a resource, so they are shared across your entire account. Users in a department or specialized group can draw from a common vocabulary (tags) to create resource groups that are meaningful to their roles and responsibilities. Having a common pool of tags

also means that when users share a resource group, they don't have to worry about missing or conflicting tag information.

## AWS Resource Groups resources

In Resource Groups, the only available resource is a group. Groups have unique Amazon Resource Names (ARNs) associated with them. For more information about ARNs, see [Amazon Resource Names \(ARN\) and AWS Service Namespaces](#) in the *Amazon Web Services General Reference*.

Resource Type	ARN Format
Resource Group	<code>arn:aws:resource-groups: <i>region</i>:<i>account</i>:group/<i>group-name</i></code>

## How tagging works

Tags are key and value pairs that act as metadata for organizing your AWS resources. With most AWS resources, you have the option of adding tags when you create the resource, whether it's an Amazon EC2 instance, an Amazon S3 bucket, or other resource. However, you can also add tags to multiple, supported resources at once by using Tag Editor. You build a query for resources of various types, and then add, remove, or replace tags for the resources in your search results. Tag-based queries assign an AND operator to tags, so any resource that matches the specified resource types and all specified tags is returned by the query.

### Important

Do not store personally identifiable information (PII) or other confidential or sensitive information in tags. We use tags to provide you with billing and administration services. Tags are not intended to be used for private or sensitive data.

For more information about tagging, see the [Tag Editor User Guide](#). You can tag [supported resources](#) by using Tag Editor, and some additional resources by using tagging functionality in the service console in which you create and manage the resource.

# Getting started with AWS Resource Groups

In AWS, a *resource* is an entity that you can work with. Examples include an Amazon EC2 instance, an Amazon S3 bucket, or an Amazon Route 53 hosted zone. If you work with multiple resources, you might find it useful to manage them as a group rather than move from one AWS service to another for each task.

This section shows you how to get started with AWS Resource Groups. First, organize AWS resources by tagging them in Tag Editor. Then build queries in Resource Groups that include the resource types you want in a group, and tags that you've applied to resources.

After you've created resource groups in Resource Groups, use AWS Systems Manager tools such as Automation to simplify management tasks on your groups of resources.

For more information about getting started with AWS Systems Manager features and tools, see the [AWS Systems Manager User Guide](#).

## Topics

- [Prerequisites for working with AWS Resource Groups](#)

## Prerequisites for working with AWS Resource Groups

Before you get started working with resource groups, be sure you have an active AWS account with existing resources and appropriate rights to tag resources and create groups.

## Sign up for AWS

If you do not have an AWS account, complete the following steps to create one.

### To sign up for an AWS account

1. Open <https://portal.aws.amazon.com/billing/signup>.
2. Follow the online instructions.

Part of the sign-up procedure involves receiving a phone call and entering a verification code on the phone keypad.

When you sign up for an AWS account, an *AWS account root user* is created. The root user has access to all AWS services and resources in the account. As a security best practice, [assign](#)

[administrative access to an administrative user](#), and use only the root user to perform [tasks that require root user access](#).

## Create resources

You can create an empty resource group, but won't be able to perform any tasks on resource group members until there are resources in the group. For more information about the supported resource types, see [Resource types you can use with AWS Resource Groups and Tag Editor](#).

## Set up permissions

To make full use of Resource Groups and Tag Editor, you might need additional permissions to tag resources or to see a resource's tag keys and values. These permissions fall into the following categories:

- Permissions for individual services so that you can tag resources from those services and include them in resource groups.
- Permissions that are required to use the Tag Editor console
- Permissions that are required to use the AWS Resource Groups console and API.

If you are an administrator, you can provide permissions for your users by creating policies through the AWS Identity and Access Management (IAM) service. You first create your principals, such as IAM roles or users, or associate external identities with your AWS environment using a service like AWS IAM Identity Center. Then you apply policies with the permissions that your users need. For information about creating and attaching IAM policies, see [Working with policies](#).

## Permissions for individual services

### Important

This section describes permissions that are required if you want to tag resources from other service consoles and APIs, and add those resources to resource groups.

As described in [What are resource groups?](#), each resource group represents a collection of resources of specified types that share one or more tag keys or values. To add tags to a resource, you need the permissions required for the service to which the resource belongs. For example, to tag Amazon

EC2 instances, you must have permissions to the tagging actions in that service's API, such as those listed in the [Amazon EC2 User Guide](#).

To make full use of the Resource Groups feature, you need other permissions that allow you to access a service's console and interact with the resources there. For examples of such policies for Amazon EC2, see [Example policies for working in the Amazon EC2 console](#) in the *Amazon EC2 User Guide for Linux Instances*.

## Required permissions for Resource Groups and Tag Editor

To use Resource Groups and Tag Editor, the following permissions must be added to a user's policy statement in IAM. You can add either AWS-managed policies that are maintained and kept up-to-date by AWS, or you can create and maintain your own custom policy.

### Using AWS managed policies for Resource Groups and Tag Editor permissions

AWS Resource Groups and Tag Editor support the following AWS managed policies that you can use to provide a predefined set of permissions to your users. You can attach these managed policies to any user, role or group just as you would any other policy that you create.

#### [ResourceGroupsandTagEditorReadOnlyAccess](#)

This policy grants the attached IAM role or user permission to call the read-only operations for both Resource Groups and Tag Editor. To read a resource's tags, you must also have permissions for that resource through a separate policy (see the following Important note).

#### [ResourceGroupsandTagEditorFullAccess](#)

This policy grants the attached IAM role or user permission to call any Resource Groups operation and the read and write tag operations in Tag Editor. To read or write a resource's tags, you must also have permissions for that resource through a separate policy (see the following Important note).

#### Important

The two previous policies grant permission to call the Resource Groups and Tag Editor operations and use those consoles. For Resource Groups operations, those policies are sufficient and grant all the permissions needed to work with any resource in the Resource Groups console.

However, for tagging operations and the Tag Editor console, permissions are more granular. You must have permissions not only to invoke the operation, but also appropriate

permissions to the specific resource whose tags you're trying to access. To grant that access to the tags, you must also attach one of the following policies:

- The AWS-managed policy [ReadOnlyAccess](#) grants permissions to the read-only operations for every service's resources. AWS automatically keeps this policy up to date with new AWS services as they become available.
- Many services provide a service-specific read-only AWS-managed policies that you can use to limit access to only the resources provided by that service. For example, Amazon EC2 provides [AmazonEC2ReadOnlyAccess](#).
- You could create your own policy that grants access to only the very specific read-only operations for the few services and resources you want your users to access. This policy use either an "allow list" strategy or a deny list strategy.

An allow list strategy takes advantage of the fact that access is denied by default until you **explicitly allow** it in a policy. So you can use a policy like the following example:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [ "resource-groups:*" ],
      "Resource": "arn:aws:resource-groups:*:123456789012:group/*"
    }
  ]
}
```

Alternatively, you could use a "deny list" strategy that allows access to all resources except those that you explicitly block.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Deny",
      "Action": [ "resource-groups:*" ],
      "Resource": "arn:aws:resource-groups:*:123456789012:group/*"
    }
  ]
}
```

```
}
```

## Adding Resource Groups and Tag Editor permissions manually

- `resource-groups:*` (This permission allows all Resource Groups actions. If you instead want to restrict actions that are available to a user, you can replace the asterisk with a [specific Resource Groups action](#), or to a comma-separated list of actions)
- `cloudformation:DescribeStacks`
- `cloudformation:ListStackResources`
- `tag:GetResources`
- `tag:TagResources`
- `tag:UntagResources`
- `tag:getTagKeys`
- `tag:getTagValues`
- `resource-explorer:*`

### Note

The `resource-groups:SearchResources` permission allows Tag Editor to list resources when you filter your search using tag keys or values.

The `resource-explorer:ListResources` permission allows Tag Editor to list resources when you search resources without defining search tags.

To use Resource Groups and Tag Editor in the console, you also need permission to run the `resource-groups:ListGroupResources` action. This permission is necessary for listing available resource types in the current Region. Using policy conditions with `resource-groups:ListGroupResources` is not currently supported.

## Granting permissions for using AWS Resource Groups and Tag Editor

To add a policy for using AWS Resource Groups and Tag Editor to a user, do the following.

1. Open the [IAM console](#).
2. In the navigation pane, choose **Users**.

3. Find the user to whom you want to grant AWS Resource Groups and Tag Editor permissions. Choose the user's name to open the user properties page.
4. Choose **Add permissions**.
5. Choose **Attach existing policies directly**.
6. Choose **Create policy**.
7. On the **JSON** tab, paste the following policy statement.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "resource-groups:*",
        "cloudformation:DescribeStacks",
        "cloudformation:ListStackResources",
        "tag:GetResources",
        "tag:TagResources",
        "tag:UntagResources",
        "tag:getTagKeys",
        "tag:getTagValues",
        "resource-explorer:*"
      ],
      "Resource": "*"
    }
  ]
}
```

#### Note

This example policy statement grants permissions only for AWS Resource Groups and Tag Editor actions. It does not allow access to AWS Systems Manager tasks in the AWS Resource Groups console. For example, this policy does not grant permissions for you to use Systems Manager Automation commands. To perform Systems Manager tasks on resource groups, you must have Systems Manager permissions attached to your policy (such as `ssm:*`). For more information about granting access to Systems Manager, see [Configuring access to Systems Manager](#) in the *AWS Systems Manager User Guide*.

8. Choose **Review policy**.
9. Give the new policy a name and description. (for example, `AWSResourceGroupsQueryAPIAccess`).
10. Choose **Create policy**.
11. Now that the policy is saved in IAM, you can attach it to other users. For more information about how to add a policy to a user, see [Adding permissions by attaching policies directly to the user](#) in the *IAM User Guide*.

## Learn more about AWS Resource Groups authorization and access control

Resource Groups supports the following.

- **Action-based policies.** For example, you can create a policy that allows users to perform [ListGroups](#) operations, but no others.
- **Resource-level permissions.** Resource Groups supports using [ARNs](#) to specify individual resources in the policy.
- **Authorization based on tags.** Resource Groups supports using resource tags in the condition of a policy. For example, you can create a policy that allows Resource Groups users full access to a group that you have tagged.
- **Temporary credentials.** Users can assume a role with a policy that allows AWS Resource Groups operations.

Resource Groups doesn't support resource-based policies.

Resource Groups doesn't use any service-linked roles.

For more information about how Resource Groups and Tag Editor integrate with AWS Identity and Access Management (IAM), see the following topics in the *AWS Identity and Access Management User Guide*.

- [AWS services that work with IAM](#)
- [Actions, resources, and condition keys for AWS Resource Groups](#)
- [Controlling access using policies](#)

# Creating query-based groups in AWS Resource Groups

## Topics

- [Types of resource group queries](#)
- [Build a tag-based query and create a group](#)
- [Create an AWS CloudFormation stack-based group](#)

## Types of resource group queries

In AWS Resource Groups, a *query* is the foundation of a query-based group. You can base a resource group on one of two types of queries.

### Tag-based

Tag-based queries include lists of resource types that are specified in the following format `AWS::service::resource`, and tags. *Tags* are keys that help identify and sort your resources in your organization. Optionally, tags include values for keys.

For a tag-based query, you also specify the tags that are shared by the resources that you want to be members of the group. For example, if you want to create a resource group that has all of the Amazon EC2 instances and Amazon S3 buckets that you are using to run the testing stage of an application, and you have instances and buckets that are tagged this way, choose the `AWS::EC2::Instance` and `AWS::S3::Bucket` resource types from the drop-down list, and then specify the tag key **Stage**, with a tag value of **Test**.

The syntax of the `ResourceQuery` parameter of a tag-based resource group contains the following elements:

- **Type**

This element indicates which kind of query defines this resource group. To create a tag-based resource group, specify the value `TAG_FILTERS_1_0`, as follows:

```
"Type": "TAG_FILTERS_1_0"
```

- **Query**

This element defines the actual query used to match against resources. It contains a string representation of a JSON structure with the following elements:

- **ResourceTypeFilters**

This element limits the results to only those resource types that match the filter. You can specify the following values:

- "AWS::AllSupported" – to specify that the results can include resources of any type that match the query and that are currently supported by the Resource Groups service.
- "AWS::*service-id*::*resource-type*" – a comma separated list of resource-type specification strings with this format: , such as "AWS::EC2::Instance".

- **TagFilters**

This element specifies key/value string pairs that are compared to the tags attached to your resources. Those with a tag key and value that match the filter are included in the group. Each filter consists of these elements:

- "Key" – a string with a key name. Only resources that have tags with a matching key name match the filter and are members of the group.
- "Values" – a string with a comma separated list of values for the specified key. Only resources with a matching tag key and a value that matches one in this list are members of the group.

All of these JSON elements must be combined into a single-line string representation of the JSON structure. For example, consider a Query with the following example JSON structure. This query is meant to match only Amazon EC2 instances that have a tag "Stage" with a value "Test".

```
{
  "ResourceTypeFilters": [ "AWS::EC2::Instance" ],
  "TagFilters": [
    {
      "Key": "Stage",
      "Values": [ "Test" ]
    }
  ]
}
```

That JSON can be represented as the following single-line string, and used as the value of the Query element. Because the value of a JSON structure must be a double-quoted string, you must escape any embedded double-quote characters or forward slash characters by preceding each with a backslash as shown here:

```
"Query": "{\"ResourceTypeFilters\": [\"AWS::AllSupported\"], \"TagFilters\": [{\"Key\": \"Stage\", \"Values\": [\"Test\"]}]}"
```

The complete ResourceQuery string is then represented as shown here, as a CLI command parameter:

```
--resource-query '{"Type": "TAG_FILTERS_1_0", "Query": "{\"ResourceTypeFilters\": [\"AWS::AllSupported\"], \"TagFilters\": [{\"Key\": \"Stage\", \"Values\": [\"Test\"]}]}"'
```

## AWS CloudFormation stack-based

In an AWS CloudFormation stack-based query, you choose an AWS CloudFormation stack in your account in the current region, and then choose resource types in the stack that you want to be in the group. You can base your query on only one AWS CloudFormation stack.

### Note

An AWS CloudFormation stack can contain other AWS CloudFormation "child" stacks. However, a resource group based on a "parent" stack doesn't get all of the child stacks' resources as group members. Resource groups adds the child stacks to the parent stack's resource group as single group members and doesn't expand them.

Resource Groups supports queries based on AWS CloudFormation stacks that have one of the following statuses.

- CREATE\_COMPLETE
- CREATE\_IN\_PROGRESS
- DELETE\_FAILED
- DELETE\_IN\_PROGRESS
- REVIEW\_IN\_PROGRESS

### Important

Only resources that are directly created as part of the stack in the query are included in the resource group. Resources created later by members of the AWS CloudFormation

stack do not become members of the group. For example, if an auto-scaling group is created by AWS CloudFormation as part of the stack, then that auto-scaling group *is* a member of the group. However, an Amazon EC2 instance created by that auto-scaling group as part of its operation *is not* a member of the AWS CloudFormation stack-based resource group.

If you create a group based on an AWS CloudFormation stack, and the stack's status changes to one that is no longer supported as a basis for a group query, such as `DELETE_COMPLETE`, the resource group still exists, but it has no member resources.

After you create a resource group, you can perform tasks on the resources in the group.

The syntax of the `ResourceQuery` parameter of a CloudFormation stack-based resource group contains the following elements:

- **Type**

This element indicates which kind of query defines this resource group.

To create a AWS CloudFormation stack-based resource group, specify the value `CLOUDFORMATION_STACK_1_0`, as follows:

```
"Type": "CLOUDFORMATION_STACK_1_0"
```

- **Query**

This element defines the actual query used to match against resources. It contains a string representation of a JSON structure with the following elements:

- **ResourceTypeFilters**

This element limits the results to only those resource types that match the filter. You can specify the following values:

- `"AWS::AllSupported"` – to specify that the results can include resources of any type that match the query.
- `"AWS::service-id::resource-type"` – a comma separated list of resource-type specification strings with this format: `,` such as `"AWS::EC2::Instance"`.

- **StackIdentifier**

This element specifies the Amazon Resource Name (ARN) of the AWS CloudFormation stack whose resources you want to include in the group.

All of these JSON elements must be combined into a single-line string representation of the JSON structure. For example, consider a Query with the following example JSON structure. This query is meant to match only Amazon S3 buckets that are part of the specified AWS CloudFormation stack.

```
{
  "ResourceTypeFilters": [ "AWS::S3::Bucket" ],
  "StackIdentifier": "arn:aws:cloudformation:us-
west-2:123456789012:stack/MyCloudFormationStackName/fb0d5000-aba8-00e8-
aa9e-50d5cEXAMPLE"
}
```

That JSON can be represented as the following single-line string, and used as the value of the Query element. Because the value of a JSON structure must be a double-quoted string, you must escape any embedded double-quote characters or forward slash characters by preceding each with a backslash as shown here:

```
"Query": "{\\"ResourceTypeFilters\\": [\\"AWS::S3::Bucket\\"],\\"StackIdentifier\\":
\\"arn:aws:cloudformation:us-west-2:123456789012:stack\\MyCloudFormationStackName\\
fb0d5000-aba8-00e8-aa9e-50d5cEXAMPLE\\"}
```

The complete ResourceQuery string is then represented as shown here, as a CLI command parameter:

```
--resource-query '{"Type": "CLOUDFORMATION_STACK_1_0", "Query": "{\\"ResourceTypeFilters
\\": [\\"AWS::S3::Bucket\\"],\\"StackIdentifier\\":\\"arn:aws:cloudformation:us-
west-2:123456789012:stack\\MyCloudFormationStackName\\fb0d5000-aba8-00e8-
aa9e-50d5cEXAMPLE\\"}'
```

## Build a tag-based query and create a group

The following procedures show you how to build a tag-based query and use it to create a resource group.

### Console

1. Sign in to the [AWS Resource Groups console](#).

2. In the navigation pane, choose [Create Resource Group](#).
3. On the **Create query-based group** page, under **Group type**, choose the **Tag based** group type.
4. Under **Grouping criteria**, choose the resource types that you want to be in your resource group. You can have a maximum of 20 resource types in a query. For this walkthrough, choose **AWS::EC2::Instance** and **AWS::S3::Bucket**.
5. Still under **Grouping criteria**, for **Tags**, specify a tag key, or a tag key and value pair, to limit the matching resources to include only those that are tagged with your specified values. Choose **Add** or press **Enter** when you've finished your tag. In this example, filter for resources that have a tag key of **Stage**. The tag value is optional, but narrows the results of the query further. You can add multiple values for a tag key by adding an OR operator between tag values. To add more tags, choose **Add**. Queries assign an AND operator to tags, so any resource that matches the specified resource types and all specified tags is returned by the query.
6. Still under **Grouping criteria**, choose **Preview group resources** to return the list of EC2 instances and S3 buckets in your account that match the specified tag key or keys.
7. After you have the results that you want, create a group based on this query.

- a. Under **Group details**, for **Group name**, type a name for your resource group.

A resource group name can have a maximum of 128 characters, including letters, numbers, hyphens, periods, and underscores. The name cannot start with AWS or aws. These are reserved. A resource group name must be unique in the current Region in your account.

- b. (Optional) In **Group description**, enter a description of your group.
- c. (Optional) In **Group tags**, add tag key and value pairs that apply only to the resource group, not the member resources in the group.

Group tags are useful if you plan to make this group a member of a larger group. Because specifying at least a tag key is required to create a group, be sure to add at least a tag key in **Group tags** to groups that you plan to nest into larger groups.

8. When you're finished, choose **Create group**.

## AWS CLI & AWS SDKs

A tag-based group is based on a query of type `TAG_FILTERS_1_0`.

1. In an AWS CLI session, type the following, and then press **Enter**, replacing the values for group name, description, resource types, tag keys, and tag values with your own. Descriptions can have a maximum of 512 characters, including letters, numbers, hyphens, underscores, punctuation, and spaces. You can have a maximum of 20 resource types in a query. A resource group name can have a maximum of 128 characters, including letters, numbers, hyphens, periods, and underscores. The name cannot start with AWS or aws. These are reserved. A resource group name must be unique in your account.

At least one value for ResourceFilters is required. To specify all resource types, use `AWS::AllSupported` as the ResourceFilters value.

```
$ aws resource-groups create-group \
  --name resource-group-name \
  --resource-query '{"Type":"TAG_FILTERS_1_0","Query":{"ResourceTypeFilters
\":[\"resource_type1\",\"resource_type2\"]},\"TagFilters\":{\"Key\":\"Key1\",
\"Values\":[\"Value1\",\"Value2\"]},{\"Key\":\"Key2\",\"Values\":[\"Value1\",
\"Value2\"]}}}'
```

The following command is an example.

```
$ aws resource-groups create-group \
  --name my-resource-group \
  --resource-query '{"Type":"TAG_FILTERS_1_0","Query":{"ResourceTypeFilters
\":[\"AWS::EC2::Instance\"],\"TagFilters\":{\"Key\":\"Stage\", \"Values\":[
\"Test\"]}}}'
```

The following command is an example that includes all supported resource types.

```
$ aws resource-groups create-group \
  --name my-resource-group \
  --resource-query '{"Type":"TAG_FILTERS_1_0","Query":{"ResourceTypeFilters
\":[\"AWS::AllSupported\"],\"TagFilters\":{\"Key\":\"Stage\", \"Values\":[
\"Test\"]}}}'
```

2. The following are returned in the response to the command.
  - A full description of the group you have created.
  - The resource query that you used to create the group.
  - The tags that are associated with the group.

## Create an AWS CloudFormation stack-based group

The following procedures show you how to build a stack-based query and use it to create a resource group.

### Console

1. Sign in to the [AWS Resource Groups console](#).
2. In the navigation pane, choose [Create Resource Group](#).
3. On **Create query-based group**, under **Group type**, choose the **CloudFormation stack based** group type.
4. Choose the stack that you want to be the basis of your group. A resource group can be based on only one stack. To filter the list of stacks, start typing the name of the stack. Only stacks with supported statuses appear in the list.
5. Choose resource types in the stack that you want to include in the group. For this walkthrough, keep the default, **All supported resource types**. For more information about which resource types are supported and can be in the group, see [Resource types you can use with AWS Resource Groups and Tag Editor](#).
6. Choose **View group resources** to return the list of resources in the AWS CloudFormation stack that match your selected resource types.
7. After you have the results that you want, create a group based on this query.
  - a. Under **Group details**, for **Group name**, type a name for your resource group.

A resource group name can have a maximum of 128 characters, including letters, numbers, hyphens, periods, and underscores. The name cannot start with AWS or aws. These are reserved. A resource group name must be unique in the current Region in your account.

- b. (Optional) In **Group description**, enter a description of your group.
- c. (Optional) In **Group tags**, add tag key and value pairs that apply only to the resource group, not the member resources in the group.

Group tags are useful if you plan to make this group a member of a larger group. Because specifying at least a tag key is required to create a group, be sure to add at least a tag key in **Group tags** to groups that you plan to nest into larger groups.

8. When you're finished, choose **Create group**.

## AWS CLI & AWS SDKs

An AWS CloudFormation stack-based group is based on a query of type `CLOUDFORMATION_STACK_1_0`.

1. Run the following command, replacing the values for group name, description, stack identifier, and resource types with your own. Descriptions can have a maximum of 512 characters, including letters, numbers, hyphens, underscores, punctuation, and spaces.

If you do not specify resource types, Resource Groups includes all supported resource types in the stack. You can have a maximum of 20 resource types in a query. A resource group name can have a maximum of 128 characters, including letters, numbers, hyphens, periods, and underscores. The name cannot start with `AWS` or `aws`. These are reserved. A resource group name must be unique in your account.

The *stack\_identifier* is the stack ARN, as shown in the example command.

```
$ aws resource-groups create-group \
  --name group_name \
  --description "description" \
  --resource-query
  '{"Type":"CLOUDFORMATION_STACK_1_0","Query":{"StackIdentifier\":"
  \stack_identifier\","ResourceTypeFilters":["resource_type1\",
  \resource_type2\"]}}'
```

The following command is an example.

```
$ aws resource-groups create-group \
  --name My-CFN-stack-group \
  --description "My first CloudFormation stack-based group" \
  --resource-query
  '{"Type":"CLOUDFORMATION_STACK_1_0","Query":{"StackIdentifier\":"
  \arn:aws:cloudformation:us-west-2:123456789012:stack/AWStestuseraccount\
  fb0d5000-aba8-00e8-aa9e-50d5cEXAMPLE\","ResourceTypeFilters\":"
  [\"AWS::EC2::Instance\", \"AWS::S3::Bucket\"]}}'
```

2. The following are returned in the response to the command.
  - A full description of the group you have created.
  - The resource query that you used to create the group.

## Updating groups in AWS Resource Groups

To update a tag-based resource group in Resource Groups, you can edit the query and tags that are the basis of your group. You can add and remove resources from your group only by applying changes to the query or tags. You cannot select specific resources to add to or remove from your group. The best way to add or remove a specific resource from a group is to edit the resource's tags. Then verify that your resource group tag query either includes or omits the tag, depending on whether you want the resource in your group.

To update an AWS CloudFormation stack-based resource group, you can choose a different stack. You can also add or remove resource types from the stack that you want to be part of the group. To change the resources that are available in the stack, update the AWS CloudFormation template used to create the stack, and then update the stack in AWS CloudFormation. For more information about how to update an AWS CloudFormation stack, see [AWS CloudFormation stacks updates](#) in the *AWS CloudFormation User Guide*.

In the AWS CLI, you update groups in two commands.

- `update-group`, which you run to update a group's description.
- `update-group-query`, which you run to update the resource query and tags that determine the group's member resources.

In the console, you cannot change an AWS CloudFormation stack-based group to a tag-based query group, or vice versa. However, you can do this by using the Resource Groups API, including in the AWS CLI.

### Update tag-based query groups

#### Console

Update a tag-based group by changing the resource types or tags in the query on which the group is based. You can also add or change the group's description.

1. Sign in to the [AWS Resource Groups console](#).
2. In the navigation pane, under [Saved Resource Groups](#), choose the name of the group, and then choose **Edit**.

**Note**

You can update only resource groups that you own. The **Owner** column shows account ownership for each resource group. Any groups with an account owner other than the one you're signed in to were created in AWS License Manager. For more information, see [Host resource groups in AWS License Manager](#) in the *License Manager User Guide*.

3. On the **Edit group** page, under **Grouping criteria**, add or remove resource types. You can have a maximum of 20 resource types in a query. To remove a resource type, choose **X** on the resource type's label. Choose **View group resources** to see how the changes affect your group's resource members. In this walkthrough, we add the resource type **AWS::RDS::DBInstance** to the query.
4. Still under **Grouping criteria**, edit the tags as needed. In this example, we filter for resources that have a tag key of **Stage** and add a tag value of **Test**. The tag value is optional, but narrows the results of the query further. To remove a tag, choose **X** on the tag's label.
5. In **Additional information**, you can edit the group description. You cannot edit a group's name after the group has been created.
6. (Optional) In **Group tags**, you can add or remove tags. Group tags are metadata about your resource group. They do not affect member resources. To change the resources that are returned by the resource group's query, edit the tags found under **Grouping criteria**.

Group tags are useful if you plan to make this group a member of a larger group. Specifying at least a tag key is required to create a group. Therefore, be sure to add at least a tag key in **Group tags** to groups that you plan to nest into larger groups.

7. Choose **Preview group resources** to retrieve the updated list of EC2 instances, S3 buckets, and Amazon RDS database instances in your account that match the specified tag keys. If you do not see resources in the list that you expect, be sure that the resources are tagged with tags that you specified in **Grouping criteria**.
8. When you are finished, choose **Save changes**.

## AWS CLI & AWS SDKs

In the AWS CLI, you update a group's query and update a resource group's description by using two different commands. You cannot edit an existing group's name. In the AWS CLI, you can change a tag-based group to a CloudFormation stack-based group, or vice versa.

1. If you do not want to change the description of your group, skip this step and go on to the next. In an AWS CLI session, type the following, and then press **Enter**, replacing the values for group name and description with your own.

```
$ aws resource-groups update-group \  
  --group-name resource-group-name \  
  --description "description_text"
```

The following command is an example.

```
$ aws resource-groups update-group \  
  --group-name my-resource-group \  
  --description "EC2 instances, S3 buckets, and RDS DBs that we are using for  
the test stage."
```

The command returns a full, updated description of the group.

2. To update the query and tags of a group, type the following command. Replace the values for group name, resource types, tag keys, and tag values with your own. Then press **Enter**. You can have a maximum of 20 resource types in a query.

```
$ aws resource-groups update-group-query \  
  --group-name resource-group-name \  
  --resource-query '{"Type":"TAG_FILTERS_1_0","Query":{"ResourceTypeFilters\  
\":[\"resource_type1\",\"resource_type2\"],\"TagFilters\":{[\"Key\":\"Key1\",\  
\"Values\":[\"Value1\",\"Value2\"]},{\"Key\":\"Key2\",\"Values\":[\"Value1\",\  
\"Value2\"]}]}}'
```

The following command is an example.

```
$ aws resource-groups update-group-query \  
  --group-name my-resource-group \  
  --resource-query '{"Type":"TAG_FILTERS_1_0","Query":{"ResourceTypeFilters\  
\":[\"resource_type1\",\"resource_type2\"],\"TagFilters\":{[\"Key\":\"Key1\",\  
\"Values\":[\"Value1\",\"Value2\"]},{\"Key\":\"Key2\",\"Values\":[\"Value1\",\  
\"Value2\"]}]}}'
```

```
--resource-query '{"Type":"TAG_FILTERS_1_0","Query":{"ResourceTypeFilters\n":["AWS::EC2::Instance","AWS::S3::Bucket","AWS::RDS::DBInstance"],\n"TagFilters":[{"Key":"Stage","Values":["Test"]}]}'}'
```

The command returns the updated query as a result.

## Update an AWS CloudFormation stack-based group

### Console

You cannot change an AWS CloudFormation stack-based group to a tag-based group in the AWS Management Console. However, you can change the stack on which the group is based, or change the stack resource types that you want to include in the group. You can also add or change the group's description.

1. Sign in to the [AWS Resource Groups console](#).
2. In the navigation pane, under [Saved resource groups](#), choose the name of the group, and then choose **Edit**.

3.

#### Note

You can update only resource groups that you own. The **Owner** column shows account ownership for each resource group. Any groups with an account owner other than the one you're signed in to were created in AWS License Manager. For more information, see [Host resource groups in AWS License Manager](#) in the *License Manager User Guide*.

4. On the **Edit group** page, under **Grouping criteria**, to change the stack on which your group is based, choose the stack from the drop-down list. A resource group can be based on only one stack. To filter the list of stacks, start typing the name of the stack. Only stacks with supported statuses appear in the list. For a list of supported statuses, see [Creating query-based groups in AWS Resource Groups](#) in this guide.
5. Add or remove resource types. Only resource types that are available in the stack are shown in the drop-down list. The default is **All supported resource types**. You can have a maximum of 20 resource types in a query. To remove a resource type, choose **X** on the resource type's label. For more information about which resource types are supported and can be in the group, see [Resource types you can use with AWS Resource Groups and Tag Editor](#).

6. Choose **Preview group resources** to retrieve the list of resources in the AWS CloudFormation stack that match your selected resource types.
7. In **Additional information**, you can edit the group description. You cannot edit a group's name after the group has been created.
8. In **Group tags**, add or remove tags. Group tags are metadata about your resource group. They do not affect member resources. To change the resources that are returned by the resource group's query, edit tags in **Grouping criteria**.

Group tags are useful if you plan to make this group a member of a larger group.

Specifying at least a tag key is required to create a group. Therefore, be sure to add at least a tag key in **Group tags** to groups that you plan to nest into larger groups.

9. When you are finished, choose **Save changes**.

## AWS CLI & AWS SDKs

In the AWS CLI, you update a group's query and update a resource group's description by using two different commands. You cannot edit an existing group's name. In the AWS CLI, you can change a tag-based group to a CloudFormation stack-based group, or vice versa.

1. If you do not want to change the description of your group, skip this step and go on to the next. Run the following command, replacing the values for group name and description with your own.

```
$ aws resource-groups update-group \  
  --group-name "resource-group-name" \  
  --description "description_text"
```

The following command is an example.

```
$ aws resource-groups update-group \  
  --group-name "My-CFN-stack-group" \  
  --description "EC2 instances, S3 buckets, and RDS DBs that we are using for  
the test stage."
```

The command returns a full, updated description of the group.

2. To update the query and tags of a group, run the following command. Replace the values for group name, stack identifier, and resource types with your own. To add resource types,

provide the full list of resource types in the command, not only resource types you are adding. You can have a maximum of 20 resource types in a query.

The *stack\_identifier* is the stack ARN, as shown in the example command.

```
$ aws resource-groups update-group-query \
  --group-name resource-group-name \
  --description "description" \
  --resource-query
  '{"Type":"CLOUDFORMATION_STACK_1_0","Query":{"StackIdentifier":
  \stack_identifier"},"ResourceTypeFilters":["resource_type1",
  \resource_type2"]}'
```

The following command is an example.

```
$ aws resource-groups update-group-query \
  --group-name "my-resource-group" \
  --description "Updated CloudFormation stack-based group" \
  --resource-query
  '{"Type":"CLOUDFORMATION_STACK_1_0","Query":{"StackIdentifier":
  \arn:aws:cloudformation:us-west-2:810000000000:stack/AWStestuseraccount
  \/fb0d5000-aba8-00e8-aa9e-50d5cEXAMPLE"},"ResourceTypeFilters":
  ["AWS::EC2::Instance","AWS::S3::Bucket"]}'
```

The command returns the updated query as a result.

## Group lifecycle events: Monitoring resource groups for changes

After you use AWS Resource Groups to organize your resources into groups, you can monitor those groups for changes that are exposed to you as *events*. You can receive a notification about a group event as a signal for you to take some kind of action. For example, you could configure a notification that is sent whenever a group's membership changes. You could use an event from adding a new group member to trigger a Lambda function that programmatically reviews the change to ensure that new group members meet compliance requirements set by your organization. Such a Lambda function could perform automatic remediation for any new group members that fail to meet those requirements. An event caused by the removal of a group member could trigger a Lambda function that performs any required cleanup, such as deleting linked resources.

By turning on group lifecycle events for your resource groups, you allow events about changes to your groups to be captured by Amazon EventBridge and made available to all of the various EventBridge supported target services. You can then configure those target services to automatically take whatever actions your scenario requires. These targets include a variety of AWS services such as Amazon Simple Notification Service (Amazon SNS), Amazon Simple Queue Service (Amazon SQS), and AWS Lambda. With services like Lambda, your events can trigger *programmatic* responses that use code to perform whatever actions you require. For a list of the AWS services that you can target with EventBridge, see [Amazon EventBridge targets](#) in the *Amazon EventBridge User Guide*.

When you turn on group lifecycle events, AWS Resource Groups creates the following items:

- An AWS Identity and Access Management (IAM) service-linked role that has permission to monitor your resources for any changes to their tags and your AWS CloudFormation stacks for any changes to the resources that are part of a stack.
- A Resource Groups managed EventBridge rule that captures the details of any tag or stack changes to your resources. EventBridge uses this rule to notify Resource Groups about those changes. Then, Resource Groups generates membership events to send to EventBridge for your custom rules to process.

The service-linked role can be assumed by *only* the Resource Groups service. For more information about the service-linked role used by Resource Groups for this feature, see [Using service-linked roles for Resource Groups](#).

When this feature is turned on, Resource Groups generates an event when you make any of the following changes to a resource group:

- Create a new resource group.
- Update the query which defines the membership of [query-based resource group](#).
- Update the configuration of a [service linked resource group](#).
- Update the description of a resource group.
- Delete a resource group.
- Change a resource group's membership by adding or removing a resource from the group. A membership change can also happen when tags change, or when a AWS CloudFormation stack changes.

### Important

- To successfully receive and respond to group events, you must make changes to both Resource Groups and EventBridge. You can perform the changes in any order, but no group events are published to EventBridge targets until after you make changes to both services.
- The resource group changes don't include changes to any tags attached to the resource group itself. To generate events based on tag changes to your groups, you must use an EventBridge rule that uses the `aws.tag` source, instead of the `aws.resource-groups` source. For more information, see [Tag change events on AWS Resources](#) in the *Amazon EventBridge User Guide*.

## Topics

- [Turning on group lifecycle events in Resource Groups](#)
- [Creating an EventBridge rule to capture group lifecycle events and publish notifications](#)
- [Turning off group lifecycle events](#)
- [Structure and syntax of Resource Groups lifecycle events](#)

## Turning on group lifecycle events in Resource Groups

To receive notifications about lifecycle changes to your resource groups, you can turn on group lifecycle events. Resource Groups then provides information about your groups' changes to Amazon EventBridge. In EventBridge, you can evaluate and act on the changes using [rules you define in the EventBridge service](#).

### Minimum permissions

To turn on group lifecycle events in your AWS account, you must sign in as an AWS Identity and Access Management (IAM) principal with the following permissions:

- `resource-groups:UpdateAccountSettings`
- `iam:CreateServiceLinkedRole`
- `events:PutRule`

- `events:PutTargets`
- `events:DescribeRule`
- `events:ListTargetsByRule`
- `cloudformation:DescribeStacks`
- `cloudformation:ListStackResources`
- `tag:GetResources`

When you initially turn on group lifecycle events in an AWS account, Resource Groups creates a [service-linked role named `AWSServiceRoleForResourceGroups`](#). This managed role has permission to use a Resource Groups managed EventBridge rule. The rule monitors the tags attached to your resources and the AWS CloudFormation stacks in your account for any changes. Resource Groups then publishes those changes to the default event bus in Amazon EventBridge. The service also creates an EventBridge managed rule named [Managed.ResourceGroups.TagChangeEvents](#). This rule captures the details of tag changes of your resources. This lets Resource Groups generate membership events to send to EventBridge for your custom rules to process. Your EventBridge rules can then respond to events by sending notifications to the rules' configured targets.

After you complete these steps, rules that look for these events should start receiving them in a few minutes.

You can turn on group lifecycle events by using either the AWS Management Console or by using a command from the AWS CLI or one of the SDK APIs.

#### Note

You can't turn on group lifecycle events if your resource groups quota is too high. For more information, review [Viewing service quotas](#).

## AWS Management Console

### To turn on group lifecycle events in the Resource Groups console

1. Open the [Settings](#) page in the Resource Groups console.

2. In the **Group lifecycle events** section, choose the switch next to **Notifications are turned off**.
3. On the confirmation dialog, choose **Turn on notifications**.

The feature switch displays **Notifications are turned on**.

That completes the first part of the process. After you turn on event notifications, you can [create rules in Amazon EventBridge](#) that capture the events and send them to specific AWS services for processing.

## AWS CLI

### To turn on group lifecycle events by using the AWS CLI or the AWS SDKs

The following example show how to use the AWS CLI to turn on group lifecycle events in Resource Groups. Enter the command with the service principal parameter exactly as shown. The output shows both the current status and the desired status of the feature.

```
$ aws resource-groups update-account-settings \
  --group-lifecycle-events-desired-status ACTIVE
{
  "AccountSettings": {
    "GroupLifecycleEventsDesiredStatus": "ACTIVE",
    "GroupLifecycleEventsStatus": "IN_PROGRESS"
  }
}
```

You can confirm that the feature is turned on by running the following example command. When both status fields show the same value, then the operation is complete.

```
$ aws resource-groups get-account-settings
{
  "AccountSettings": {
    "GroupLifecycleEventsDesiredStatus": "ACTIVE",
    "GroupLifecycleEventsStatus": "ACTIVE"
  }
}
```

For more information, see the following resources:

- AWS CLI – [aws resource-groups update-account-settings](#) and [aws resource-groups get-account-settings](#)
- API – [UpdateAccountSettings](#) and [GetAccountSettings](#)

## Creating an EventBridge rule to capture group lifecycle events and publish notifications

You can [turn on group lifecycle events for your resource groups](#) in AWS Resource Groups to publish events to Amazon EventBridge. Then, you can create EventBridge rules that respond to those events by sending them to other AWS services for further processing.

### AWS CLI

The process to create a rule in EventBridge that captures events and sends them to your desired target service takes two separate CLI commands:

1. [Create the EventBridge rule to capture the events you want](#)
2. [Attach a target that can process the events to the EventBridge rule](#)

### Step 1: Create the EventBridge rule to capture the events

The following AWS CLI [put-rule](#) example command creates an EventBridge rule that captures *all* Resource Groups lifecycle event changes.

```
$ aws events put-rule \  
  --name "CatchAllResourceGroupEvents" \  
  --event-pattern '{"source":["aws.resource-groups"]}' \  
{  
  "RuleArn": "arn:aws:events:us-east-1:123456789012:rule/  
CatchAllResourceGroupEvents"  
}
```

The output includes the Amazon Resource Name (ARN) of the new rule.

#### Note

Parameter values that include quoted strings have different formatting rules based on the operating system and shell that you use. For the examples in this guide, we

show commands that work on a Linux BASH shell. For instructions about formatting strings with embedded quotes for other operating systems, such as the Windows command prompt, see [Using quotation marks inside strings](#) in the *AWS Command Line Interface User Guide*.

As parameter strings get more complex, it can be easier and less error prone to [accept a parameter value from a text file](#) instead of typing it directly on the command line.

The following event pattern restricts the events to only those that are related to the specified group, identified by its ARN. This event pattern is a complex JSON string that is much less readable when compressed into a single-line, properly escaped JSON string. You can store it in a file instead.

Store the event pattern JSON string in a file. In the following code example, the file is `eventpattern.txt`.

```
{
  "source": [ "aws.resource-groups" ],
  "detail": {
    "group": {
      "arn": [ "my-resource-group-arn" ]
    }
  }
}
```

Then, issue the following command to create the rule, retrieving the custom event pattern from the file.

```
$ aws events put-rule \
  --name "CatchResourceGroupEventsForMyGroup" \
  --event-pattern file://eventpattern.txt
{
  "RuleArn": "arn:aws:events:us-east-1:123456789012:rule/
CatchResourceGroupEventsForMyGroup"
}
```

To capture other types of Resource Groups events, replace the `--event-pattern` string with filters like those presented in the section [Example EventBridge custom event patterns for different use cases](#).

## Step 2: Attach a target that can process the events to the EventBridge rule

Now that you have a rule that captures the events of interest to you, you can attach one or more targets to do some type of processing on the events.

The following AWS CLI [put-targets](#) command attaches an Amazon Simple Notification Service (Amazon SNS) topic named `my-sns-topic` to the rule you created in the previous example. All subscribers to the topic receive a notification when a change occurs to the group specified in the rule.

```
$ aws events put-targets \  
  --rule CatchResourceGroupEventsForMyGroup \  
  --targets Id=1,Arn=arn:aws:sns:us-east-1:123456789012:my-sns-topic \  
{  
  "FailedEntryCount": 0,  
  "FailedEntries": []  
}
```

At this point, any group changes that match the event pattern in your rule are automatically sent to the configured target or targets. If, as in the previous example, the target is an Amazon SNS topic, then all subscribers to the topic receive a message containing the event as described in [Structure and syntax of Resource Groups lifecycle events](#).

For more information, see the following resources:

- AWS CLI – [aws events put-rule](#) and [aws events put-targets](#)
- API – [PutRule](#) and [PutTargets](#)

## Creating a rule to capture only specific group lifecycle event types

You can create a rule with a custom event pattern that captures only the events that you are interested in. For complete details about how to filter incoming events using a custom event pattern, see [Amazon EventBridge events](#) in the *Amazon EventBridge User Guide*.

For example, suppose you want a rule to process only those Resource Groups notifications that indicate the creation of a new resource group. You could use a custom event pattern similar to the following example.

```
{
```

```
"source": [ "aws.resource-groups" ],
"detail-type": [ "ResourceGroups Group State Change" ],
"detail": {
  "state-change": "create"
}
}
```

That filter captures only those events that have those exact values in the specified fields. For a complete list of the fields available for you to match, see [Structure and syntax of Resource Groups lifecycle events](#).

## Turning off group lifecycle events

You can turn off group lifecycle events to stop AWS Resource Groups from emitting events to Amazon EventBridge. You can do this by using either the AWS Management Console or by using a command from the AWS CLI or one of the SDK APIs.

### Note

Turning off group lifecycle events deletes the Resource Groups managed EventBridge rule used to scan your resource tags and AWS CloudFormation stacks for changes. Resource Groups can no longer pass those changes to EventBridge. Any rules you defined in EventBridge that look for Resource Groups events stop receiving events to process. If you intend to turn on group lifecycle events again in the future, you can disable your rules. If you don't intend to use those rules again, you can delete them. For more information, see [Disabling or deleting an EventBridge rule](#) in the *Amazon EventBridge User Guide*.

Turning off group lifecycle events does **not** delete the service-linked role. You can [delete the service-linked role manually](#) if you wish using IAM. If you later need to turn on group lifecycle events again and the service-linked role doesn't exist, Resource Groups recreates it automatically.

### Minimum permissions

To turn off group lifecycle events in your current AWS account, you must sign in as an AWS Identity and Access Management (IAM) principal with the following permissions:

- `resource-groups:UpdateAccountSettings`
- `events>DeleteRule`

- `events:RemoveTargets`
- `events:DescribeRule`
- `events:ListTargetsByRule`

## AWS Management Console

### To turn off group lifecycle event notifications to EventBridge

1. Open the [Settings](#) page in the Resource Groups console.
2. In the **Group lifecycle events** section, choose the switch next to **Notifications are turned on**.
3. On the confirmation dialog, choose **Turn off notifications**.

The feature switch is displayed: **Event notifications are turned off**.

At this point, Resource Groups no longer sends events to the EventBridge default event bus, and any rules that you have no longer receive group notification events to process. You can optionally delete those rules to complete the clean up.

## AWS CLI

### To turn off group lifecycle event notifications to EventBridge

The following example show how to use the AWS CLI to turn off group lifecycle events in Resource Groups.

```
$ aws resource-groups update-account-settings \
  ----group-lifecycle-events-desired-status INACTIVE
{
  "AccountSettings": {
    "GroupLifecycleEventsDesiredStatus": "INACTIVE",
    "GroupLifecycleEventsStatus": "INACTIVE"
  }
}
```

For more information, see the following resources:

- AWS CLI – [aws resource-groups update-account-settings](#) and [aws resource-groups get-account-settings](#)
- API – [UpdateAccountSettings](#) and [GetAccountSettings](#)

## Structure and syntax of Resource Groups lifecycle events

The lifecycle events for AWS Resource Groups take the form of [JSON](#) object strings in the following general format.

```
{
  "version": "0",
  "id": "08f00e24-2e30-ec44-b824-8acddf1ac868",
  "detail-type": "ResourceGroups Group ... Change",
  "source": "aws.resource-groups",
  "account": "123456789012",
  "time": "2020-09-29T09:59:01Z",
  "region": "us-east-1",
  "resources": [
    "arn:aws:resource-groups:us-east-1:123456789012:group/MyGroupName"
  ],
  "detail": {
    ...
  }
}
```

For details about the fields common to all Amazon EventBridge events, see [Amazon EventBridge events](#) in the *Amazon EventBridge User Guide*. Details that are specific to Resource Groups are explained in the following table.

Field name	Type	Description
detail-type	String	<p>For Resource Groups, the <code>detail-type</code> field is always one of the following values:</p> <ul style="list-style-type: none"> <li>• <a href="#">ResourceGroups Group State Change</a> – Represents changes to the overall group state and its properties.</li> </ul>

Field name	Type	Description
		<ul style="list-style-type: none"> <li><a href="#">ResourceGroups Group Membership Change</a> – Represents changes to the group membership.</li> </ul>
source	String	For Resource Groups, this value is <b>always</b> <code>"aws.resource-groups"</code> .
resources	An array of Amazon Resource Names (ARNs)	<p>This field always includes the <a href="#">Amazon resource name (ARN)</a> of the group with the change that triggered this event.</p> <p>This field can also include the ARNs of any resources added to or removed from the group, if applicable.</p>
detail	JSON object string	This is the payload of the event. The contents of the detail field vary based on the value of the detail-type. <a href="#">See the next section for more information.</a>

## Structure of the detail field

The detail field includes all of the Resource Groups service-specific details about a specific change. The detail field can take one of two forms, a group state change or membership change, based on the value of the detail-type field described in the previous section.

### Important

Resource groups in these events are identified by a combination of the group's ARN and a "unique-id" field that contains a [UUID](#). By including a UUID as part of the identity of a resource group, you can distinguish between a group that is deleted and a different group that is later created with the same name. We recommend that you treat a concatenation of the ARN and unique id as the key for the group in your programs that interact with these events.

## Group state change

"detail-type": "ResourceGroups Group State Change"

This detail-type value indicates that the state of the group itself, including its metadata, has changed. This change occurs when a group is created, updated, or deleted, as indicated by the "change" field within the detail.

The information included in the details section when this detail-type is specified include the fields described in the following table.

Field name	Type	Description
event-sequence	Double	A monotonically increasing number that specifies the sequence of events for a specific group. The number resets when you delete the group and create another group with the same name.
group	<a href="#">Group</a> JSON object	The group object associated with the event by its ARN, name, and unique ID.
state-change	String	The type of state change that occurred. Can be any of the following values: <ul style="list-style-type: none"> <li><a href="#">create</a></li> <li><a href="#">update</a></li> <li><a href="#">delete</a></li> </ul>
old-state	<a href="#">GroupState</a> JSON object	The state of the group before the change. The object includes only the values of properties that changed.
new-state	<a href="#">GroupState</a> JSON object	The state of the group after the change. The object includes only the values of properties that changed.

The group JSON object contains the elements described in the following table.

Field name	Type	Description
arn	String	The ARN of the group.
name	String	The friendly name of the group.
unique-id	GUID	A unique GUID value that distinguishes between a group that was deleted and a different group that was later created with the same name and ARN. Use the concatenation of ARN and this value as a unique key for the group when consuming these events in your code.

The GroupState JSON objects contain the elements described in the following table.

Field name	Type	Description
description	String	The customer-provided description of the resource group.
resource-query	ResourceQuery JSON object	A JSON representation of the query that defines the group's members. This field is present only for groups based on a query. The syntax of this field is defined by the <a href="#">ResourceQuery API data type</a> . Example of this are included in the <a href="#">Create</a> and <a href="#">Update</a> event examples.
group-configuration	Configuration JSON object	A JSON representation of configuration parameters associated with a service-linked group. For more information, see <a href="#">Service configurations for resource groups</a> in the <i>AWS Resource Groups API Reference</i> .

Each of the following code examples illustrates the contents of the detail field for each state-change type.

## Create

```
"state-change": "create"
```

The event indicates that a new group was created. The event carries all the group metadata properties set during the group's creation. This event is typically followed by one or more group membership events unless the group is empty. Properties that have a null value are not displayed in the event body.

The following example event indicates a newly created resource group named `my-service-group`. In this example, the group uses a tag-based query that matches only Amazon Elastic Compute Cloud (Amazon EC2) instances that have the tag `"project"="my-service"`.

```
{
  "version": "0",
  "id": "08f00e24-2e30-ec44-b824-8acddf1ac868",
  "detail-type": "ResourceGroups Group State Change",
  "source": "aws.resource-groups",
  "account": "123456789012",
  "time": "2020-09-29T09:59:01Z",
  "region": "us-east-1",
  "resources": [
    "arn:aws:resource-groups:us-east-1:123456789012:group/my-service-group"
  ],
  "detail": {
    "event-sequence": 1.0,
    "state-change": "create",
    "group": {
      "arn": "arn:aws:resource-groups:us-east-1:123456789012:group/my-service-group",
      "name": "my-service-group",
      "unique-id": "3dd07ab7-3228-4410-8cdc-6c4a10fccee"
    },
    "new-state": {
      "resource-query": {
        "type": "TAG_FILTERS_1_0",
        "query": "{
          \"ResourceTypeFilters\": [\"AWS::EC2::Instance\"],
          \"TagFilters\": [{\"Key\": \"project\", \"Values\": [\"my-service\"]}
        ]"
      }
    }
  }
}
```

```
}

```

## Update

```
"state-change": "update"
```

The event indicates that an existing group was modified in some way. The event carries only the properties that changed from the previous state. Properties that have not changed are not displayed in the event body.

The following example event indicates that the tag-based query in the previous example's resource group was modified to also include Amazon EC2 volume resources in the group.

```
{
  "version": "0",
  "id": "08f00e24-2e30-ec44-b824-8acddf1ac868",
  "detail-type": "ResourceGroups Group State Change",
  "source": "aws.resource-groups",
  "account": "123456789012",
  "time": "2020-09-29T09:59:01Z",
  "region": "us-east-1",
  "resources": [
    "arn:aws:resource-groups:us-east-1:123456789012:group/my-service-group"
  ],
  "detail": {
    "event-sequence": 3.0,
    "state-change": "update",
    "group": {
      "arn": "arn:aws:resource-groups:us-east-1:123456789012:group/my-service-
group",
      "name": "my-service",
      "unique-id": "3dd07ab7-3228-4410-8cdc-6c4a10fcceeaa"
    },
    "new-state": {
      "resource-query": {
        "type": "TAG_FILTERS_1_0",
        "query": "{
          \"ResourceTypeFilters\": [\"AWS::EC2::Instance\",
\"AWS::EC2::Volume\"],
          \"TagFilters\": [{\"Key\": \"project\", \"Values\": [\"my-service\"]}]"
        }
      }
    }
  },
}
```

```

    "old-state": {
      "resource-query": {
        "type": "TAG_FILTERS_1_0",
        "query": "{
          \"ResourceTypeFilters\": [\"AWS::EC2::Instance\"],
          \"TagFilters\": [{\"Key\": \"Project\", \"Values\": [\"my-service\"]}
        }"
      }
    }
  }
}

```

## Delete

```
"state-change": "delete"
```

The event indicates that an existing group was deleted. The detail field includes no metadata about the group other than its identification. The event-`sequence` field is reset after this event as it is, by definition, the last event for this `arn` and `unique-id`.

```

{
  "version": "0",
  "id": "08f00e24-2e30-ec44-b824-8acddf1ac868",
  "detail-type": "ResourceGroups Group State Change",
  "source": "aws.resource-groups",
  "account": "123456789012",
  "time": "2020-09-29T09:59:01Z",
  "region": "us-east-1",
  "resources": [
    "arn:aws:resource-groups:us-east-1:123456789012:group/my-service"
  ],
  "detail": {
    "event-sequence": 4.0,
    "state-change": "delete",
    "group": {
      "arn": "arn:aws:resource-groups:us-east-1:123456789012:group/my-service",
      "name": "my-service",
      "unique-id": "3dd07ab7-3228-4410-8cdc-6c4a10fccee"
    }
  }
}

```

## Group membership change

"detail-type": "ResourceGroups Group Membership Change"

This detail-type value indicates that the group's membership was changed by a resource being added to or removed from the group. When this detail-type is specified, the top-level resources field includes the ARN of the group whose membership was changed and the ARNs of any resources that were added to or removed from the group.

The information included in the details section when this detail-type is specified include the fields described in the following table.

Field name	Type	Description
event-sequence	Double	A monotonically increasing number that indicates the sequence of events for a specific group. The number resets when the group is deleted and its unique ID changes.
group	Group JSON object	Identifies the group object associated with the event by its ARN, name, and unique ID.
resources	Array of ResourceChange JSON objects	<p>An array of resources whose group membership has changed.</p> <p>This ResourceChange object contains the following fields for each resource:</p> <ul style="list-style-type: none"> <li>membership-change – The value is either "add" or "remove".</li> <li>arn – The ARN of the resource added or removed.</li> <li>resource-type – The type of resource added or removed.</li> </ul>

The following code example illustrates the contents of the event for a typical membership change type. This example shows one resource being added to the group, and one resource being removed from the group.

```

{
  "version": "0",
  "id": "08f00e24-2e30-ec44-b824-8acddf1ac868",
  "detail-type": "ResourceGroups Group Membership Change",
  "source": "aws.resource-groups",
  "account": "123456789012",
  "time": "2020-09-29T09:59:01Z",
  "region": "us-east-1",
  "resources": [
    "arn:aws:resource-groups:us-east-1:123456789012:group/my-service",
    "arn:aws:ec2:us-east-1:123456789012:instance/i-abcd1111",
    "arn:aws:ec2:us-east-1:123456789012:instance/i-efef2222"
  ],
  "detail": {
    "event-sequence": 2.0,
    "group": {
      "arn": "arn:aws:resource-groups:us-east-1:123456789012:group/my-service",
      "name": "my-service",
      "unique-id": "3dd07ab7-3228-4410-8cdc-6c4a10fcceea"
    },
    "resources": [
      {
        "membership-change": "add",
        "arn": "arn:aws:ec2:us-east-1:123456789012:instance/i-abcd1111",
        "resource-type": "AWS::EC2::Instance"
      },
      {
        "membership-change": "remove",
        "arn": "arn:aws:ec2:us-east-1:123456789012:instance/i-efef2222",
        "resource-type": "AWS::EC2::Instance"
      }
    ]
  }
}

```

## Example EventBridge custom event patterns for different use cases

The following example EventBridge custom event patterns filter the events generated by Resource Groups to only those that you are interested in for a specific event rule and target.

In the following code examples, if a specific group or resource is needed, replace each *user input placeholder* with your own information.

## All Resource Groups events

```
{
  "source": [ "aws.resource-groups" ]
}
```

## Group state or membership change events

The following code example is for all group *state* changes.

```
{
  "source": [ "aws.resource-groups" ],
  "detail-type": [ "ResourceGroups Group State Change " ]
}
```

The following code example is for all group *membership* changes.

```
{
  "source": [ "aws.resource-groups" ],
  "detail-type": [ "ResourceGroups Group Membership Change" ]
}
```

## Events for a specific group

```
{
  "source": [ "aws.resource-groups" ],
  "detail": {
    "group": {
      "arn": [ "my-group-arn" ]
    }
  }
}
```

The previous example captures changes to the specified group. The following example does the same and also captures changes when the group is a member resource of another group.

```
{
  "source": [ "aws.resource-groups" ],
  "resources": [ "my-group-arn" ]
}
```

## Events for a specific resource

You can filter only group membership change events for specific member resources.

```
{
  "source": [ "aws.resource-groups" ],
  "detail-type": [ "ResourceGroups Group Membership Change " ],
  "resources": [ "arn:aws:ec2:us-east-1:123456789012:instance/i-b188560f" ]
}
```

## Events for a specific resource type

You can use prefix matching with ARNs to match events for a specific resource type.

```
{
  "source": [ "aws.resource-groups" ],
  "resources": [
    { "prefix": "arn:aws:ec2:us-east-1:123456789012:instance" }
  ]
}
```

Alternatively, you can use exact matching by using resource-type identifiers, potentially matching on more than one type concisely. Unlike the previous example, the following example matches only group membership change events because group state change events don't include a resources field in their detail field.

```
{
  "source": [ "aws.resource-groups" ],
  "detail": {
    "resources": {
      "resource-type": [ "AWS::EC2::Instance", "AWS::EC2::Volume" ]
    }
  }
}
```

## All resource removal events

```
{
  "source": [ "aws.resource-groups" ],
  "detail-type": [ "ResourceGroups Group Membership Change" ],
  "detail": {
    "resources": {
```

```

        "membership-change": [ "remove" ]
      }
    }
  }

```

### All resource removal events for a specific resource

```

{
  "source": [ "aws.resource-groups" ],
  "detail-type": [ "ResourceGroups Group Membership Change" ],
  "detail": {
    "resources": {
      "membership-change": [ "remove" ],
      "arn": [ "arn:aws:ec2:us-east-1:123456789012:instance/i-b188560f" ]
    }
  }
}

```

You can't use the **top-level** `resources` array that was used in the first example in this section for this type of event filtering. That's because a resource in the top-level `resources` element might be a resource being added to a group and the event would still match. In other words, the following code example might return unexpected events. Instead, use the syntax shown in the previous example.

```

{
  "source": [ "aws.resource-groups" ],
  "detail-type": [ "ResourceGroups Group Membership Change" ],
  "resources": [ "arn:aws:ec2:us-east-1:123456789012:instance/i-b188560f" ],
  "detail": {
    "resources": {
      "membership-change": [ "remove" ]
    }
  }
}

```

## Deleting resource groups from AWS Resource Groups

You can use the [AWS Resource Groups console](#) or the AWS CLI to delete resource groups from AWS Resource Groups. Deleting a resource group does not delete the resources that are members of the group or tags on member resources. It deletes only the group structure and any group-level tags.

## Console

### To delete resource groups

1. Sign in to the [AWS Resource Groups console](#).
2. In the navigation pane, choose [Saved Resource Groups](#).
3. Choose the name of the resource group that you want to delete, and then choose **View details**.
4. On the group's detail page, choose **Delete** in the top right corner.
5. When you are prompted to confirm the deletion, choose **Delete**.

## AWS CLI & AWS SDKs

### To delete resource groups

1. Run the following command, replacing *resource\_group\_name* with the name of your group.

```
$ aws resource-groups delete-group \  
  --group-name resource_group_name
```

2. When you are prompted to confirm the deletion, type yes, and then press **Enter**.

## AWS services that work with AWS Resource Groups

You can use the following AWS services with AWS Resource Groups.

AWS service	Using with Resource Groups
<a href="#">AWS CloudFormation</a> – Create resource groups in AWS CloudFormation by using a stack template.	Provision and organize AWS resources at the same time. Organize resources by tags. Organize resources from another stack. Gather insights on your AWS resources in resource groups using Amazon CloudWatch or take operational actions using AWS Systems Manager.

AWS service	Using with Resource Groups
	<p>For more information, see <a href="#">ResourceGroups resource type reference</a> in the <i>AWS CloudFormation User Guide</i>.</p>
<p><a href="#">CloudTrail</a> – Capture all resource group actions using AWS CloudTrail.</p>	<p>Capture information about actions performed on your resource groups including details like who performed the action (IAM principal, such as a role, user, or an AWS service), when the action was performed, where the action occurred (the source IP address) and more. These records can then be used for analysis or to trigger follow-up actions.</p> <p>For more information, see <a href="#">Viewing events with CloudTrail Event history</a>.</p>
<p><a href="#">Amazon CloudWatch</a> – Enable real-time monitoring of your AWS resources and the applications you run on AWS.</p>	<p>Focus your view to display metrics and alarms from a single resource group.</p> <p>For more information, see <a href="#">Focus on metrics and alarms in a resource group</a> in the <i>Amazon CloudWatch User Guide</i>.</p>
<p><a href="#">Amazon CloudWatch application insights</a> – Detect common problems with your .NET and SQL Server-based applications.</p>	<p>Monitor your .NET and SQL Server application resources that belong to a resource group.</p> <p>For more information, see <a href="#">Supported application components</a> in the <i>Amazon CloudWatch User Guide</i>.</p>
<p><a href="#">Amazon DynamoDB table groups</a> – Organize your DynamoDB tables into logical groupings so you can more easily manage your resources.</p>	<p>Create, edit, and delete groups of DynamoDB tables from the DynamoDB <b>Action</b> menu.</p> <p>For more information, see the <a href="#">Amazon DynamoDB Developer Guide</a>.</p>

AWS service	Using with Resource Groups
<p><a href="#">Amazon EC2 dedicated hosts</a> – Use your existing per-socket, per-core, or per-VM software licenses, including Windows Server, Microsoft SQL Server, SUSE, and Linux Enterprise Server.</p>	<p>Launch Amazon EC2 instances into host resource groups to help maximize your utilization of Dedicated Hosts.</p> <p>For more information, see <a href="#">Working with dedicated hosts</a> in the <i>Amazon EC2 User Guide for Linux Instances</i>.</p>
<p><a href="#">Amazon EC2 capacity reservations</a> – Reserve capacity for your Amazon EC2 instances to be used when you need it. You can specify attributes for the capacity reservation so that it only works with Amazon EC2 instances that launch with matching attributes.</p>	<p>Launch your Amazon EC2 instances into resource groups that contain one or more capacity reservations. If the group doesn't have a capacity reservation with matching attributes and available capacity for a requested instance, the instance runs as an on-demand instance. If you later add a matching capacity reservation to the targeted group, the instance is automatically matched with and moved into the reserved capacity.</p> <p>For more information, see <a href="#">Work with Capacity Reservation groups</a> in the <i>Amazon EC2 User Guide for Linux Instances</i>.</p>
<p><a href="#">AWS License Manager</a> – Streamline the process of bringing software vendor licenses to the cloud.</p>	<p>Configure a host resource group to enable License Manager to manage your Dedicated Hosts.</p> <p>For more information, see <a href="#">Host Resource Groups in License Manager</a> in the <i>License Manager User Guide</i>.</p>

AWS service	Using with Resource Groups
<p><a href="#">AWS Resilience Hub</a> – Prepare and protect your applications from disruptions.</p>	<p>Discover your applications that are defined using Resource Groups.</p> <p>For more information, see <a href="#">Measure and Improve Your Application Resilience with AWS Resilience Hub</a> in the <i>AWS News Blog</i>.</p>
<p><a href="#">AWS Resource Access Manager</a> – Share specified AWS resources that you own with other accounts.</p>	<p>Share host resource groups using AWS RAM.</p> <p>For more information, see <a href="#">Shareable resources</a> in the <i>AWS RAM User Guide</i>.</p>
<p><a href="#">AWS Service Catalog AppRegistry</a> – Define and manage your applications and their metadata.</p>	<p>When you create an application in AppRegistry, that service automatically creates an resource group for that application. The application resource group is a collection of all of the resources in your application. The service also creates a AWS CloudFormation stack-based resource group for every stack associated with the application.</p> <p>For more information, see <a href="#">Using AppRegistry</a> in the <i>AWS Service Catalog Administrator Guide</i>.</p>

AWS service	Using with Resource Groups
<p><a href="#">AWS Systems Manager</a> – Enable visibility and control of your AWS resources.</p>	<p>Gather operational insights and take bulk actions on your applications that are based on resource groups. In the AWS Systems Manager console, the Application Manager <b>Custom applications</b> page automatically imports and displays operations data for applications that are based on resource groups. You can use the information in Application Manager to help you determine which resources in an application are compliant and working correctly and which resources require action.</p> <p>For more information, see <a href="#">Working with applications in Application Manager</a> in the <i>AWS Systems Manager User Guide</i>.</p>
<p><a href="#">Amazon VPC Network Access Analyzer</a> – Identify unwanted network access to your resources on AWS.</p>	<p>You can specify the sources and destinations for your network access requirements by using AWS Resource Groups. This lets you govern network access across your AWS environment, independent of how you configure your network.</p> <p>For more information, see <a href="#">Use Resource Groups with Network Access Scopes</a> in the <i>Amazon Virtual Private Cloud User Guide</i>.</p>

## Service configurations for resource groups

Resource groups enable you to manage collections of your AWS resources as a unit. Some AWS services support this by performing requested operations on all members of the group. Such services can store the settings to be applied to group members as a *configuration* in the form of a [JSON](#) data structure that is attached to the group.

This topic describes the available configuration settings for supported AWS services.

## Topics

- [How to access the service configuration attached to a resource group](#)
- [JSON syntax of a service configuration](#)
- [Supported configuration types and parameters](#)

## How to access the service configuration attached to a resource group

Services that support service-linked groups typically set the configuration for you when you use the tools provided by that service, such as that service's management console or its AWS CLI and AWS SDK operations. Some services fully manage their service-linked groups and you can't modify them in any way except as allowed by the console or commands provided by the owning AWS service. However, in some cases, you can interact with the service configuration by using the following API operations in the AWS SDKs or their AWS CLI equivalents:

- You can attach your own configuration to a group when you create the group by using the [CreateGroup](#) operation.
- You can modify the current configuration attached to a group by using the [PutGroupConfiguration](#) operation.
- You can view the current configuration of a resource group by calling the [GetGroupConfiguration](#) operation.

## JSON syntax of a service configuration

A resource group can contain a *configuration* that defines service-specific settings that apply to the resources that are members of that group.

A configuration is expressed as a [JSON](#) object. At the top-most level, a configuration is an array of [group configuration items](#). Each group configuration item contains two elements: a Type for the configuration and a set of Parameters defined by that type. Each parameter contains a Name and an array of one or more Values. The following example with *placeholders* shows the basic syntax for a configuration for a single sample resource type. This example shows a type with two parameters, and each parameter with two values. The actual valid types, parameters, and values are discussed in the next section.

```
{  
  "Configuration": [  
    {  
      "Type": "SampleResourceType",  
      "Parameters": [  
        {  
          "Name": "Parameter1",  
          "Values": ["Value1", "Value2"]  
        },  
        {  
          "Name": "Parameter2",  
          "Values": ["Value3", "Value4"]  
        }  
      ]  
    }  
  ]  
}
```

```
{
  "Type": "configuration-type",
  "Parameters": [
    {
      "Name": "parameter1-name",
      "Values": [
        "value1",
        "value2"
      ]
    },
    {
      "Name": "parameter2-name",
      "Values": [
        "value3",
        "value4"
      ]
    }
  ]
}
```

## Supported configuration types and parameters

Resource Groups supports using the following configuration types. Each configuration type has a set of parameters that are valid for that type.

### Topics

- [AWS::ResourceGroups::Generic](#)
- [AWS::AppRegistry::Application](#)
- [AWS::CloudFormation::Stack](#)
- [AWS::EC2::CapacityReservationPool](#)
- [AWS::EC2::HostManagement](#)
- [AWS::NetworkFirewall::RuleGroup](#)

### **AWS::ResourceGroups::Generic**

This configuration type specifies settings that enforce membership requirements on the resource group, rather than configuring the behavior of a specific resource type for an AWS service. This

configuration type is automatically added by those service-linked groups that need it, such as the `AWS::EC2::CapacityReservationPool` and `AWS::EC2::HostManagement` types.

The following Parameters are valid for the `AWS::ResourceGroups::Generic` service-linked group Type.

- **allowed-resource-types**

This parameter specifies that the resource group can consist of resources of only the specified type or types.

**Data type of values:** String

**Permitted values:**

- `AWS::EC2::Host` – A Configuration with this parameter and value is required when the service configuration also contains a Configuration of type `AWS::EC2::HostManagement`. This ensures that the `HostManagement` group can contain only Amazon EC2 dedicated hosts.
- `AWS::EC2::CapacityReservation` – A Configuration with this parameter and value is required when the service configuration also contains a Configuration item of type `AWS::EC2::CapacityReservationPool`. This ensures that a `CapacityReservation` group can contain only Amazon EC2 capacity reservation capacity.

**Required:** Conditional, based on other Configuration elements that are attached to the resource group. See the previous entry for **Permitted values**.

The following example restricts group members to only Amazon EC2 host instances.

```
{
  "Configuration": [
    {
      "Type": "AWS::ResourceGroups::Generic",
      "Parameters": [
        {
          "Name": "allowed-resource-types",
          "Values": ["AWS::EC2::Host"]
        }
      ]
    }
  ]
}
```

- **deletion-protection**

This parameter specifies that the resource group can't be deleted unless it contains no members. For more information, see [Delete a host resource group](#) in the *License Manager User Guide*

**Data type of values:** Array of string

**Permitted values:** The only permitted value is [ "UNLESS\_EMPTY" ] (the value must be upper case).

**Required:** Conditional, based on other Configuration elements that are attached to the resource group. This parameter is required only when the resource group also has another Configuration element with the Type of `AWS::EC2::HostManagement`.

The following example enables delete protection for the group unless the group has no members.

```
{
  "Configuration": [
    {
      "Type": "AWS::ResourceGroups::Generic",
      "Parameters": [
        {
          "Name": "deletion-protection",
          "Values": [ "UNLESS_EMPTY" ]
        }
      ]
    }
  ]
}
```

## **AWS::AppRegistry::Application**

This Configuration type specifies that the resource group represents an application created by AWS Service Catalog AppRegistry.

Resource groups of this type are fully managed by the AppRegistry service, and can't be created, updated, or deleted by users other than by using the tools provided by AppRegistry.

**Note**

Because resource groups of this type are automatically created and maintained by AWS and not managed by the user, these resource groups do not count against your quota limit for the [maximum number of resource groups that you can create in your AWS account](#).

For more information, see [Using AppRegistry](#) in the *Service Catalog User Guide*.

When AppRegistry creates a service-linked resource group of this type, it also automatically creates a separate, additional [AWS CloudFormation service-linked group](#) for each AWS CloudFormation stack associated with the application.

AppRegistry automatically names the service-linked groups of this type that it creates with the prefix `AWS_AppRegistry_Application-` followed by the name of the application:

`AWS_AppRegistry_Application-MyAppName`

The following parameters are supported for the `AWS::AppRegistry::Application` service-linked group type.

- **Name**

This parameter specifies the friendly name of the application that was assigned by the user when it was created in AppRegistry.

**Data type of values:** String

**Permitted values:** any text string permitted by the AppRegistry service for an application name.

**Required:** Yes

- **Arn**

This parameter specifies the [Amazon Resource Name \(ARN\)](#) path of the application assigned by AppRegistry.

**Data type of values:** String

**Permitted values:** a valid ARN.

**Required:** Yes

**Note**

To change any of these elements, you must modify the application using the AppRegistry console or that service's AWS SDK and AWS CLI operations.

This application resource group automatically includes as group members the [resource groups created for the AWS CloudFormation stacks](#) that are associated with the AppRegistry application. You can use the [ListGroupResources](#) operation to see those child groups.

The following example shows what the configuration section of a `AWS::AppRegistry::Application` service-linked group looks like.

```
{
  "Configuration": [
    {
      "Type": "AWS::AppRegistry::Application",
      "Parameters": [
        {
          "Name": "Name",
          "Values": [
            "MyApplication"
          ]
        },
        {
          "Name": "Arn",
          "Values": [
            "arn:aws:servicecatalog:us-east-1:123456789012:/
applications/<application-id>"
          ]
        }
      ]
    }
  ]
}
```

## `AWS::CloudFormation::Stack`

This Configuration type specifies that the group represents an AWS CloudFormation stack and its members are the AWS resources created by that stack.

Resource groups of this type are automatically created for you when you associate a AWS CloudFormation stack with the AppRegistry service. You can't create, update, or delete these groups except by using the tools provided by AppRegistry.

AppRegistry automatically names the service-linked groups of this type that it creates with the prefix `AWS_CloudFormation_Stack-` followed by the name of the stack:  
`AWS_CloudFormation_Stack-MyStackName`

**Note**

Because resource groups of this type are automatically created and maintained by AWS and not managed by the user, these resource groups do not count against your quota limit for the [maximum number of resource groups that you can create in your AWS account](#).

For more information, see [Using AppRegistry](#) in the *Service Catalog User Guide*.

AppRegistry automatically creates a service-linked resource group of this type for every AWS CloudFormation stack that you associate with the AppRegistry application. These resource groups become child members of the parent [resource group for the AppRegistry application](#).

The members of this AWS CloudFormation resource group are the AWS resources created as part of the stack.

The following parameters are supported for the `AWS::CloudFormation::Stack` service-linked group type.

- **Name**

This parameter specifies the friendly name of the AWS CloudFormation stack assigned by the user when the stack was created.

**Data type of values:** String

**Permitted values:** any text string permitted by the AWS CloudFormation service for a stack name.

**Required:** Yes

- **Arn**

This parameter specifies the [Amazon Resource Name \(ARN\)](#) path of the AWS CloudFormation stack attached to the application in AppRegistry.

**Data type of values:** String

**Permitted values:** a valid ARN.

**Required:** Yes

**Note**

To change any of these elements, you must modify the application using the AppRegistry console or equivalent AWS SDK and AWS CLI operations.

The following example shows what the configuration section of an `AWS::CloudFormation::Stack` service-linked group looks like.

```
{
  "Configuration": [
    {
      "Type": "AWS::CloudFormation::Stack",
      "Parameters": [
        {
          "Name": "Name",
          "Values": [
            "MyStack"
          ]
        },
        {
          "Name": "Arn",
          "Values": [
            "arn:aws:cloudformation:us-
east-1:123456789012:stack/MyStack/<stack-id>"
          ]
        }
      ]
    }
  ]
}
```

## AWS::EC2::CapacityReservationPool

This Configuration type specifies that the resource group represents a common pool of capacity provided by the group's members. The members of this resource group are required to be Amazon EC2 capacity reservations. A resource group can include both capacity reservations that you own in your account and capacity reservations that are shared with you from other accounts by using AWS Resource Access Manager. This lets you launch an Amazon EC2 instance using this resource group as the value for the capacity reservation parameter. When you do this, the instance uses the available reserved capacity in the group. If resource group has no available capacity, the instance launches as a stand alone on-demand instance outside of the pool. For more information, see [Working with Capacity Reservation groups](#) in the *Amazon EC2 User Guide for Linux Instances*.

If you configure a service-linked resource group with a Configuration item of this type, then you must also specify separate Configuration items with the following values:

- An `AWS::ResourceGroups::Generic` type with one parameter:
  - The parameter `allowed-resource-types` and a single value of `AWS::EC2::CapacityReservation`. This ensures that only Amazon EC2 capacity reservations can be members of the resource group.

The `AWS::EC2::CapacityReservationPool` item in a group configuration doesn't support any parameters.

The following example shows what the Configuration section of such a group looks like.

```
{
  "Configuration": [
    {
      "Type": "AWS::EC2::CapacityReservationPool"
    },
    {
      "Type": "AWS::ResourceGroups::Generic",
      "Parameters": [
        {
          "Name": "allowed-resource-types",
          "Values": [ "AWS::EC2::CapacityReservation" ]
        }
      ]
    }
  ]
}
```

```
}
```

## AWS::EC2::HostManagement

This identifier specifies settings for Amazon EC2 host management and AWS License Manager that are enforced for the group's members. For more information, see [Host resource groups in AWS License Manager](#).

If you configure a service-linked resource group with a Configuration item of this type, then you must also specify separate Configuration items with the following values:

- An `AWS::ResourceGroups::Generic` type, with a parameter of `allowed-resource-types` and a single value of `AWS::EC2::Host`. This ensures that only Amazon EC2 dedicated hosts can be members of the group.
- An `AWS::ResourceGroups::Generic` type, with a parameter of `deletion-protection` and a single value of `UNLESS_EMPTY`. This ensures that the group can't be deleted unless the group is empty.

The following parameters are supported for the `AWS::EC2::HostManagement` service-linked group type.

- **auto-allocate-host**

This parameter specifies whether instances are launched onto a specific dedicated host, or onto any available host that has a matching configuration. For more information, see [Understanding auto-placement and affinity](#) in the *Amazon EC2 User Guide for Linux Instances*.

**Data type of values:** Boolean

**Permitted values:** "true" or "false" (must be lower case).

**Required:** No

```
{
  "Configuration": [
    {
      "Type": "AWS::EC2::HostManagement",
      "Parameters": [
        {
          "Name": "auto-allocate-host",
```

```

        "Values": [ "true" ]
      }
    ]
  },
  {
    "Type": "AWS::ResourceGroups::Generic",
    "Parameters": [
      {
        "Name": "allowed-resource-types",
        "Values": [ "AWS::EC2::Host" ]
      },
      {
        "Name": "deletion-protection",
        "Values": [ "UNLESS_EMPTY" ]
      }
    ]
  }
]
}

```

- **auto-release-host**

This parameter specifies whether a dedicated host in the group is automatically released after its last running instance is terminated. For more information, see [Releasing Dedicated Hosts](#) in the *Amazon EC2 User Guide for Linux Instances*.

**Data type of values:** Boolean

**Permitted values:** "true" or "false" (must be lower case).

**Required:** No

```

{
  "Configuration": [
    {
      "Type": "AWS::EC2::HostManagement",
      "Parameters": [
        {
          "Name": "auto-release-host",
          "Values": [ "false" ]
        }
      ]
    }
  ],
}

```

```

    {
      "Type": "AWS::ResourceGroups::Generic",
      "Parameters": [
        {
          "Name": "allowed-resource-types",
          "Values": [ "AWS::EC2::Host" ]
        },
        {
          "Name": "deletion-protection",
          "Values": [ "UNLESS_EMPTY" ]
        }
      ]
    }
  ]
}

```

- **allowed-host-families**

This parameter specifies which instance type families can be used by instances that are members of this group.

**Data type of values:** An array of String.

**Permitted values:** Each must be a valid [Amazon EC2 instance type family identifier](#), such as C4, M5, P3dn, or R5d.

**Required:** No

The following example configuration item specifies that launched instances can be only members of the C5 or M5 instance type families.

```

{
  "Configuration": [
    {
      "Type": "AWS::EC2::HostManagement",
      "Parameters": [
        {
          "Name": "allowed-host-families",
          "Values": ["c5", "m5"]
        }
      ]
    },
    {

```

```

    "Type": "AWS::ResourceGroups::Generic",
    "Parameters": [
      {
        "Name": "allowed-resource-types",
        "Values": ["AWS::EC2::Host"]
      },
      {
        "Name": "deletion-protection",
        "Values": ["UNLESS_EMPTY"]
      }
    ]
  }
]
}

```

- **allowed-host-based-license-configurations**

This parameter specifies the [Amazon Resource Name \(ARN\)](#) paths of one or more core/socket based license configurations that you want applied to members of the group.

**Data type of values:** An array of ARNs.

**Permitted values:** Each must be a valid [License Manager configuration ARN](#).

**Required:** Conditional. You must specify either this parameter or any-host-based-license-configuration, but not both. They are mutually exclusive.

The following example configuration item specifies that group members can use the two specified License Manager configurations.

```

{
  "Configuration": [
    {
      "Type": "AWS::EC2::HostManagement",
      "Parameters": [
        {
          "Name": "allowed-host-based-license-configurations",
          "Values": [
            "arn:aws:license-manager:us-west-2:123456789012:license-configuration:lic-6eb6586f508a786a2ba41EXAMPLE1111",
            "arn:aws:license-manager:us-west-2:123456789012:license-configuration:lic-8a786a26f50ba416eb658EXAMPLE2222"
          ]
        }
      ]
    }
  ]
}

```

```

    }
  ]
},
{
  "Type": "AWS::ResourceGroups::Generic",
  "Parameters": [
    {
      "Name": "allowed-resource-types",
      "Values": [ "AWS::EC2::Host" ]
    },
    {
      "Name": "deletion-protection",
      "Values": [ "UNLESS_EMPTY" ]
    }
  ]
}
]
}

```

- **any-host-based-license-configuration**

This parameter specifies that you do not want to associate a specific license configuration to your group. In this case, all core/socket based license configurations are available to your members of your host resource group. Use this setting if you have an unlimited number of licenses and want to optimize for host utilization.

**Data type of values:** Boolean

**Permitted values:** "true" or "false" (must be lower case).

**Required:** Conditional. You must specify either this parameter or `allowed-host-based-license-configurations`, but not both. They are mutually exclusive.

The following example configuration item specifies that group members can use any core/socket based license configuration.

```

{
  "Configuration": [
    {
      "Type": "AWS::EC2::HostManagement",
      "Parameters": [
        {
          "Name": "any-host-based-license-configuration",

```

```

        "Values": ["true"]
      }
    ]
  },
  {
    "Type": "AWS::ResourceGroups::Generic",
    "Parameters": [
      {
        "Name": "allowed-resource-types",
        "Values": ["AWS::EC2::Host"]
      },
      {
        "Name": "deletion-protection",
        "Values": ["UNLESS_EMPTY"]
      }
    ]
  }
]
}

```

The following example illustrates how to include all of the host management settings together in a single configuration.

```

{
  "Configuration": [
    {
      "Type": "AWS::EC2::HostManagement",
      "Parameters": [
        {
          "Name": "auto-allocate-host",
          "Values": ["true"]
        },
        {
          "Name": "auto-release-host",
          "Values": ["false"]
        },
        {
          "Name": "allowed-host-families",
          "Values": ["c5", "m5"]
        },
        {
          "Name": "allowed-host-based-license-configurations",

```

```

        "Values": [
            "arn:aws:license-manager:us-west-2:123456789012:license-
configuration:lic-6eb6586f508a786a2ba41EXAMPLE1111",
            "arn:aws:license-manager:us-west-2:123456789012:license-
configuration:lic-8a786a26f50ba416eb658EXAMPLE2222"
        ]
    },
    {
        "Type": "AWS::ResourceGroups::Generic",
        "Parameters": [
            {
                "Name": "allowed-resource-types",
                "Values": ["AWS::EC2::Host"]
            },
            {
                "Name": "deletion-protection",
                "Values": ["UNLESS_EMPTY"]
            }
        ]
    }
]
}

```

## **AWS::NetworkFirewall::RuleGroup**

This identifier specifies settings for AWS Network Firewall rule groups that are enforced for the group's members. Firewall administrators can specify the ARN of a resource group of this type to automatically resolve the IP addresses of the group's members for a firewall rule instead of having to list each address manually. For more information, see [Using tag-based resource groups in AWS Network Firewall](#).

You can create resource groups of this configuration type by using the Network Firewall console or by running a AWS CLI command or AWS SDK operation.

Resource groups of this configuration type have the following restrictions:

- The group's members consist of only resources of types supported by Network Firewall.
- The group must contain a tag-based query to manage the group's membership; any resources of supported types with tags that match the query are automatically members of the group.
- There are no Parameters supported for this configuration type.

- To delete a resource group of this configuration type, it can't be referenced by any Network Firewall rule group.

The following example illustrates the Configuration and ResourceQuery sections for a group of this type.

```
{
  "Configuration": [
    {
      "Type": "AWS::NetworkFirewall::RuleGroup",
      "Parameters": []
    }
  ],
  "ResourceQuery": {
    "Query": "{\"ResourceTypeFilters\": [\"AWS::EC2::Instance\"], \"TagFilters\": [{\"Key\": \"environment\", \"Values\": [\"production\"]}]}",
    "Type": "TAG_FILTERS_1_0"
  }
}
```

The following example AWS CLI command creates a resource group with the previous configuration and query.

```
$ aws resource-groups create-group \
  --name test-group \
  --resource-query '{"Type": "TAG_FILTERS_1_0", "Query": "{\"ResourceTypeFilters\": [\"AWS::EC2::Instance\", \"TagFilters\": [{\"Key\": \"environment\", \"Values\": [\"production\"]}]}"' \
  --configuration '[{"Type": "AWS::NetworkFirewall::RuleGroup", "Parameters": []}]'
{
  "Group": {
    "GroupArn": "arn:aws:resource-groups:us-west-2:123456789012:group/test-group",
    "Name": "test-group",
    "OwnerId": "123456789012"
  },
  "Configuration": [
    {
      "Type": "AWS::NetworkFirewall::RuleGroup",
      "Parameters": []
    }
  ],
  "ResourceQuery": {
```

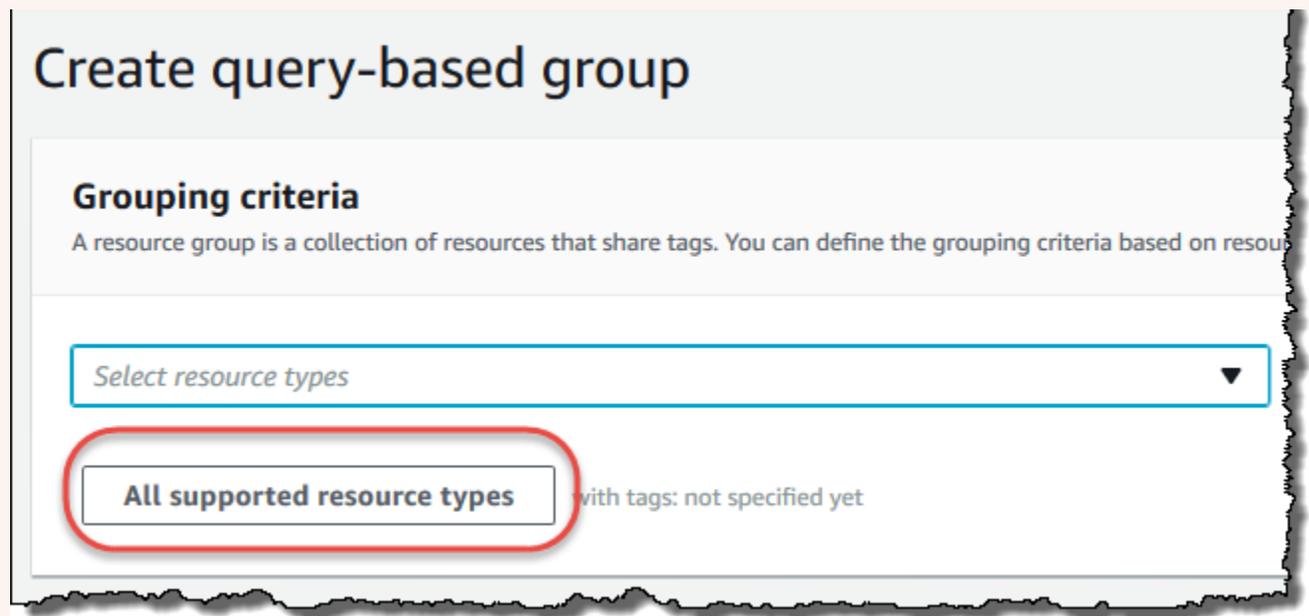
```
    "Query": "{\n      \"ResourceTypeFilters\": [\n        \"AWS::EC2::Instance\"\n      ],\n      \"TagFilters\": [\n        {\n          \"Key\": \"environment\",\n          \"Values\": [\n            \"production\"\n          ]\n        }\n      ]\n    }",\n    "Type": "TAG_FILTERS_1_0"\n  }\n}
```

# Resource types you can use with AWS Resource Groups and Tag Editor

You can use the AWS Management Console or the AWS CLI to create resource groups and then interact with the member resources through those groups. You can add tags to many AWS resources and then use those tags to manage group membership. This topic describes the AWS resource types that you can include in resource groups by using AWS Resource Groups, and the resource types that you can tag by using Tag Editor.

## Important

A resource group based on a query for **All supported resource types** can add members automatically over time, as new resources are supported by Resource Groups. When you run automations or other bulk tasks on an existing resource group based on **All supported resource types**, be aware that the actions might run on many more resources than were in the group when you first created the group. This might also mean that automations or tasks that you created for other resources are applied to possibly unintended resources, or resources on which the tasks cannot be successfully completed. In those cases, you can add a resource type filter to specify that only resources of the specified types can be part of the group.



The following tables list which resource types are supported for tagging in Tag Editor, for membership in tag query-based groups, and for membership in AWS CloudFormation stack-based groups.

### Column definitions

- **Tag Editor Tagging** – You can tag resources of this type by using the [Tag Editor console](#). Otherwise, you must use either the [AWS Resource Groups Tagging API](#) or the tagging services supported natively by that resource’s owning service.
- **Tag-based Groups** – You can include resources of this type in [resource groups whose membership is determined by the tags attached to the resources](#). The group specifies tag key names and values, and any resources with tags that match are automatically part of the group
- **AWS CloudFormation Stack-based Groups** – You can include resources of this type in [resource groups whose membership consists of the resources created as part of a CloudFormation stack](#). The group specifies the stack’s ARN, and all of its resources are automatically members of the group.

#### Note

Adding tags to a AWS CloudFormation stack causes an update of the stack.

For a list of resource types that are deprecated and no longer supported by Resource Groups, see the section [Deprecated resource types](#) at the end of this topic.

## Amazon API Gateway

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ApiGateway::Account	× No	× No	✓ Yes
AWS::ApiGateway::ApiKey	× No	✓ Yes	✓ Yes

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ApiGateway::ClientCertificate	× No	✓ Yes	× No
AWS::ApiGateway::DomainName	× No	× No	✓ Yes
AWS::ApiGateway::RestApi	× No	✓ Yes	✓ Yes
AWS::ApiGateway::Stage	× No	✓ Yes	× No
AWS::ApiGateway::UsagePlan	× No	✓ Yes	✓ Yes

## IAM Access Analyzer

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::AccessAnalyzer::Analyzer	× No	✓ Yes	× No

## AWS Amplify

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Amplify::App	× No	✓ Yes	× No

## AWS App Mesh

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::AppMesh::Mesh	✗ No	✓ Yes	✗ No

## Amazon AppStream

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::AppStream::AppBlock	✗ No	✓ Yes	✗ No
AWS::AppStream::Application	✗ No	✓ Yes	✗ No
AWS::AppStream::Fleet	✓ Yes	✓ Yes	✓ Yes
AWS::AppStream::ImageBuilder	✓ Yes	✓ Yes	✓ Yes
AWS::AppStream::Stack	✓ Yes	✓ Yes	✓ Yes

## AWS AppSync

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::AppSync::DataSource	✗ No	✗ No	✓ Yes
AWS::AppSync::GraphQLApi	✗ No	✗ No	✓ Yes

## AWS Backup

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Backup::BackupPlan	✗ No	✓ Yes	✗ No
AWS::Backup::BackupVault	✗ No	✓ Yes	✗ No
AWS::Backup::ReportPlan	✗ No	✓ Yes	✗ No

## AWS Batch

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Batch::ComputeEnvironment	✗ No	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Batch::JobQueue	✗ No	✓ Yes	✗ No
AWS::Batch::SchedulingPolicy	✗ No	✓ Yes	✗ No

## AWS Billing Conductor

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::BillingConductor::BillingGroup	✗ No	✓ Yes	✓ Yes
AWS::BillingConductor::CustomLineItem	✗ No	✓ Yes	✓ Yes
AWS::BillingConductor::PricingPlan	✗ No	✓ Yes	✓ Yes
AWS::BillingConductor::PricingRule	✗ No	✓ Yes	✓ Yes

## Amazon Braket

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Braket::Job	✗ No	✓ Yes	✗ No
AWS::Braket::QuantumTask	✓ Yes	✓ Yes	✗ No

## AWS Certificate Manager

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CertificateManager::Certificate	✓ Yes	✓ Yes	✓ Yes

## AWS Certificate Manager Private Certificate Authority

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ACMPCA::CertificateAuthority	✗ No	✓ Yes	✗ No

## AWS Cloud9

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Cloud9::Environment	✓ Yes	✓ Yes	✗ No

## AWS CloudFormation

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CloudFormation::Stack	✓ Yes	✓ Yes	✓ Yes

## Amazon CloudFront

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CloudFront::Distribution	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✓ Yes <sup>2</sup>
AWS::CloudFront::StreamingDistribution	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✓ Yes <sup>2</sup>

<sup>1</sup> This is a resource for a global service that is hosted in the **US East (N. Virginia)** Region. To use Tag Editor to create or modify tags for this resource type, you must include `us-east-1` from the **Select regions** list under **Find resources to tag** in the Tag Editor console.

<sup>2</sup> This is a resource for a global service that is hosted in the **US East (N. Virginia)** Region. Because Resource Groups are maintained separately for each region, you must switch your AWS Management Console to the AWS Region that contains the resources you want to include in the group. To create a resource group that contains a global resource, you must configure your AWS Management Console to **US East (N. Virginia) us-east-1** using the Region selector in the upper-right corner of the AWS Management Console.

## AWS CloudTrail

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CloudTrail::Channel	✗ No	✓ Yes	✗ No
AWS::CloudTrail::EventDataStore	✗ No	✓ Yes	✗ No
AWS::CloudTrail::Trail	✓ Yes	✓ Yes	✓ Yes

## Amazon CloudWatch

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CloudWatch::Alarm	✓ Yes	✓ Yes	✓ Yes
AWS::CloudWatch::Dashboard	✗ No	✗ No	✓ Yes

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CloudWatch::InsightRule	✗ No	✓ Yes	✗ No
AWS::CloudWatch::MetricStream	✗ No	✓ Yes	✗ No
AWS::CloudWatch::ServiceLevelObjective	✗ No	✓ Yes	✗ No

## Amazon CloudWatch Logs

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Logs::Destination	✗ No	✓ Yes	✗ No
AWS::Logs::LogGroup	✗ No	✓ Yes	✓ Yes

## Amazon CloudWatch Synthetics

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Synthetics::Canary	✗ No	✓ Yes	✓ Yes

## AWS CodeArtifact

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CodeArtifact::Domain	✓ Yes	✓ Yes	✓ Yes
AWS::CodeArtifact::Repository	✓ Yes	✓ Yes	✓ Yes

## AWS CodeBuild

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CodeBuild::Project	✓ Yes	✓ Yes	✗ No

## AWS CodeCommit

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CodeCommit::Repository	✓ Yes	✓ Yes	✗ No

## AWS CodeDeploy

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CodeDeploy::Application	✗ No	✓ Yes	✓ Yes
AWS::CodeDeploy::DeploymentConfig	✗ No	✗ No	✓ Yes

## Amazon CodeGuru Reviewer

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CodeGuruReviewer::RepositoryAssociation	✓ Yes	✓ Yes	✓ Yes

## Amazon CodeGuru Profiler

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CodeGuruProfiler::ProfilingGroup	✗ No	✓ Yes	✗ No

## AWS CodePipeline

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CodePipeline::CustomActionType	✗ No	✓ Yes	✗ No
AWS::CodePipeline::Pipeline	✓ Yes	✓ Yes	✓ Yes
AWS::CodePipeline::Webhook	✓ Yes	✓ Yes	✓ Yes

## AWS CodeConnections

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::CodeStarConnections::Connection	✗ No	✓ Yes	✗ No

## Amazon Cognito

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Cognito::IdentityPool	✓ Yes	✓ Yes	✓ Yes
AWS::Cognito::UserPool	✓ Yes	✓ Yes	✓ Yes

## Amazon Comprehend

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Comprehend::DocumentClassifier	✓ Yes	✓ Yes	× No
AWS::Comprehend::EntityRecognizer	✓ Yes	✓ Yes	× No

## AWS Config

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Config::ConfigRule	✓ Yes	✓ Yes	× No

## Amazon Connect Wisdom

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Wisdom::Assistant	× No	✓ Yes	✓ Yes
AWS::Wisdom::AssistantAssociation	× No	✓ Yes	✓ Yes
AWS::Wisdom::Content	× No	✓ Yes	× No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Wisdom::KnowledgeBase	✗ No	✓ Yes	✓ Yes
AWS::Wisdom::Session	✗ No	✓ Yes	✗ No

## AWS Data Exchange

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::DataExchange::DataSet	✓ Yes	✓ Yes	✗ No
AWS::DataExchange::Revision	✗ No	✓ Yes	✗ No

## AWS Data Pipeline

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::DataPipeline::Pipeline	✓ Yes	✓ Yes	✓ Yes

## AWS DataSync

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::DataSync::Task	✗ No	✓ Yes	✗ No

## AWS Database Migration Service

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::DMS::Certificate	✓ Yes	✓ Yes	✗ No
AWS::DMS::Endpoint	✓ Yes	✓ Yes	✓ Yes
AWS::DMS::EventSubscription	✓ Yes	✓ Yes	✗ No
AWS::DMS::ReplicationInstance	✓ Yes	✓ Yes	✓ Yes
AWS::DMS::ReplicationSubnetGroup	✓ Yes	✓ Yes	✗ No
AWS::DMS::ReplicationTask	✓ Yes	✓ Yes	✗ No

## Amazon DynamoDB

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::DynamoDB::Table	✓ Yes	✓ Yes	✓ Yes

## Amazon EMR

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EMR::Cluster	✓ Yes	✓ Yes	✓ Yes

## Amazon EMR Containers

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EMRContainers::JobRun	✗ No	✓ Yes	✗ No
AWS::EMRContainers::VirtualCluster	✓ Yes	✓ Yes	✓ Yes

## Amazon EMR Serverless

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EMRServerless::Application	✗ No	✓ Yes	✓ Yes
AWS::EMRServerless::JobRun	✗ No	✓ Yes	✗ No

## Amazon ElastiCache

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ElastiCache::CacheCluster	✓ Yes	✓ Yes	✓ Yes
AWS::ElastiCache::ParameterGroup	✗ No	✓ Yes	✗ No
AWS::ElastiCache::SecurityGroup	✗ No	✓ Yes	✗ No
AWS::ElastiCache::Snapshot	✓ Yes	✓ Yes	✗ No
AWS::ElastiCache::SubnetGroup	✗ No	✓ Yes	✗ No
AWS::ElastiCache::User	✗ No	✓ Yes	✗ No
AWS::ElastiCache::UserGroup	✗ No	✓ Yes	✗ No

## AWS Elastic Beanstalk

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ElasticBeanstalk::Application	✓ Yes	✓ Yes	✗ No
AWS::ElasticBeanstalk::ApplicationVersion	✗ No	✓ Yes	✗ No
AWS::ElasticBeanstalk::ConfigurationTemplate	✗ No	✓ Yes	✗ No
AWS::ElasticBeanstalk::Environment	✗ No	✓ Yes	✗ No

## Amazon Elastic Compute Cloud (Amazon EC2)

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EC2::CapacityReservation	✗ No	✓ Yes	✗ No
AWS::EC2::CapacityReservationFleet	✗ No	✓ Yes	✗ No
AWS::EC2::CarrierGateway	✗ No	✓ Yes	✗ No
AWS::EC2::ClientVpnEndpoint	✗ No	✓ Yes	✗ No
AWS::EC2::CoipPool	✗ No	✓ Yes	✗ No
AWS::EC2::CustomerGateway	✓ Yes	✓ Yes	✓ Yes

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EC2::DHCPOptions	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::EC2Fleet	✗ No	✓ Yes	✗ No
AWS::EC2::EgressOnlyInternetGateway	✗ No	✓ Yes	✗ No
AWS::EC2::EIP	✓ Yes	✓ Yes	✗ No
AWS::EC2::ExportImageTask	✗ No	✓ Yes	✗ No
AWS::EC2::ExportInstanceTask	✗ No	✓ Yes	✗ No
AWS::EC2::FlowLog	✗ No	✓ Yes	✗ No
AWS::EC2::FpgaImage	✗ No	✓ Yes	✗ No
AWS::EC2::Host	✗ No	✓ Yes	✗ No
AWS::EC2::HostReservation	✗ No	✓ Yes	✗ No
AWS::EC2::Image	✓ Yes	✓ Yes	✗ No
AWS::EC2::ImportImageTask	✗ No	✓ Yes	✗ No
AWS::EC2::ImportSnapshotTask	✗ No	✓ Yes	✗ No
AWS::EC2::Instance	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::InstanceEventWindow	✗ No	✓ Yes	✗ No
AWS::EC2::InternetGateway	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::IPv4Pool	✗ No	✓ Yes	✗ No
AWS::EC2::IPv6Pool	✗ No	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EC2::KeyPair	✗ No	✓ Yes	✗ No
AWS::EC2::LaunchTemplate	✗ No	✓ Yes	✓ Yes
AWS::EC2::LocalGateway	✗ No	✓ Yes	✗ No
AWS::EC2::LocalGatewayRouteTable	✗ No	✓ Yes	✗ No
AWS::EC2::LocalGatewayRouteTableVirtualInterfaceGroupAssociation	✗ No	✓ Yes	✗ No
AWS::EC2::LocalGatewayRouteTableVPCAssociation	✗ No	✓ Yes	✗ No
AWS::EC2::LocalGatewayVirtualInterface	✗ No	✓ Yes	✗ No
AWS::EC2::LocalGatewayVirtualInterfaceGroup	✗ No	✓ Yes	✗ No
AWS::EC2::NatGateway	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::NetworkAcl	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::NetworkInsightsAccessScope	✗ No	✓ Yes	✗ No
AWS::EC2::NetworkInsightsAccessScopeAnalysis	✗ No	✓ Yes	✗ No
AWS::EC2::NetworkInsightsAnalysis	✗ No	✓ Yes	✗ No
AWS::EC2::NetworkInsightsPath	✗ No	✓ Yes	✗ No
AWS::EC2::NetworkInterface	✓ Yes	✓ Yes	✓ Yes

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EC2::PlacementGroup	✗ No	✓ Yes	✓ Yes
AWS::EC2::PrefixList	✗ No	✓ Yes	✗ No
AWS::EC2::ReplaceRootVolumeTask	✗ No	✓ Yes	✗ No
AWS::EC2::ReservedInstance	✓ Yes	✓ Yes	✗ No
AWS::EC2::RouteTable	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::SecurityGroup	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::Snapshot	✓ Yes	✓ Yes	✗ No
AWS::EC2::SpotFleet	✗ No	✓ Yes	✗ No
AWS::EC2::SpotInstanceRequest	✓ Yes	✓ Yes	✗ No
AWS::EC2::Subnet	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::SubnetCidrReservation	✗ No	✓ Yes	✗ No
AWS::EC2::TrafficMirrorFilter	✗ No	✓ Yes	✗ No
AWS::EC2::TrafficMirrorSession	✗ No	✓ Yes	✗ No
AWS::EC2::TrafficMirrorTarget	✗ No	✓ Yes	✗ No
AWS::EC2::TransitGateway	✗ No	✓ Yes	✗ No
AWS::EC2::TransitGatewayAttachment	✗ No	✓ Yes	✗ No
AWS::EC2::TransitGatewayConnectPeer	✗ No	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EC2::TransitGatewayMulticastDomain	✗ No	✓ Yes	✗ No
AWS::EC2::TransitGatewayPolicyTable	✗ No	✓ Yes	✗ No
AWS::EC2::TransitGatewayRouteTable	✗ No	✓ Yes	✗ No
AWS::EC2::TransitGatewayRouteTableAnnouncement	✗ No	✓ Yes	✗ No
AWS::EC2::VerifiedAccessEndpoint	✗ No	✓ Yes	✗ No
AWS::EC2::VerifiedAccessGroup	✗ No	✓ Yes	✗ No
AWS::EC2::VerifiedAccessInstance	✗ No	✓ Yes	✗ No
AWS::EC2::VerifiedAccessTrustProvider	✗ No	✓ Yes	✗ No
AWS::EC2::Volume	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::VPC	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::VPCEndpoint	✗ No	✓ Yes	✗ No
AWS::EC2::VPCEndpointConnection	✗ No	✓ Yes	✗ No
AWS::EC2::VPCEndpointService	✗ No	✓ Yes	✗ No
AWS::EC2::VPCEndpointServicePermissions	✗ No	✓ Yes	✗ No
AWS::EC2::VPCPeeringConnection	✗ No	✓ Yes	✓ Yes

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EC2::VPNConnection	✓ Yes	✓ Yes	✓ Yes
AWS::EC2::VPNGateway	✓ Yes	✓ Yes	✓ Yes

## Amazon Elastic Container Registry

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ECR::Repository	× No	✓ Yes	× No

## Amazon Elastic Container Service

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ECS::CapacityProvider	× No	✓ Yes	× No
AWS::ECS::Cluster	✓ Yes	✓ Yes	× No
AWS::ECS::ContainerInstance	× No	✓ Yes	× No
AWS::ECS::Service	× No	✓ Yes	× No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ECS::Task	✗ No	✓ Yes	✗ No
AWS::ECS::TaskDefinition	✓ Yes	✓ Yes	✗ No
AWS::ECS::TaskSet	✗ No	✓ Yes	✗ No

## Amazon Elastic File System

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EFS::FileSystem	✓ Yes	✓ Yes	✓ Yes

## Amazon Elastic Inference

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ElasticInference::ElasticInferenceAccelerator	✓ Yes	✓ Yes	✗ No

## Amazon Elastic Kubernetes Service (Amazon EKS)

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EKS::Cluster	✓ Yes	✓ Yes	✓ Yes

## Elastic Load Balancing

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ElasticLoadBalancing::LoadBalancer	✓ Yes	✓ Yes	✓ Yes
AWS::ElasticLoadBalancingV2::Listener	✗ No	✓ Yes	✓ Yes
AWS::ElasticLoadBalancingV2::ListenerRule	✗ No	✓ Yes	✓ Yes
AWS::ElasticLoadBalancingV2::LoadBalancer	✓ Yes	✓ Yes	✓ Yes
AWS::ElasticLoadBalancingV2::TargetGroup	✓ Yes	✓ Yes	✓ Yes

## Amazon OpenSearch Service

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Elasticsearch::Domain	✓ Yes	✓ Yes	✓ Yes

## Amazon CloudWatch Events

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Events::EventBus	✗ No	✓ Yes	✗ No
AWS::Events::Rule	✓ Yes	✓ Yes	✓ Yes

### Note

Rules in custom event buses aren't supported in Tag Editor.

## Amazon EventBridge Schemas

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::EventSchemas::Discoverer	✗ No	✓ Yes	✗ No
AWS::EventSchemas::Registry	✗ No	✓ Yes	✗ No
AWS::EventSchemas::Schema	✗ No	✓ Yes	✗ No

## Amazon FSx

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::FSx::FileSystem	✓ Yes	✓ Yes	✗ No

## Amazon Forecast

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Forecast::Dataset	✓ Yes	✓ Yes	✗ No
AWS::Forecast::DatasetGroup	✓ Yes	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Forecast::DatasetImportJob	✓ Yes	✓ Yes	✗ No
AWS::Forecast::Forecast	✓ Yes	✓ Yes	✗ No
AWS::Forecast::ForecastExportJob	✓ Yes	✓ Yes	✗ No
AWS::Forecast::Predictor	✓ Yes	✓ Yes	✗ No
AWS::Forecast::PredictorBacktestExportJob	✓ Yes	✓ Yes	✗ No

## Amazon Fraud Detector

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::FraudDetector::Detector	✓ Yes	✓ Yes	✗ No
AWS::FraudDetector::DetectorVersion	✗ No	✓ Yes	✗ No
AWS::FraudDetector::EntityType	✓ Yes	✓ Yes	✗ No
AWS::FraudDetector::EventType	✓ Yes	✓ Yes	✗ No
AWS::FraudDetector::ExternalModel	✓ Yes	✓ Yes	✗ No
AWS::FraudDetector::Label	✓ Yes	✓ Yes	✗ No
AWS::FraudDetector::Model	✓ Yes	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::FraudDetector::ModelVersion	✗ No	✓ Yes	✗ No
AWS::FraudDetector::Outcome	✓ Yes	✓ Yes	✗ No
AWS::FraudDetector::Rule	✗ No	✓ Yes	✗ No
AWS::FraudDetector::Variable	✓ Yes	✓ Yes	✗ No

## Amazon GameLift

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::GameLift::Alias	✗ No	✓ Yes	✗ No
AWS::GameLift::GameSessionQueue	✗ No	✓ Yes	✗ No
AWS::GameLift::MatchmakingConfiguration	✗ No	✓ Yes	✗ No
AWS::GameLift::MatchmakingRuleSet	✗ No	✓ Yes	✗ No

## AWS Global Accelerator

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::GlobalAccelerator::Accelerator	✗ No	✓ Yes	✗ No

## AWS Glue

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Glue::Crawler	✓ Yes	✓ Yes	✗ No
AWS::Glue::Database	✗ No	✓ Yes	✓ Yes
AWS::Glue::Job	✓ Yes	✓ Yes	✗ No
AWS::Glue::Trigger	✓ Yes	✓ Yes	✗ No
AWS::Glue::Workflow	✗ No	✓ Yes	✗ No

## AWS Glue DataBrew

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::DataBrew::Dataset	✓ Yes	✓ Yes	✓ Yes
AWS::DataBrew::Job	✓ Yes	✓ Yes	✓ Yes
AWS::DataBrew::Project	✓ Yes	✓ Yes	✓ Yes
AWS::DataBrew::Recipe	✓ Yes	✓ Yes	✓ Yes
AWS::DataBrew::Schedule	✓ Yes	✓ Yes	✓ Yes

## AWS Ground Station

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::GroundStation::Config	× No	✓ Yes	× No

## Amazon GuardDuty

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::GuardDuty::Detector	✗ No	✓ Yes	✓ Yes
AWS::GuardDuty::Filter	✗ No	✓ Yes	✗ No
AWS::GuardDuty::IPSet	✗ No	✓ Yes	✗ No
AWS::GuardDuty::ThreatIntelSet	✗ No	✓ Yes	✗ No

## Amazon Interactive Video Service

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IVS::Channel	✗ No	✓ Yes	✗ No
AWS::IVS::RecordingConfiguration	✗ No	✓ Yes	✗ No
AWS::IVS::StreamKey	✗ No	✓ Yes	✗ No

# AWS Identity and Access Management

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IAM::InstanceProfile	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No
AWS::IAM::ManagedPolicy	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No
AWS::IAM::OpenIDConnectProvider	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No
AWS::IAM::Role	✗ No	✗ No	✓ Yes <sup>2</sup>
AWS::IAM::SAMLProvider	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No
AWS::IAM::ServerCertificate	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No
AWS::IAM::VirtualMFADevice	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No

<sup>1</sup> This is a resource for a global service that is hosted in the **US East (N. Virginia)** Region. To use Tag Editor to create or modify tags for this resource type, you must include `us-east-1` from the **Select regions** list under **Find resources to tag** in the Tag Editor console.

<sup>2</sup> This is a resource for a global service that is hosted in the **US East (N. Virginia)** Region. Because Resource Groups are maintained separately for each region, you must switch your AWS Management Console to the AWS Region that contains the resources you want to include in the group. To create a resource group that contains a global resource, you must configure your AWS Management Console to **US East (N. Virginia) us-east-1** using the Region selector in the upper-right corner of the AWS Management Console.

## EC2 Image Builder

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ImageBuilder::Component	✗ No	✓ Yes	✗ No
AWS::ImageBuilder::ContainerRecipe	✗ No	✓ Yes	✗ No
AWS::ImageBuilder::DistributionConfiguration	✗ No	✓ Yes	✗ No
AWS::ImageBuilder::Image	✗ No	✓ Yes	✗ No
AWS::ImageBuilder::ImagePipeline	✗ No	✓ Yes	✗ No
AWS::ImageBuilder::ImageRecipe	✗ No	✓ Yes	✗ No
AWS::ImageBuilder::InfrastructureConfiguration	✗ No	✓ Yes	✗ No

## Amazon Inspector

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Inspector::AssessmentTemplate	✗ No	✓ Yes	✓ Yes

## AWS IoT

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IoT::Authorizer	✗ No	✓ Yes	✗ No
AWS::IoT::CustomMetric	✗ No	✓ Yes	✗ No
AWS::IoT::Dimension	✗ No	✓ Yes	✗ No
AWS::IoT::JobTemplate	✗ No	✓ Yes	✗ No
AWS::IoT::MitigationAction	✗ No	✓ Yes	✗ No
AWS::IoT::Policy	✗ No	✓ Yes	✗ No
AWS::IoT::RoleAlias	✗ No	✓ Yes	✗ No
AWS::IoT::ScheduledAudit	✗ No	✓ Yes	✗ No
AWS::IoT::SecurityProfile	✗ No	✓ Yes	✗ No
AWS::IoT::TopicRule	✗ No	✓ Yes	✓ Yes

## AWS IoT Analytics

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IoTAnalytics::Channel	✗ No	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IoTAnalytics::Dataset	✓ Yes	✓ Yes	✗ No
AWS::IoTAnalytics::Datastore	✗ No	✓ Yes	✗ No
AWS::IoTAnalytics::Pipeline	✗ No	✓ Yes	✗ No

## AWS IoT Events

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IoTEvents::DetectorModel	✓ Yes	✓ Yes	✓ Yes
AWS::IoTEvents::Input	✓ Yes	✓ Yes	✓ Yes

## AWS IoT FleetWise

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IoT FleetWise::Campaign	✗ No	✓ Yes	✓ Yes
AWS::IoT FleetWise::DecoderManifest	✗ No	✓ Yes	✓ Yes

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IoTfleetWise::Fleet	✗ No	✓ Yes	✓ Yes
AWS::IoTfleetWise::ModelManifest	✗ No	✓ Yes	✓ Yes
AWS::IoTfleetWise::SignalCatalog	✗ No	✓ Yes	✓ Yes
AWS::IoTfleetWise::Vehicle	✗ No	✓ Yes	✓ Yes

## AWS IoT Greengrass

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Greengrass::ConnectorDefinition	✓ Yes	✓ Yes	✗ No
AWS::Greengrass::CoreDefinition	✓ Yes	✓ Yes	✗ No
AWS::Greengrass::DeviceDefinition	✓ Yes	✓ Yes	✗ No
AWS::Greengrass::FunctionDefinition	✓ Yes	✓ Yes	✗ No
AWS::Greengrass::Group	✓ Yes	✓ Yes	✗ No
AWS::Greengrass::LoggerDefinition	✓ Yes	✓ Yes	✗ No
AWS::Greengrass::ResourceDefinition	✓ Yes	✓ Yes	✗ No
AWS::Greengrass::SubscriptionDefinition	✓ Yes	✓ Yes	✗ No

## AWS IoT SiteWise console

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::IoTSiteWise::Asset	✗ No	✓ Yes	✗ No
AWS::IoTSiteWise::AssetModel	✗ No	✓ Yes	✗ No
AWS::IoTSiteWise::Gateway	✗ No	✓ Yes	✗ No

## AWS Key Management Service

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::KMS::Alias	✗ No	✗ No	✓ Yes
AWS::KMS::Key	✓ Yes	✓ Yes	✓ Yes

## Amazon Keyspaces (for Apache Cassandra)

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Cassandra::Keyspace	✗ No	✓ Yes	✓ Yes

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Cassandra::Table	✗ No	✓ Yes	✗ No

## Amazon Kinesis

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Kinesis::Stream	✓ Yes	✓ Yes	✓ Yes

## Amazon Managed Service for Apache Flink

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::KinesisAnalytics::Application	✓ Yes	✓ Yes	✓ Yes
AWS::KinesisAnalyticsV2::Application	✗ No	✗ No	✓ Yes

## Amazon Data Firehose

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::KinesisFirehose::DeliveryStream	✗ No	✓ Yes	✓ Yes

## AWS Lambda

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Lambda::Alias	✗ No	✗ No	✓ Yes
AWS::Lambda::EventSourceMapping	✗ No	✗ No	✓ Yes
AWS::Lambda::Function	✓ Yes	✓ Yes	✓ Yes
AWS::Lambda::LayerVersion	✗ No	✗ No	✓ Yes
AWS::Lambda::Version	✗ No	✗ No	✓ Yes

## Amazon MQ

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::AmazonMQ::Broker	✓ Yes	✓ Yes	✗ No
AWS::AmazonMQ::Configuration	✓ Yes	✓ Yes	✗ No

## Amazon Macie

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Macie::ClassificationJob	✓ Yes	✓ Yes	✗ No
AWS::Macie::CustomDataIdentifier	✓ Yes	✓ Yes	✓ Yes
AWS::Macie::FindingsFilter	✓ Yes	✓ Yes	✓ Yes
AWS::Macie::Member	✓ Yes	✓ Yes	✗ No

## Amazon Managed Streaming for Apache Kafka

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Kafka::Cluster	✓ Yes	✓ Yes	✗ No

## AWS Elemental MediaConnect

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::MediaConnect::Flow	✗ No	✓ Yes	✗ No
AWS::MediaConnect::FlowEntitlement	✗ No	✓ Yes	✗ No
AWS::MediaConnect::FlowOutput	✗ No	✓ Yes	✗ No
AWS::MediaConnect::FlowSource	✗ No	✓ Yes	✗ No

## AWS Elemental MediaPackage

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::MediaPackage::Channel	✗ No	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::MediaPackage::PackagingConfiguration	✗ No	✓ Yes	✗ No
AWS::MediaPackage::PackagingGroup	✗ No	✓ Yes	✗ No

## AWS Network Manager

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::NetworkManager::CoreNetwork	✗ No	✓ Yes	✗ No
AWS::NetworkManager::Device	✗ No	✓ Yes	✗ No
AWS::NetworkManager::GlobalNetwork	✗ No	✓ Yes	✗ No
AWS::NetworkManager::Link	✗ No	✓ Yes	✗ No
AWS::NetworkManager::Site	✗ No	✓ Yes	✗ No
AWS::NetworkManager::VpcAttachment	✗ No	✓ Yes	✗ No

## Amazon OpenSearch Service OpenSearch

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::OpenSearchService::Domain	✓ Yes	✓ Yes	✓ Yes

## AWS OpsWorks

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::OpsWorks::Instance	× No	✓ Yes	✓ Yes
AWS::OpsWorks::Layer	× No	✓ Yes	✓ Yes
AWS::OpsWorks::Stack	× No	✓ Yes	✓ Yes

## AWS Organizations

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Organizations::Account	✓ Yes	✓ Yes	× No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Organizations::OrganizationalUnit	✗ No	✓ Yes	✗ No
AWS::Organizations::Policy	✗ No	✓ Yes	✗ No
AWS::Organizations::Root	✓ Yes	✓ Yes	✗ No

## Amazon Pinpoint

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Pinpoint::App	✗ No	✓ Yes	✓ Yes
AWS::Pinpoint::EmailTemplate	✗ No	✓ Yes	✓ Yes
AWS::Pinpoint::PushTemplate	✗ No	✓ Yes	✓ Yes
AWS::Pinpoint::SmsTemplate	✗ No	✓ Yes	✓ Yes
AWS::Pinpoint::VoiceTemplate	✗ No	✓ Yes	✗ No

## Amazon Pinpoint SMS and Voice API

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::PinpointSMSVoiceV2::Pool	✗ No	✓ Yes	✗ No

## Amazon Quantum Ledger Database (Amazon QLDB)

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::QLDB::Ledger	✓ Yes	✓ Yes	✓ Yes
AWS::QLDB::Stream	✗ No	✓ Yes	✓ Yes

## Amazon Redshift

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Redshift::Cluster	✓ Yes	✓ Yes	✓ Yes
AWS::Redshift::ClusterParameterGroup	✓ Yes	✓ Yes	✓ Yes
AWS::Redshift::ClusterSecurityGroup	✗ No	✓ Yes	✓ Yes

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Redshift::ClusterSubnetGroup	✓ Yes	✓ Yes	✓ Yes
AWS::Redshift::DBGroup	✗ No	✓ Yes	✗ No
AWS::Redshift::DBName	✗ No	✓ Yes	✗ No
AWS::Redshift::DBUser	✗ No	✓ Yes	✗ No
AWS::Redshift::EventSubscription	✗ No	✓ Yes	✗ No
AWS::Redshift::HSMClientCertificate	✓ Yes	✓ Yes	✗ No
AWS::Redshift::HSMConfiguration	✗ No	✓ Yes	✗ No
AWS::Redshift::Namespace	✗ No	✓ Yes	✗ No
AWS::Redshift::Snapshot	✗ No	✓ Yes	✗ No
AWS::Redshift::SnapshotCopyGrant	✗ No	✓ Yes	✗ No
AWS::Redshift::SnapshotSchedule	✗ No	✓ Yes	✗ No
AWS::Redshift::UsageLimit	✗ No	✓ Yes	✗ No

# Amazon Relational Database Service (Amazon RDS)

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::RDS::CustomDBEngineVersion	✗ No	✓ Yes	✗ No
AWS::RDS::DBCluster	✓ Yes	✓ Yes	✓ Yes
AWS::RDS::DBClusterEndpoint	✗ No	✓ Yes	✗ No
AWS::RDS::DBClusterParameterGroup	✓ Yes	✓ Yes	✓ Yes
AWS::RDS::DBClusterSnapshot	✓ Yes	✓ Yes	✗ No
AWS::RDS::DBInstance	✓ Yes	✓ Yes	✓ Yes
AWS::RDS::DBParameterGroup	✓ Yes	✓ Yes	✓ Yes
AWS::RDS::DBProxy	✗ No	✓ Yes	✗ No
AWS::RDS::DBProxyEndpoint	✗ No	✓ Yes	✗ No
AWS::RDS::DBProxyTargetGroup	✗ No	✓ Yes	✗ No
AWS::RDS::DBSecurityGroup	✓ Yes	✓ Yes	✓ Yes
AWS::RDS::DBSnapshot	✓ Yes	✓ Yes	✗ No
AWS::RDS::DBSubnetGroup	✓ Yes	✓ Yes	✓ Yes
AWS::RDS::Deployment	✗ No	✓ Yes	✗ No
AWS::RDS::EventSubscription	✓ Yes	✓ Yes	✗ No
AWS::RDS::OptionGroup	✓ Yes	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::RDS::ReservedDBInstance	✓ Yes	✓ Yes	✗ No

## AWS Resource Access Manager

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::RAM::ResourceShare	✓ Yes	✓ Yes	✗ No

## AWS Resource Groups

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ResourceGroups::Group	✓ Yes	✓ Yes	✓ Yes

## AWS Robomaker

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::RoboMaker::DeploymentJob	✗ No	✓ Yes	✗ No
AWS::RoboMaker::Fleet	✗ No	✓ Yes	✗ No
AWS::RoboMaker::Robot	✗ No	✓ Yes	✗ No
AWS::RoboMaker::RobotApplication	✓ Yes	✓ Yes	✗ No
AWS::RoboMaker::SimulationApplication	✓ Yes	✓ Yes	✗ No
AWS::RoboMaker::SimulationJob	✓ Yes	✓ Yes	✗ No

## Amazon Route 53

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Route53::Domain	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No
AWS::Route53::HealthCheck	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✓ Yes <sup>2</sup>
AWS::Route53::HostedZone	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✓ Yes <sup>2</sup>

<sup>1</sup> This is a resource for a global service that is hosted in the **US East (N. Virginia)** Region. To use Tag Editor to create or modify tags for this resource type, you must include `us-east-1` from the **Select regions** list under **Find resources to tag** in the Tag Editor console.

<sup>2</sup> This is a resource for a global service that is hosted in the **US East (N. Virginia)** Region. Because Resource Groups are maintained separately for each region, you must switch your AWS Management Console to the AWS Region that contains the resources you want to include in the group. To create a resource group that contains a global resource, you must configure your AWS Management Console to **US East (N. Virginia) us-east-1** using the Region selector in the upper-right corner of the AWS Management Console.

## Amazon Route 53 Resolver

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Route53Resolver::FirewallDomainList	✗ No	✓ Yes <sup>2</sup>	✗ No
AWS::Route53Resolver::FirewallRuleGroup	✗ No	✓ Yes <sup>2</sup>	✗ No
AWS::Route53Resolver::ResolverEndpoint	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No
AWS::Route53Resolver::ResolverQueryLoggingConfig	✗ No	✓ Yes <sup>2</sup>	✗ No
AWS::Route53Resolver::ResolverRule	✓ Yes <sup>1</sup>	✓ Yes <sup>2</sup>	✗ No

<sup>1</sup> This is a resource for a global service that is hosted in the **US East (N. Virginia)** Region. To use Tag Editor to create or modify tags for this resource type, you must include `us-east-1` from the **Select regions** list under **Find resources to tag** in the Tag Editor console.

<sup>2</sup> This is a resource for a global service that is hosted in the **US East (N. Virginia)** Region. Because Resource Groups are maintained separately for each region, you must switch your AWS Management Console to the AWS Region that contains the resources you want to include in the group. To create a resource group that contains a global resource, you must configure your AWS Management Console to **US East (N. Virginia) us-east-1** using the Region selector in the upper-right corner of the AWS Management Console.

## Amazon S3 Glacier

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Glacier::Vault	✓ Yes	✓ Yes	✗ No

## Amazon SageMaker

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::SageMaker::AppImageConfig	✗ No	✓ Yes	✗ No
AWS::SageMaker::CodeRepository	✗ No	✓ Yes	✗ No
AWS::SageMaker::Endpoint	✗ No	✓ Yes	✓ Yes
AWS::SageMaker::EndpointConfig	✗ No	✓ Yes	✓ Yes
AWS::SageMaker::HyperParameterTuningJob	✗ No	✓ Yes	✗ No

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::SageMaker::Image	✗ No	✓ Yes	✗ No
AWS::SageMaker::LabelingJob	✗ No	✓ Yes	✗ No
AWS::SageMaker::Model	✗ No	✓ Yes	✓ Yes
AWS::SageMaker::ModelPackageGroup	✗ No	✓ Yes	✓ Yes
AWS::SageMaker::NotebookInstance	✓ Yes	✓ Yes	✓ Yes
AWS::SageMaker::Pipeline	✗ No	✓ Yes	✗ No
AWS::SageMaker::Project	✗ No	✓ Yes	✓ Yes
AWS::SageMaker::TrainingJob	✗ No	✓ Yes	✗ No
AWS::SageMaker::TransformJob	✗ No	✓ Yes	✗ No
AWS::SageMaker::Workteam	✗ No	✓ Yes	✗ No

## AWS Secrets Manager

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::SecretsManager::Secret	✓ Yes	✓ Yes	✓ Yes

## AWS Service Catalog

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ServiceCatalog::CloudFormationProduct	✗ No	✓ Yes	✓ Yes
AWS::ServiceCatalog::Portfolio	✗ No	✓ Yes	✓ Yes

## AWS Service Catalog AppRegistry

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ServiceCatalogAppRegistry::Application	✗ No	✓ Yes	✗ No
AWS::ServiceCatalogAppRegistry::AttributeGroup	✗ No	✓ Yes	✗ No

## Service Quotas

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::ServiceQuotas::Quota	✗ No	✓ Yes	✗ No

## Amazon Simple Email Service

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::SES::ConfigurationSet	✓ Yes	✓ Yes	✓ Yes
AWS::SES::ContactList	✓ Yes	✓ Yes	✓ Yes
AWS::SES::DedicatedIpPool	✓ Yes	✓ Yes	✗ No
AWS::SES::Identity	✓ Yes	✓ Yes	✗ No

## Amazon Simple Notification Service

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::SNS::Topic	✓ Yes	✓ Yes	✓ Yes

## Amazon Simple Queue Service

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::SQS::Queue	✓ Yes	✓ Yes	✓ Yes

## Amazon Simple Storage Service (Amazon S3)

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::S3::Bucket	✓ Yes	✓ Yes	✓ Yes
AWS::S3::Job	✗ No	✓ Yes	✗ No
AWS::S3::StorageLens	✗ No	✓ Yes	✗ No

## AWS Step Functions

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::StepFunctions::Activity	✓ Yes	✓ Yes	✓ Yes
AWS::StepFunctions::StateMachine	✓ Yes	✓ Yes	✓ Yes

## Storage Gateway

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::StorageGateway::Gateway	✓ Yes	✓ Yes	✗ No
AWS::StorageGateway::Volume	✗ No	✓ Yes	✗ No

## AWS Systems Manager

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::SSM::Association	✗ No	✓ Yes	✗ No
AWS::SSM::AutomationExecution	✗ No	✓ Yes	✗ No
AWS::SSM::Document	✗ No	✓ Yes	✓ Yes
AWS::SSM::MaintenanceWindow	✗ No	✓ Yes	✗ No
AWS::SSM::ManagedInstance	✗ No	✓ Yes	✗ No
AWS::SSM::OpsItem	✗ No	✓ Yes	✗ No
AWS::SSM::OpsMetadata	✗ No	✓ Yes	✗ No
AWS::SSM::Parameter	✓ Yes	✓ Yes	✓ Yes
AWS::SSM::PatchBaseline	✗ No	✓ Yes	✓ Yes

## AWS Systems Manager for SAP

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::SystemsManagerSAP::Application	✗ No	✓ Yes	✓ Yes
AWS::SystemsManagerSAP::Database	✗ No	✓ Yes	✗ No

## Amazon Timestream

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Timestream::ScheduledQuery	✗ No	✓ Yes	✓ Yes

## AWS Transfer Family

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::Transfer::Certificate	✗ No	✓ Yes	✗ No
AWS::Transfer::Connector	✗ No	✓ Yes	✗ No
AWS::Transfer::Workflow	✗ No	✓ Yes	✗ No

## AWS WAF

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::WAF::Rule	✗ No	✓ Yes	✗ No
AWS::WAF::WebACL	✗ No	✓ Yes	✗ No

## Amazon WorkSpaces

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::WorkSpaces::Workspace	✓ Yes	✓ Yes	✓ Yes

## AWS X-Ray

Resources	Tag Editor Tagging	Tag-based Groups	AWS CloudFormation Stack-based Groups
AWS::XRay::Group	✗ No	✓ Yes	✗ No
AWS::XRay::SamplingRule	✗ No	✓ Yes	✗ No

## Deprecated resource types

The following resource types are no longer supported for the specified functionality.

Service	Resource type	Support change	Date
AWS RoboMaker	<a href="#">AWS::RoboMaker::Robot</a>	No longer supported by Tag Editor.	May 2, 2022
AWS RoboMaker	<a href="#">AWS::RoboMaker::Fluent</a>	No longer supported by Tag Editor.	May 2, 2022
AWS RoboMaker	<a href="#">AWS::RoboMaker::DeploymentJob</a>	No longer supported by Tag Editor.	May 2, 2022

# Creating resource groups with AWS CloudFormation

AWS Resource Groups is integrated with AWS CloudFormation, a service that helps you to model and set up your AWS resources so that you can spend less time creating and managing your resources and infrastructure. You create a template that describes all of the AWS resources that you want (such as resource groups), and AWS CloudFormation provisions and configures those resources for you.

When you use AWS CloudFormation, you can reuse your template to set up your resource groups consistently and repeatedly. Describe your resource groups once, and then provision the same resource groups over and over in multiple AWS accounts and Regions.

## Resource Groups and AWS CloudFormation templates

To provision and configure resources for Resource Groups and related services, you must understand [AWS CloudFormation templates](#). Templates are formatted text files in JSON or YAML. These templates describe the resources that you want to provision in your AWS CloudFormation stacks. If you're unfamiliar with JSON or YAML, you can use AWS CloudFormation Designer to help you get started with AWS CloudFormation templates. For more information, see [What is AWS CloudFormation Designer?](#) in the *AWS CloudFormation User Guide*.

Resource Groups supports creating resource groups in AWS CloudFormation. For more information, including examples of JSON and YAML templates for resource groups, see the [AWS Resource Groups resource type reference](#) in the *AWS CloudFormation User Guide*.

## Learn more about AWS CloudFormation

To learn more about AWS CloudFormation, see the following resources:

- [AWS CloudFormation](#)
- [AWS CloudFormation User Guide](#)
- [AWS CloudFormation API Reference](#)
- [AWS CloudFormation Command Line Interface User Guide](#)

# Security in AWS Resource Groups

Cloud security at AWS is the highest priority. As an AWS customer, you benefit from a data center and network architecture that is built to meet the requirements of the most security-sensitive organizations.

Security is a shared responsibility between AWS and you. The [shared responsibility model](#) describes this as security *of* the cloud and security *in* the cloud:

- **Security of the cloud** – AWS is responsible for protecting the infrastructure that runs AWS services in the AWS Cloud. AWS also provides you with services that you can use securely. Third-party auditors regularly test and verify the effectiveness of our security as part of the [AWS compliance programs](#). To learn about the compliance programs that apply to AWS Resource Groups, see [AWS Services in Scope by Compliance Program](#).
- **Security in the cloud** – Your responsibility is determined by the AWS service that you use. You are also responsible for other factors including the sensitivity of your data, your company's requirements, and applicable laws and regulations.

This documentation helps you understand how to apply the shared responsibility model when using Resource Groups. The following topics show you how to configure Resource Groups to meet your security and compliance objectives. You also learn how to use other AWS services that help you to monitor and secure your Resource Groups resources.

## Topics

- [Data protection in AWS Resource Groups](#)
- [Identity and access management for AWS Resource Groups](#)
- [Logging and monitoring in Resource Groups](#)
- [Compliance validation for Resource Groups](#)
- [Resilience in Resource Groups](#)
- [Infrastructure security in Resource Groups](#)
- [Security best practices for Resource Groups](#)

# Data protection in AWS Resource Groups

The AWS [shared responsibility model](#) applies to data protection in AWS Resource Groups. As described in this model, AWS is responsible for protecting the global infrastructure that runs all of the AWS Cloud. You are responsible for maintaining control over your content that is hosted on this infrastructure. You are also responsible for the security configuration and management tasks for the AWS services that you use. For more information about data privacy, see the [Data Privacy FAQ](#). For information about data protection in Europe, see the [AWS Shared Responsibility Model and GDPR](#) blog post on the *AWS Security Blog*.

For data protection purposes, we recommend that you protect AWS account credentials and set up individual users with AWS IAM Identity Center or AWS Identity and Access Management (IAM). That way, each user is given only the permissions necessary to fulfill their job duties. We also recommend that you secure your data in the following ways:

- Use multi-factor authentication (MFA) with each account.
- Use SSL/TLS to communicate with AWS resources. We require TLS 1.2 and recommend TLS 1.3.
- Set up API and user activity logging with AWS CloudTrail.
- Use AWS encryption solutions, along with all default security controls within AWS services.
- Use advanced managed security services such as Amazon Macie, which assists in discovering and securing sensitive data that is stored in Amazon S3.
- If you require FIPS 140-2 validated cryptographic modules when accessing AWS through a command line interface or an API, use a FIPS endpoint. For more information about the available FIPS endpoints, see [Federal Information Processing Standard \(FIPS\) 140-2](#).

We strongly recommend that you never put confidential or sensitive information, such as your customers' email addresses, into tags or free-form text fields such as a **Name** field. This includes when you work with Resource Groups or other AWS services using the console, API, AWS CLI, or AWS SDKs. Any data that you enter into tags or free-form text fields used for names may be used for billing or diagnostic logs. If you provide a URL to an external server, we strongly recommend that you do not include credentials information in the URL to validate your request to that server.

## Data encryption

Compared to other AWS services, AWS Resource Groups has a minimal attack surface, because it does not provide a way of changing, adding, or deleting AWS resources except for groups. Resource Groups collects the following service-specific information from you.

- Group names (not encrypted, not private)
- Group descriptions (not encrypted, but private)
- Member resources in groups (these are stored in logs, which are not encrypted)

## Encryption at rest

There are no additional ways of isolating service or network traffic specific to Resource Groups. If applicable, use AWS-specific isolation. You can use the Resource Groups API and console in a VPC to help maximize privacy and infrastructure security.

## Encryption in transit

AWS Resource Groups data is encrypted in transit to the service's internal database for backup. This is not user-configurable.

## Key management

AWS Resource Groups is not currently integrated with AWS Key Management Service and does not support AWS KMS keys.

## Internetwork traffic privacy

AWS Resource Groups uses HTTPS for all transmissions between Resource Groups users and AWS. Resource Groups uses transport layer security (TLS) 1.2, but also supports TLS 1.0 and 1.1.

# Identity and access management for AWS Resource Groups

AWS Identity and Access Management (IAM) is an AWS service that helps an administrator securely control access to AWS resources. IAM administrators control who can be *authenticated* (signed in) and *authorized* (have permissions) to use Resource Groups resources. IAM is an AWS service that you can use with no additional charge.

## Topics

- [Audience](#)
- [Authenticating with identities](#)
- [Managing access using policies](#)
- [How Resource Groups works with IAM](#)

- [AWS managed policies for AWS Resource Groups](#)
- [Using service-linked roles for Resource Groups](#)
- [AWS Resource Groups identity-based policy examples](#)
- [Troubleshooting AWS Resource Groups identity and access](#)

## Audience

How you use AWS Identity and Access Management (IAM) differs, depending on the work that you do in Resource Groups.

**Service user** – If you use the Resource Groups service to do your job, then your administrator provides you with the credentials and permissions that you need. As you use more Resource Groups features to do your work, you might need additional permissions. Understanding how access is managed can help you request the right permissions from your administrator. If you cannot access a feature in Resource Groups, see [Troubleshooting AWS Resource Groups identity and access](#).

**Service administrator** – If you're in charge of Resource Groups resources at your company, you probably have full access to Resource Groups. It's your job to determine which Resource Groups features and resources your service users should access. You must then submit requests to your IAM administrator to change the permissions of your service users. Review the information on this page to understand the basic concepts of IAM. To learn more about how your company can use IAM with Resource Groups, see [How Resource Groups works with IAM](#).

**IAM administrator** – If you're an IAM administrator, you might want to learn details about how you can write policies to manage access to Resource Groups. To view example Resource Groups identity-based policies that you can use in IAM, see [AWS Resource Groups identity-based policy examples](#).

## Authenticating with identities

Authentication is how you sign in to AWS using your identity credentials. You must be *authenticated* (signed in to AWS) as the AWS account root user, as an IAM user, or by assuming an IAM role.

You can sign in to AWS as a federated identity by using credentials provided through an identity source. AWS IAM Identity Center (IAM Identity Center) users, your company's single sign-on authentication, and your Google or Facebook credentials are examples of federated identities.

When you sign in as a federated identity, your administrator previously set up identity federation using IAM roles. When you access AWS by using federation, you are indirectly assuming a role.

Depending on the type of user you are, you can sign in to the AWS Management Console or the AWS access portal. For more information about signing in to AWS, see [How to sign in to your AWS account](#) in the *AWS Sign-In User Guide*.

If you access AWS programmatically, AWS provides a software development kit (SDK) and a command line interface (CLI) to cryptographically sign your requests by using your credentials. If you don't use AWS tools, you must sign requests yourself. For more information about using the recommended method to sign requests yourself, see [Signing AWS API requests](#) in the *IAM User Guide*.

Regardless of the authentication method that you use, you might be required to provide additional security information. For example, AWS recommends that you use multi-factor authentication (MFA) to increase the security of your account. To learn more, see [Multi-factor authentication](#) in the *AWS IAM Identity Center User Guide* and [Using multi-factor authentication \(MFA\) in AWS](#) in the *IAM User Guide*.

## AWS account root user

When you create an AWS account, you begin with one sign-in identity that has complete access to all AWS services and resources in the account. This identity is called the AWS account *root user* and is accessed by signing in with the email address and password that you used to create the account. We strongly recommend that you don't use the root user for your everyday tasks. Safeguard your root user credentials and use them to perform the tasks that only the root user can perform. For the complete list of tasks that require you to sign in as the root user, see [Tasks that require root user credentials](#) in the *IAM User Guide*.

## IAM users and groups

An [IAM user](#) is an identity within your AWS account that has specific permissions for a single person or application. Where possible, we recommend relying on temporary credentials instead of creating IAM users who have long-term credentials such as passwords and access keys. However, if you have specific use cases that require long-term credentials with IAM users, we recommend that you rotate access keys. For more information, see [Rotate access keys regularly for use cases that require long-term credentials](#) in the *IAM User Guide*.

An [IAM group](#) is an identity that specifies a collection of IAM users. You can't sign in as a group. You can use groups to specify permissions for multiple users at a time. Groups make permissions easier

to manage for large sets of users. For example, you could have a group named *IAMAdmins* and give that group permissions to administer IAM resources.

Users are different from roles. A user is uniquely associated with one person or application, but a role is intended to be assumable by anyone who needs it. Users have permanent long-term credentials, but roles provide temporary credentials. To learn more, see [When to create an IAM user \(instead of a role\)](#) in the *IAM User Guide*.

## IAM roles

An [IAM role](#) is an identity within your AWS account that has specific permissions. It is similar to an IAM user, but is not associated with a specific person. You can temporarily assume an IAM role in the AWS Management Console by [switching roles](#). You can assume a role by calling an AWS CLI or AWS API operation or by using a custom URL. For more information about methods for using roles, see [Using IAM roles](#) in the *IAM User Guide*.

IAM roles with temporary credentials are useful in the following situations:

- **Federated user access** – To assign permissions to a federated identity, you create a role and define permissions for the role. When a federated identity authenticates, the identity is associated with the role and is granted the permissions that are defined by the role. For information about roles for federation, see [Creating a role for a third-party Identity Provider](#) in the *IAM User Guide*. If you use IAM Identity Center, you configure a permission set. To control what your identities can access after they authenticate, IAM Identity Center correlates the permission set to a role in IAM. For information about permission sets, see [Permission sets](#) in the *AWS IAM Identity Center User Guide*.
- **Temporary IAM user permissions** – An IAM user or role can assume an IAM role to temporarily take on different permissions for a specific task.
- **Cross-account access** – You can use an IAM role to allow someone (a trusted principal) in a different account to access resources in your account. Roles are the primary way to grant cross-account access. However, with some AWS services, you can attach a policy directly to a resource (instead of using a role as a proxy). To learn the difference between roles and resource-based policies for cross-account access, see [How IAM roles differ from resource-based policies](#) in the *IAM User Guide*.
- **Cross-service access** – Some AWS services use features in other AWS services. For example, when you make a call in a service, it's common for that service to run applications in Amazon EC2 or store objects in Amazon S3. A service might do this using the calling principal's permissions, using a service role, or using a service-linked role.

- **Forward access sessions (FAS)** – When you use an IAM user or role to perform actions in AWS, you are considered a principal. When you use some services, you might perform an action that then initiates another action in a different service. FAS uses the permissions of the principal calling an AWS service, combined with the requesting AWS service to make requests to downstream services. FAS requests are only made when a service receives a request that requires interactions with other AWS services or resources to complete. In this case, you must have permissions to perform both actions. For policy details when making FAS requests, see [Forward access sessions](#).
- **Service role** – A service role is an [IAM role](#) that a service assumes to perform actions on your behalf. An IAM administrator can create, modify, and delete a service role from within IAM. For more information, see [Creating a role to delegate permissions to an AWS service](#) in the *IAM User Guide*.
- **Service-linked role** – A service-linked role is a type of service role that is linked to an AWS service. The service can assume the role to perform an action on your behalf. Service-linked roles appear in your AWS account and are owned by the service. An IAM administrator can view, but not edit the permissions for service-linked roles.
- **Applications running on Amazon EC2** – You can use an IAM role to manage temporary credentials for applications that are running on an EC2 instance and making AWS CLI or AWS API requests. This is preferable to storing access keys within the EC2 instance. To assign an AWS role to an EC2 instance and make it available to all of its applications, you create an instance profile that is attached to the instance. An instance profile contains the role and enables programs that are running on the EC2 instance to get temporary credentials. For more information, see [Using an IAM role to grant permissions to applications running on Amazon EC2 instances](#) in the *IAM User Guide*.

To learn whether to use IAM roles or IAM users, see [When to create an IAM role \(instead of a user\)](#) in the *IAM User Guide*.

## Managing access using policies

You control access in AWS by creating policies and attaching them to AWS identities or resources. A policy is an object in AWS that, when associated with an identity or resource, defines their permissions. AWS evaluates these policies when a principal (user, root user, or role session) makes a request. Permissions in the policies determine whether the request is allowed or denied. Most policies are stored in AWS as JSON documents. For more information about the structure and contents of JSON policy documents, see [Overview of JSON policies](#) in the *IAM User Guide*.

Administrators can use AWS JSON policies to specify who has access to what. That is, which **principal** can perform **actions** on what **resources**, and under what **conditions**.

By default, users and roles have no permissions. To grant users permission to perform actions on the resources that they need, an IAM administrator can create IAM policies. The administrator can then add the IAM policies to roles, and users can assume the roles.

IAM policies define permissions for an action regardless of the method that you use to perform the operation. For example, suppose that you have a policy that allows the `iam:GetRole` action. A user with that policy can get role information from the AWS Management Console, the AWS CLI, or the AWS API.

## Identity-based policies

Identity-based policies are JSON permissions policy documents that you can attach to an identity, such as an IAM user, group of users, or role. These policies control what actions users and roles can perform, on which resources, and under what conditions. To learn how to create an identity-based policy, see [Creating IAM policies](#) in the *IAM User Guide*.

Identity-based policies can be further categorized as *inline policies* or *managed policies*. Inline policies are embedded directly into a single user, group, or role. Managed policies are standalone policies that you can attach to multiple users, groups, and roles in your AWS account. Managed policies include AWS managed policies and customer managed policies. To learn how to choose between a managed policy or an inline policy, see [Choosing between managed policies and inline policies](#) in the *IAM User Guide*.

## Resource-based policies

Resource-based policies are JSON policy documents that you attach to a resource. Examples of resource-based policies are IAM *role trust policies* and Amazon S3 *bucket policies*. In services that support resource-based policies, service administrators can use them to control access to a specific resource. For the resource where the policy is attached, the policy defines what actions a specified principal can perform on that resource and under what conditions. You must [specify a principal](#) in a resource-based policy. Principals can include accounts, users, roles, federated users, or AWS services.

Resource-based policies are inline policies that are located in that service. You can't use AWS managed policies from IAM in a resource-based policy.

## Access control lists (ACLs)

Access control lists (ACLs) control which principals (account members, users, or roles) have permissions to access a resource. ACLs are similar to resource-based policies, although they do not use the JSON policy document format.

Amazon S3, AWS WAF, and Amazon VPC are examples of services that support ACLs. To learn more about ACLs, see [Access control list \(ACL\) overview](#) in the *Amazon Simple Storage Service Developer Guide*.

## Other policy types

AWS supports additional, less-common policy types. These policy types can set the maximum permissions granted to you by the more common policy types.

- **Permissions boundaries** – A permissions boundary is an advanced feature in which you set the maximum permissions that an identity-based policy can grant to an IAM entity (IAM user or role). You can set a permissions boundary for an entity. The resulting permissions are the intersection of an entity's identity-based policies and its permissions boundaries. Resource-based policies that specify the user or role in the `Principal` field are not limited by the permissions boundary. An explicit deny in any of these policies overrides the allow. For more information about permissions boundaries, see [Permissions boundaries for IAM entities](#) in the *IAM User Guide*.
- **Service control policies (SCPs)** – SCPs are JSON policies that specify the maximum permissions for an organization or organizational unit (OU) in AWS Organizations. AWS Organizations is a service for grouping and centrally managing multiple AWS accounts that your business owns. If you enable all features in an organization, then you can apply service control policies (SCPs) to any or all of your accounts. The SCP limits permissions for entities in member accounts, including each AWS account root user. For more information about Organizations and SCPs, see [How SCPs work](#) in the *AWS Organizations User Guide*.
- **Session policies** – Session policies are advanced policies that you pass as a parameter when you programmatically create a temporary session for a role or federated user. The resulting session's permissions are the intersection of the user or role's identity-based policies and the session policies. Permissions can also come from a resource-based policy. An explicit deny in any of these policies overrides the allow. For more information, see [Session policies](#) in the *IAM User Guide*.

## Multiple policy types

When multiple types of policies apply to a request, the resulting permissions are more complicated to understand. To learn how AWS determines whether to allow a request when multiple policy types are involved, see [Policy evaluation logic](#) in the *IAM User Guide*.

## How Resource Groups works with IAM

Before you use IAM to manage access to Resource Groups, you should understand what IAM features are available to use with Resource Groups. To get a high-level view of how Resource Groups and other AWS services work with IAM, see [AWS Services That Work with IAM](#) in the *IAM User Guide*.

### Topics

- [Resource Groups identity-based policies](#)
- [Resource-based policies](#)
- [Authorization based on Resource Groups tags](#)
- [Resource Groups IAM roles](#)

## Resource Groups identity-based policies

With IAM identity-based policies, you can specify allowed or denied actions and resources as well as the conditions under which actions are allowed or denied. Resource Groups supports specific actions, resources, and condition keys. To learn about all of the elements that you use in a JSON policy, see [IAM JSON Policy Elements Reference](#) in the *IAM User Guide*.

### Actions

Administrators can use AWS JSON policies to specify who has access to what. That is, which **principal** can perform **actions** on what **resources**, and under what **conditions**.

The `Action` element of a JSON policy describes the actions that you can use to allow or deny access in a policy. Policy actions usually have the same name as the associated AWS API operation. There are some exceptions, such as *permission-only actions* that don't have a matching API operation. There are also some operations that require multiple actions in a policy. These additional actions are called *dependent actions*.

Include actions in a policy to grant permissions to perform the associated operation.

Policy actions in Resource Groups use the following prefix before the action: `resource-groups:`. Tag Editor actions are performed entirely in the console, but have the prefix `resource-explorer` in log entries.

For example, to grant someone permission to create a Resource Groups group with the Resource Groups `CreateGroup` API operation, you include the `resource-groups:CreateGroup` action in their policy. Policy statements must include either an `Action` or `NotAction` element. Resource Groups defines its own set of actions that describe tasks that you can perform with this service.

To specify multiple Resource Groups and Tag Editor actions in a single statement, separate them with commas as follows:

```
"Action": [
  "resource-groups:action1",
  "resource-groups:action2",
  "resource-explorer:action3"
```

You can specify multiple actions using wildcards (\*). For example, to specify all actions that begin with the word `List`, include the following action:

```
"Action": "resource-groups:List*"
```

To see a list of Resource Groups actions, see [Actions, Resources, and Condition Keys for AWS Resource Groups](#) in the *IAM User Guide*.

## Resources

Administrators can use AWS JSON policies to specify who has access to what. That is, which **principal** can perform **actions** on what **resources**, and under what **conditions**.

The Resource JSON policy element specifies the object or objects to which the action applies. Statements must include either a `Resource` or a `NotResource` element. As a best practice, specify a resource using its [Amazon Resource Name \(ARN\)](#). You can do this for actions that support a specific resource type, known as *resource-level permissions*.

For actions that don't support resource-level permissions, such as listing operations, use a wildcard (\*) to indicate that the statement applies to all resources.

```
"Resource": "*"
```

The only Resource Groups resource is a *group*. The group resource has an ARN in the following format:

```
arn:${Partition}:resource-groups:${Region}:${Account}:group/${GroupName}
```

For more information about the format of ARNs, see [Amazon Resource Names \(ARNs\) and AWS Service Namespaces](#).

For example, to specify the `my-test-group` resource group in your statement, use the following ARN:

```
"Resource": "arn:aws:resource-groups:us-east-1:123456789012:group/my-test-group"
```

To specify all groups that belong to a specific account, use the wildcard (\*):

```
"Resource": "arn:aws:resource-groups:us-east-1:123456789012:group/*"
```

Some Resource Groups actions, such as those for creating resources, cannot be performed on a specific resource. In those cases, you must use the wildcard (\*).

```
"Resource": "*"
```

Some Resource Groups API actions can involve multiple resources. For example, `DeleteGroup` deletes groups, so a calling principal must have permissions to delete a specific group or all groups. To specify multiple resources in a single statement, separate the ARNs with commas.

```
"Resource": [  
  "resource1",  
  "resource2"  
]
```

To see a list of Resource Groups resource types and their ARNs, and learn with which actions you can specify the ARN of each resource, see [Actions, Resources, and Condition Keys for AWS Resource Groups](#) in the *IAM User Guide*.

## Condition keys

Administrators can use AWS JSON policies to specify who has access to what. That is, which **principal** can perform **actions** on what **resources**, and under what **conditions**.

The `Condition` element (or `Condition block`) lets you specify conditions in which a statement is in effect. The `Condition` element is optional. You can create conditional expressions that use [condition operators](#), such as equals or less than, to match the condition in the policy with values in the request.

If you specify multiple `Condition` elements in a statement, or multiple keys in a single `Condition` element, AWS evaluates them using a logical AND operation. If you specify multiple values for a single condition key, AWS evaluates the condition using a logical OR operation. All of the conditions must be met before the statement's permissions are granted.

You can also use placeholder variables when you specify conditions. For example, you can grant an IAM user permission to access a resource only if it is tagged with their IAM user name. For more information, see [IAM policy elements: variables and tags](#) in the *IAM User Guide*.

AWS supports global condition keys and service-specific condition keys. To see all AWS global condition keys, see [AWS global condition context keys](#) in the *IAM User Guide*.

Resource Groups defines its own set of condition keys and also supports using some global condition keys. To see all AWS global condition keys, see [AWS Global Condition Context Keys](#) in the *IAM User Guide*.

To see a list of Resource Groups condition keys, and learn with which actions and resources you can use a condition key, see [Actions, Resources, and Condition Keys for AWS Resource Groups](#) in the *IAM User Guide*.

## Examples

To view examples of Resource Groups identity-based policies, see [AWS Resource Groups identity-based policy examples](#).

## Resource-based policies

Resource Groups does not support resource-based policies.

## Authorization based on Resource Groups tags

You can attach tags to groups in Resource Groups, or pass tags in a request to Resource Groups. To control access based on tags, you provide tag information in the [condition element](#) of a policy using the `aws:ResourceTag/key-name`, `aws:RequestTag/key-name`, or `aws:TagKeys` condition keys. You can apply tags to a group when you are creating or updating the group. For

more information about tagging a group in Resource Groups, see [Creating query-based groups in AWS Resource Groups](#) and [Updating groups in AWS Resource Groups](#) in this guide.

To view an example identity-based policy for limiting access to a resource based on the tags on that resource, see [Viewing groups based on tags](#).

## Resource Groups IAM roles

An [IAM role](#) is an entity within your AWS account that has specific permissions. Resource Groups does not have or use service roles.

## Using temporary credentials with Resource Groups

In Resource Groups, you can use temporary credentials to sign in with federation, assume an IAM role, or to assume a cross-account role. You obtain temporary security credentials by calling AWS STS API operations such as [AssumeRole](#) or [GetFederationToken](#).

## Service-linked roles

[Service-linked roles](#) allow AWS services to access resources in other services to complete an action on your behalf.

Resource Groups does not have or use service-linked roles.

## Service roles

This feature allows a service to assume a [service role](#) on your behalf.

Resource Groups does not have or use service roles.

## AWS managed policies for AWS Resource Groups

An AWS managed policy is a standalone policy that is created and administered by AWS. AWS managed policies are designed to provide permissions for many common use cases so that you can start assigning permissions to users, groups, and roles.

Keep in mind that AWS managed policies might not grant least-privilege permissions for your specific use cases because they're available for all AWS customers to use. We recommend that you reduce permissions further by defining [customer managed policies](#) that are specific to your use cases.

You cannot change the permissions defined in AWS managed policies. If AWS updates the permissions defined in an AWS managed policy, the update affects all principal identities (users, groups, and roles) that the policy is attached to. AWS is most likely to update an AWS managed policy when a new AWS service is launched or new API operations become available for existing services.

For more information, see [AWS managed policies](#) in the *IAM User Guide*.

## AWS-managed policies for Resource Groups

- [ResourceGroupsServiceRolePolicy](#)

### AWS managed policy: ResourceGroupsServiceRolePolicy

You can't attach ResourceGroupsServiceRolePolicy to any IAM entities yourself. This policy can be attached only to a service-linked role that allows Resource Groups to perform actions on your behalf. For more information, see [Using service-linked roles for Resource Groups](#).

This policy grants the permissions required for Resource Groups to retrieve information about the resources in your resource groups and any AWS CloudFormation stacks that those resources belong to. This lets Resource Groups generate CloudWatch Events for the group lifecycle events feature.

To see the latest version of this AWS managed policy, see [ResourceGroupsServiceRolePolicy](#) in the IAM console.

### AWS managed policy: ResourceGroupsandTagEditorFullAccess

When you attach a policy to a principal entity, you give the entity permissions that are defined in the policy. AWS managed policies make it easier for you to assign appropriate permissions to users, groups, and roles than if you had to write the policies yourself.

This policy grants the permissions required for full access to Resource Groups and Tag Editor functionality.

To see the latest version of this AWS managed policy, see [ResourceGroupsandTagEditorFullAccess](#) in the IAM console.

For more information about this policy, see [ResourceGroupsandTagEditorFullAccess](#) in the *AWS Managed Policy Reference Guide*.

## AWS managed policy: ResourceGroupsandTagEditorReadOnlyAccess

When you attach a policy to a principal entity, you give the entity permissions that are defined in the policy. AWS managed policies make it easier for you to assign appropriate permissions to users, groups, and roles than if you had to write the policies yourself.

This policy grants the permissions required for read only access to Resource Groups and Tag Editor functionality.

To see the latest version of this AWS managed policy, see [ResourceGroupsandTagEditorReadOnlyAccess](#) in the IAM console.

For more information about this policy, see [ResourceGroupsandTagEditorReadOnlyAccess](#) in the *AWS Managed Policy Reference Guide*.

### Resource Groups updates to AWS managed policies

View details about updates to AWS managed policies for Resource Groups since this service began tracking these changes. For automatic alerts about changes to this page, subscribe to the RSS feed on the [Resource Groups Document history](#) page.

Change	Description	Date
Policy update – <a href="#">ResourceGroupsandTagEditorFullAccess</a>	Resource Groups updated a policy to include additional AWS CloudFormation permissions.	August 10, 2023
Policy update – <a href="#">ResourceGroupsandTagEditorReadOnlyAccess</a>	Resource Groups updated a policy to include additional AWS CloudFormation permissions.	August 10, 2023
New policy – <a href="#">ResourceGroupsServiceRolePolicy</a>	Resource Groups added a new policy to support its service-linked role.	November 17, 2022
Resource Groups started tracking changes	Resource Groups started tracking changes for its AWS managed policies.	November 17, 2022

## Using service-linked roles for Resource Groups

AWS Resource Groups uses AWS Identity and Access Management (IAM) [service-linked roles](#). A service-linked role is a unique type of IAM role that is linked directly to Resource Groups. Service-linked roles are predefined by Resource Groups and include all the permissions that the service requires to call other AWS services on your behalf.

A service-linked role makes setting up Resource Groups easier because you don't have to manually add the necessary permissions. Resource Groups defines the permissions of its service-linked roles and sets trust policies on each that ensures that only the Resource Groups service can assume its roles. The defined permissions include the trust policy and the permissions policy, and that permissions policy can't be attached to any other IAM entity.

For information about other services that support service-linked roles, see [AWS services that work with IAM](#) and look for the services that have **Yes** in the **Service-linked roles** column. Choose a **Yes** with a link to view the service-linked role documentation for that service.

### Service-linked role permissions for Resource Groups

Resource Groups uses the following service-linked role to support group lifecycle events. Choose the link on the role name to view the role in the IAM console after you create it.

- [AWSServiceRoleForResourceGroups](#)

Resource Groups uses the permissions in this role to query the AWS services that own your resources to help resolve group membership and to keep the group up-to-date. It allows Resource Groups to emit service-related events to the Amazon EventBridge service.

The `AWSServiceRoleForResourceGroups` service-linked role trusts **only** the following service to assume the role:

- `resourcegroups.amazonaws.com`

The permissions attached to the role come from the following AWS managed policy. Choose the link on the policy name to view the policy in the IAM console.

- [AWS managed policies for AWS Resource Groups](#)

## Creating the service-linked role for Resource Groups

### Important

This service-linked role can appear in your account if you complete an action in another service that requires the features supported by this role. For more information, see [A new role appeared in my AWS account](#).

To create the service-linked role, [turn on the group lifecycle events feature](#).

## Editing a service-linked role for Resource Groups

Resource Groups doesn't allow you to edit the `AWSServiceRoleForResourceGroups` service-linked role. After you create a service-linked role, you can't change the name of the role because various entities might reference the role. However, you can edit the description of the role using IAM. For more information, see [Editing a service-linked role](#) in the *IAM User Guide*.

## Deleting a service-linked role for Resource Groups

You can delete the service-linked role only after you turn off the group lifecycle events feature.

### Important

- AWS prevents you from removing the service-linked role until you first [turn off the group lifecycle events feature](#) that created it.
- We recommend that you do not delete the service-linked role as long as you have any resource groups in your AWS account. The Resource Groups service can't interact with other AWS services to manage your groups if you delete this role.

## Manually delete the service-linked role

Use the IAM console, the AWS CLI, or the AWS API to delete the `AWSServiceRoleForResourceGroups` service-linked role. For more information, see [Deleting a service-linked role](#) in the *IAM User Guide*.

## Console

### To delete the Resource Groups service-linked role

1. Open the [IAM console to the Roles page](#).
2. Find the role named `AWSServiceRoleForResourceGroups`, and select the check box beside it.
3. Choose **Delete**.
4. Confirm your intent to delete the role by entering the role's name in the box, and then choose **Delete**.

The role disappears from your list of roles in the IAM console.

## AWS CLI

### To delete the Resource Groups service-linked role

To delete the role, enter the following command with the parameters exactly as shown. Do not replace any of the values.

```
$ aws iam delete-service-linked-role \  
  --role-name AWSServiceRoleForResourceGroups \  
{  
  "DeletionTaskId": "task/aws-service-role/resource-groups.amazonaws.com/  
AWSServiceRoleForResourceGroups/34e58943-e9a5-4220-9856-fc565EXAMPLE"  
}
```

The command returns a task ID. The actual role deletion occurs asynchronously. You can check the status of the role deletion by passing the provided task identifier to the following AWS CLI command.

```
$ aws iam get-service-linked-role-deletion-status \  
  --deletion-task-id "task/aws-service-role/resource-groups.amazonaws.com/  
AWSServiceRoleForResourceGroups/34e58943-e9a5-4220-9856-fc565EXAMPLE"  
{  
  "Status": "SUCCEEDED"  
}
```

## Supported Regions for Resource Groups service-linked roles

Resource Groups supports using service-linked roles in all of the AWS Regions where the service is available. For more information, see [AWS Regions and Endpoints](#).

## AWS Resource Groups identity-based policy examples

By default, IAM principals, such as roles and users, don't have permission to create or modify Resource Groups resources. They also can't perform tasks using the AWS Management Console, AWS CLI, or AWS API. An IAM administrator must create IAM policies that grant the principals permission to perform specific API operations on the specified resources they need. The administrator must then attach those policies to the principals that require those permissions.

To learn how to create an IAM identity-based policy using these example JSON policy documents, see [Creating Policies on the JSON Tab](#) in the *IAM User Guide*.

### Topics

- [Policy best practices](#)
- [Using the Resource Groups console and API](#)
- [Allow users to view their own permissions](#)
- [Viewing groups based on tags](#)

### Policy best practices

Identity-based policies determine whether someone can create, access, or delete Resource Groups resources in your account. These actions can incur costs for your AWS account. When you create or edit identity-based policies, follow these guidelines and recommendations:

- **Get started with AWS managed policies and move toward least-privilege permissions** – To get started granting permissions to your users and workloads, use the *AWS managed policies* that grant permissions for many common use cases. They are available in your AWS account. We recommend that you reduce permissions further by defining AWS customer managed policies that are specific to your use cases. For more information, see [AWS managed policies](#) or [AWS managed policies for job functions](#) in the *IAM User Guide*.
- **Apply least-privilege permissions** – When you set permissions with IAM policies, grant only the permissions required to perform a task. You do this by defining the actions that can be taken on specific resources under specific conditions, also known as *least-privilege permissions*. For more

information about using IAM to apply permissions, see [Policies and permissions in IAM](#) in the *IAM User Guide*.

- **Use conditions in IAM policies to further restrict access** – You can add a condition to your policies to limit access to actions and resources. For example, you can write a policy condition to specify that all requests must be sent using SSL. You can also use conditions to grant access to service actions if they are used through a specific AWS service, such as AWS CloudFormation. For more information, see [IAM JSON policy elements: Condition](#) in the *IAM User Guide*.
- **Use IAM Access Analyzer to validate your IAM policies to ensure secure and functional permissions** – IAM Access Analyzer validates new and existing policies so that the policies adhere to the IAM policy language (JSON) and IAM best practices. IAM Access Analyzer provides more than 100 policy checks and actionable recommendations to help you author secure and functional policies. For more information, see [IAM Access Analyzer policy validation](#) in the *IAM User Guide*.
- **Require multi-factor authentication (MFA)** – If you have a scenario that requires IAM users or a root user in your AWS account, turn on MFA for additional security. To require MFA when API operations are called, add MFA conditions to your policies. For more information, see [Configuring MFA-protected API access](#) in the *IAM User Guide*.

For more information about best practices in IAM, see [Security best practices in IAM](#) in the *IAM User Guide*.

## Using the Resource Groups console and API

To access the AWS Resource Groups and Tag Editor console and API, you must have a minimum set of permissions. These permissions must allow you to list and view details about the Resource Groups resources in your AWS account. If you create an identity-based policy that is more restrictive than the minimum required permissions, the console and API commands won't function as intended for principals (IAM roles or users) with that policy.

To ensure that those entities can still use Resource Groups, attach the following policy (or a policy that contains the permissions listed in the following policy) to the entities. For more information, see [Adding Permissions to a User](#) in the *IAM User Guide*:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
```

```

    "Effect": "Allow",
    "Action": [
      "resource-groups:*",
      "cloudformation:DescribeStacks",
      "cloudformation:ListStackResources",
      "tag:GetResources",
      "tag:TagResources",
      "tag:UntagResources",
      "tag:getTagKeys",
      "tag:getTagValues",
      "resource-explorer:List*"
    ],
    "Resource": "*"
  }
]
}

```

For more information about granting access to Resource Groups, see [Granting permissions for using AWS Resource Groups and Tag Editor](#) in this guide.

## Allow users to view their own permissions

This example shows how you might create a policy that allows IAM users to view the inline and managed policies that are attached to their user identity. This policy includes permissions to complete this action on the console or programmatically using the AWS CLI or AWS API.

```

{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "ViewOwnUserInfo",
      "Effect": "Allow",
      "Action": [
        "iam:GetUserPolicy",
        "iam:ListGroupsWithUser",
        "iam:ListAttachedUserPolicies",
        "iam:ListUserPolicies",
        "iam:GetUser"
      ],
      "Resource": ["arn:aws:iam::*:user/${aws:username}"]
    },
    {
      "Sid": "NavigateInConsole",

```

```

    "Effect": "Allow",
    "Action": [
      "iam:GetGroupPolicy",
      "iam:GetPolicyVersion",
      "iam:GetPolicy",
      "iam:ListAttachedGroupPolicies",
      "iam:ListGroupPolicies",
      "iam:ListPolicyVersions",
      "iam:ListPolicies",
      "iam:ListUsers"
    ],
    "Resource": "*"
  }
]
}

```

## Viewing groups based on tags

You can use conditions in your identity-based policy to control access to Resource Groups resources based on tags. This example shows how you might create a policy that allows viewing a resource, in this example, a resource group. However, permission is granted only if the group tag project has the same value as the project tag attached to the calling principal.

```

{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "resource-groups:ListGroup",
      "Resource": "arn:aws:resource-groups::region:account_ID:group/group_name"
    },
    {
      "Effect": "Allow",
      "Action": "resource-groups:ListGroup",
      "Resource": "arn:aws:resource-groups::region:account_ID:group/group_name",
      "Condition": {
        "StringEquals": {"aws:ResourceTag/project": "${aws:PrincipalTag/
project}"}
      }
    }
  ]
}

```

You can attach this policy to the principals in your account. If a principal with the tag key `project` and tag value `alpha` attempts to view a resource group, the group must also be tagged `project=alpha`. Otherwise the user is denied access. The condition tag key `project` matches both `Project` and `project` because condition key names are not case-sensitive. For more information, see [IAM JSON Policy Elements: Condition](#) in the *IAM User Guide*.

## Troubleshooting AWS Resource Groups identity and access

Use the following information to help you diagnose and fix common issues that you might encounter when working with Resource Groups and IAM.

### Topics

- [I am not authorized to perform an action in Resource Groups](#)
- [I am not authorized to perform iam:PassRole](#)
- [I want to allow people outside of my AWS account to access my Resource Groups](#)

### I am not authorized to perform an action in Resource Groups

If the AWS Management Console tells you that you're not authorized to perform an action, then you must contact your administrator for assistance. Your administrator is the person that provided you with your sign-in credentials.

The following example error occurs when the user `mateojackson` tries to use the console to view details about a group but does not have `resource-groups:ListGroup` permission.

```
User: arn:aws:iam::123456789012:user/mateojackson is not authorized to
perform: resource-groups:ListGroup on resource: arn:aws:resource-groups::us-
west-2:123456789012:group/my-test-group
```

In this case, Mateo asks his administrator to update his policies to allow him to access the `my-test-group` resource using the `resource-groups:ListGroup` action.

### I am not authorized to perform iam:PassRole

If you receive an error that you're not authorized to perform the `iam:PassRole` action, your policies must be updated to allow you to pass a role to Resource Groups.

Some AWS services allow you to pass an existing role to that service instead of creating a new service role or service-linked role. To do this, you must have permissions to pass the role to the service.

The following example error occurs when an IAM user named `marymajor` tries to use the console to perform an action in Resource Groups. However, the action requires the service to have permissions that are granted by a service role. Mary does not have permissions to pass the role to the service.

```
User: arn:aws:iam::123456789012:user/marymajor is not authorized to perform:
iam:PassRole
```

In this case, Mary's policies must be updated to allow her to perform the `iam:PassRole` action.

If you need help, contact your AWS administrator. Your administrator is the person who provided you with your sign-in credentials.

## I want to allow people outside of my AWS account to access my Resource Groups

You can create a role that users in other accounts or people outside of your organization can use to access your resources. You can specify who is trusted to assume the role. For services that support resource-based policies or access control lists (ACLs), you can use those policies to grant people access to your resources.

To learn more, consult the following:

- To learn whether Resource Groups supports these features, see [How Resource Groups works with IAM](#).
- To learn how to provide access to your resources across AWS accounts that you own, see [Providing access to an IAM user in another AWS account that you own](#) in the *IAM User Guide*.
- To learn how to provide access to your resources to third-party AWS accounts, see [Providing access to AWS accounts owned by third parties](#) in the *IAM User Guide*.
- To learn how to provide access through identity federation, see [Providing access to externally authenticated users \(identity federation\)](#) in the *IAM User Guide*.
- To learn the difference between using roles and resource-based policies for cross-account access, see [How IAM roles differ from resource-based policies](#) in the *IAM User Guide*.

# Logging and monitoring in Resource Groups

All AWS Resource Groups actions are logged in AWS CloudTrail.

## Logging AWS Resource Groups API calls with AWS CloudTrail

AWS Resource Groups and Tag Editor are integrated with AWS CloudTrail, a service that provides a record of actions taken by a user, role, or an AWS service in Resource Groups or Tag Editor. CloudTrail captures all API calls for Resource Groups as events, including calls from the Resource Groups or Tag Editor console and from code calls to the Resource Groups APIs. If you create a trail, you can enable continuous delivery of CloudTrail events to an Amazon S3 bucket, including events for Resource Groups. If you don't configure a trail, you can still view the most recent events in the CloudTrail console in **Event history**. Using the information collected by CloudTrail, you can determine the request that was made to Resource Groups, the IP address from which the request was made, who made the request, when it was made, and additional details.

To learn more about CloudTrail, see the [AWS CloudTrail User Guide](#).

## Resource Groups information in CloudTrail

CloudTrail is enabled on your AWS account when you create the account. When activity occurs in Resource Groups, or in the Tag Editor console, that activity is recorded in a CloudTrail event along with other AWS service events in **Event history**. You can view, search, and download recent events in your AWS account. For more information, see [Viewing Events with CloudTrail Event History](#).

For an ongoing record of events in your AWS account, including events for Resource Groups, create a trail. A trail enables CloudTrail to deliver log files to an Amazon S3 bucket. By default, when you create a trail in the console, the trail applies to all regions. The trail logs events from all regions in the AWS partition and delivers the log files to the Amazon S3 bucket that you specify. Additionally, you can configure other AWS services to further analyze and act upon the event data collected in CloudTrail logs. For more information, see:

- [Overview for Creating a Trail](#)
- [CloudTrail Supported Services and Integrations](#)
- [Configuring Amazon SNS Notifications for CloudTrail](#)
- [Receiving CloudTrail Log Files from Multiple Regions](#) and [Receiving CloudTrail Log Files from Multiple Accounts](#)

All Resource Groups actions are logged by CloudTrail and are documented in the [AWS Resource Groups API Reference](#). Resource Groups actions in CloudTrail are shown as events with the API endpoint `resource-groups.amazonaws.com` as their source. For example, calls to the `CreateGroup`, `GetGroup`, and `UpdateGroupQuery` actions generate entries in the CloudTrail log files. Tag Editor actions in the console are logged by CloudTrail, and are shown as events with the internal API endpoint `resource-explorer` as their source.

Every event or log entry contains information about who generated the request. The identity information helps you determine the following:

- Whether the request was made with root or IAM user credentials.
- Whether the request was made with temporary security credentials for a role or federated user.
- Whether the request was made by another AWS service.

For more information, see the [CloudTrail userIdentity Element](#).

## Understanding Resource Groups log file entries

A trail is a configuration that enables delivery of events as log files to an Amazon S3 bucket that you specify. CloudTrail log files contain one or more log entries. An event represents a single request from any source and includes information about the requested action, the date and time of the action, request parameters, and so on. CloudTrail log files are not an ordered stack trace of the public API calls, so they do not appear in any specific order.

The following example shows a CloudTrail log entry that demonstrates the action `CreateGroup`.

```
{"eventVersion":"1.05",
"userIdentity":{"
  "type":"AssumedRole",
  "principalId":"ID number:AWSResourceGroupsUser",
  "arn":"arn:aws:sts::831000000000:assumed-role/Admin/AWSResourceGroupsUser",
  "accountId":"831000000000","accessKeyId":"ID number",
  "sessionContext":{"
    "attributes":{"
      "mfaAuthenticated":"false",
      "creationDate":"2018-06-05T22:03:47Z"
    }
  },
  "sessionIssuer":{"
    "type":"Role",
    "principalId":"ID number",
```

```
        "arn": "arn:aws:iam::831000000000:role/Admin",
        "accountId": "831000000000",
        "userName": "Admin"
      }
    },
    "eventTime": "2018-06-05T22:18:23Z",
    "eventSource": "resource-groups.amazonaws.com",
    "eventName": "CreateGroup",
    "awsRegion": "us-west-2",
    "sourceIPAddress": "100.25.190.51",
    "userAgent": "console.amazonaws.com",
    "requestParameters": {
      "Description": "EC2 instances that we are using for application staging.",
      "Name": "Staging",
      "ResourceQuery": {
        "Query": "string",
        "Type": "TAG_FILTERS_1_0"
      },
      "Tags": {
        "Key": "Phase",
        "Value": "Stage"
      }
    },
    "responseElements": {
      "Group": {
        "Description": "EC2 instances that we are using for application staging.",
        "groupArn": "arn:aws:resource-groups:us-west-2:831000000000:group/Staging",
        "Name": "Staging"
      },
      "resourceQuery": {
        "Query": "string",
        "Type": "TAG_FILTERS_1_0"
      }
    },
    "requestID": "de7z64z9-d394-12ug-8081-7zz0386fbc6",
    "eventID": "8z7z18dz-6z90-47bz-87cf-e8346428zzz3",
    "eventType": "AwsApiCall",
    "recipientAccountId": "831000000000"
  }
}
```

# Compliance validation for Resource Groups

To learn whether an AWS service is within the scope of specific compliance programs, see [AWS services in Scope by Compliance Program](#) and choose the compliance program that you are interested in. For general information, see [AWS Compliance Programs](#).

You can download third-party audit reports using AWS Artifact. For more information, see [Downloading Reports in AWS Artifact](#).

Your compliance responsibility when using AWS services is determined by the sensitivity of your data, your company's compliance objectives, and applicable laws and regulations. AWS provides the following resources to help with compliance:

- [Security and Compliance Quick Start Guides](#) – These deployment guides discuss architectural considerations and provide steps for deploying baseline environments on AWS that are security and compliance focused.
- [Architecting for HIPAA Security and Compliance on Amazon Web Services](#) – This whitepaper describes how companies can use AWS to create HIPAA-eligible applications.

## Note

Not all AWS services are HIPAA eligible. For more information, see the [HIPAA Eligible Services Reference](#).

- [AWS Compliance Resources](#) – This collection of workbooks and guides might apply to your industry and location.
- [AWS Customer Compliance Guides](#) – Understand the shared responsibility model through the lens of compliance. The guides summarize the best practices for securing AWS services and map the guidance to security controls across multiple frameworks (including National Institute of Standards and Technology (NIST), Payment Card Industry Security Standards Council (PCI), and International Organization for Standardization (ISO)).
- [Evaluating Resources with Rules](#) in the *AWS Config Developer Guide* – The AWS Config service assesses how well your resource configurations comply with internal practices, industry guidelines, and regulations.
- [AWS Security Hub](#) – This AWS service provides a comprehensive view of your security state within AWS. Security Hub uses security controls to evaluate your AWS resources and to check your

compliance against security industry standards and best practices. For a list of supported services and controls, see [Security Hub controls reference](#).

- [AWS Audit Manager](#) – This AWS service helps you continuously audit your AWS usage to simplify how you manage risk and compliance with regulations and industry standards.

## Resilience in Resource Groups

AWS Resource Groups performs automated backups to internal service resources. These backups are not user-configurable. Backups are encrypted, both at rest and in transit. Resource Groups stores customer data in Amazon DynamoDB.

The AWS global infrastructure is built around AWS Regions and Availability Zones. AWS Regions provide multiple physically separated and isolated Availability Zones, which are connected with low-latency, high-throughput, and highly redundant networking. With Availability Zones, you can design and operate applications and databases that automatically fail over between Availability Zones without interruption. Availability Zones are more highly available, fault tolerant, and scalable than traditional single or multiple data center infrastructures.

Even a complete loss of user resource groups would not result in a loss of customer data, because most customer data is replicated across AWS Availability Zones (AZs). If you delete groups accidentally, contact [AWS Support Center](#).

For more information about AWS Regions and Availability Zones, see [AWS Global Infrastructure](#).

## Infrastructure security in Resource Groups

There are no additional ways of isolating service or network traffic provided by Resource Groups. If applicable, use AWS-specific isolation. You can use the Resource Groups API and console in a VPC to help maximize privacy and infrastructure security.

As a managed service, AWS Resource Groups is protected by AWS global network security. For information about AWS security services and how AWS protects infrastructure, see [AWS Cloud Security](#). To design your AWS environment using the best practices for infrastructure security, see [Infrastructure Protection](#) in *Security Pillar AWS Well-Architected Framework*.

You use AWS published API calls to access Resource Groups through the network. Clients must support the following:

- Transport Layer Security (TLS). We require TLS 1.2 and recommend TLS 1.3.
- Cipher suites with perfect forward secrecy (PFS) such as DHE (Ephemeral Diffie-Hellman) or ECDHE (Elliptic Curve Ephemeral Diffie-Hellman). Most modern systems such as Java 7 and later support these modes.

Additionally, requests must be signed by using an access key ID and a secret access key that is associated with an IAM principal. Or you can use the [AWS Security Token Service](#) (AWS STS) to generate temporary security credentials to sign requests.

Resource Groups does not support resource-based policies.

## Security best practices for Resource Groups

The following best practices are general guidelines and don't represent a complete security solution. Because these best practices might not be appropriate or sufficient for your environment, treat them as helpful considerations rather than prescriptions.

- **Use the principle of least privilege** to grant access to groups. Resource Groups supports resource-level permissions. Grant access to specific groups only as required for specific users. Avoid using asterisks in policy statements that assign permissions to all users or all groups. For more information about least privilege, see [Grant Least Privilege](#) in the *IAM User Guide*.
- **Keep private information out of public fields.** The name of a group is treated as service metadata. Group names are not encrypted. Do not put sensitive information in group names. Group descriptions are private.

Do not put private or sensitive information in tag keys or tag values.

- **Use authorization based on tagging** whenever appropriate. Resource Groups supports authorization based on tags. You can tag groups, then update policies that are attached to your IAM principals, such as users and roles, to set their level of access based on the tags that are applied to a group. For more information about how to use authorization based on tags, see [Controlling access to AWS resources using resource tags](#) in the *IAM User Guide*.

Many AWS services support authorization based on tags for their resources. Be aware that tag-based authorization might be configured for member resources in a group. If access to a group's resources is restricted by tags, unauthorized users or groups might not be able to perform actions or automations on those resources. For example, if an Amazon EC2 instance in one of your groups is tagged with a tag key of Confidentiality and a tag value of High, and you

are not authorized to run commands on resources tagged `Confidentiality:High`, actions or automations that you perform on the EC2 instance will fail, even if actions are successful for other resources in the resource group. For more information about which services support tag-based authorization for their resources, see [AWS Services That Work with IAM](#) in the *IAM User Guide*.

For more information about developing a tagging strategy for your AWS resources, see [AWS Tagging Strategies](#).

# Service quotas for Resource Groups

The following table describes limits within AWS Resource Groups (Resource Groups). You can request an increase for some of these limits. To request a limit increase, go to the [Service Quotas console](#). For information about limits that can be changed, see [Service Quotas](#).

## Note

The following definitions apply to the description in the quotas below:

- **Resource group** – A collection of AWS resources that are all in the same AWS Region, and that match the criteria specified in the group's query.

Resource	Default limit
Maximum number of resource groups per AWS account per AWS Region	100

# AWS Resource Groups Reference

Use the topics in this section to find reference information for various aspects of AWS Resource Groups.

## Service quotas for Resource Groups

Name	Default	Adjustable	Description
Resource groups per account	Each supported Region: 100	<a href="#">Yes</a>	The maximum number of resource groups that you can create in this account. A resource group is a collection of AWS resources that match a specific criteria.

### Note

You can request changes to quotas marked as adjustable by using the [AWS Resource Groups page in the Service Quotas console](#).

## AWS managed policies available for use with AWS Resource Groups

[AWS-managed IAM permission policies](#) enable you to grant pre-configured permissions to the IAM principals, such as roles and users, in your account. AWS managed policies are tested and adhere to best practice recommendations, so you can reliably use them in the scenarios for which they're define. As new resource types are supported as members of resource groups, and as new resource types support tagging, AWS automatically updates these policies to support them. You don't need to do anything.

The following table lists the AWS-managed IAM permission policies available for you to use to grant permissions to AWS Resource Groups.

Policy name and ARN	Description
<p><a href="#">AWSResourceGroupsReadOnlyAccess</a></p> <p>arn:aws:iam::aws:policy/AWSResourceGroupsReadOnlyAccess</p>	<p>Grants read-only access to the AWS Resource Groups management console. It includes permission to view the details of a resource, including the list of attached tags. This policy doesn't grant permission to make any changes to resource groups or tags.</p>
<p><a href="#">ResourceGroupsandTagEditorReadOnlyAccess</a></p> <p>arn:aws:iam::aws:policy/ResourceGroupsandTagEditorReadOnlyAccess</p>	<p>Grants read-only access to the AWS Resource Groups management console, including the Tag Editor. It includes permission to view the details of a resource, including its tags. You can use the Tag Editor to view resources that match tag queries. This policy doesn't grant permission to make any changes to resource groups or tags.</p>
<p><a href="#">ResourceGroupsandTagEditorFullAccess</a></p> <p>arn:aws:iam::aws:policy/ResourceGroupsandTagEditorFullAccess</p>	<p>Grants full administrative access to the AWS Resource Groups management console. It includes permissions to view, create, and modify resource groups. It also includes permissions to view, set, and modify tags for any resources that are supported by Tag Editor.</p>

# AWS Resource Groups document history

Change	Description	Date
<a href="#">Updated AWS managed policies ResourceGroupsandTagEditorFullAccess and ResourceGroupsandTagEditorReadOnlyAccess</a>	Resource Groups updated two AWS managed policies to add additional AWS CloudFormation permissions.	August 10, 2023
<a href="#">Resource Groups service quotas</a>	You can now view Resource Groups quota limits using Service Quotas.	June 29, 2023
<a href="#">IAM best practices update</a>	Updated guide to align with the IAM best practices . For more information, see <a href="#">Security best practices in IAM</a> .	January 3, 2023
<a href="#">Tag Editor information has been moved to its own guide</a>	The documentation for Tag Editor has been removed from this guide and moved to the new Tag Editor User Guide.	December 13, 2022
<a href="#">Resource groups can now include resources of Amazon Keyspaces (for Apache Cassandra)</a>	AWS Resource Groups now supports including resources for Amazon Keyspaces (for Apache Cassandra) in a resource group.	October 20, 2022
<a href="#">Deprecation of resource types</a>	The following resource types are no longer supported by Tag Editor: <code>AWS::RoboMaker::Robot</code> , <code>AWS::RoboMaker::Fleet</code> , and <code>AWS::Robo</code>	May 17, 2022

Maker::DeploymentJob .

[New AWS managed policy - ResourceGroupsServiceRolePolicy](#)

Resource Groups added a new AWS managed policy in AWS Identity and Access Management (IAM) to support the service's service-linked role.

January 12, 2022

[Group lifecycle events](#)

Resource Groups can now generate events in Amazon CloudWatch Events to alert you when changes happen to your resource groups.

January 12, 2022

[Resource groups can now be used by Amazon VPC Network Access Analyzer to monitor unwanted network traffic to your AWS resources.](#)

You can use AWS Resource Groups to specify the sources and destinations for your network access requirements.

December 3, 2021

[Added support for resources of AWS Resilience Hub](#)

AWS Resource Groups now supports including resources for AWS Resilience Hub in a resource group.

November 18, 2021

[Added support for resources of Amazon Pinpoint](#)

AWS Resource Groups now supports including resources for Amazon Pinpoint in a resource group.

November 11, 2021

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<a href="#">Added support for resource groups that are configured and managed by AppRegistry</a>	AWS Resource Groups now supports resource groups that contain service configurations for resources in applications that you create by using AWS Service Catalog AppRegistry. For more information, see <a href="#">Service Configurations</a> in the <i>AWS Resource Groups API Reference</i> .	September 15, 2021
<a href="#">Added support for resources of Amazon OpenSearch Service</a>	AWS Resource Groups now supports including resources for Amazon OpenSearch Service in a resource group.	August 11, 2021
<a href="#">Added support for resources of AWS Braket</a>	AWS Resource Groups now supports including resources for AWS Braket in a resource group.	June 30, 2021
<a href="#">Added support for resources of Amazon EMR Containers</a>	AWS Resource Groups now supports including resources for Amazon EMR containers in a resource group.	April 27, 2021
<a href="#">Added support for resources of additional AWS services</a>	AWS Resource Groups now supports including resources for the following services in a resource group: Amazon CodeGuru Reviewer, Amazon Elastic Inference, Amazon Forecast, Amazon Fraud Detector, and Service Quotas.	February 25, 2021

[Added chapter on security and compliance.](#)

Discusses how Resource Groups protects your information and complies with regulatory standards.

July 30, 2020

[Added support for resource groups that are configured for AWS services](#)

You can now create resource groups that are associated with an AWS service and that configure how the service can interact with the resources that are in the group. In this first release of the feature, you can create a resource group that contains Amazon EC2 capacity reservations and then launch Amazon EC2 instances into the group. If there's capacity in one or more of the group's reservations that match your instance, then that instance uses the reservation. If the instance doesn't match any available reservations in the group, then it launches as an on-demand instance. For more information, see [Working with capacity reservation groups](#) in the *Amazon EC2 User Guide for Linux Instances*.

July 29, 2020

[Added support for AWS IoT Greengrass resources.](#)

More resource types are now supported by AWS Resource Groups and Tag Editor.

March 25, 2020

## [View operations data for AWS Resource Groups](#)

In the AWS Systems Manager console, the AWS Resource Groups page displays operations data for a selected group on four tabs: **Details**, **Config**, **CloudTrail**, **OpsItems**. These tabs are not available when viewing a group in the Resource Groups console. You can use the information on these tabs to help you understand which resources in a group are compliant and working correctly and which resources require action. If you need to take action on a resource, you can use Systems Manager Automation runbooks to perform common operations maintenance and troubleshooting tasks. For more information, see [Viewing operations data for AWS Resource Groups](#) in the *AWS Systems Manager User Guide*.

March 16, 2020

## [Check for compliance with tag policies](#)

After you create and attach tag policies to accounts using AWS Organizations, you can find noncompliant tags on resources in your organization's accounts.

November 26, 2019

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<a href="#">Support for more resource types</a>	More resource types are now supported by AWS Resource Groups and Tag Editor.	October 4, 2019
<a href="#">New resource types supported by AWS Resource Groups</a>	More resource types are now supported by AWS Resource Groups, especially for groups based on an AWS CloudFormation stack.	August 5, 2019
<a href="#">New resource types supported by AWS Resource Groups</a>	Amazon API Gateway REST APIs, Amazon CloudWatch Events events, and Amazon SNS topics are now supported resource types in AWS Resource Groups.	June 27, 2019
<a href="#">Tag Editor now supports finding untagged resources</a>	You can now search for resources in Tag Editor that do not have tag values applied for a specific tag key.	June 18, 2019
<a href="#">New resource types supported by AWS Resource Groups and Tag Editor</a>	Over 50 new resource types have been added to AWS Resource Groups and Tag Editor support.	June 6, 2019

[AWS Resource Groups and Tag Editor console moves out of AWS Systems Manager console](#)

The AWS Resource Groups and Tag Editor console is now independent from the Systems Manager console. Although you can still find pointers to the AWS Resource Groups console in the Systems Manager left navigation bar, you can open the Resource Groups and Tag Editor console directly from the drop-down menu at the upper left of the AWS Management Console.

June 5, 2019

[New Resource Groups authorization and access control features](#)

Resource Groups now supports action-based policies, resource-level permissions, and authorization based on tags.

May 24, 2019

[Older, legacy Resource Groups and Tag Editor tools are no longer available](#)

Mentions of older, classic, or legacy Resource Groups and Tag Editor have been removed; these tools are no longer available in AWS. Use AWS Resource Groups and Tag Editor instead.

May 14, 2019

[Tag Editor now supports tagging resources across multiple regions](#)

Tag Editor now lets you search for and manage tags of resources across multiple regions, with your current region added to resource queries by default.

May 2, 2019

[Tag Editor now supports exporting query results to a CSV](#)

You can export the results of a query on the **Find Resources to tag** page to a CSV-formatted file. A new Region column is shown in Tag Editor query results. Tag Editor now lets you search for resources that have empty values for a specific tag key. Tag key values auto-complete as you type a unique value among existing keys.

April 2, 2019

[Tag Editor now supports adding all resource types to a query](#)

You can apply tags to up to 20 individual resource types in a single operation, or you can choose **All resource types** to query all resource types in a region. Autocompletion has been added to the **Tag key** field of a query to help enable consistent tag keys among resources. If tag changes fail on some resources, you can retry tag changes on just resources for which tag changes failed.

March 19, 2019

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<a href="#">Tag Editor now supports multiple resource types in a search</a>	You can apply tags to up to 20 resource types in a single operation. You can also choose the columns that are shown to you in search results, including columns for each unique tag key found in your search results or selected resources from results.	February 26, 2019
<a href="#">Documentation added for new Tag Editor</a>	The "Working with Tag Editor" section describes how to use the new AWS Tag Editor console experience.	February 13, 2019
<a href="#">New resource types supported for groups in Resource Groups</a>	Added new resource types that are now supported in Resource Groups.	February 4, 2019
<a href="#">Improved user experience for adding tags to tag-based Resource Groups queries</a>	Minor changes to the console user experience for addition of tags in a tag-based query.	December 17, 2018
<a href="#">AWS CloudFormation stack-based query support added to Resource Groups</a>	You can create resource groups where the query is based on an AWS CloudFormation stack. After you choose a stack, you can choose which resource types from the stack you want to appear in your group's query.	November 13, 2018
<a href="#">Resource Groups and CloudTrail</a>	Resource Groups now offers AWS CloudTrail support. You can view and work with logs of all Resource Groups API calls in CloudTrail.	June 29, 2018

- **API version:** 2017-11-27
- **Latest documentation update:** September 24, 2019

## Earlier updates

The following table describes important changes in each release of the *AWS Resource Groups User Guide* before June 2018.

Change	Description	Date
Initial release	Initial release of the next generation of AWS Resource Groups	November 29, 2017

# AWS Glossary

For the latest AWS terminology, see the [AWS glossary](#) in the *AWS Glossary Reference*.