API Reference

AWS App Mesh

API Version 2019-01-25

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AWS App Mesh: API Reference

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Welcome

AWS App Mesh is a service mesh based on the Envoy proxy that makes it easy to monitor and control microservices. App Mesh standardizes how your microservices communicate, giving you end-to-end visibility and helping to ensure high availability for your applications.

App Mesh gives you consistent visibility and network traffic controls for every microservice in an application. You can use App Mesh with AWS Fargate, Amazon ECS, Amazon EKS, Kubernetes on AWS, and Amazon EC2.

Note

App Mesh supports microservice applications that use service discovery naming for their components. For more information about service discovery on Amazon ECS, see Service Discovery in the *Amazon Elastic Container Service Developer Guide*. Kubernetes `kube-dns` and `coredns` are supported. For more information, see DNS for Services and Pods in the Kubernetes documentation.

This document was last published on September 3, 2025.

Actions

The following actions are supported:

- CreateGatewayRoute
- CreateMesh
- CreateRoute
- CreateVirtualGateway
- CreateVirtualNode
- CreateVirtualRouter
- CreateVirtualService
- DeleteGatewayRoute
- DeleteMesh
- DeleteRoute
- DeleteVirtualGateway
- DeleteVirtualNode
- DeleteVirtualRouter
- DeleteVirtualService
- DescribeGatewayRoute
- DescribeMesh
- DescribeRoute
- DescribeVirtualGateway
- DescribeVirtualNode
- DescribeVirtualRouter
- DescribeVirtualService
- ListGatewayRoutes
- ListMeshes
- ListRoutes
- ListTagsForResource
- ListVirtualGateways
- ListVirtualNodes

- ListVirtualRouters
- ListVirtualServices
- TagResource
- UntagResource
- UpdateGatewayRoute
- UpdateMesh
- UpdateRoute
- UpdateVirtualGateway
- UpdateVirtualNode
- UpdateVirtualRouter
- UpdateVirtualService

CreateGatewayRoute

Creates a gateway route.

A gateway route is attached to a virtual gateway and routes traffic to an existing virtual service. If a route matches a request, it can distribute traffic to a target virtual service.

For more information about gateway routes, see Gateway routes.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualGateway/virtualGatewayName/gatewayRoutes?
meshOwner=meshOwner HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "gatewayRouteName": "string",
   "spec": {
      "grpcRoute": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
               }
            }
         },
         "match": {
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
```

```
            }
         ],
         "port": number,
         "serviceName": "string"
      }
   },
   "http2Route": {
      "action": {
         "rewrite": {
            "hostname": {
               "defaultTargetHostname": "string"
            },
            "path": {
               "exact": "string"
            },
            "prefix": {
               "defaultPrefix": "string",
               "value": "string"
            }
         },
         "target": {
            "port": number,
            "virtualService": {
               "virtualServiceName": "string"
            }
         }
      },
      "match": {
         "headers": [
            {
               "invert": boolean,
               "match": { ... },
               "name": "string"
            }
         ],
         "hostname": {
            "exact": "string",
            "suffix": "string"
         },
         "method": "string",
         "path": {
            "exact": "string",
            "regex": "string"
         },
```

```
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ]
         }
      },
      "httpRoute": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               },
               "path": {
                  "exact": "string"
               },
               "prefix": {
                  "defaultPrefix": "string",
                  "value": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
               }
            }
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "hostname": {
               "exact": "string",
               "suffix": "string"
```

```
            },
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ]
         }
      },
      "priority": number
   },
   "tags": [
      {
         "key": "string",
         "value": "string"
      }
   ]
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to create the gateway route in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then the account that you specify must share the mesh with your account before you can create

the resource in the service mesh. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualGatewayName

The name of the virtual gateway to associate the gateway route with. If the virtual gateway is in a shared mesh, then you must be the owner of the virtual gateway resource.

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

gatewayRouteName

The name to use for the gateway route.

Type: String

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

Required: Yes

spec

The gateway route specification to apply.

Type: GatewayRouteSpec object

Required: Yes

tags

Optional metadata that you can apply to the gateway route to assist with categorization and organization. Each tag consists of a key and an optional value, both of which you define. Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "gatewayRouteName": "string",
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "grpcRoute": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
```

```
            }
         }
      },
      "match": {
         "hostname": {
            "exact": "string",
            "suffix": "string"
         },
         "metadata": [
            {
               "invert": boolean,
               "match": { ... },
               "name": "string"
            }
         ],
         "port": number,
         "serviceName": "string"
      }
   },
   "http2Route": {
      "action": {
         "rewrite": {
            "hostname": {
               "defaultTargetHostname": "string"
            },
            "path": {
               "exact": "string"
            },
            "prefix": {
               "defaultPrefix": "string",
               "value": "string"
            }
         },
         "target": {
            "port": number,
            "virtualService": {
               "virtualServiceName": "string"
            }
         }
      },
      "match": {
         "headers": [
            {
               "invert": boolean,
```

```
                "match": { ... },
                "name": "string"
             }
          ],
          "hostname": {
             "exact": "string",
             "suffix": "string"
          },
          "method": "string",
          "path": {
             "exact": "string",
             "regex": "string"
          },
          "port": number,
          "prefix": "string",
          "queryParameters": [
             {
                "match": {
                   "exact": "string"
                },
                "name": "string"
             }
          ]
       }
    },
    "httpRoute": {
       "action": {
          "rewrite": {
             "hostname": {
                "defaultTargetHostname": "string"
             },
             "path": {
                "exact": "string"
             },
             "prefix": {
                "defaultPrefix": "string",
                "value": "string"
             }
          },
          "target": {
             "port": number,
             "virtualService": {
                "virtualServiceName": "string"
             }
```

```
            }
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ]
         }
      },
      "priority": number
   },
   "status": {
      "status": "string"
   },
   "virtualGatewayName": "string"
}
```

Response Elements

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

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

gatewayRouteName

The name of the gateway route.

Type: String

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

meshName

The name of the service mesh that the resource resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the gateway route.

Type: GatewayRouteSpec object

status

The status of the gateway route.

Type: GatewayRouteStatus object

virtualGatewayName

The virtual gateway that the gateway route is associated with.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example creates an HTTP/2 gateway route named `myGatewayRoute` that is associated to a virtual gateway named `myVirtualGateway` in the `apps` service mesh. The route routes all traffic to the virtual service named `myservicea.svc.cluster.local`.

Sample Request

```
PUT /v20190125/meshes/apps/virtualGateways HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200608T194401Z
Authorization: AUTHPARAMS

{
 "gatewayRouteName": "myGatewayRoute",
 "spec": {
  "http2Route": {
   "action": {
    "target": {
     "virtualService": {
```

```
      "virtualServiceName": "myservicea.svc.cluster.local"
     }
    }
   },
   "match": {
    "prefix": "/"
   }
  }
 },
 "clientToken": "1aa1111a-1111-1111-111a-a1a1a1aa111a"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 696b569b-3593-446d-832c-0a38ce1c53ac
content-type: application/json
content-length: 517
date: Mon, 08 Jun 2020 19:44:02 GMT
x-envoy-upstream-service-time: 48
server: envoy
Connection: keep-alive

{
 "gatewayRouteName": "myGatewayRoute",
 "meshName": "myApps",
 "metadata": {
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway/gatewayRoute/myGatewayRoute",
  "createdAt": 1.591642091122E9,
  "lastUpdatedAt": 1.591642091122E9,
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "uid": "ff111ff2-33ff-4ff4-ffff-111f111f111f",
  "version": 1
 },
 "spec": {
  "grpcRoute": null,
  "http2Route": {
   "action": {
    "target": {
     "virtualService": {
      "virtualServiceName": "myservicea.svc.cluster.local"
```

```
      }
     }
    },
    "match": {
     "prefix": "/"
    }
   },
   "httpRoute": null
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualGatewayName": "myVirtualGateway"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateMesh

Creates a service mesh.

A service mesh is a logical boundary for network traffic between services that are represented by resources within the mesh. After you create your service mesh, you can create virtual services, virtual nodes, virtual routers, and routes to distribute traffic between the applications in your mesh.

For more information about service meshes, see Service meshes.

Request Syntax

```
PUT /v20190125/meshes HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "meshName": "string",
   "spec": {
      "egressFilter": {
         "type": "string"
      },
      "serviceDiscovery": {
         "ipPreference": "string"
      }
   },
   "tags": [
      {
         "key": "string",
         "value": "string"
      }
   ]
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

meshName

The name to use for the service mesh.

Type: String

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

Required: Yes

spec

The service mesh specification to apply.

Type: MeshSpec object

Required: No

tags

Optional metadata that you can apply to the service mesh to assist with categorization and organization. Each tag consists of a key and an optional value, both of which you define. Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "egressFilter": {
         "type": "string"
      },
      "serviceDiscovery": {
         "ipPreference": "string"
      }
   },
   "status": {
      "status": "string"
   }
}
```

Response Elements

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

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

meshName

The name of the service mesh.

Type: String

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

metadata

The associated metadata for the service mesh.

Type: ResourceMetadata object

spec

The associated specification for the service mesh.

Type: MeshSpec object

status

The status of the service mesh.

Type: MeshStatus object

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example creates a service mesh named `ecs-mesh`.

Sample Request

```
PUT /v20190125/meshes HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T192324Z
```

```
Authorization: AUTHPARAMS

{
  "meshName": "ecs-mesh",
  "clientToken": "34a20934-da3a-43a0-9d1b-390308a7393b"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 5c2f774d-da0b-40f3-80c5-d8711eb15dce
content-type: application/json
content-length: 245
date: Wed, 27 Feb 2019 19:23:24 GMT
x-envoy-upstream-service-time: 76
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh",
  "createdAt": 1.551295405298E9,
  "lastUpdatedAt": 1.551295405298E9,
  "uid": "2d29a11c-f2dd-44a6-b620-33661cfdfe97",
  "version": 1
 },
 "status": {
  "status": "ACTIVE"
 }
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRoute

Creates a route that is associated with a virtual router.

You can route several different protocols and define a retry policy for a route. Traffic can be routed to one or more virtual nodes.

For more information about routes, see Routes.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualRouter/virtualRouterName/routes?
meshOwner=meshOwner HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "routeName": "string",
   "spec": {
      "grpcRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "methodName": "string",
            "port": number,
            "serviceName": "string"
         },
         "retryPolicy": {
            "grpcRetryEvents": [ "string" ],
```

```
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "http2Route": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
```

```
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ],
            "scheme": "string"
         },
         "retryPolicy": {
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "httpRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
```

```
                "match": { ... },
                "name": "string"
             }
          ],
          "method": "string",
          "path": {
             "exact": "string",
             "regex": "string"
          },
          "port": number,
          "prefix": "string",
          "queryParameters": [
             {
                "match": {
                   "exact": "string"
                },
                "name": "string"
             }
          ],
          "scheme": "string"
       },
       "retryPolicy": {
          "httpRetryEvents": [ "string" ],
          "maxRetries": number,
          "perRetryTimeout": {
             "unit": "string",
             "value": number
          },
          "tcpRetryEvents": [ "string" ]
       },
       "timeout": {
          "idle": {
             "unit": "string",
             "value": number
          },
          "perRequest": {
             "unit": "string",
             "value": number
          }
       }
    },
    "priority": number,
    "tcpRoute": {
       "action": {
```

```
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "port": number
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            }
         }
      }
   },
   "tags": [
      {
         "key": "string",
         "value": "string"
      }
   ]
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to create the route in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then the account that you specify must share the mesh with your account before you can create

the resource in the service mesh. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualRouterName

The name of the virtual router in which to create the route. If the virtual router is in a shared mesh, then you must be the owner of the virtual router resource.

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

routeName

The name to use for the route.

Type: String

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

Required: Yes

spec

The route specification to apply.

Type: RouteSpec object

Required: Yes

tags

Optional metadata that you can apply to the route to assist with categorization and organization. Each tag consists of a key and an optional value, both of which you define. Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "routeName": "string",
   "spec": {
      "grpcRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
```

```
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "methodName": "string",
            "port": number,
            "serviceName": "string"
         },
         "retryPolicy": {
            "grpcRetryEvents": [ "string" ],
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "http2Route": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "headers": [
```

```
            {
               "invert": boolean,
               "match": { ... },
               "name": "string"
            }
         ],
         "method": "string",
         "path": {
            "exact": "string",
            "regex": "string"
         },
         "port": number,
         "prefix": "string",
         "queryParameters": [
            {
               "match": {
                  "exact": "string"
               },
               "name": "string"
            }
         ],
         "scheme": "string"
      },
      "retryPolicy": {
         "httpRetryEvents": [ "string" ],
         "maxRetries": number,
         "perRetryTimeout": {
            "unit": "string",
            "value": number
         },
         "tcpRetryEvents": [ "string" ]
      },
      "timeout": {
         "idle": {
            "unit": "string",
            "value": number
         },
         "perRequest": {
            "unit": "string",
            "value": number
         }
      }
   },
   "httpRoute": {
```

```
      "action": {
         "weightedTargets": [
            {
               "port": number,
               "virtualNode": "string",
               "weight": number
            }
         ]
      },
      "match": {
         "headers": [
            {
               "invert": boolean,
               "match": { ... },
               "name": "string"
            }
         ],
         "method": "string",
         "path": {
            "exact": "string",
            "regex": "string"
         },
         "port": number,
         "prefix": "string",
         "queryParameters": [
            {
               "match": {
                  "exact": "string"
               },
               "name": "string"
            }
         ],
         "scheme": "string"
      },
      "retryPolicy": {
         "httpRetryEvents": [ "string" ],
         "maxRetries": number,
         "perRetryTimeout": {
            "unit": "string",
            "value": number
         },
         "tcpRetryEvents": [ "string" ]
      },
      "timeout": {
```

```
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "priority": number,
      "tcpRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "port": number
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            }
         }
      }
   },
   "status": {
      "status": "string"
   },
   "virtualRouterName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the route resides in.

Type: String

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

metadata

The associated metadata for the route.

Type: ResourceMetadata object

routeName

The name of the route.

Type: String

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

spec

The specifications of the route.

Type: RouteSpec object

status

The status of the route.

Type: RouteStatus object

virtualRouterName

The virtual router that the route is associated with.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example creates a route named `colorgateway-route` for the `colorgateway-vr` virtual router in the `ecs-mesh` service mesh. The route directs all traffic to the `colorgateway-vn` virtual node.

Sample Request

```
PUT /v20190125/meshes/ecs-mesh/virtualRouter/colorgateway-vr/routes HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T192454Z
Authorization: AUTHPARAMS

{
  "routeName": "colorgateway-route",
  "spec": {
    "httpRoute": {
      "action": {
        "weightedTargets": [
          {
            "virtualNode": "colorgateway-vn",
            "weight": 100
          }
        ]
      },
      "match": {
        "prefix": "/"
      }
```

```
    }
  },
  "clientToken": "a785b959-201d-49d7-b81d-32e7f393968f"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 159941a8-18be-423c-89fe-3beb9542ca3f
content-type: application/json
content-length: 511
date: Wed, 27 Feb 2019 19:24:54 GMT
x-envoy-upstream-service-time: 59
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorgateway-vr/route/colorgateway-route",
  "createdAt": 1.551295495004E9,
  "lastUpdatedAt": 1.551295495004E9,
  "uid": "3251bf37-2d01-4b79-be96-d0c36c61511f",
  "version": 1
 },
 "routeName": "colorgateway-route",
 "spec": {
  "httpRoute": {
   "action": {
    "weightedTargets": [{
     "virtualNode": "colorgateway-vn",
     "weight": 100
    }]
   },
   "match": {
    "prefix": "/"
   }
  },
  "tcpRoute": null
 },
 "status": {
  "status": "ACTIVE"
```

```
  },
  "virtualRouterName": "colorgateway-vr"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateVirtualGateway

Creates a virtual gateway.

A virtual gateway allows resources outside your mesh to communicate to resources that are inside your mesh. The virtual gateway represents an Envoy proxy running in an Amazon ECS task, in a Kubernetes service, or on an Amazon EC2 instance. Unlike a virtual node, which represents an Envoy running with an application, a virtual gateway represents Envoy deployed by itself.

For more information about virtual gateways, see Virtual gateways.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualGateways?meshOwner=meshOwner HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
               "path": "string",
```

```
                "port": number,
                "protocol": "string",
                "timeoutMillis": number,
                "unhealthyThreshold": number
             },
             "portMapping": {
                "port": number,
                "protocol": "string"
             },
             "tls": {
                "certificate": { ... },
                "mode": "string",
                "validation": {
                   "subjectAlternativeNames": {
                      "match": {
                         "exact": [ "string" ]
                      }
                   },
                   "trust": { ... }
                }
             }
          }
       ],
       "logging": {
          "accessLog": { ... }
       }
    },
    "tags": [
       {
          "key": "string",
          "value": "string"
       }
    ],
    "virtualGatewayName": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to create the virtual gateway in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then the account that you specify must share the mesh with your account before you can create the resource in the service mesh. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The virtual gateway specification to apply.

Type: VirtualGatewaySpec object

Required: Yes

tags

Optional metadata that you can apply to the virtual gateway to assist with categorization and organization. Each tag consists of a key and an optional value, both of which you define. Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

virtualGatewayName

The name to use for the virtual gateway.

Type: String

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

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
```

```
            }
         },
         "listeners": [
            {
               "connectionPool": { ... },
               "healthCheck": {
                  "healthyThreshold": number,
                  "intervalMillis": number,
                  "path": "string",
                  "port": number,
                  "protocol": "string",
                  "timeoutMillis": number,
                  "unhealthyThreshold": number
               },
               "portMapping": {
                  "port": number,
                  "protocol": "string"
               },
               "tls": {
                  "certificate": { ... },
                  "mode": "string",
                  "validation": {
                     "subjectAlternativeNames": {
                        "match": {
                           "exact": [ "string" ]
                        }
                     },
                     "trust": { ... }
                  }
               }
            }
         ],
         "logging": {
            "accessLog": { ... }
         }
      },
      "status": {
         "status": "string"
      },
      "virtualGatewayName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual gateway resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the virtual gateway.

Type: VirtualGatewaySpec object

status

The current status of the virtual gateway.

Type: VirtualGatewayStatus object

virtualGatewayName

The name of the virtual gateway.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example creates a virtual gateway named `myVirtualGateway` in the `apps` service mesh. The virtual gateway listens for `http2` traffic on port `80`.

Sample Request

```
PUT /v20190125/meshes/apps/virtualGateways HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200706T144617Z
Authorization: AUTHPARAMS
Content-Length: 174

{
 "spec": {
  "listeners": [{
   "portMapping": {
    "port": 80,
    "protocol": "http2"
   }
  }]
 },
 "virtualGatewayName": "myVirtualGateway",
 "clientToken": "1aa1111a-1111-1111-111a-a1a1a1aa111a"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 696b569b-3593-446d-832c-0a38ce1c53ac
content-type: application/json
content-length: 513
date: Mon, 06 Jul 2020 14:46:17 GMT
x-envoy-upstream-service-time: 33
server: envoy
Connection: keep-alive

{
 "meshName": "apps",
 "metadata": {
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway",
  "createdAt": 1.594046778215E9,
  "lastUpdatedAt": 1.594046778215E9,
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012,
  "uid": "ff111ff2-33ff-4ff4-ffff-111f111f111f",
  "version": 1
 },
 "spec": {
  "backendDefaults": null,
  "listeners": [{
   "healthCheck": null,
   "portMapping": {
    "port": 80,
    "protocol": "http2"
   },
   "tls": null
  }],
  "logging": null
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualGatewayName": "myVirtualGateway"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateVirtualNode

Creates a virtual node within a service mesh.

A virtual node acts as a logical pointer to a particular task group, such as an Amazon ECS service or a Kubernetes deployment. When you create a virtual node, you can specify the service discovery information for your task group, and whether the proxy running in a task group will communicate with other proxies using Transport Layer Security (TLS).

You define a `listener` for any inbound traffic that your virtual node expects. Any virtual service that your virtual node expects to communicate to is specified as a `backend`.

The response metadata for your new virtual node contains the `arn` that is associated with the virtual node. Set this value to the full ARN; for example, `arn:aws:appmesh:us-west-2:123456789012:myMesh/default/virtualNode/myApp`) as the `APPMESH_RESOURCE_ARN` environment variable for your task group's Envoy proxy container in your task definition or pod spec. This is then mapped to the `node.id` and `node.cluster` Envoy parameters.

> **Note**
>
> By default, App Mesh uses the name of the resource you specified in `APPMESH_RESOURCE_ARN` when Envoy is referring to itself in metrics and traces. You can override this behavior by setting the `APPMESH_RESOURCE_CLUSTER` environment variable with your own name.

For more information about virtual nodes, see Virtual nodes. You must be using `1.15.0` or later of the Envoy image when setting these variables. For more information aboutApp Mesh Envoy variables, see Envoy image in the AWS App Mesh User Guide.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualNodes?meshOwner=meshOwner HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "backendDefaults": {
```

```
      "clientPolicy": {
         "tls": {
            "certificate": { ... },
            "enforce": boolean,
            "ports": [ number ],
            "validation": {
               "subjectAlternativeNames": {
                  "match": {
                     "exact": [ "string" ]
                  }
               },
               "trust": { ... }
            }
         }
      },
      "backends": [
         { ... }
      ],
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
               "path": "string",
               "port": number,
               "protocol": "string",
               "timeoutMillis": number,
               "unhealthyThreshold": number
            },
            "outlierDetection": {
               "baseEjectionDuration": {
                  "unit": "string",
                  "value": number
               },
               "interval": {
                  "unit": "string",
                  "value": number
               },
               "maxEjectionPercent": number,
               "maxServerErrors": number
            },
            "portMapping": {
```

```
                "port": number,
                "protocol": "string"
             },
             "timeout": { ... },
             "tls": {
                "certificate": { ... },
                "mode": "string",
                "validation": {
                   "subjectAlternativeNames": {
                      "match": {
                         "exact": [ "string" ]
                      }
                   },
                   "trust": { ... }
                }
             }
          }
       ],
       "logging": {
          "accessLog": { ... }
       },
       "serviceDiscovery": { ... }
    },
    "tags": [
       {
          "key": "string",
          "value": "string"
       }
    ],
    "virtualNodeName": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to create the virtual node in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then the account that you specify must share the mesh with your account before you can create the resource in the service mesh. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The virtual node specification to apply.

Type: VirtualNodeSpec object

Required: Yes

tags

Optional metadata that you can apply to the virtual node to assist with categorization and organization. Each tag consists of a key and an optional value, both of which you define. Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

virtualNodeName

The name to use for the virtual node.

Type: String

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

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
```

```
      },
      "backends": [
         { ... }
      ],
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
               "path": "string",
               "port": number,
               "protocol": "string",
               "timeoutMillis": number,
               "unhealthyThreshold": number
            },
            "outlierDetection": {
               "baseEjectionDuration": {
                  "unit": "string",
                  "value": number
               },
               "interval": {
                  "unit": "string",
                  "value": number
               },
               "maxEjectionPercent": number,
               "maxServerErrors": number
            },
            "portMapping": {
               "port": number,
               "protocol": "string"
            },
            "timeout": { ... },
            "tls": {
               "certificate": { ... },
               "mode": "string",
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
```

```
            }
         }
      ],
      "logging": {
         "accessLog": { ... }
      },
      "serviceDiscovery": { ... }
   },
   "status": {
      "status": "string"
   },
   "virtualNodeName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual node resides in.

Type: String

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

metadata

The associated metadata for the virtual node.

Type: ResourceMetadata object

spec

The specifications of the virtual node.

Type: VirtualNodeSpec object

status

The current status for the virtual node.

Type: VirtualNodeStatus object

virtualNodeName

The name of the virtual node.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example creates a virtual node named `colorgateway-vn` in the `ecs-mesh` service mesh.

Sample Request

```
PUT /v20190125/meshes/ecs-mesh/virtualNodes HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T192431Z
Authorization: AUTHPARAMS

{
```

```
  "spec": {
    "listeners": [
      {
        "portMapping": {
          "port": 9080,
          "protocol": "http"
        }
      }
    ],
    "serviceDiscovery": {
      "dns": {
        "hostname": "colorgateway.default.svc.cluster.local"
      }
    },
    "backends": [
      {
        "virtualService": {
          "virtualServiceName": "tcpecho.default.svc.cluster.local"
        }
      },
      {
        "virtualService": {
          "virtualServiceName": "colorteller.default.svc.cluster.local"
        }
      }
    ]
  },
  "virtualNodeName": "colorgateway-vn",
  "clientToken": "c148ccbb-3619-49da-bb3e-4561eb5370c4"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: cc29e2dd-e4c4-4d6e-9424-e9211580f70e
content-type: application/json
content-length: 687
date: Wed, 27 Feb 2019 19:24:31 GMT
x-envoy-upstream-service-time: 132
server: envoy
Connection: keep-alive

{
```

```
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/
colorgateway-vn",
  "createdAt": 1.551295471546E9,
  "lastUpdatedAt": 1.551295471546E9,
  "uid": "887cfab8-a727-41b2-8cd7-2fdebfd6304e",
  "version": 1
 },
 "spec": {
  "backends": [{
   "virtualService": {
    "virtualServiceName": "tcpecho.default.svc.cluster.local"
   }
  }, {
   "virtualService": {
    "virtualServiceName": "colorteller.default.svc.cluster.local"
   }
  }],
  "listeners": [{
   "healthCheck": null,
   "portMapping": {
    "port": 9080,
    "protocol": "http"
   }
  }],
  "logging": null,
  "serviceDiscovery": {
   "dns": {
    "hostname": "colorgateway.default.svc.cluster.local"
   }
  }
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualNodeName": "colorgateway-vn"
}
```


See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateVirtualRouter

Creates a virtual router within a service mesh.

Specify a `listener` for any inbound traffic that your virtual router receives. Create a virtual router for each protocol and port that you need to route. Virtual routers handle traffic for one or more virtual services within your mesh. After you create your virtual router, create and associate routes for your virtual router that direct incoming requests to different virtual nodes.

For more information about virtual routers, see Virtual routers.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualRouters?meshOwner=meshOwner HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "listeners": [
         {
            "portMapping": {
               "port": number,
               "protocol": "string"
            }
         }
      ]
   },
   "tags": [
      {
         "key": "string",
         "value": "string"
      }
   ],
   "virtualRouterName": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to create the virtual router in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then the account that you specify must share the mesh with your account before you can create the resource in the service mesh. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The virtual router specification to apply.

Type: VirtualRouterSpec object

Required: Yes

tags

Optional metadata that you can apply to the virtual router to assist with categorization and organization. Each tag consists of a key and an optional value, both of which you define.

Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

virtualRouterName

The name to use for the virtual router.

Type: String

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

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "listeners": [
         {
            "portMapping": {
               "port": number,
               "protocol": "string"
            }
```

```
         }
      ]
   },
   "status": {
      "status": "string"
   },
   "virtualRouterName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual router resides in.

Type: String

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

metadata

The associated metadata for the virtual router.

Type: ResourceMetadata object

spec

The specifications of the virtual router.

Type: VirtualRouterSpec object

status

The current status of the virtual router.

Type: VirtualRouterStatus object

virtualRouterName

The name of the virtual router.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example creates a virtual router named `colorteller-vr` in the `ecs-mesh` service mesh.

Sample Request

```
PUT /v20190125/meshes/ecs-mesh/virtualRouters HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T192446Z
Authorization: AUTHPARAMS

{
  "spec": {
```

```
      listeners: [
            {
                port: 80,
                protocol: http
            }
        ]},
  "virtualRouterName": "colorteller-vr",
  "clientToken": "e90d8ee2-c111-4431-bfa3-4725a06a84b1"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 770a356d-60e5-45f7-9f47-823eb5f1b750
content-type: application/json
content-length: 337
date: Wed, 27 Feb 2019 19:24:46 GMT
x-envoy-upstream-service-time: 19
server: envoy
Connection: keep-alive

{
  "meshName": "ecs-mesh",
  "metadata": {
    "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorteller-vr",
    "createdAt": 1551295486.588,
    "lastUpdatedAt": 1551295486.588,
    "uid": "a756d1e5-ce8f-40a5-afbc-380f61f0c1e0",
    "version": 1
  },
  "spec": {
    "listeners": [
      {
        "portMapping": {
          "port": 9080,
          "protocol": "http"
        }
      }
    ]
  },
  "status": {
    "status": "ACTIVE"
```

```
  },
  "virtualRouterName": "colorteller-vr"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateVirtualService

Creates a virtual service within a service mesh.

A virtual service is an abstraction of a real service that is provided by a virtual node directly or indirectly by means of a virtual router. Dependent services call your virtual service by its `virtualServiceName`, and those requests are routed to the virtual node or virtual router that is specified as the provider for the virtual service.

For more information about virtual services, see Virtual services.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualServices?meshOwner=meshOwner HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "provider": { ... }
   },
   "tags": [
      {
         "key": "string",
         "value": "string"
      }
   ],
   "virtualServiceName": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to create the virtual service in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then the account that you specify must share the mesh with your account before you can create the resource in the service mesh. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The virtual service specification to apply.

Type: VirtualServiceSpec object

Required: Yes

tags

Optional metadata that you can apply to the virtual service to assist with categorization and organization. Each tag consists of a key and an optional value, both of which you define. Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

virtualServiceName

The name to use for the virtual service.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "provider": { ... }
   },
   "status": {
      "status": "string"
   },
   "virtualServiceName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual service resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the virtual service.

Type: VirtualServiceSpec object

status

The current status of the virtual service.

Type: VirtualServiceStatus object

virtualServiceName

The name of the virtual service.

Type: String

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example creates a virtual service named `colorgateway.default.svc.cluster.local` in the `ecs-mesh` service mesh.

Sample Request

```
PUT /v20190125/meshes/ecs-mesh/virtualServices HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T192448Z
Authorization: AUTHPARAMS

{
  "spec": {
    "provider": {
      "virtualNode": {
        "virtualNodeName": "colorgateway-vn"
      }
    }
  },
  "virtualServiceName": "colorgateway.default.svc.cluster.local",
  "clientToken": "0a263779-366d-400f-9c4c-0ab7ff0ef392"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 6418af7b-e02b-4f0e-bb96-a3b4aab428c8
content-type: application/json
content-length: 456
date: Wed, 27 Feb 2019 19:24:48 GMT
x-envoy-upstream-service-time: 67
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualService/
colorgateway.default.svc.cluster.local",
  "createdAt": 1.551295488701E9,
```

```
  "lastUpdatedAt": 1.551295488701E9,
  "uid": "f1b0ed85-7648-4be2-a0fc-c97865029c48",
  "version": 1
 },
 "spec": {
  "provider": {
   "virtualNode": {
    "virtualNodeName": "colorgateway-vn"
   },
   "virtualRouter": null
  }
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualServiceName": "colorgateway.default.svc.cluster.local"
}
```


See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteGatewayRoute

Deletes an existing gateway route.

Request Syntax

```
DELETE /v20190125/meshes/meshName/virtualGateway/virtualGatewayName/
gatewayRoutes/gatewayRouteName?meshOwner=meshOwner HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

gatewayRouteName

The name of the gateway route to delete.

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

Required: Yes

meshName

The name of the service mesh to delete the gateway route from.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualGatewayName

The name of the virtual gateway to delete the route from.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "gatewayRouteName": "string",
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "grpcRoute": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
               }
            }
         },
         "match": {
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "metadata": [
               {
```

```
                "invert": boolean,
                "match": { ... },
                "name": "string"
             }
          ],
          "port": number,
          "serviceName": "string"
       }
    },
    "http2Route": {
       "action": {
          "rewrite": {
             "hostname": {
                "defaultTargetHostname": "string"
             },
             "path": {
                "exact": "string"
             },
             "prefix": {
                "defaultPrefix": "string",
                "value": "string"
             }
          },
          "target": {
             "port": number,
             "virtualService": {
                "virtualServiceName": "string"
             }
          }
       },
       "match": {
          "headers": [
             {
                "invert": boolean,
                "match": { ... },
                "name": "string"
             }
          ],
          "hostname": {
             "exact": "string",
             "suffix": "string"
          },
          "method": "string",
          "path": {
```

```
            "exact": "string",
            "regex": "string"
         },
         "port": number,
         "prefix": "string",
         "queryParameters": [
            {
               "match": {
                  "exact": "string"
               },
               "name": "string"
            }
         ]
      }
   },
   "httpRoute": {
      "action": {
         "rewrite": {
            "hostname": {
               "defaultTargetHostname": "string"
            },
            "path": {
               "exact": "string"
            },
            "prefix": {
               "defaultPrefix": "string",
               "value": "string"
            }
         },
         "target": {
            "port": number,
            "virtualService": {
               "virtualServiceName": "string"
            }
         }
      },
      "match": {
         "headers": [
            {
               "invert": boolean,
               "match": { ... },
               "name": "string"
            }
         ],
```

```
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ]
         }
      },
      "priority": number
   },
   "status": {
      "status": "string"
   },
   "virtualGatewayName": "string"
}
```

Response Elements

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

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

gatewayRouteName

The name of the gateway route.

Type: String

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

meshName

The name of the service mesh that the resource resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the gateway route.

Type: GatewayRouteSpec object

status

The status of the gateway route.

Type: GatewayRouteStatus object

virtualGatewayName

The virtual gateway that the gateway route is associated with.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ResourceInUseException

You can't delete the specified resource because it's in use or required by another resource.

HTTP Status Code: 409

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example deletes a gateway route named `myGatewayRoute` from the `myVirtualGateway` virtual gateway that is in the `apps` service mesh.

Sample Request

```
DELETE /v20190125/meshes/apps/virtualGateway/myVirtualGateway/gatewayRoutes/
myGatewayRoute HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200608T193419Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: a7e8bcc1-0dec-464d-9e69-5cd1f780c9eb
content-type: application/json
content-length: 618
date: Mon, 08 Jun 2020 19:34:19 GMT
x-envoy-upstream-service-time: 49
server: envoy
Connection: keep-alive

{
 "gatewayRouteName": "myGatewayRoute",
 "meshName": "myApps",
 "metadata": {
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway/gatewayRoute/myGatewayRoute",
  "createdAt": 1.591642091122E9,
  "lastUpdatedAt": 1.591644859804E9,
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "uid": "ff111ff2-33ff-4ff4-ffff-111f111f111f",
  "version": 3
 },
 "spec": {
  "grpcRoute": null,
  "http2Route": {
   "action": {
```

```
    "target": {
     "virtualService": {
      "virtualServiceName": "myserviceb.svc.cluster.local"
     }
    }
   },
   "match": {
    "prefix": "/"
   }
  },
  "httpRoute": null
 },
 "status": {
  "status": "DELETED"
 },
 "virtualGatewayName": "myVirtualGateway"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteMesh

Deletes an existing service mesh.

You must delete all resources (virtual services, routes, virtual routers, and virtual nodes) in the service mesh before you can delete the mesh itself.

Request Syntax

```
DELETE /v20190125/meshes/meshName HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to delete.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
```

```
      "uid": "string",
      "version": number
   },
   "spec": {
      "egressFilter": {
         "type": "string"
      },
      "serviceDiscovery": {
         "ipPreference": "string"
      }
   },
   "status": {
      "status": "string"
   }
}
```

Response Elements

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

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

meshName

The name of the service mesh.

Type: String

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

metadata

The associated metadata for the service mesh.

Type: ResourceMetadata object

spec

The associated specification for the service mesh.

Type: MeshSpec object

status

The status of the service mesh.

Type: MeshStatus object

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ResourceInUseException

You can't delete the specified resource because it's in use or required by another resource.

HTTP Status Code: 409

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example command deletes a service mesh named `ecs-mesh` in your default region.

Sample Request

```
DELETE /v20190125/meshes/ecs-mesh HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T203825Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 5b4e49f2-dac7-4782-8be3-1e81c8599e14
content-type: application/json
content-length: 246
date: Wed, 27 Feb 2019 20:38:25 GMT
x-envoy-upstream-service-time: 35
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh",
  "createdAt": 1.551295405298E9,
```

```
  "lastUpdatedAt": 1.551299905963E9,
  "uid": "2d29a11c-f2dd-44a6-b620-33661cfdfe97",
  "version": 1
 },
 "status": {
  "status": "DELETED"
 }
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRoute

Deletes an existing route.

Request Syntax

```
DELETE /v20190125/meshes/meshName/virtualRouter/virtualRouterName/routes/routeName?
meshOwner=meshOwner HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to delete the route in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

routeName

The name of the route to delete.

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

Required: Yes

virtualRouterName

The name of the virtual router to delete the route in.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "routeName": "string",
   "spec": {
      "grpcRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "methodName": "string",
            "port": number,
            "serviceName": "string"
```

```
         },
         "retryPolicy": {
            "grpcRetryEvents": [ "string" ],
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "http2Route": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
```

```
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ],
            "scheme": "string"
         },
         "retryPolicy": {
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "httpRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
```

```
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ],
            "scheme": "string"
         },
         "retryPolicy": {
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
```

```
      "priority": number,
      "tcpRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "port": number
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            }
         }
      }
   },
   "status": {
      "status": "string"
   },
   "virtualRouterName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the route resides in.

Type: String

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

metadata

The associated metadata for the route.

Type: ResourceMetadata object

routeName

The name of the route.

Type: String

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

spec

The specifications of the route.

Type: RouteSpec object

status

The status of the route.

Type: RouteStatus object

virtualRouterName

The virtual router that the route is associated with.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ResourceInUseException

You can't delete the specified resource because it's in use or required by another resource.

HTTP Status Code: 409

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example deletes a route named `colorgateway-route` for the `colorgateway-vr` virtual router in the `ecs-mesh` service mesh.

Sample Request

```
DELETE /v20190125/meshes/ecs-mesh/virtualRouter/colorgateway-vr/routes/colorgateway-
route HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T203328Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 59fda333-ead1-4fbd-ba64-b7150e52d29a
content-type: application/json
content-length: 512
date: Wed, 27 Feb 2019 20:33:28 GMT
x-envoy-upstream-service-time: 95
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorgateway-vr/route/colorgateway-route",
  "createdAt": 1.551295495004E9,
  "lastUpdatedAt": 1.551299608556E9,
  "uid": "3251bf37-2d01-4b79-be96-d0c36c61511f",
  "version": 2
 },
 "routeName": "colorgateway-route",
 "spec": {
  "httpRoute": {
   "action": {
    "weightedTargets": [{
     "virtualNode": "colorgateway-vn",
     "weight": 100
    }]
   },
   "match": {
    "prefix": "/"
   }
```

```
   },
   "tcpRoute": null
  },
  "status": {
   "status": "DELETED"
  },
  "virtualRouterName": "colorgateway-vr"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteVirtualGateway

Deletes an existing virtual gateway. You cannot delete a virtual gateway if any gateway routes are associated to it.

Request Syntax

```
DELETE /v20190125/meshes/meshName/virtualGateways/virtualGatewayName?
meshOwner=meshOwner HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to delete the virtual gateway from.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualGatewayName

The name of the virtual gateway to delete.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
               "path": "string",
               "port": number,
               "protocol": "string",
```

```
                "timeoutMillis": number,
                "unhealthyThreshold": number
             },
             "portMapping": {
                "port": number,
                "protocol": "string"
             },
             "tls": {
                "certificate": { ... },
                "mode": "string",
                "validation": {
                   "subjectAlternativeNames": {
                      "match": {
                         "exact": [ "string" ]
                      }
                   },
                   "trust": { ... }
                }
             }
          }
       ],
       "logging": {
          "accessLog": { ... }
       }
    },
    "status": {
       "status": "string"
    },
    "virtualGatewayName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual gateway resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the virtual gateway.

Type: VirtualGatewaySpec object

status

The current status of the virtual gateway.

Type: VirtualGatewayStatus object

virtualGatewayName

The name of the virtual gateway.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ResourceInUseException

You can't delete the specified resource because it's in use or required by another resource.

HTTP Status Code: 409

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example deletes a virtual gateway named `myVirtualGateway` from the `apps` service mesh.

Sample Request

```
DELETE /v20190125/meshes/apps/virtualGateways/myVirtualGateway HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200706T150515Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 884f2830-6964-4d0e-9788-144631c36bb9
content-type: application/json
content-length: 514
date: Mon, 06 Jul 2020 15:05:15 GMT
x-envoy-upstream-service-time: 26
server: envoy
Connection: keep-alive

{
 "meshName": "apps",
 "metadata": {
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway",
  "createdAt": 1.594046778215E9,
  "lastUpdatedAt": 1.594047916142E9,
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "uid": "ff111ff2-33ff-4ff4-ffff-111f111f111f",
  "version": 2
 },
 "spec": {
  "backendDefaults": null,
  "listeners": [{
   "healthCheck": null,
   "portMapping": {
    "port": 80,
    "protocol": "http2"
   },
   "tls": null
  }],
  "logging": null
```

```
 },
 "status": {
  "status": "DELETED"
 },
 "virtualGatewayName": "myVirtualGateway"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteVirtualNode

Deletes an existing virtual node.

You must delete any virtual services that list a virtual node as a service provider before you can delete the virtual node itself.

Request Syntax

```
DELETE /v20190125/meshes/meshName/virtualNodes/virtualNodeName?meshOwner=meshOwner
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to delete the virtual node in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualNodeName

The name of the virtual node to delete.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "backends": [
         { ... }
      ],
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
```

```
            "path": "string",
            "port": number,
            "protocol": "string",
            "timeoutMillis": number,
            "unhealthyThreshold": number
         },
         "outlierDetection": {
            "baseEjectionDuration": {
               "unit": "string",
               "value": number
            },
            "interval": {
               "unit": "string",
               "value": number
            },
            "maxEjectionPercent": number,
            "maxServerErrors": number
         },
         "portMapping": {
            "port": number,
            "protocol": "string"
         },
         "timeout": { ... },
         "tls": {
            "certificate": { ... },
            "mode": "string",
            "validation": {
               "subjectAlternativeNames": {
                  "match": {
                     "exact": [ "string" ]
                  }
               },
               "trust": { ... }
            }
         }
      }
   ],
   "logging": {
      "accessLog": { ... }
   },
   "serviceDiscovery": { ... }
},
"status": {
   "status": "string"
```

```
    },
    "virtualNodeName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual node resides in.

Type: String

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

metadata

The associated metadata for the virtual node.

Type: ResourceMetadata object

spec

The specifications of the virtual node.

Type: VirtualNodeSpec object

status

The current status for the virtual node.

Type: VirtualNodeStatus object

virtualNodeName

The name of the virtual node.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ResourceInUseException

You can't delete the specified resource because it's in use or required by another resource.

HTTP Status Code: 409

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example deletes a virtual node named `colorgateway-vn` in the `ecs-mesh` service mesh.

Sample Request

```
DELETE /v20190125/meshes/ecs-mesh/virtualNodes/colorgateway-vn HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T231337Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 84875cd2-d36c-445a-b1a7-6a26ec798e62
content-type: application/json
content-length: 688
date: Wed, 27 Feb 2019 23:13:37 GMT
x-envoy-upstream-service-time: 25
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/
colorgateway-vn",
  "createdAt": 1.551307227168E9,
```

```
  "lastUpdatedAt": 1.551309217745E9,
  "uid": "4cd6303b-491e-4c2b-9108-1a4690ec9f36",
  "version": 2
 },
 "spec": {
  "backends": [{
   "virtualService": {
    "virtualServiceName": "tcpecho.default.svc.cluster.local"
   }
  }, {
   "virtualService": {
    "virtualServiceName": "colorteller.default.svc.cluster.local"
   }
  }],
  "listeners": [{
   "healthCheck": null,
   "portMapping": {
    "port": 9080,
    "protocol": "http"
   }
  }],
  "logging": null,
  "serviceDiscovery": {
   "dns": {
    "hostname": "colorgateway.default.svc.cluster.local"
   }
  }
 },
 "status": {
  "status": "DELETED"
 },
 "virtualNodeName": "colorgateway-vn"
}
```


See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteVirtualRouter

Deletes an existing virtual router.

You must delete any routes associated with the virtual router before you can delete the router itself.

Request Syntax

```
DELETE /v20190125/meshes/meshName/virtualRouters/virtualRouterName?meshOwner=meshOwner
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to delete the virtual router in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualRouterName

The name of the virtual router to delete.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "listeners": [
         {
            "portMapping": {
               "port": number,
               "protocol": "string"
            }
         }
      ]
   },
   "status": {
      "status": "string"
   },
   "virtualRouterName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual router resides in.

Type: String

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

metadata

The associated metadata for the virtual router.

Type: ResourceMetadata object

spec

The specifications of the virtual router.

Type: VirtualRouterSpec object

status

The current status of the virtual router.

Type: VirtualRouterStatus object

virtualRouterName

The name of the virtual router.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ResourceInUseException

You can't delete the specified resource because it's in use or required by another resource.

HTTP Status Code: 409

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example deletes a virtual router named `colorgateway-vr` in the `ecs-mesh` service mesh.

Sample Request

```
DELETE /v20190125/meshes/ecs-mesh/virtualRouters/colorgateway-vr HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T231334Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 77a5e726-69b4-4bd4-9016-99f76f4d1daa
content-type: application/json
content-length: 340
date: Wed, 27 Feb 2019 23:13:34 GMT
x-envoy-upstream-service-time: 23
server: envoy
Connection: keep-alive

{
  "meshName": "ecs-mesh",
  "metadata": {
    "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorgateway-vr",
    "createdAt": 1551307245.617,
    "lastUpdatedAt": 1551309214.686,
    "uid": "601f33c5-8938-4c07-a28a-3d3c91871ee4",
    "version": 2
  },
  "spec": {
    "listeners": [
      {
        "portMapping": {
          "port": 9080,
          "protocol": "http"
        }
      }
    ]
  },
  "status": {
    "status": "DELETED"
  },
```

```
  "virtualRouterName": "colorgateway-vr"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteVirtualService

Deletes an existing virtual service.

Request Syntax

```
DELETE /v20190125/meshes/meshName/virtualServices/virtualServiceName?
meshOwner=meshOwner HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to delete the virtual service in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualServiceName

The name of the virtual service to delete.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "provider": { ... }
   },
   "status": {
      "status": "string"
   },
   "virtualServiceName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual service resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the virtual service.

Type: VirtualServiceSpec object

status

The current status of the virtual service.

Type: VirtualServiceStatus object

virtualServiceName

The name of the virtual service.

Type: String

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ResourceInUseException

You can't delete the specified resource because it's in use or required by another resource.

HTTP Status Code: 409

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example deletes a virtual service named `colorgateway.default.svc.cluster.local` in the `ecs-mesh` service mesh.

Sample Request

```
DELETE /v20190125/meshes/ecs-mesh/virtualServices/
colorgateway.default.svc.cluster.local HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T231318Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 8a5c10db-aebc-4341-8b15-4003e87150e8
content-type: application/json
```

```
content-length: 456
date: Wed, 27 Feb 2019 23:13:18 GMT
x-envoy-upstream-service-time: 78
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualService/
colorgateway.default.svc.cluster.local",
  "createdAt": 1.551307250696E9,
  "lastUpdatedAt": 1.55130919872E9,
  "uid": "90849766-3af0-40bc-9a83-a7b932d64fb6",
  "version": 2
 },
 "spec": {
  "provider": {
   "virtualNode": {
    "virtualNodeName": "colorgateway-vn"
   },
   "virtualRouter": null
  }
 },
 "status": {
  "status": "DELETED"
 },
 "virtualServiceName": "colorgateway.default.svc.cluster.local"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeGatewayRoute

Describes an existing gateway route.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualGateway/virtualGatewayName/
gatewayRoutes/gatewayRouteName?meshOwner=meshOwner HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

gatewayRouteName

The name of the gateway route to describe.

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

Required: Yes

meshName

The name of the service mesh that the gateway route resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualGatewayName

The name of the virtual gateway that the gateway route is associated with.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "gatewayRouteName": "string",
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "grpcRoute": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
               }
            }
         },
         "match": {
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "metadata": [
               {
```

```
                "invert": boolean,
                "match": { ... },
                "name": "string"
             }
          ],
          "port": number,
          "serviceName": "string"
       }
    },
    "http2Route": {
       "action": {
          "rewrite": {
             "hostname": {
                "defaultTargetHostname": "string"
             },
             "path": {
                "exact": "string"
             },
             "prefix": {
                "defaultPrefix": "string",
                "value": "string"
             }
          },
          "target": {
             "port": number,
             "virtualService": {
                "virtualServiceName": "string"
             }
          }
       },
       "match": {
          "headers": [
             {
                "invert": boolean,
                "match": { ... },
                "name": "string"
             }
          ],
          "hostname": {
             "exact": "string",
             "suffix": "string"
          },
          "method": "string",
          "path": {
```

```
            "exact": "string",
            "regex": "string"
         },
         "port": number,
         "prefix": "string",
         "queryParameters": [
            {
               "match": {
                  "exact": "string"
               },
               "name": "string"
            }
         ]
      }
   },
   "httpRoute": {
      "action": {
         "rewrite": {
            "hostname": {
               "defaultTargetHostname": "string"
            },
            "path": {
               "exact": "string"
            },
            "prefix": {
               "defaultPrefix": "string",
               "value": "string"
            }
         },
         "target": {
            "port": number,
            "virtualService": {
               "virtualServiceName": "string"
            }
         }
      },
      "match": {
         "headers": [
            {
               "invert": boolean,
               "match": { ... },
               "name": "string"
            }
         ],
```

```
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ]
         }
      },
      "priority": number
   },
   "status": {
      "status": "string"
   },
   "virtualGatewayName": "string"
}
```

Response Elements

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

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

gatewayRouteName

The name of the gateway route.

Type: String

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

meshName

The name of the service mesh that the resource resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the gateway route.

Type: GatewayRouteSpec object

status

The status of the gateway route.

Type: GatewayRouteStatus object

virtualGatewayName

The virtual gateway that the gateway route is associated with.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example describes a gateway route named `myGatewayRoute` that is associated with a virtual gateway named `myVirtualGateway` in the `apps` service mesh.

Sample Request

```
GET /v20190125/meshes/apps/virtualGateway/myVirtualGateway/gatewayRoutes/myGatewayRoute
 HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200608T194902Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 6d60d9e4-294d-40ca-a829-37f9ebc058e8
content-type: application/json
content-length: 617
date: Mon, 08 Jun 2020 20:26:03 GMT
x-envoy-upstream-service-time: 31
server: envoy
Connection: keep-alive

{
 "gatewayRouteName": "myGatewayRoute",
 "meshName": "myApps",
 "metadata": {
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway/gatewayRoute/myGatewayRoute",
  "createdAt": 1.591645848403E9,
  "lastUpdatedAt": 1.591645848403E9,
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "uid": "ff111ff2-33ff-4ff4-ffff-111f111f111f",
  "version": 1
 },
 "spec": {
  "grpcRoute": null,
  "http2Route": {
   "action": {
    "target": {
     "virtualService": {
      "virtualServiceName": "myservicea.svc.cluster.local"
     }
    }
```

```
    },
    "match": {
     "prefix": "/"
    }
   },
   "httpRoute": null
  },
  "status": {
   "status": "ACTIVE"
  },
  "virtualGatewayName": "myVirtualGateway"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeMesh

Describes an existing service mesh.

Request Syntax

```
GET /v20190125/meshes/meshName?meshOwner=meshOwner HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to describe.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
```

```
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "egressFilter": {
         "type": "string"
      },
      "serviceDiscovery": {
         "ipPreference": "string"
      }
   },
   "status": {
      "status": "string"
   }
}
```

Response Elements

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

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

meshName

The name of the service mesh.

Type: String

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

metadata

The associated metadata for the service mesh.

Type: ResourceMetadata object

spec

The associated specification for the service mesh.

Type: MeshSpec object

status

The status of the service mesh.

Type: MeshStatus object

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes a service mesh named `ecs-mesh`.

Sample Request

```
GET /v20190125/meshes HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T235715Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 572dcc56-18d6-4f86-b596-8e182f81afce
content-type: application/json
content-length: 114
date: Wed, 27 Feb 2019 23:57:15 GMT
x-envoy-upstream-service-time: 67
server: envoy
Connection: keep-alive

{
 "meshes": [{
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh",
  "meshName": "ecs-mesh"
 }],
```

```
 "nextToken": null
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeRoute

Describes an existing route.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualRouter/virtualRouterName/routes/routeName?
meshOwner=meshOwner HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the route resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

routeName

The name of the route to describe.

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

Required: Yes

virtualRouterName

The name of the virtual router that the route is associated with.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "routeName": "string",
   "spec": {
      "grpcRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "methodName": "string",
            "port": number,
            "serviceName": "string"
```

```
         },
         "retryPolicy": {
            "grpcRetryEvents": [ "string" ],
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "http2Route": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
```

```
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ],
            "scheme": "string"
         },
         "retryPolicy": {
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "httpRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
```

```
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ],
            "scheme": "string"
         },
         "retryPolicy": {
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
```

```
      "priority": number,
      "tcpRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "port": number
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            }
         }
      }
   },
   "status": {
      "status": "string"
   },
   "virtualRouterName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the route resides in.

Type: String

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

metadata

The associated metadata for the route.

Type: ResourceMetadata object

routeName

The name of the route.

Type: String

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

spec

The specifications of the route.

Type: RouteSpec object

status

The status of the route.

Type: RouteStatus object

virtualRouterName

The virtual router that the route is associated with.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes a route named `colorteller-route` for the `colorteller-vr` virtual router in the `ecs-mesh` service mesh.

Sample Request

```
GET /v20190125/meshes/ecs-mesh/virtualRouter/colorteller-vr/routes/colorteller-route
 HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T000038Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: f28c32fe-2d36-4fcf-a64e-01b45a4b034c
content-type: application/json
content-length: 504
date: Thu, 28 Feb 2019 00:00:38 GMT
x-envoy-upstream-service-time: 46
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorteller-vr/route/colorteller-route",
  "createdAt": 1.551311817276E9,
  "lastUpdatedAt": 1.551311817276E9,
  "uid": "1cf3109a-0d7f-438c-b17d-a3785f14ff7b",
  "version": 1
 },
 "routeName": "colorteller-route",
 "spec": {
  "httpRoute": {
   "action": {
    "weightedTargets": [{
     "virtualNode": "colorteller-vn",
     "weight": 1
    }]
   },
   "match": {
    "prefix": "/"
   }
```

```
   },
   "tcpRoute": null
  },
  "status": {
   "status": "ACTIVE"
  },
  "virtualRouterName": "colorteller-vr"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeVirtualGateway

Describes an existing virtual gateway.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualGateways/virtualGatewayName?meshOwner=meshOwner
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the gateway route resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualGatewayName

The name of the virtual gateway to describe.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
               "path": "string",
               "port": number,
               "protocol": "string",
```

```
                "timeoutMillis": number,
                "unhealthyThreshold": number
             },
             "portMapping": {
                "port": number,
                "protocol": "string"
             },
             "tls": {
                "certificate": { ... },
                "mode": "string",
                "validation": {
                   "subjectAlternativeNames": {
                      "match": {
                         "exact": [ "string" ]
                      }
                   },
                   "trust": { ... }
                }
             }
          }
       ],
       "logging": {
          "accessLog": { ... }
       }
    },
    "status": {
       "status": "string"
    },
    "virtualGatewayName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual gateway resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the virtual gateway.

Type: VirtualGatewaySpec object

status

The current status of the virtual gateway.

Type: VirtualGatewayStatus object

virtualGatewayName

The name of the virtual gateway.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example describes a virtual gateway named `myVirtualGateway` that is in the `apps` service mesh.

Sample Request

```
GET /v20190125/meshes/apps/virtualGateways/myVirtualGateway HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
```

```
X-Amz-Date: 20200706T145910Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 52e5ee7c-7434-4ca0-885e-5c9d8a7bbaf8
content-type: application/json
content-length: 513
date: Mon, 06 Jul 2020 14:59:10 GMT
x-envoy-upstream-service-time: 19
server: envoy
Connection: keep-alive

{
 "meshName": "apps",
 "metadata": {
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway",
  "createdAt": 1.594046778215E9,
  "lastUpdatedAt": 1.594046778215E9,
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "uid": "ff111ff2-33ff-4ff4-ffff-111f111f111f",
  "version": 1
 },
 "spec": {
  "backendDefaults": null,
  "listeners": [{
   "healthCheck": null,
   "portMapping": {
    "port": 80,
    "protocol": "http2"
   },
   "tls": null
  }],
  "logging": null
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualGatewayName": "myVirtualGateway"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeVirtualNode

Describes an existing virtual node.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualNodes/virtualNodeName?meshOwner=meshOwner
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the virtual node resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualNodeName

The name of the virtual node to describe.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "backends": [
         { ... }
      ],
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
```

```
            "path": "string",
            "port": number,
            "protocol": "string",
            "timeoutMillis": number,
            "unhealthyThreshold": number
         },
         "outlierDetection": {
            "baseEjectionDuration": {
               "unit": "string",
               "value": number
            },
            "interval": {
               "unit": "string",
               "value": number
            },
            "maxEjectionPercent": number,
            "maxServerErrors": number
         },
         "portMapping": {
            "port": number,
            "protocol": "string"
         },
         "timeout": { ... },
         "tls": {
            "certificate": { ... },
            "mode": "string",
            "validation": {
               "subjectAlternativeNames": {
                  "match": {
                     "exact": [ "string" ]
                  }
               },
               "trust": { ... }
            }
         }
      }
   ],
   "logging": {
      "accessLog": { ... }
   },
   "serviceDiscovery": { ... }
},
"status": {
   "status": "string"
```

```
    },
    "virtualNodeName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual node resides in.

Type: String

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

metadata

The associated metadata for the virtual node.

Type: ResourceMetadata object

spec

The specifications of the virtual node.

Type: VirtualNodeSpec object

status

The current status for the virtual node.

Type: VirtualNodeStatus object

virtualNodeName

The name of the virtual node.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes a virtual node named `colorteller-vn` in the `ecs-mesh` service mesh.

Sample Request

```
GET /v20190125/meshes/ecs-mesh/virtualNodes/colorteller-vn HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T000300Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 083f9376-9799-4142-978b-42f5966192b8
content-type: application/json
content-length: 654
date: Thu, 28 Feb 2019 00:03:00 GMT
x-envoy-upstream-service-time: 60
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/colorteller-
vn",
  "createdAt": 1.551311799179E9,
  "lastUpdatedAt": 1.551311799179E9,
  "uid": "0999e53a-8e0e-4c4c-8764-ae8ebecc296d",
  "version": 1
 },
 "spec": {
  "backends": [],
```

```
  "listeners": [{
   "healthCheck": {
    "healthyThreshold": 2,
    "intervalMillis": 5000,
    "path": "/ping",
    "port": 9080,
    "protocol": "http",
    "timeoutMillis": 2000,
    "unhealthyThreshold": 2
   },
   "portMapping": {
    "port": 9080,
    "protocol": "http"
   }
  }],
  "logging": null,
  "serviceDiscovery": {
   "dns": {
    "hostname": "colorteller.default.svc.cluster.local"
   }
  }
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualNodeName": "colorteller-vn"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeVirtualRouter

Describes an existing virtual router.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualRouters/virtualRouterName?meshOwner=meshOwner
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the virtual router resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualRouterName

The name of the virtual router to describe.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "listeners": [
         {
            "portMapping": {
               "port": number,
               "protocol": "string"
            }
         }
      ]
   },
   "status": {
      "status": "string"
   },
   "virtualRouterName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual router resides in.

Type: String

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

metadata

The associated metadata for the virtual router.

Type: ResourceMetadata object

spec

The specifications of the virtual router.

Type: VirtualRouterSpec object

status

The current status of the virtual router.

Type: VirtualRouterStatus object

virtualRouterName

The name of the virtual router.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes a virtual router named `colorteller-vr` in the `ecs-mesh` service mesh.

Sample Request

```
GET /v20190125/meshes/ecs-mesh/virtualRouters/colorteller-vr HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T000509Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: e7e0fbe8-2015-429c-bbb5-c736c09b2500
content-type: application/json
content-length: 337
date: Thu, 28 Feb 2019 00:05:10 GMT
x-envoy-upstream-service-time: 68
server: envoy
Connection: keep-alive

{
  "meshName": "ecs-mesh",
  "metadata": {
    "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorteller-vr",
    "createdAt": 1551311805.476,
    "lastUpdatedAt": 1551311805.476,
    "uid": "79628d34-8c17-42ba-83a5-8a42fd17ec5a",
    "version": 1
  },
  "spec": {
    "listeners": [
      {
        "portMapping": {
          "port": 9080,
          "protocol": "http"
        }
      }
    ]
  },
  "status": {
    "status": "ACTIVE"
  },
  "virtualRouterName": "colorteller-vr"
}
```

See Also

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

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeVirtualService

Describes an existing virtual service.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualServices/virtualServiceName?meshOwner=meshOwner
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the virtual service resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualServiceName

The name of the virtual service to describe.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "provider": { ... }
   },
   "status": {
      "status": "string"
   },
   "virtualServiceName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual service resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the virtual service.

Type: VirtualServiceSpec object

status

The current status of the virtual service.

Type: VirtualServiceStatus object

virtualServiceName

The name of the virtual service.

Type: String

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes a virtual service named `colorgateway.default.svc.cluster.local` in the `ecs-mesh` service mesh.

Sample Request

```
GET /v20190125/meshes/ecs-mesh/virtualServices/colorgateway.default.svc.cluster.local
 HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T000705Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 3b822acc-bd78-4ea6-9831-8cd989dd37ec
content-type: application/json
content-length: 456
date: Thu, 28 Feb 2019 00:07:04 GMT
```

```
x-envoy-upstream-service-time: 30
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualService/
colorgateway.default.svc.cluster.local",
  "createdAt": 1.551311807444E9,
  "lastUpdatedAt": 1.551311807444E9,
  "uid": "dd06064b-e542-40a9-bbc7-e381a47ea0e0",
  "version": 1
 },
 "spec": {
  "provider": {
   "virtualNode": {
    "virtualNodeName": "colorgateway-vn"
   },
   "virtualRouter": null
  }
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualServiceName": "colorgateway.default.svc.cluster.local"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListGatewayRoutes

Returns a list of existing gateway routes that are associated to a virtual gateway.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualGateway/virtualGatewayName/gatewayRoutes?
limit=limit&meshOwner=meshOwner&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

limit

The maximum number of results returned by `ListGatewayRoutes` in paginated output. When you use this parameter, `ListGatewayRoutes` returns only `limit` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListGatewayRoutes` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListGatewayRoutes` returns up to 100 results and a `nextToken` value if applicable.

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

meshName

The name of the service mesh to list gateway routes in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

nextToken

The `nextToken` value returned from a previous paginated `ListGatewayRoutes` request where `limit` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

virtualGatewayName

The name of the virtual gateway to list gateway routes in.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "gatewayRoutes": [
      {
         "arn": "string",
         "createdAt": number,
         "gatewayRouteName": "string",
         "lastUpdatedAt": number,
         "meshName": "string",
         "meshOwner": "string",
         "resourceOwner": "string",
         "version": number,
         "virtualGatewayName": "string"
      }
   ],
   "nextToken": "string"
}
```

Response Elements

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

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

gatewayRoutes

The list of existing gateway routes for the specified service mesh and virtual gateway.

Type: Array of GatewayRouteRef objects

nextToken

The `nextToken` value to include in a future `ListGatewayRoutes` request. When the results of a `ListGatewayRoutes` request exceed `limit`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example lists gateway routes that are associated with the virtual gateway named `myVirtualGateway` in the `apps` service mesh.

Sample Request

```
GET /v20190125/meshes/apps/virtualGateway/myVirtualGateway/gatewayRoutes HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200608T190053Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
```

```
x-amzn-requestid: b82c3691-a7a9-4d99-acf6-0f9a81db9beb
content-type: application/json
content-length: 393
date: Mon, 08 Jun 2020 20:52:25 GMT
x-envoy-upstream-service-time: 26
server: envoy
Connection: keep-alive

{
 "gatewayRoutes": [{
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway/gatewayRoute/myGatewayRoute",
  "createdAt": 1.591642091122E9,
  "gatewayRouteName": "myGatewayRoute",
  "lastUpdatedAt": 1.591642091122E9,
  "meshName": "myApps",
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "version": 1,
  "virtualGatewayName": "myVirtualGateway"
 }],
 "nextToken": null
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListMeshes

Returns a list of existing service meshes.

Request Syntax

```
GET /v20190125/meshes?limit=limit&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

limit

The maximum number of results returned by `ListMeshes` in paginated output. When you use this parameter, `ListMeshes` returns only `limit` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListMeshes` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListMeshes` returns up to 100 results and a `nextToken` value if applicable.

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

nextToken

The `nextToken` value returned from a previous paginated `ListMeshes` request where `limit` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

> **Note**
>
> This token should be treated as an opaque identifier that is used only to retrieve the next items in a list and not for other programmatic purposes.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshes": [
      {
         "arn": "string",
         "createdAt": number,
         "lastUpdatedAt": number,
         "meshName": "string",
         "meshOwner": "string",
         "resourceOwner": "string",
         "version": number
      }
   ],
   "nextToken": "string"
}
```

Response Elements

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

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

meshes

The list of existing service meshes.

Type: Array of MeshRef objects

nextToken

The `nextToken` value to include in a future `ListMeshes` request. When the results of a `ListMeshes` request exceed `limit`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example lists the service meshes for an account in the `us-east-1` Region.

Sample Request

```
GET /v20190125/meshes HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T235715Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 572dcc56-18d6-4f86-b596-8e182f81afce
content-type: application/json
content-length: 114
date: Wed, 27 Feb 2019 23:57:15 GMT
x-envoy-upstream-service-time: 67
server: envoy
Connection: keep-alive

{
  "meshes": [
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh",
      "meshName": "ecs-mesh"
    }
  ],
  "nextToken": null
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRoutes

Returns a list of existing routes in a service mesh.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualRouter/virtualRouterName/routes?
limit=limit&meshOwner=meshOwner&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

limit

The maximum number of results returned by `ListRoutes` in paginated output. When you use this parameter, `ListRoutes` returns only `limit` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListRoutes` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListRoutes` returns up to 100 results and a `nextToken` value if applicable.

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

meshName

The name of the service mesh to list routes in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

nextToken

The `nextToken` value returned from a previous paginated `ListRoutes` request where `limit` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

virtualRouterName

The name of the virtual router to list routes in.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "nextToken": "string",
   "routes": [
      {
         "arn": "string",
         "createdAt": number,
         "lastUpdatedAt": number,
         "meshName": "string",
         "meshOwner": "string",
         "resourceOwner": "string",
         "routeName": "string",
         "version": number,
         "virtualRouterName": "string"
      }
   ]
}
```

Response Elements

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

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

nextToken

The `nextToken` value to include in a future `ListRoutes` request. When the results of a `ListRoutes` request exceed `limit`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

routes

The list of existing routes for the specified service mesh and virtual router.

Type: Array of RouteRef objects

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example lists the routes that are associated with the `colorteller-vr` virtual router in the `ecs-mesh` service mesh.

Sample Request

```
GET /v20190125/meshes/ecs-mesh/virtualRouter/colorteller-vr/routes HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T235954Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
```

```
x-amzn-requestid: 5a783529-a278-44d2-b450-4e23898cb180
content-type: application/json
content-length: 236
date: Wed, 27 Feb 2019 23:59:54 GMT
x-envoy-upstream-service-time: 56
server: envoy
Connection: keep-alive

{
  "nextToken": null,
  "routes": [
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorteller-vr/route/colorteller-route",
      "meshName": "ecs-mesh",
      "routeName": "colorteller-route",
      "virtualRouterName": "colorteller-vr"
    }
  ]
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListTagsForResource

List the tags for an App Mesh resource.

Request Syntax

```
GET /v20190125/tags?limit=limit&nextToken=nextToken&resourceArn=resourceArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

limit

The maximum number of tag results returned by `ListTagsForResource` in paginated output. When this parameter is used, `ListTagsForResource` returns only `limit` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListTagsForResource` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListTagsForResource` returns up to 100 results and a `nextToken` value if applicable.

Valid Range: Minimum value of 1. Maximum value of 50.

nextToken

The `nextToken` value returned from a previous paginated `ListTagsForResource` request where `limit` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

resourceArn

The Amazon Resource Name (ARN) that identifies the resource to list the tags for.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "nextToken": "string",
   "tags": [
      {
         "key": "string",
         "value": "string"
      }
   ]
}
```

Response Elements

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

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

nextToken

The `nextToken` value to include in a future `ListTagsForResource` request. When the results of a `ListTagsForResource` request exceed `limit`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

tags

The tags for the resource.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListVirtualGateways

Returns a list of existing virtual gateways in a service mesh.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualGateways?
limit=limit&meshOwner=meshOwner&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

limit

The maximum number of results returned by `ListVirtualGateways` in paginated output. When you use this parameter, `ListVirtualGateways` returns only `limit` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListVirtualGateways` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListVirtualGateways` returns up to 100 results and a `nextToken` value if applicable.

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

meshName

The name of the service mesh to list virtual gateways in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

nextToken

The `nextToken` value returned from a previous paginated `ListVirtualGateways` request where `limit` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "nextToken": "string",
   "virtualGateways": [
      {
         "arn": "string",
         "createdAt": number,
         "lastUpdatedAt": number,
         "meshName": "string",
         "meshOwner": "string",
         "resourceOwner": "string",
         "version": number,
         "virtualGatewayName": "string"
      }
   ]
}
```

Response Elements

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

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

nextToken

The `nextToken` value to include in a future `ListVirtualGateways` request. When the results of a `ListVirtualGateways` request exceed `limit`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

virtualGateways

The list of existing virtual gateways for the specified service mesh.

Type: Array of VirtualGatewayRef objects

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example lists the virtual gateways that are in the apps service mesh.

Sample Request

```
GET /v20190125/meshes/apps/virtualGateways HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200608T185502Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 3add7f54-944b-464a-93ed-57589ed5158d
content-type: application/json
content-length: 331
date: Mon, 08 Jun 2020 20:53:50 GMT
x-envoy-upstream-service-time: 24
```

```
server: envoy
Connection: keep-alive

{
 "nextToken": null,
 "virtualGateways": [{
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway",
  "createdAt": 1.591630673505E9,
  "lastUpdatedAt": 1.591630673505E9,
  "meshName": "apps",
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "version": 1,
  "virtualGatewayName": "myVirtualGateway"
 }]
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListVirtualNodes

Returns a list of existing virtual nodes.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualNodes?
limit=limit&meshOwner=meshOwner&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

limit

The maximum number of results returned by `ListVirtualNodes` in paginated output. When you use this parameter, `ListVirtualNodes` returns only `limit` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListVirtualNodes` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListVirtualNodes` returns up to 100 results and a `nextToken` value if applicable.

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

meshName

The name of the service mesh to list virtual nodes in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

nextToken

The `nextToken` value returned from a previous paginated `ListVirtualNodes` request where `limit` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "nextToken": "string",
   "virtualNodes": [
      {
         "arn": "string",
         "createdAt": number,
         "lastUpdatedAt": number,
         "meshName": "string",
         "meshOwner": "string",
         "resourceOwner": "string",
         "version": number,
         "virtualNodeName": "string"
      }
   ]
}
```

Response Elements

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

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

nextToken

The `nextToken` value to include in a future `ListVirtualNodes` request. When the results of a `ListVirtualNodes` request exceed `limit`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

virtualNodes

The list of existing virtual nodes for the specified service mesh.

Type: Array of VirtualNodeRef objects

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example lists the virtual nodes that reside in the `ecs-mesh` service mesh.

Sample Request

```
GET /v20190125/meshes/ecs-mesh/virtualNodes HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T235730Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 8fbb6448-5519-4f45-97d1-ed4d3238aa69
content-type: application/json
content-length: 941
date: Wed, 27 Feb 2019 23:57:31 GMT
x-envoy-upstream-service-time: 108
server: envoy
```

```
Connection: keep-alive

{
  "nextToken": null,
  "virtualNodes": [
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/
colorteller-vn",
      "meshName": "ecs-mesh",
      "virtualNodeName": "colorteller-vn"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/tcpecho-
vn",
      "meshName": "ecs-mesh",
      "virtualNodeName": "tcpecho-vn"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/
colorteller-black-vn",
      "meshName": "ecs-mesh",
      "virtualNodeName": "colorteller-black-vn"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/
colorgateway-vn",
      "meshName": "ecs-mesh",
      "virtualNodeName": "colorgateway-vn"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/
colorteller-red-vn",
      "meshName": "ecs-mesh",
      "virtualNodeName": "colorteller-red-vn"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/
colorteller-blue-vn",
      "meshName": "ecs-mesh",
      "virtualNodeName": "colorteller-blue-vn"
    }
  ]
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListVirtualRouters

Returns a list of existing virtual routers in a service mesh.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualRouters?
limit=limit&meshOwner=meshOwner&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

limit

The maximum number of results returned by `ListVirtualRouters` in paginated output. When you use this parameter, `ListVirtualRouters` returns only `limit` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListVirtualRouters` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListVirtualRouters` returns up to 100 results and a `nextToken` value if applicable.

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

meshName

The name of the service mesh to list virtual routers in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

nextToken

The `nextToken` value returned from a previous paginated `ListVirtualRouters` request where `limit` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "nextToken": "string",
   "virtualRouters": [
      {
         "arn": "string",
         "createdAt": number,
         "lastUpdatedAt": number,
         "meshName": "string",
         "meshOwner": "string",
         "resourceOwner": "string",
         "version": number,
         "virtualRouterName": "string"
      }
   ]
}
```

Response Elements

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

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

nextToken

The `nextToken` value to include in a future `ListVirtualRouters` request. When the results of a `ListVirtualRouters` request exceed `limit`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

virtualRouters

The list of existing virtual routers for the specified service mesh.

Type: Array of VirtualRouterRef objects

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example lists the virtual routers that reside in the `ecs-mesh` service mesh.

Sample Request

```
GET /v20190125/meshes/ecs-mesh/virtualRouters HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T235738Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: ec2895b6-ffaf-4d0a-b1dd-830901321588
content-type: application/json
content-length: 341
date: Wed, 27 Feb 2019 23:57:38 GMT
x-envoy-upstream-service-time: 43
```

```
server: envoy
Connection: keep-alive

{
  "nextToken": null,
  "virtualRouters": [
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorteller-vr",
      "meshName": "ecs-mesh",
      "virtualRouterName": "colorteller-vr"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorgateway-vr",
      "meshName": "ecs-mesh",
      "virtualRouterName": "colorgateway-vr"
    }
  ]
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListVirtualServices

Returns a list of existing virtual services in a service mesh.

Request Syntax

```
GET /v20190125/meshes/meshName/virtualServices?
limit=limit&meshOwner=meshOwner&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

limit

The maximum number of results returned by `ListVirtualServices` in paginated output. When you use this parameter, `ListVirtualServices` returns only `limit` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListVirtualServices` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListVirtualServices` returns up to 100 results and a `nextToken` value if applicable.

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

meshName

The name of the service mesh to list virtual services in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

nextToken

The `nextToken` value returned from a previous paginated `ListVirtualServices` request where `limit` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "nextToken": "string",
   "virtualServices": [
      {
         "arn": "string",
         "createdAt": number,
         "lastUpdatedAt": number,
         "meshName": "string",
         "meshOwner": "string",
         "resourceOwner": "string",
         "version": number,
         "virtualServiceName": "string"
      }
   ]
}
```

Response Elements

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

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

nextToken

The `nextToken` value to include in a future `ListVirtualServices` request. When the results of a `ListVirtualServices` request exceed `limit`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

virtualServices

The list of existing virtual services for the specified service mesh.

Type: Array of VirtualServiceRef objects

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example lists the virtual services in the `ecs-mesh` service mesh.

Sample Request

```
GET /v20190125/meshes/ecs-mesh/virtualServices HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190227T235746Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 1e2ccc92-46aa-4541-ae10-9790266e7436
content-type: application/json
content-length: 629
date: Wed, 27 Feb 2019 23:57:46 GMT
x-envoy-upstream-service-time: 9
```

```
server: envoy
Connection: keep-alive

{
  "nextToken": null,
  "virtualServices": [
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualService/
tcpecho.default.svc.cluster.local",
      "meshName": "ecs-mesh",
      "virtualServiceName": "tcpecho.default.svc.cluster.local"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualService/
colorteller.default.svc.cluster.local",
      "meshName": "ecs-mesh",
      "virtualServiceName": "colorteller.default.svc.cluster.local"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualService/
colorgateway.default.svc.cluster.local",
      "meshName": "ecs-mesh",
      "virtualServiceName": "colorgateway.default.svc.cluster.local"
    }
  ]
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

TagResource

Associates the specified tags to a resource with the specified `resourceArn`. If existing tags on a resource aren't specified in the request parameters, they aren't changed. When a resource is deleted, the tags associated with that resource are also deleted.

Request Syntax

```
PUT /v20190125/tag?resourceArn=resourceArn HTTP/1.1
Content-type: application/json

{
   "tags": [
      {
         "key": "string",
         "value": "string"
      }
   ]
}
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The Amazon Resource Name (ARN) of the resource to add tags to.

Required: Yes

Request Body

The request accepts the following data in JSON format.

tags

The tags to add to the resource. A tag is an array of key-value pairs. Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Type: Array of TagRef objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

TooManyTagsException

The request exceeds the maximum allowed number of tags allowed per resource. The current limit is 50 user tags per resource. You must reduce the number of tags in the request. None of the tags in this request were applied.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UntagResource

Deletes specified tags from a resource.

Request Syntax

```
PUT /v20190125/untag?resourceArn=resourceArn HTTP/1.1
Content-type: application/json

{
   "tagKeys": [ "string" ]
}
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The Amazon Resource Name (ARN) of the resource to delete tags from.

Required: Yes

Request Body

The request accepts the following data in JSON format.

tagKeys

The keys of the tags to be removed.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 50 items.

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

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateGatewayRoute

Updates an existing gateway route that is associated to a specified virtual gateway in a service mesh.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualGateway/virtualGatewayName/
gatewayRoutes/gatewayRouteName?meshOwner=meshOwner HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "grpcRoute": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
               }
            }
         },
         "match": {
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "port": number,
            "serviceName": "string"
         }
```

```
      },
      "http2Route": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               },
               "path": {
                  "exact": "string"
               },
               "prefix": {
                  "defaultPrefix": "string",
                  "value": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
               }
            }
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
```

```
                    "exact": "string"
                },
                "name": "string"
            }
        ]
    }
},
"httpRoute": {
    "action": {
        "rewrite": {
            "hostname": {
                "defaultTargetHostname": "string"
            },
            "path": {
                "exact": "string"
            },
            "prefix": {
                "defaultPrefix": "string",
                "value": "string"
            }
        },
        "target": {
            "port": number,
            "virtualService": {
                "virtualServiceName": "string"
            }
        }
    },
    "match": {
        "headers": [
            {
                "invert": boolean,
                "match": { ... },
                "name": "string"
            }
        ],
        "hostname": {
            "exact": "string",
            "suffix": "string"
        },
        "method": "string",
        "path": {
            "exact": "string",
            "regex": "string"
```

```
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ]
         }
      },
      "priority": number
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

gatewayRouteName

The name of the gateway route to update.

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

Required: Yes

meshName

The name of the service mesh that the gateway route resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualGatewayName

The name of the virtual gateway that the gateway route is associated with.

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The new gateway route specification to apply. This overwrites the existing data.

Type: GatewayRouteSpec object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "gatewayRouteName": "string",
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
```

```
      "uid": "string",
      "version": number
   },
   "spec": {
      "grpcRoute": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
               }
            }
         },
         "match": {
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "port": number,
            "serviceName": "string"
         }
      },
      "http2Route": {
         "action": {
            "rewrite": {
               "hostname": {
                  "defaultTargetHostname": "string"
               },
               "path": {
                  "exact": "string"
               },
               "prefix": {
```

```
                  "defaultPrefix": "string",
                  "value": "string"
               }
            },
            "target": {
               "port": number,
               "virtualService": {
                  "virtualServiceName": "string"
               }
            }
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "hostname": {
               "exact": "string",
               "suffix": "string"
            },
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ]
         }
      },
      "httpRoute": {
         "action": {
            "rewrite": {
               "hostname": {
```

```
            "defaultTargetHostname": "string"
         },
         "path": {
            "exact": "string"
         },
         "prefix": {
            "defaultPrefix": "string",
            "value": "string"
         }
      },
      "target": {
         "port": number,
         "virtualService": {
            "virtualServiceName": "string"
         }
      }
   },
   "match": {
      "headers": [
         {
            "invert": boolean,
            "match": { ... },
            "name": "string"
         }
      ],
      "hostname": {
         "exact": "string",
         "suffix": "string"
      },
      "method": "string",
      "path": {
         "exact": "string",
         "regex": "string"
      },
      "port": number,
      "prefix": "string",
      "queryParameters": [
         {
            "match": {
               "exact": "string"
            },
            "name": "string"
         }
      ]
```

```
            }
         },
         "priority": number
      },
      "status": {
         "status": "string"
      },
      "virtualGatewayName": "string"
}
```

Response Elements

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

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

gatewayRouteName

The name of the gateway route.

Type: String

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

meshName

The name of the service mesh that the resource resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the gateway route.

Type: GatewayRouteSpec object

status

The status of the gateway route.

Type: GatewayRouteStatus object

virtualGatewayName

The virtual gateway that the gateway route is associated with.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example updates a gateway route named `myGatewayRoute` that is associated to the `myVirtualGateway` virtual gateway in the `apps` service mesh.

Sample Request

```
PUT /v20190125/meshes/apps/virtualGateway/myVirtualGateway/gatewayRoutes/myGatewayRoute
 HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200608T192800Z
Authorization: AUTHPARAMS
```

```
{
 "spec": {
  "http2Route": {
   "action": {
    "target": {
     "virtualService": {
      "virtualServiceName": "myserviceb.svc.cluster.local"
     }
    }
   },
   "match": {
    "prefix": "/"
   }
  }
 },
 "clientToken": "1aa1111a-1111-1111-111a-a1a1a1aa111a"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 6c253f78-e011-4533-a926-e75416f06641
content-type: application/json
content-length: 617
date: Mon, 08 Jun 2020 19:28:00 GMT
x-envoy-upstream-service-time: 76
server: envoy
Connection: keep-alive

{
 "gatewayRouteName": "myGatewayRoute",
 "meshName": "myApps",
 "metadata": {
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway/gatewayRoute/myGatewayRoute",
  "createdAt": 1.591642091122E9,
  "lastUpdatedAt": 1.591644481211E9,
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "uid": "ff111ff2-33ff-4ff4-ffff-111f111f111f",
  "version": 2
 },
 "spec": {
```

```
  "grpcRoute": null,
  "http2Route": {
   "action": {
    "target": {
     "virtualService": {
      "virtualServiceName": "myserviceb.svc.cluster.local"
     }
    }
   },
   "match": {
    "prefix": "/"
   }
  },
  "httpRoute": null
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualGatewayName": "myVirtualGateway"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateMesh

Updates an existing service mesh.

Request Syntax

```
PUT /v20190125/meshes/meshName HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "egressFilter": {
         "type": "string"
      },
      "serviceDiscovery": {
         "ipPreference": "string"
      }
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh to update.

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The service mesh specification to apply.

Type: MeshSpec object

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "egressFilter": {
         "type": "string"
      },
      "serviceDiscovery": {
         "ipPreference": "string"
      }
   },
   "status": {
      "status": "string"
   }
}
```

Response Elements

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

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

meshName

The name of the service mesh.

Type: String

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

metadata

The associated metadata for the service mesh.

Type: ResourceMetadata object

spec

The associated specification for the service mesh.

Type: MeshSpec object

status

The status of the service mesh.

Type: MeshStatus object

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRoute

Updates an existing route for a specified service mesh and virtual router.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualRouter/virtualRouterName/routes/routeName?
meshOwner=meshOwner HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "grpcRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "methodName": "string",
            "port": number,
            "serviceName": "string"
         },
         "retryPolicy": {
            "grpcRetryEvents": [ "string" ],
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
```

```
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "http2Route": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
```

```
            }
         ],
         "scheme": "string"
      },
      "retryPolicy": {
         "httpRetryEvents": [ "string" ],
         "maxRetries": number,
         "perRetryTimeout": {
            "unit": "string",
            "value": number
         },
         "tcpRetryEvents": [ "string" ]
      },
      "timeout": {
         "idle": {
            "unit": "string",
            "value": number
         },
         "perRequest": {
            "unit": "string",
            "value": number
         }
      }
   },
   "httpRoute": {
      "action": {
         "weightedTargets": [
            {
               "port": number,
               "virtualNode": "string",
               "weight": number
            }
         ]
      },
      "match": {
         "headers": [
            {
               "invert": boolean,
               "match": { ... },
               "name": "string"
            }
         ],
         "method": "string",
         "path": {
```

```
            "exact": "string",
            "regex": "string"
         },
         "port": number,
         "prefix": "string",
         "queryParameters": [
            {
               "match": {
                  "exact": "string"
               },
               "name": "string"
            }
         ],
         "scheme": "string"
      },
      "retryPolicy": {
         "httpRetryEvents": [ "string" ],
         "maxRetries": number,
         "perRetryTimeout": {
            "unit": "string",
            "value": number
         },
         "tcpRetryEvents": [ "string" ]
      },
      "timeout": {
         "idle": {
            "unit": "string",
            "value": number
         },
         "perRequest": {
            "unit": "string",
            "value": number
         }
      }
   },
   "priority": number,
   "tcpRoute": {
      "action": {
         "weightedTargets": [
            {
               "port": number,
               "virtualNode": "string",
               "weight": number
            }
```

```
            ]
         },
         "match": {
            "port": number
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            }
         }
      }
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the route resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

routeName

The name of the route to update.

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

Required: Yes

virtualRouterName

The name of the virtual router that the route is associated with.

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The new route specification to apply. This overwrites the existing data.

Type: RouteSpec object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "routeName": "string",
   "spec": {
```

```
      "grpcRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "metadata": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "methodName": "string",
            "port": number,
            "serviceName": "string"
         },
         "retryPolicy": {
            "grpcRetryEvents": [ "string" ],
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "http2Route": {
```

```
      "action": {
         "weightedTargets": [
            {
               "port": number,
               "virtualNode": "string",
               "weight": number
            }
         ]
      },
      "match": {
         "headers": [
            {
               "invert": boolean,
               "match": { ... },
               "name": "string"
            }
         ],
         "method": "string",
         "path": {
            "exact": "string",
            "regex": "string"
         },
         "port": number,
         "prefix": "string",
         "queryParameters": [
            {
               "match": {
                  "exact": "string"
               },
               "name": "string"
            }
         ],
         "scheme": "string"
      },
      "retryPolicy": {
         "httpRetryEvents": [ "string" ],
         "maxRetries": number,
         "perRetryTimeout": {
            "unit": "string",
            "value": number
         },
         "tcpRetryEvents": [ "string" ]
      },
      "timeout": {
```

```
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "httpRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "headers": [
               {
                  "invert": boolean,
                  "match": { ... },
                  "name": "string"
               }
            ],
            "method": "string",
            "path": {
               "exact": "string",
               "regex": "string"
            },
            "port": number,
            "prefix": "string",
            "queryParameters": [
               {
                  "match": {
                     "exact": "string"
                  },
                  "name": "string"
               }
            ],
            "scheme": "string"
```

```
         },
         "retryPolicy": {
            "httpRetryEvents": [ "string" ],
            "maxRetries": number,
            "perRetryTimeout": {
               "unit": "string",
               "value": number
            },
            "tcpRetryEvents": [ "string" ]
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            },
            "perRequest": {
               "unit": "string",
               "value": number
            }
         }
      },
      "priority": number,
      "tcpRoute": {
         "action": {
            "weightedTargets": [
               {
                  "port": number,
                  "virtualNode": "string",
                  "weight": number
               }
            ]
         },
         "match": {
            "port": number
         },
         "timeout": {
            "idle": {
               "unit": "string",
               "value": number
            }
         }
      }
   },
   "status": {
```

```
      "status": "string"
   },
   "virtualRouterName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the route resides in.

Type: String

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

metadata

The associated metadata for the route.

Type: ResourceMetadata object

routeName

The name of the route.

Type: String

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

spec

The specifications of the route.

Type: RouteSpec object

status

The status of the route.

Type: RouteStatus object

virtualRouterName

The virtual router that the route is associated with.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example updates a route for the virtual router named `colorteller-vr` in the `ecs-mesh` service mesh. The route directs traffic to two weighted targets: 80% to `colorteller-blue-vn` and 20% to `colorteller-red-vn`.

Sample Request

```
PUT /v20190125/meshes/ecs-mesh/virtualRouter/colorteller-vr/routes/colorteller-route
 HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T001532Z
Authorization: AUTHPARAMS
```

```
{
  "spec": {
    "httpRoute": {
      "action": {
        "weightedTargets": [
          {
            "virtualNode": "colorteller-blue-vn",
            "weight": 8
          },
          {
            "virtualNode": "colorteller-red-vn",
            "weight": 2
          }
        ]
      },
      "match": {
        "prefix": "/"
      }
    }
  },
  "clientToken": "e8bbfdff-5d3a-4e5c-9c32-571bad83b021"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 3375b176-77ba-4f76-be44-98ec4a839b8c
content-type: application/json
content-length: 557
date: Thu, 28 Feb 2019 00:15:32 GMT
x-envoy-upstream-service-time: 56
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorteller-vr/route/colorteller-route",
  "createdAt": 1.551311817276E9,
  "lastUpdatedAt": 1.551312932979E9,
  "uid": "1cf3109a-0d7f-438c-b17d-a3785f14ff7b",
```

```
  "version": 2
 },
 "routeName": "colorteller-route",
 "spec": {
  "httpRoute": {
   "action": {
    "weightedTargets": [{
     "virtualNode": "colorteller-blue-vn",
     "weight": 8
    }, {
     "virtualNode": "colorteller-red-vn",
     "weight": 2
    }]
   },
   "match": {
    "prefix": "/"
   }
  },
  "tcpRoute": null
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualRouterName": "colorteller-vr"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateVirtualGateway

Updates an existing virtual gateway in a specified service mesh.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualGateways/virtualGatewayName?meshOwner=meshOwner
 HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
               "path": "string",
               "port": number,
               "protocol": "string",
               "timeoutMillis": number,
               "unhealthyThreshold": number
            },
            "portMapping": {
```

```
                "port": number,
                "protocol": "string"
             },
             "tls": {
                "certificate": { ... },
                "mode": "string",
                "validation": {
                   "subjectAlternativeNames": {
                      "match": {
                         "exact": [ "string" ]
                      }
                   },
                   "trust": { ... }
                }
             }
          }
       ],
       "logging": {
          "accessLog": { ... }
       }
    }
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the virtual gateway resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualGatewayName

The name of the virtual gateway to update.

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The new virtual gateway specification to apply. This overwrites the existing data.

Type: VirtualGatewaySpec object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
```

```
      "version": number
   },
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
               "path": "string",
               "port": number,
               "protocol": "string",
               "timeoutMillis": number,
               "unhealthyThreshold": number
            },
            "portMapping": {
               "port": number,
               "protocol": "string"
            },
            "tls": {
               "certificate": { ... },
               "mode": "string",
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
```

```
                    },
                    "trust": { ... }
                }
            }
        }
    ],
    "logging": {
        "accessLog": { ... }
    }
  },
  "status": {
    "status": "string"
  },
  "virtualGatewayName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual gateway resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the virtual gateway.

Type: VirtualGatewaySpec object

status

The current status of the virtual gateway.

Type: VirtualGatewayStatus object

virtualGatewayName

The name of the virtual gateway.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example updates a virtual gateway named `myVirtualGateway` in the `apps` service mesh.

Sample Request

```
PUT /v20190125/meshes/apps/virtualGateways/myVirtualGateway HTTP/1.1
Host: appmesh.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.298 Python/3.6.0 Windows/10 botocore/1.13.34
X-Amz-Date: 20200706T151140Z
Authorization: AUTHPARAMS

{
```

```
 "spec": {
  "listeners": [{
   "portMapping": {
    "port": 8080,
    "protocol": "http2"
   }
  }]
 },
 "clientToken": "1aa1111a-1111-1111-111a-a1a1a1aa111a"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 009bf6b9-c86a-40ba-b6a4-45cb41badc77
content-type: application/json
content-length: 515
date: Mon, 06 Jul 2020 15:11:40 GMT
x-envoy-upstream-service-time: 34
server: envoy
Connection: keep-alive

{
 "meshName": "apps",
 "metadata": {
  "arn": "arn:aws:appmesh:us-west-2:123456789012:mesh/apps/virtualGateway/
myVirtualGateway",
  "createdAt": 1.594048239495E9,
  "lastUpdatedAt": 1.594048300694E9,
  "meshOwner": "123456789012",
  "resourceOwner": "123456789012",
  "uid": "ff111ff2-33ff-4ff4-ffff-111f111f111f",
  "version": 2
 },
 "spec": {
  "backendDefaults": null,
  "listeners": [{
   "healthCheck": null,
   "portMapping": {
    "port": 8080,
    "protocol": "http2"
   },
   "tls": null
```

```
   }],
   "logging": null
  },
  "status": {
   "status": "ACTIVE"
  },
  "virtualGatewayName": "myVirtualGateway"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateVirtualNode

Updates an existing virtual node in a specified service mesh.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualNodes/virtualNodeName?meshOwner=meshOwner
 HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "backends": [
         { ... }
      ],
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
               "path": "string",
               "port": number,
               "protocol": "string",
               "timeoutMillis": number,
```

```
                "unhealthyThreshold": number
            },
            "outlierDetection": {
               "baseEjectionDuration": {
                  "unit": "string",
                  "value": number
               },
               "interval": {
                  "unit": "string",
                  "value": number
               },
               "maxEjectionPercent": number,
               "maxServerErrors": number
            },
            "portMapping": {
               "port": number,
               "protocol": "string"
            },
            "timeout": { ... },
            "tls": {
               "certificate": { ... },
               "mode": "string",
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      ],
      "logging": {
         "accessLog": { ... }
      },
      "serviceDiscovery": { ... }
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the virtual node resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualNodeName

The name of the virtual node to update.

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The new virtual node specification to apply. This overwrites the existing data.

Type: VirtualNodeSpec object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "backendDefaults": {
         "clientPolicy": {
            "tls": {
               "certificate": { ... },
               "enforce": boolean,
               "ports": [ number ],
               "validation": {
                  "subjectAlternativeNames": {
                     "match": {
                        "exact": [ "string" ]
                     }
                  },
                  "trust": { ... }
               }
            }
         }
      },
      "backends": [
         { ... }
      ],
      "listeners": [
         {
            "connectionPool": { ... },
            "healthCheck": {
               "healthyThreshold": number,
               "intervalMillis": number,
```

```
            "path": "string",
            "port": number,
            "protocol": "string",
            "timeoutMillis": number,
            "unhealthyThreshold": number
         },
         "outlierDetection": {
            "baseEjectionDuration": {
               "unit": "string",
               "value": number
            },
            "interval": {
               "unit": "string",
               "value": number
            },
            "maxEjectionPercent": number,
            "maxServerErrors": number
         },
         "portMapping": {
            "port": number,
            "protocol": "string"
         },
         "timeout": { ... },
         "tls": {
            "certificate": { ... },
            "mode": "string",
            "validation": {
               "subjectAlternativeNames": {
                  "match": {
                     "exact": [ "string" ]
                  }
               },
               "trust": { ... }
            }
         }
      }
   ],
   "logging": {
      "accessLog": { ... }
   },
   "serviceDiscovery": { ... }
},
"status": {
   "status": "string"
```

```
    },
    "virtualNodeName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual node resides in.

Type: String

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

metadata

The associated metadata for the virtual node.

Type: ResourceMetadata object

spec

The specifications of the virtual node.

Type: VirtualNodeSpec object

status

The current status for the virtual node.

Type: VirtualNodeStatus object

virtualNodeName

The name of the virtual node.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example updates a virtual node named `colorteller-vn` in the `ecs-mesh` service mesh.

Sample Request

```
PUT /v20190125/meshes/ecs-mesh/virtualNodes/colorteller-vn HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T002242Z
Authorization: AUTHPARAMS

{
  "spec": {
    "backends": [],
    "listeners": [
      {
        "healthCheck": {
          "healthyThreshold": 2,
          "intervalMillis": 5000,
```

```
          "path": "/ping",
          "port": 9080,
          "protocol": "http",
          "timeoutMillis": 2000,
          "unhealthyThreshold": 2
        },
        "portMapping": {
          "port": 9080,
          "protocol": "http"
        }
      }
    ],
    "serviceDiscovery": {
      "dns": {
        "hostname": "colorteller-white.default.svc.cluster.local"
      }
    }
  },
  "clientToken": "xxxxxxxx-xxxx-xxxx-1111-EXAMPLE11111"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: d6dc2922-f4c0-4077-8107-db673f167a12
content-type: application/json
content-length: 660
date: Thu, 28 Feb 2019 00:22:42 GMT
x-envoy-upstream-service-time: 88
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualNode/colorteller-
vn",
  "createdAt": 1.551311799179E9,
  "lastUpdatedAt": 1.551313363236E9,
  "uid": "0999e53a-8e0e-4c4c-8764-ae8ebecc296d",
  "version": 2
 },
 "spec": {
```

```
  "backends": [],
  "listeners": [{
   "healthCheck": {
    "healthyThreshold": 2,
    "intervalMillis": 5000,
    "path": "/ping",
    "port": 9080,
    "protocol": "http",
    "timeoutMillis": 2000,
    "unhealthyThreshold": 2
   },
   "portMapping": {
    "port": 9080,
    "protocol": "http"
   }
  }],
  "logging": null,
  "serviceDiscovery": {
   "dns": {
    "hostname": "colorteller-white.default.svc.cluster.local"
   }
  }
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualNodeName": "colorteller-vn"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateVirtualRouter

Updates an existing virtual router in a specified service mesh.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualRouters/virtualRouterName?meshOwner=meshOwner
 HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "listeners": [
         {
            "portMapping": {
               "port": number,
               "protocol": "string"
            }
         }
      ]
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the virtual router resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualRouterName

The name of the virtual router to update.

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The new virtual router specification to apply. This overwrites the existing data.

Type: VirtualRouterSpec object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
```

```
      "uid": "string",
      "version": number
   },
   "spec": {
      "listeners": [
         {
            "portMapping": {
               "port": number,
               "protocol": "string"
            }
         }
      ]
   },
   "status": {
      "status": "string"
   },
   "virtualRouterName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual router resides in.

Type: String

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

metadata

The associated metadata for the virtual router.

Type: ResourceMetadata object

spec

The specifications of the virtual router.

Type: VirtualRouterSpec object

status

The current status of the virtual router.

Type: VirtualRouterStatus object

virtualRouterName

The name of the virtual router.

Type: String

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

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example updates a virtual router named `colorteller-vr` in the `ecs-mesh` service mesh.

Sample Request

```
PUT /v20190125/meshes/ecs-mesh/virtualRouters/colorteller-vr HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T002506Z
```

```
Authorization: AUTHPARAMS

{
  "spec": {},
  "clientToken": "6029e873-0ef2-41b9-957e-2742048c92c3"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: fba0cb49-d242-46e5-aacd-c4a0fad60413
content-type: application/json
content-length: 336
date: Thu, 28 Feb 2019 00:25:06 GMT
x-envoy-upstream-service-time: 70
server: envoy
Connection: keep-alive

{
  "meshName": "ecs-mesh",
  "metadata": {
    "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualRouter/
colorteller-vr",
    "createdAt": 1551311805.476,
    "lastUpdatedAt": 1551313507.39,
    "uid": "79628d34-8c17-42ba-83a5-8a42fd17ec5a",
    "version": 2
  },
  "spec": {
    "listeners": [
      {
        "portMapping": {
          "port": 9080,
          "protocol": "http"
        }
      }
    ]
  },
  "status": {
    "status": "ACTIVE"
  },
  "virtualRouterName": "colorteller-vr"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateVirtualService

Updates an existing virtual service in a specified service mesh.

Request Syntax

```
PUT /v20190125/meshes/meshName/virtualServices/virtualServiceName?meshOwner=meshOwner
 HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "spec": {
      "provider": { ... }
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

meshName

The name of the service mesh that the virtual service resides in.

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Length Constraints: Fixed length of 12.

virtualServiceName

The name of the virtual service to update.

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Up to 36 letters, numbers, hyphens, and underscores are allowed.

Type: String

Required: No

spec

The new virtual service specification to apply. This overwrites the existing data.

Type: VirtualServiceSpec object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "meshName": "string",
   "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
   },
   "spec": {
      "provider": { ... }
   },
   "status": {
      "status": "string"
   },
```

```
    "virtualServiceName": "string"
}
```

Response Elements

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

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

meshName

The name of the service mesh that the virtual service resides in.

Type: String

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

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

spec

The specifications of the virtual service.

Type: VirtualServiceSpec object

status

The current status of the virtual service.

Type: VirtualServiceStatus object

virtualServiceName

The name of the virtual service.

Type: String

Errors

BadRequestException

The request syntax was malformed. Check your request syntax and try again.

HTTP Status Code: 400

ConflictException

The request contains a client token that was used for a previous update resource call with different specifications. Try the request again with a new client token.

HTTP Status Code: 409

ForbiddenException

You don't have permissions to perform this action.

HTTP Status Code: 403

InternalServerErrorException

The request processing has failed because of an unknown error, exception, or failure.

HTTP Status Code: 500

LimitExceededException

You have exceeded a service limit for your account. For more information, see Service Limits in the *AWS App Mesh User Guide*.

HTTP Status Code: 400

NotFoundException

The specified resource doesn't exist. Check your request syntax and try again.

HTTP Status Code: 404

ServiceUnavailableException

The request has failed due to a temporary failure of the service.

HTTP Status Code: 503

TooManyRequestsException

The maximum request rate permitted by the App Mesh APIs has been exceeded for your account. For best results, use an increasing or variable sleep interval between requests.

HTTP Status Code: 429

Examples

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see Signature Version 4 Signing Process in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the AWS Command Line Interface (AWS CLI) or one of the AWS SDKs to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example updates a virtual service named `colorgateway.default.svc.cluster.local` in the `ecs-mesh` service mesh.

Sample Request

```
PUT /v20190125/meshes/ecs-mesh/virtualServices/colorgateway.default.svc.cluster.local
 HTTP/1.1
Host: appmesh.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T002829Z
Authorization: AUTHPARAMS

{
  "spec": {
    "provider": {
      "virtualNode": {
        "virtualNodeName": "colorgateway-vn"
      }
    }
  },
  "clientToken": "c207a9a1-5828-4d73-9e8e-1d3b9350b2ac"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-requestid: 60d5fb65-ac74-4523-a1df-9e56da84fa84
```

```
content-type: application/json
content-length: 456
date: Thu, 28 Feb 2019 00:28:29 GMT
x-envoy-upstream-service-time: 88
server: envoy
Connection: keep-alive

{
 "meshName": "ecs-mesh",
 "metadata": {
  "arn": "arn:aws:appmesh:us-east-1:123456789012:mesh/ecs-mesh/virtualService/
colorgateway.default.svc.cluster.local",
  "createdAt": 1.551311807444E9,
  "lastUpdatedAt": 1.551313709898E9,
  "uid": "dd06064b-e542-40a9-bbc7-e381a47ea0e0",
  "version": 2
 },
 "spec": {
  "provider": {
   "virtualNode": {
    "virtualNodeName": "colorgateway-vn"
   },
   "virtualRouter": null
  }
 },
 "status": {
  "status": "ACTIVE"
 },
 "virtualServiceName": "colorgateway.default.svc.cluster.local"
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

Data Types

The AWS App Mesh API contains several data types that various actions use. This section describes each data type in detail.

> **Note**
>
> The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- AccessLog
- AwsCloudMapInstanceAttribute
- AwsCloudMapServiceDiscovery
- Backend
- BackendDefaults
- ClientPolicy
- ClientPolicyTls
- ClientTlsCertificate
- DnsServiceDiscovery
- Duration
- EgressFilter
- FileAccessLog
- GatewayRouteData
- GatewayRouteHostnameMatch
- GatewayRouteHostnameRewrite
- GatewayRouteRef
- GatewayRouteSpec
- GatewayRouteStatus
- GatewayRouteTarget
- GatewayRouteVirtualService

- GrpcGatewayRoute
- GrpcGatewayRouteAction
- GrpcGatewayRouteMatch
- GrpcGatewayRouteMetadata
- GrpcGatewayRouteRewrite
- GrpcMetadataMatchMethod
- GrpcRetryPolicy
- GrpcRoute
- GrpcRouteAction
- GrpcRouteMatch
- GrpcRouteMetadata
- GrpcRouteMetadataMatchMethod
- GrpcTimeout
- HeaderMatchMethod
- HealthCheckPolicy
- HttpGatewayRoute
- HttpGatewayRouteAction
- HttpGatewayRouteHeader
- HttpGatewayRouteMatch
- HttpGatewayRoutePathRewrite
- HttpGatewayRoutePrefixRewrite
- HttpGatewayRouteRewrite
- HttpPathMatch
- HttpQueryParameter
- HttpRetryPolicy
- HttpRoute
- HttpRouteAction
- HttpRouteHeader
- HttpRouteMatch
- HttpTimeout

- JsonFormatRef
- Listener
- ListenerTimeout
- ListenerTls
- ListenerTlsAcmCertificate
- ListenerTlsCertificate
- ListenerTlsFileCertificate
- ListenerTlsSdsCertificate
- ListenerTlsValidationContext
- ListenerTlsValidationContextTrust
- Logging
- LoggingFormat
- MatchRange
- MeshData
- MeshRef
- MeshServiceDiscovery
- MeshSpec
- MeshStatus
- OutlierDetection
- PortMapping
- QueryParameterMatch
- ResourceMetadata
- RouteData
- RouteRef
- RouteSpec
- RouteStatus
- ServiceDiscovery
- SubjectAlternativeNameMatchers
- SubjectAlternativeNames
- TagRef

- TcpRoute
- TcpRouteAction
- TcpRouteMatch
- TcpTimeout
- TlsValidationContext
- TlsValidationContextAcmTrust
- TlsValidationContextFileTrust
- TlsValidationContextSdsTrust
- TlsValidationContextTrust
- VirtualGatewayAccessLog
- VirtualGatewayBackendDefaults
- VirtualGatewayClientPolicy
- VirtualGatewayClientPolicyTls
- VirtualGatewayClientTlsCertificate
- VirtualGatewayConnectionPool
- VirtualGatewayData
- VirtualGatewayFileAccessLog
- VirtualGatewayGrpcConnectionPool
- VirtualGatewayHealthCheckPolicy
- VirtualGatewayHttp2ConnectionPool
- VirtualGatewayHttpConnectionPool
- VirtualGatewayListener
- VirtualGatewayListenerTls
- VirtualGatewayListenerTlsAcmCertificate
- VirtualGatewayListenerTlsCertificate
- VirtualGatewayListenerTlsFileCertificate
- VirtualGatewayListenerTlsSdsCertificate
- VirtualGatewayListenerTlsValidationContext
- VirtualGatewayListenerTlsValidationContextTrust
- VirtualGatewayLogging

- VirtualGatewayPortMapping
- VirtualGatewayRef
- VirtualGatewaySpec
- VirtualGatewayStatus
- VirtualGatewayTlsValidationContext
- VirtualGatewayTlsValidationContextAcmTrust
- VirtualGatewayTlsValidationContextFileTrust
- VirtualGatewayTlsValidationContextSdsTrust
- VirtualGatewayTlsValidationContextTrust
- VirtualNodeConnectionPool
- VirtualNodeData
- VirtualNodeGrpcConnectionPool
- VirtualNodeHttp2ConnectionPool
- VirtualNodeHttpConnectionPool
- VirtualNodeRef
- VirtualNodeServiceProvider
- VirtualNodeSpec
- VirtualNodeStatus
- VirtualNodeTcpConnectionPool
- VirtualRouterData
- VirtualRouterListener
- VirtualRouterRef
- VirtualRouterServiceProvider
- VirtualRouterSpec
- VirtualRouterStatus
- VirtualServiceBackend
- VirtualServiceData
- VirtualServiceProvider
- VirtualServiceRef
- VirtualServiceSpec

- VirtualServiceStatus
- WeightedTarget

AccessLog

An object that represents the access logging information for a virtual node.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

file

The file object to send virtual node access logs to.

Type: FileAccessLog object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AwsCloudMapInstanceAttribute

An object that represents the AWS Cloud Map attribute information for your virtual node.

> **Note**
>
> AWS Cloud Map is not available in the eu-south-1 Region.

Contents

key

The name of an AWS Cloud Map service instance attribute key. Any AWS Cloud Map service instance that contains the specified key and value is returned.

Type: String

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

Pattern: `[a-zA-Z0-9!-~]+`

Required: Yes

value

The value of an AWS Cloud Map service instance attribute key. Any AWS Cloud Map service instance that contains the specified key and value is returned.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `([a-zA-Z0-9!-~][ a-zA-Z0-9!-~]*){0,1}[a-zA-Z0-9!-~]{0,1}`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AwsCloudMapServiceDiscovery

An object that represents the AWS Cloud Map service discovery information for your virtual node.

> **Note**
>
> AWS Cloud Map is not available in the eu-south-1 Region.

Contents

namespaceName

The HTTP name of the AWS Cloud Map namespace to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: Yes

serviceName

The name of the AWS Cloud Map service to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: Yes

attributes

A string map that contains attributes with values that you can use to filter instances by any custom attribute that you specified when you registered the instance. Only instances that match all of the specified key/value pairs will be returned.

Type: Array of AwsCloudMapInstanceAttribute objects

Required: No

ipPreference

The preferred IP version that this virtual node uses. Setting the IP preference on the virtual node only overrides the IP preference set for the mesh on this specific node.

Type: String

Valid Values: `IPv6_PREFERRED | IPv4_PREFERRED | IPv4_ONLY | IPv6_ONLY`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Backend

An object that represents the backends that a virtual node is expected to send outbound traffic to.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

virtualService

Specifies a virtual service to use as a backend.

Type: VirtualServiceBackend object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

BackendDefaults

An object that represents the default properties for a backend.

Contents

clientPolicy

A reference to an object that represents a client policy.

Type: ClientPolicy object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClientPolicy

An object that represents a client policy.

Contents

tls

A reference to an object that represents a Transport Layer Security (TLS) client policy.

Type: ClientPolicyTls object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClientPolicyTls

A reference to an object that represents a Transport Layer Security (TLS) client policy.

Contents

validation

A reference to an object that represents a TLS validation context.

Type: TlsValidationContext object

Required: Yes

certificate

A reference to an object that represents a client's TLS certificate.

Type: ClientTlsCertificate object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

enforce

Whether the policy is enforced. The default is `True`, if a value isn't specified.

Type: Boolean

Required: No

ports

One or more ports that the policy is enforced for.

Type: Array of integers

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClientTlsCertificate

An object that represents the client's certificate.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

file

An object that represents a local file certificate. The certificate must meet specific requirements and you must have proxy authorization enabled. For more information, see Transport Layer Security (TLS).

Type: ListenerTlsFileCertificate object

Required: No

sds

A reference to an object that represents a client's TLS Secret Discovery Service certificate.

Type: ListenerTlsSdsCertificate object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DnsServiceDiscovery

An object that represents the DNS service discovery information for your virtual node.

Contents

hostname

Specifies the DNS service discovery hostname for the virtual node.

Type: String

Required: Yes

ipPreference

The preferred IP version that this virtual node uses. Setting the IP preference on the virtual node only overrides the IP preference set for the mesh on this specific node.

Type: String

Valid Values: `IPv6_PREFERRED | IPv4_PREFERRED | IPv4_ONLY | IPv6_ONLY`

Required: No

responseType

Specifies the DNS response type for the virtual node.

Type: String

Valid Values: `LOADBALANCER | ENDPOINTS`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

Duration

An object that represents a duration of time.

Contents

unit

A unit of time.

Type: String

Valid Values: `s | ms`

Required: No

value

A number of time units.

Type: Long

Valid Range: Minimum value of 0.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EgressFilter

An object that represents the egress filter rules for a service mesh.

Contents

type

The egress filter type. By default, the type is `DROP_ALL`, which allows egress only from virtual nodes to other defined resources in the service mesh (and any traffic to `*.amazonaws.com` for AWS API calls). You can set the egress filter type to `ALLOW_ALL` to allow egress to any endpoint inside or outside of the service mesh.

> **Note**
>
> If you specify any backends on a virtual node when using `ALLOW_ALL`, you must specifiy all egress for that virtual node as backends. Otherwise, `ALLOW_ALL` will no longer work for that virtual node.

Type: String

Valid Values: `ALLOW_ALL | DROP_ALL`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

FileAccessLog

An object that represents an access log file.

Contents

path

The file path to write access logs to. You can use `/dev/stdout` to send access logs to standard out and configure your Envoy container to use a log driver, such as `awslogs`, to export the access logs to a log storage service such as Amazon CloudWatch Logs. You can also specify a path in the Envoy container's file system to write the files to disk.

> **Note**
>
> The Envoy process must have write permissions to the path that you specify here. Otherwise, Envoy fails to bootstrap properly.

Type: String

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

Required: Yes

format

The specified format for the logs. The format is either `json_format` or `text_format`.

Type: LoggingFormat object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

GatewayRouteData

An object that represents a gateway route returned by a describe operation.

Contents

gatewayRouteName

The name of the gateway route.

Type: String

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

Required: Yes

meshName

The name of the service mesh that the resource resides in.

Type: String

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

Required: Yes

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

Required: Yes

spec

The specifications of the gateway route.

Type: GatewayRouteSpec object

Required: Yes

status

The status of the gateway route.

Type: GatewayRouteStatus object

Required: Yes

virtualGatewayName

The virtual gateway that the gateway route is associated with.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GatewayRouteHostnameMatch

An object representing the gateway route host name to match.

Contents

exact

The exact host name to match on.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Required: No

suffix

The specified ending characters of the host name to match on.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GatewayRouteHostnameRewrite

An object representing the gateway route host name to rewrite.

Contents

defaultTargetHostname

The default target host name to write to.

Type: String

Valid Values: `ENABLED | DISABLED`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GatewayRouteRef

An object that represents a gateway route returned by a list operation.

Contents

arn

The full Amazon Resource Name (ARN) for the gateway route.

Type: String

Required: Yes

createdAt

The Unix epoch timestamp in seconds for when the resource was created.

Type: Timestamp

Required: Yes

gatewayRouteName

The name of the gateway route.

Type: String

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

Required: Yes

lastUpdatedAt

The Unix epoch timestamp in seconds for when the resource was last updated.

Type: Timestamp

Required: Yes

meshName

The name of the service mesh that the resource resides in.

Type: String

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

resourceOwner

The AWS IAM account ID of the resource owner. If the account ID is not your own, then it's the ID of the mesh owner or of another account that the mesh is shared with. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

version

The version of the resource. Resources are created at version 1, and this version is incremented each time that they're updated.

Type: Long

Required: Yes

virtualGatewayName

The virtual gateway that the gateway route is associated with.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GatewayRouteSpec

An object that represents a gateway route specification. Specify one gateway route type.

Contents

grpcRoute

An object that represents the specification of a gRPC gateway route.

Type: GrpcGatewayRoute object

Required: No

http2Route

An object that represents the specification of an HTTP/2 gateway route.

Type: HttpGatewayRoute object

Required: No

httpRoute

An object that represents the specification of an HTTP gateway route.

Type: HttpGatewayRoute object

Required: No

priority

The ordering of the gateway routes spec.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 1000.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GatewayRouteStatus

An object that represents the current status of a gateway route.

Contents

status

The current status for the gateway route.

Type: String

Valid Values: `ACTIVE | INACTIVE | DELETED`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GatewayRouteTarget

An object that represents a gateway route target.

Contents

virtualService

An object that represents a virtual service gateway route target.

Type: GatewayRouteVirtualService object

Required: Yes

port

The port number of the gateway route target.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GatewayRouteVirtualService

An object that represents the virtual service that traffic is routed to.

Contents

virtualServiceName

The name of the virtual service that traffic is routed to.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcGatewayRoute

An object that represents a gRPC gateway route.

Contents

action

An object that represents the action to take if a match is determined.

Type: GrpcGatewayRouteAction object

Required: Yes

match

An object that represents the criteria for determining a request match.

Type: GrpcGatewayRouteMatch object

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcGatewayRouteAction

An object that represents the action to take if a match is determined.

Contents

target

An object that represents the target that traffic is routed to when a request matches the gateway route.

Type: GatewayRouteTarget object

Required: Yes

rewrite

The gateway route action to rewrite.

Type: GrpcGatewayRouteRewrite object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcGatewayRouteMatch

An object that represents the criteria for determining a request match.

Contents

hostname

The gateway route host name to be matched on.

Type: GatewayRouteHostnameMatch object

Required: No

metadata

The gateway route metadata to be matched on.

Type: Array of GrpcGatewayRouteMetadata objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: No

port

The gateway route port to be matched on.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

serviceName

The fully qualified domain name for the service to match from the request.

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcGatewayRouteMetadata

An object representing the metadata of the gateway route.

Contents

name

A name for the gateway route metadata.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Required: Yes

invert

Specify `True` to match anything except the match criteria. The default value is `False`.

Type: Boolean

Required: No

match

The criteria for determining a metadata match.

Type: GrpcMetadataMatchMethod object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcGatewayRouteRewrite

An object that represents the gateway route to rewrite.

Contents

hostname

The host name of the gateway route to rewrite.

Type: GatewayRouteHostnameRewrite object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcMetadataMatchMethod

An object representing the method header to be matched.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

exact

The exact method header to be matched on.

Type: String

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

Required: No

prefix

The specified beginning characters of the method header to be matched on.

Type: String

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

Required: No

range

An object that represents the range of values to match on. The first character of the range is included in the range, though the last character is not. For example, if the range specified were 1-100, only values 1-99 would be matched.

Type: MatchRange object

Required: No

regex

The regex used to match the method header.

Type: String

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

Required: No

suffix

The specified ending characters of the method header to match on.

Type: String

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

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcRetryPolicy

An object that represents a retry policy. Specify at least one value for at least one of the types of `RetryEvents`, a value for `maxRetries`, and a value for `perRetryTimeout`. Both `server-error` and `gateway-error` under `httpRetryEvents` include the Envoy `reset` policy. For more information on the `reset` policy, see the Envoy documentation.

Contents

maxRetries

The maximum number of retry attempts.

Type: Long

Valid Range: Minimum value of 0.

Required: Yes

perRetryTimeout

The timeout for each retry attempt.

Type: Duration object

Required: Yes

grpcRetryEvents

Specify at least one of the valid values.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Valid Values: `cancelled | deadline-exceeded | internal | resource-exhausted | unavailable`

Required: No

httpRetryEvents

Specify at least one of the following values.

- **server-error** – HTTP status codes 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, and 511

- **gateway-error** – HTTP status codes 502, 503, and 504
- **client-error** – HTTP status code 409
- **stream-error** – Retry on refused stream

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Length Constraints: Minimum length of 1. Maximum length of 25.

Required: No

tcpRetryEvents

Specify a valid value. The event occurs before any processing of a request has started and is encountered when the upstream is temporarily or permanently unavailable.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `connection-error`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcRoute

An object that represents a gRPC route type.

Contents

action

An object that represents the action to take if a match is determined.

Type: GrpcRouteAction object

Required: Yes

match

An object that represents the criteria for determining a request match.

Type: GrpcRouteMatch object

Required: Yes

retryPolicy

An object that represents a retry policy.

Type: GrpcRetryPolicy object

Required: No

timeout

An object that represents types of timeouts.

Type: GrpcTimeout object

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcRouteAction

An object that represents the action to take if a match is determined.

Contents

weightedTargets

An object that represents the targets that traffic is routed to when a request matches the route.

Type: Array of WeightedTarget objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcRouteMatch

An object that represents the criteria for determining a request match.

Contents

metadata

An object that represents the data to match from the request.

Type: Array of GrpcRouteMetadata objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: No

methodName

The method name to match from the request. If you specify a name, you must also specify a `serviceName`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Required: No

port

The port number to match on.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

serviceName

The fully qualified domain name for the service to match from the request.

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcRouteMetadata

An object that represents the match metadata for the route.

Contents

name

The name of the route.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Required: Yes

invert

Specify `True` to match anything except the match criteria. The default value is `False`.

Type: Boolean

Required: No

match

An object that represents the data to match from the request.

Type: GrpcRouteMetadataMatchMethod object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcRouteMetadataMatchMethod

An object that represents the match method. Specify one of the match values.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

exact

The value sent by the client must match the specified value exactly.

Type: String

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

Required: No

prefix

The value sent by the client must begin with the specified characters.

Type: String

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

Required: No

range

An object that represents the range of values to match on.

Type: MatchRange object

Required: No

regex

The value sent by the client must include the specified characters.

Type: String

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

Required: No

suffix

The value sent by the client must end with the specified characters.

Type: String

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

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GrpcTimeout

An object that represents types of timeouts.

Contents

idle

An object that represents an idle timeout. An idle timeout bounds the amount of time that a connection may be idle. The default value is none.

Type: Duration object

Required: No

perRequest

An object that represents a per request timeout. The default value is 15 seconds. If you set a higher timeout, then make sure that the higher value is set for each App Mesh resource in a conversation. For example, if a virtual node backend uses a virtual router provider to route to another virtual node, then the timeout should be greater than 15 seconds for the source and destination virtual node and the route.

Type: Duration object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HeaderMatchMethod

An object that represents the method and value to match with the header value sent in a request. Specify one match method.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

exact

The value sent by the client must match the specified value exactly.

Type: String

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

Required: No

prefix

The value sent by the client must begin with the specified characters.

Type: String

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

Required: No

range

An object that represents the range of values to match on.

Type: MatchRange object

Required: No

regex

The value sent by the client must include the specified characters.

Type: String

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

Required: No

suffix

The value sent by the client must end with the specified characters.

Type: String

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

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HealthCheckPolicy

An object that represents the health check policy for a virtual node's listener.

Contents

healthyThreshold

The number of consecutive successful health checks that must occur before declaring listener healthy.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: Yes

intervalMillis

The time period in milliseconds between each health check execution.

Type: Long

Valid Range: Minimum value of 5000. Maximum value of 300000.

Required: Yes

protocol

The protocol for the health check request. If you specify `grpc`, then your service must conform to the GRPC Health Checking Protocol.

Type: String

Valid Values: `http | tcp | http2 | grpc`

Required: Yes

timeoutMillis

The amount of time to wait when receiving a response from the health check, in milliseconds.

Type: Long

Valid Range: Minimum value of 2000. Maximum value of 60000.

Required: Yes

unhealthyThreshold

The number of consecutive failed health checks that must occur before declaring a virtual node unhealthy.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: Yes

path

The destination path for the health check request. This value is only used if the specified protocol is HTTP or HTTP/2. For any other protocol, this value is ignored.

Type: String

Required: No

port

The destination port for the health check request. This port must match the port defined in the PortMapping for the listener.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpGatewayRoute

An object that represents an HTTP gateway route.

Contents

action

An object that represents the action to take if a match is determined.

Type: HttpGatewayRouteAction object

Required: Yes

match

An object that represents the criteria for determining a request match.

Type: HttpGatewayRouteMatch object

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpGatewayRouteAction

An object that represents the action to take if a match is determined.

Contents

target

An object that represents the target that traffic is routed to when a request matches the gateway route.

Type: GatewayRouteTarget object

Required: Yes

rewrite

The gateway route action to rewrite.

Type: HttpGatewayRouteRewrite object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpGatewayRouteHeader

An object that represents the HTTP header in the gateway route.

Contents

name

A name for the HTTP header in the gateway route that will be matched on.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Required: Yes

invert

Specify `True` to match anything except the match criteria. The default value is `False`.

Type: Boolean

Required: No

match

An object that represents the method and value to match with the header value sent in a request. Specify one match method.

Type: HeaderMatchMethod object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

HttpGatewayRouteMatch

An object that represents the criteria for determining a request match.

Contents

headers

The client request headers to match on.

Type: Array of HttpGatewayRouteHeader objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: No

hostname

The host name to match on.

Type: GatewayRouteHostnameMatch object

Required: No

method

The method to match on.

Type: String

Valid Values: `GET | HEAD | POST | PUT | DELETE | CONNECT | OPTIONS | TRACE | PATCH`

Required: No

path

The path to match on.

Type: HttpPathMatch object

Required: No

port

The port number to match on.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

prefix

Specifies the path to match requests with. This parameter must always start with `/`, which by itself matches all requests to the virtual service name. You can also match for path-based routing of requests. For example, if your virtual service name is `my-service.local` and you want the route to match requests to `my-service.local/metrics`, your prefix should be `/metrics`.

Type: String

Required: No

queryParameters

The query parameter to match on.

Type: Array of HttpQueryParameter objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpGatewayRoutePathRewrite

An object that represents the path to rewrite.

Contents

exact

The exact path to rewrite.

Type: String

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

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpGatewayRoutePrefixRewrite

An object representing the beginning characters of the route to rewrite.

Contents

defaultPrefix

The default prefix used to replace the incoming route prefix when rewritten.

Type: String

Valid Values: `ENABLED | DISABLED`

Required: No

value

The value used to replace the incoming route prefix when rewritten.

Type: String

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

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpGatewayRouteRewrite

An object representing the gateway route to rewrite.

Contents

hostname

The host name to rewrite.

Type: GatewayRouteHostnameRewrite object

Required: No

path

The path to rewrite.

Type: HttpGatewayRoutePathRewrite object

Required: No

prefix

The specified beginning characters to rewrite.

Type: HttpGatewayRoutePrefixRewrite object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpPathMatch

An object representing the path to match in the request.

Contents

exact

The exact path to match on.

Type: String

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

Required: No

regex

The regex used to match the path.

Type: String

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

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpQueryParameter

An object that represents the query parameter in the request.

Contents

name

A name for the query parameter that will be matched on.

Type: String

Required: Yes

match

The query parameter to match on.

Type: QueryParameterMatch object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpRetryPolicy

An object that represents a retry policy. Specify at least one value for at least one of the types of `RetryEvents`, a value for `maxRetries`, and a value for `perRetryTimeout`. Both `server-error` and `gateway-error` under `httpRetryEvents` include the Envoy `reset` policy. For more information on the `reset` policy, see the Envoy documentation.

Contents

maxRetries

The maximum number of retry attempts.

Type: Long

Valid Range: Minimum value of 0.

Required: Yes

perRetryTimeout

The timeout for each retry attempt.

Type: Duration object

Required: Yes

httpRetryEvents

Specify at least one of the following values.

- **server-error** – HTTP status codes 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, and 511
- **gateway-error** – HTTP status codes 502, 503, and 504
- **client-error** – HTTP status code 409
- **stream-error** – Retry on refused stream

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Length Constraints: Minimum length of 1. Maximum length of 25.

Required: No

tcpRetryEvents

Specify a valid value. The event occurs before any processing of a request has started and is encountered when the upstream is temporarily or permanently unavailable.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `connection-error`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpRoute

An object that represents an HTTP or HTTP/2 route type.

Contents

action

An object that represents the action to take if a match is determined.

Type: HttpRouteAction object

Required: Yes

match

An object that represents the criteria for determining a request match.

Type: HttpRouteMatch object

Required: Yes

retryPolicy

An object that represents a retry policy.

Type: HttpRetryPolicy object

Required: No

timeout

An object that represents types of timeouts.

Type: HttpTimeout object

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpRouteAction

An object that represents the action to take if a match is determined.

Contents

weightedTargets

An object that represents the targets that traffic is routed to when a request matches the route.

Type: Array of WeightedTarget objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpRouteHeader

An object that represents the HTTP header in the request.

Contents

name

A name for the HTTP header in the client request that will be matched on.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Required: Yes

invert

Specify `True` to match anything except the match criteria. The default value is `False`.

Type: Boolean

Required: No

match

The `HeaderMatchMethod` object.

Type: HeaderMatchMethod object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpRouteMatch

An object that represents the requirements for a route to match HTTP requests for a virtual router.

Contents

headers

The client request headers to match on.

Type: Array of HttpRouteHeader objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: No

method

The client request method to match on. Specify only one.

Type: String

Valid Values: `GET | HEAD | POST | PUT | DELETE | CONNECT | OPTIONS | TRACE | PATCH`

Required: No

path

The client request path to match on.

Type: HttpPathMatch object

Required: No

port

The port number to match on.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

prefix

Specifies the path to match requests with. This parameter must always start with `/`, which by itself matches all requests to the virtual service name. You can also match for path-based routing of requests. For example, if your virtual service name is `my-service.local` and you want the route to match requests to `my-service.local/metrics`, your prefix should be `/metrics`.

Type: String

Required: No

queryParameters

The client request query parameters to match on.

Type: Array of HttpQueryParameter objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: No

scheme

The client request scheme to match on. Specify only one. Applicable only for HTTP2 routes.

Type: String

Valid Values: `http | https`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HttpTimeout

An object that represents types of timeouts.

Contents

idle

An object that represents an idle timeout. An idle timeout bounds the amount of time that a connection may be idle. The default value is none.

Type: Duration object

Required: No

perRequest

An object that represents a per request timeout. The default value is 15 seconds. If you set a higher timeout, then make sure that the higher value is set for each App Mesh resource in a conversation. For example, if a virtual node backend uses a virtual router provider to route to another virtual node, then the timeout should be greater than 15 seconds for the source and destination virtual node and the route.

Type: Duration object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JsonFormatRef

An object that represents the key value pairs for the JSON.

Contents

key

The specified key for the JSON.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Required: Yes

value

The specified value for the JSON.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Listener

An object that represents a listener for a virtual node.

Contents

portMapping

The port mapping information for the listener.

Type: PortMapping object

Required: Yes

connectionPool

The connection pool information for the listener.

Type: VirtualNodeConnectionPool object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

healthCheck

The health check information for the listener.

Type: HealthCheckPolicy object

Required: No

outlierDetection

The outlier detection information for the listener.

Type: OutlierDetection object

Required: No

timeout

An object that represents timeouts for different protocols.

Type: ListenerTimeout object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

tls

A reference to an object that represents the Transport Layer Security (TLS) properties for a listener.

Type: ListenerTls object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListenerTimeout

An object that represents timeouts for different protocols.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

grpc

An object that represents types of timeouts.

Type: GrpcTimeout object

Required: No

http

An object that represents types of timeouts.

Type: HttpTimeout object

Required: No

http2

An object that represents types of timeouts.

Type: HttpTimeout object

Required: No

tcp

An object that represents types of timeouts.

Type: TcpTimeout object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListenerTls

An object that represents the Transport Layer Security (TLS) properties for a listener.

Contents

certificate

A reference to an object that represents a listener's Transport Layer Security (TLS) certificate.

Type: ListenerTlsCertificate object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

mode

Specify one of the following modes.

- STRICT – Listener only accepts connections with TLS enabled.
- PERMISSIVE – Listener accepts connections with or without TLS enabled.
- DISABLED – Listener only accepts connections without TLS.

Type: String

Valid Values: `STRICT | PERMISSIVE | DISABLED`

Required: Yes

validation

A reference to an object that represents a listener's Transport Layer Security (TLS) validation context.

Type: ListenerTlsValidationContext object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListenerTlsAcmCertificate

An object that represents an AWS Certificate Manager certificate.

Contents

certificateArn

The Amazon Resource Name (ARN) for the certificate. The certificate must meet specific requirements and you must have proxy authorization enabled. For more information, see Transport Layer Security (TLS).

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListenerTlsCertificate

An object that represents a listener's Transport Layer Security (TLS) certificate.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

acm

A reference to an object that represents an AWS Certificate Manager certificate.

Type: ListenerTlsAcmCertificate object

Required: No

file

A reference to an object that represents a local file certificate.

Type: ListenerTlsFileCertificate object

Required: No

sds

A reference to an object that represents a listener's Secret Discovery Service certificate.

Type: ListenerTlsSdsCertificate object

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListenerTlsFileCertificate

An object that represents a local file certificate. The certificate must meet specific requirements and you must have proxy authorization enabled. For more information, see Transport Layer Security (TLS).

Contents

certificateChain

The certificate chain for the certificate.

Type: String

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

Required: Yes

privateKey

The private key for a certificate stored on the file system of the virtual node that the proxy is running on.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListenerTlsSdsCertificate

An object that represents the listener's Secret Discovery Service certificate. The proxy must be configured with a local SDS provider via a Unix Domain Socket. See App Mesh TLS documentation for more info.

Contents

secretName

A reference to an object that represents the name of the secret requested from the Secret Discovery Service provider representing Transport Layer Security (TLS) materials like a certificate or certificate chain.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListenerTlsValidationContext

An object that represents a listener's Transport Layer Security (TLS) validation context.

Contents

trust

A reference to where to retrieve the trust chain when validating a peer’s Transport Layer Security (TLS) certificate.

Type: ListenerTlsValidationContextTrust object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

subjectAlternativeNames

A reference to an object that represents the SANs for a listener's Transport Layer Security (TLS) validation context.

Type: SubjectAlternativeNames object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListenerTlsValidationContextTrust

An object that represents a listener's Transport Layer Security (TLS) validation context trust.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

file

An object that represents a Transport Layer Security (TLS) validation context trust for a local file.

Type: TlsValidationContextFileTrust object

Required: No

sds

A reference to an object that represents a listener's Transport Layer Security (TLS) Secret Discovery Service validation context trust.

Type: TlsValidationContextSdsTrust object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Logging

An object that represents the logging information for a virtual node.

Contents

accessLog

The access log configuration for a virtual node.

Type: AccessLog object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LoggingFormat

An object that represents the format for the logs.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

json

The logging format for JSON.

Type: Array of JsonFormatRef objects

Required: No

text

The logging format for text.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1000.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MatchRange

An object that represents the range of values to match on. The first character of the range is included in the range, though the last character is not. For example, if the range specified were 1-100, only values 1-99 would be matched.

Contents

end

The end of the range.

Type: Long

Required: Yes

start

The start of the range.

Type: Long

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MeshData

An object that represents a service mesh returned by a describe operation.

Contents

meshName

The name of the service mesh.

Type: String

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

Required: Yes

metadata

The associated metadata for the service mesh.

Type: ResourceMetadata object

Required: Yes

spec

The associated specification for the service mesh.

Type: MeshSpec object

Required: Yes

status

The status of the service mesh.

Type: MeshStatus object

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MeshRef

An object that represents a service mesh returned by a list operation.

Contents

arn

The full Amazon Resource Name (ARN) of the service mesh.

Type: String

Required: Yes

createdAt

The Unix epoch timestamp in seconds for when the resource was created.

Type: Timestamp

Required: Yes

lastUpdatedAt

The Unix epoch timestamp in seconds for when the resource was last updated.

Type: Timestamp

Required: Yes

meshName

The name of the service mesh.

Type: String

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

resourceOwner

The AWS IAM account ID of the resource owner. If the account ID is not your own, then it's the ID of the mesh owner or of another account that the mesh is shared with. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

version

The version of the resource. Resources are created at version 1, and this version is incremented each time that they're updated.

Type: Long

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MeshServiceDiscovery

An object that represents the service discovery information for a service mesh.

Contents

ipPreference

The IP version to use to control traffic within the mesh.

Type: String

Valid Values: `IPv6_PREFERRED | IPv4_PREFERRED | IPv4_ONLY | IPv6_ONLY`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MeshSpec

An object that represents the specification of a service mesh.

Contents

egressFilter

The egress filter rules for the service mesh.

Type: EgressFilter object

Required: No

serviceDiscovery

An object that represents the service discovery information for a service mesh.

Type: MeshServiceDiscovery object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MeshStatus

An object that represents the status of a service mesh.

Contents

status

The current mesh status.

Type: String

Valid Values: `ACTIVE | INACTIVE | DELETED`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OutlierDetection

An object that represents the outlier detection for a virtual node's listener.

Contents

baseEjectionDuration

The base amount of time for which a host is ejected.

Type: Duration object

Required: Yes

interval

The time interval between ejection sweep analysis.

Type: Duration object

Required: Yes

maxEjectionPercent

Maximum percentage of hosts in load balancing pool for upstream service that can be ejected. Will eject at least one host regardless of the value.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: Yes

maxServerErrors

Number of consecutive `5xx` errors required for ejection.

Type: Long

Valid Range: Minimum value of 1.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PortMapping

An object that represents a port mapping.

Contents

port

The port used for the port mapping.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: Yes

protocol

The protocol used for the port mapping. Specify one protocol.

Type: String

Valid Values: `http | tcp | http2 | grpc`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

QueryParameterMatch

An object representing the query parameter to match.

Contents

exact

The exact query parameter to match on.

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResourceMetadata

An object that represents metadata for a resource.

Contents

arn

The full Amazon Resource Name (ARN) for the resource.

Type: String

Required: Yes

createdAt

The Unix epoch timestamp in seconds for when the resource was created.

Type: Timestamp

Required: Yes

lastUpdatedAt

The Unix epoch timestamp in seconds for when the resource was last updated.

Type: Timestamp

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

resourceOwner

The AWS IAM account ID of the resource owner. If the account ID is not your own, then it's the ID of the mesh owner or of another account that the mesh is shared with. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

uid

The unique identifier for the resource.

Type: String

Required: Yes

version

The version of the resource. Resources are created at version 1, and this version is incremented each time that they're updated.

Type: Long

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RouteData

An object that represents a route returned by a describe operation.

Contents

meshName

The name of the service mesh that the route resides in.

Type: String

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

Required: Yes

metadata

The associated metadata for the route.

Type: ResourceMetadata object

Required: Yes

routeName

The name of the route.

Type: String

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

Required: Yes

spec

The specifications of the route.

Type: RouteSpec object

Required: Yes

status

The status of the route.

Type: RouteStatus object

Required: Yes

virtualRouterName

The virtual router that the route is associated with.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RouteRef

An object that represents a route returned by a list operation.

Contents

arn

The full Amazon Resource Name (ARN) for the route.

Type: String

Required: Yes

createdAt

The Unix epoch timestamp in seconds for when the resource was created.

Type: Timestamp

Required: Yes

lastUpdatedAt

The Unix epoch timestamp in seconds for when the resource was last updated.

Type: Timestamp

Required: Yes

meshName

The name of the service mesh that the route resides in.

Type: String

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

resourceOwner

The AWS IAM account ID of the resource owner. If the account ID is not your own, then it's the ID of the mesh owner or of another account that the mesh is shared with. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

routeName

The name of the route.

Type: String

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

Required: Yes

version

The version of the resource. Resources are created at version 1, and this version is incremented each time that they're updated.

Type: Long

Required: Yes

virtualRouterName

The virtual router that the route is associated with.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RouteSpec

An object that represents a route specification. Specify one route type.

Contents

grpcRoute

An object that represents the specification of a gRPC route.

Type: GrpcRoute object

Required: No

http2Route

An object that represents the specification of an HTTP/2 route.

Type: HttpRoute object

Required: No

httpRoute

An object that represents the specification of an HTTP route.

Type: HttpRoute object

Required: No

priority

The priority for the route. Routes are matched based on the specified value, where 0 is the highest priority.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 1000.

Required: No

tcpRoute

An object that represents the specification of a TCP route.

Type: TcpRoute object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RouteStatus

An object that represents the current status of a route.

Contents

status

The current status for the route.

Type: String

Valid Values: `ACTIVE | INACTIVE | DELETED`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ServiceDiscovery

An object that represents the service discovery information for a virtual node.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

awsCloudMap

Specifies any AWS Cloud Map information for the virtual node.

Type: AwsCloudMapServiceDiscovery object

Required: No

dns

Specifies the DNS information for the virtual node.

Type: DnsServiceDiscovery object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SubjectAlternativeNameMatchers

An object that represents the methods by which a subject alternative name on a peer Transport Layer Security (TLS) certificate can be matched.

Contents

exact

The values sent must match the specified values exactly.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 254.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SubjectAlternativeNames

An object that represents the subject alternative names secured by the certificate.

Contents

match

An object that represents the criteria for determining a SANs match.

Type: SubjectAlternativeNameMatchers object

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TagRef

Optional metadata that you apply to a resource to assist with categorization and organization. Each tag consists of a key and an optional value, both of which you define. Tag keys can have a maximum character length of 128 characters, and tag values can have a maximum length of 256 characters.

Contents

key

One part of a key-value pair that make up a tag. A `key` is a general label that acts like a category for more specific tag values.

Type: String

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

Required: Yes

value

The optional part of a key-value pair that make up a tag. A `value` acts as a descriptor within a tag category (key).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TcpRoute

An object that represents a TCP route type.

Contents

action

The action to take if a match is determined.

Type: TcpRouteAction object

Required: Yes

match

An object that represents the criteria for determining a request match.

Type: TcpRouteMatch object

Required: No

timeout

An object that represents types of timeouts.

Type: TcpTimeout object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TcpRouteAction

An object that represents the action to take if a match is determined.

Contents

weightedTargets

An object that represents the targets that traffic is routed to when a request matches the route.

Type: Array of WeightedTarget objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TcpRouteMatch

An object representing the TCP route to match.

Contents

port

The port number to match on.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TcpTimeout

An object that represents types of timeouts.

Contents

idle

An object that represents an idle timeout. An idle timeout bounds the amount of time that a connection may be idle. The default value is none.

Type: Duration object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TlsValidationContext

An object that represents how the proxy will validate its peer during Transport Layer Security (TLS) negotiation.

Contents

trust

A reference to where to retrieve the trust chain when validating a peer's Transport Layer Security (TLS) certificate.

Type: TlsValidationContextTrust object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

subjectAlternativeNames

A reference to an object that represents the SANs for a Transport Layer Security (TLS) validation context. If you don't specify SANs on the *terminating* mesh endpoint, the Envoy proxy for that node doesn't verify the SAN on a peer client certificate. If you don't specify SANs on the *originating* mesh endpoint, the SAN on the certificate provided by the terminating endpoint must match the mesh endpoint service discovery configuration. Since SPIRE vended certificates have a SPIFFE ID as a name, you must set the SAN since the name doesn't match the service discovery name.

Type: SubjectAlternativeNames object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TlsValidationContextAcmTrust

An object that represents a Transport Layer Security (TLS) validation context trust for an AWS Certificate Manager certificate.

Contents

certificateAuthorityArns

One or more ACM Amazon Resource Name (ARN)s.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 3 items.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TlsValidationContextFileTrust

An object that represents a Transport Layer Security (TLS) validation context trust for a local file.

Contents

certificateChain

The certificate trust chain for a certificate stored on the file system of the virtual node that the proxy is running on.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TlsValidationContextSdsTrust

An object that represents a Transport Layer Security (TLS) Secret Discovery Service validation context trust. The proxy must be configured with a local SDS provider via a Unix Domain Socket. See App Mesh TLS documentation for more info.

Contents

secretName

A reference to an object that represents the name of the secret for a Transport Layer Security (TLS) Secret Discovery Service validation context trust.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TlsValidationContextTrust

An object that represents a Transport Layer Security (TLS) validation context trust.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

acm

A reference to an object that represents a Transport Layer Security (TLS) validation context trust for an AWS Certificate Manager certificate.

Type: TlsValidationContextAcmTrust object

Required: No

file

An object that represents a Transport Layer Security (TLS) validation context trust for a local file.

Type: TlsValidationContextFileTrust object

Required: No

sds

A reference to an object that represents a Transport Layer Security (TLS) Secret Discovery Service validation context trust.

Type: TlsValidationContextSdsTrust object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayAccessLog

The access log configuration for a virtual gateway.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

file

The file object to send virtual gateway access logs to.

Type: VirtualGatewayFileAccessLog object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayBackendDefaults

An object that represents the default properties for a backend.

Contents

clientPolicy

A reference to an object that represents a client policy.

Type: VirtualGatewayClientPolicy object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayClientPolicy

An object that represents a client policy.

Contents

tls

A reference to an object that represents a Transport Layer Security (TLS) client policy.

Type: VirtualGatewayClientPolicyTls object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayClientPolicyTls

An object that represents a Transport Layer Security (TLS) client policy.

Contents

validation

A reference to an object that represents a Transport Layer Security (TLS) validation context.

Type: VirtualGatewayTlsValidationContext object

Required: Yes

certificate

A reference to an object that represents a virtual gateway's client's Transport Layer Security (TLS) certificate.

Type: VirtualGatewayClientTlsCertificate object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

enforce

Whether the policy is enforced. The default is `True`, if a value isn't specified.

Type: Boolean

Required: No

ports

One or more ports that the policy is enforced for.

Type: Array of integers

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayClientTlsCertificate

An object that represents the virtual gateway's client's Transport Layer Security (TLS) certificate.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

file

An object that represents a local file certificate. The certificate must meet specific requirements and you must have proxy authorization enabled. For more information, see Transport Layer Security (TLS) .

Type: VirtualGatewayListenerTlsFileCertificate object

Required: No

sds

A reference to an object that represents a virtual gateway's client's Secret Discovery Service certificate.

Type: VirtualGatewayListenerTlsSdsCertificate object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayConnectionPool

An object that represents the type of virtual gateway connection pool.

Only one protocol is used at a time and should be the same protocol as the one chosen under port mapping.

If not present the default value for `maxPendingRequests` is 2147483647.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

grpc

An object that represents a type of connection pool.

Type: VirtualGatewayGrpcConnectionPool object

Required: No

http

An object that represents a type of connection pool.

Type: VirtualGatewayHttpConnectionPool object

Required: No

http2

An object that represents a type of connection pool.

Type: VirtualGatewayHttp2ConnectionPool object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayData

An object that represents a virtual gateway returned by a describe operation.

Contents

meshName

The name of the service mesh that the virtual gateway resides in.

Type: String

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

Required: Yes

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

Required: Yes

spec

The specifications of the virtual gateway.

Type: VirtualGatewaySpec object

Required: Yes

status

The current status of the virtual gateway.

Type: VirtualGatewayStatus object

Required: Yes

virtualGatewayName

The name of the virtual gateway.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayFileAccessLog

An object that represents an access log file.

Contents

path

The file path to write access logs to. You can use `/dev/stdout` to send access logs to standard out and configure your Envoy container to use a log driver, such as `awslogs`, to export the access logs to a log storage service such as Amazon CloudWatch Logs. You can also specify a path in the Envoy container's file system to write the files to disk.

Type: String

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

Required: Yes

format

The specified format for the virtual gateway access logs. It can be either `json_format` or `text_format`.

Type: LoggingFormat object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayGrpcConnectionPool

An object that represents a type of connection pool.

Contents

maxRequests

Maximum number of inflight requests Envoy can concurrently support across hosts in upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayHealthCheckPolicy

An object that represents the health check policy for a virtual gateway's listener.

Contents

healthyThreshold

The number of consecutive successful health checks that must occur before declaring the listener healthy.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: Yes

intervalMillis

The time period in milliseconds between each health check execution.

Type: Long

Valid Range: Minimum value of 5000. Maximum value of 300000.

Required: Yes

protocol

The protocol for the health check request. If you specify `grpc`, then your service must conform to the GRPC Health Checking Protocol.

Type: String

Valid Values: `http | http2 | grpc`

Required: Yes

timeoutMillis

The amount of time to wait when receiving a response from the health check, in milliseconds.

Type: Long

Valid Range: Minimum value of 2000. Maximum value of 60000.

Required: Yes

unhealthyThreshold

The number of consecutive failed health checks that must occur before declaring a virtual gateway unhealthy.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: Yes

path

The destination path for the health check request. This value is only used if the specified protocol is HTTP or HTTP/2. For any other protocol, this value is ignored.

Type: String

Required: No

port

The destination port for the health check request. This port must match the port defined in the PortMapping for the listener.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayHttp2ConnectionPool

An object that represents a type of connection pool.

Contents

maxRequests

Maximum number of inflight requests Envoy can concurrently support across hosts in upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayHttpConnectionPool

An object that represents a type of connection pool.

Contents

maxConnections

Maximum number of outbound TCP connections Envoy can establish concurrently with all hosts in upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

maxPendingRequests

Number of overflowing requests after `max_connections` Envoy will queue to upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayListener

An object that represents a listener for a virtual gateway.

Contents

portMapping

The port mapping information for the listener.

Type: VirtualGatewayPortMapping object

Required: Yes

connectionPool

The connection pool information for the virtual gateway listener.

Type: VirtualGatewayConnectionPool object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

healthCheck

The health check information for the listener.

Type: VirtualGatewayHealthCheckPolicy object

Required: No

tls

A reference to an object that represents the Transport Layer Security (TLS) properties for the listener.

Type: VirtualGatewayListenerTls object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayListenerTls

An object that represents the Transport Layer Security (TLS) properties for a listener.

Contents

certificate

An object that represents a Transport Layer Security (TLS) certificate.

Type: VirtualGatewayListenerTlsCertificate object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

mode

Specify one of the following modes.

- STRICT – Listener only accepts connections with TLS enabled.
- PERMISSIVE – Listener accepts connections with or without TLS enabled.
- DISABLED – Listener only accepts connections without TLS.

Type: String

Valid Values: `STRICT | PERMISSIVE | DISABLED`

Required: Yes

validation

A reference to an object that represents a virtual gateway's listener's Transport Layer Security (TLS) validation context.

Type: VirtualGatewayListenerTlsValidationContext object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayListenerTlsAcmCertificate

An object that represents an AWS Certificate Manager certificate.

Contents

certificateArn

The Amazon Resource Name (ARN) for the certificate. The certificate must meet specific requirements and you must have proxy authorization enabled. For more information, see Transport Layer Security (TLS).

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayListenerTlsCertificate

An object that represents a listener's Transport Layer Security (TLS) certificate.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

acm

A reference to an object that represents an AWS Certificate Manager certificate.

Type: VirtualGatewayListenerTlsAcmCertificate object

Required: No

file

A reference to an object that represents a local file certificate.

Type: VirtualGatewayListenerTlsFileCertificate object

Required: No

sds

A reference to an object that represents a virtual gateway's listener's Secret Discovery Service certificate.

Type: VirtualGatewayListenerTlsSdsCertificate object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayListenerTlsFileCertificate

An object that represents a local file certificate. The certificate must meet specific requirements and you must have proxy authorization enabled. For more information, see Transport Layer Security (TLS).

Contents

certificateChain

The certificate chain for the certificate.

Type: String

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

Required: Yes

privateKey

The private key for a certificate stored on the file system of the mesh endpoint that the proxy is running on.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayListenerTlsSdsCertificate

An object that represents the virtual gateway's listener's Secret Discovery Service certificate.The proxy must be configured with a local SDS provider via a Unix Domain Socket. See App MeshTLS documentation for more info.

Contents

secretName

A reference to an object that represents the name of the secret secret requested from the Secret Discovery Service provider representing Transport Layer Security (TLS) materials like a certificate or certificate chain.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayListenerTlsValidationContext

An object that represents a virtual gateway's listener's Transport Layer Security (TLS) validation context.

Contents

trust

A reference to where to retrieve the trust chain when validating a peer’s Transport Layer Security (TLS) certificate.

Type: VirtualGatewayListenerTlsValidationContextTrust object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

subjectAlternativeNames

A reference to an object that represents the SANs for a virtual gateway listener's Transport Layer Security (TLS) validation context.

Type: SubjectAlternativeNames object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayListenerTlsValidationContextTrust

An object that represents a virtual gateway's listener's Transport Layer Security (TLS) validation context trust.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

file

An object that represents a Transport Layer Security (TLS) validation context trust for a local file.

Type: VirtualGatewayTlsValidationContextFileTrust object

Required: No

sds

A reference to an object that represents a virtual gateway's listener's Transport Layer Security (TLS) Secret Discovery Service validation context trust.

Type: VirtualGatewayTlsValidationContextSdsTrust object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayLogging

An object that represents logging information.

Contents

accessLog

The access log configuration.

Type: VirtualGatewayAccessLog object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayPortMapping

An object that represents a port mapping.

Contents

port

The port used for the port mapping. Specify one protocol.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: Yes

protocol

The protocol used for the port mapping.

Type: String

Valid Values: `http | http2 | grpc`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayRef

An object that represents a virtual gateway returned by a list operation.

Contents

arn

The full Amazon Resource Name (ARN) for the resource.

Type: String

Required: Yes

createdAt

The Unix epoch timestamp in seconds for when the resource was created.

Type: Timestamp

Required: Yes

lastUpdatedAt

The Unix epoch timestamp in seconds for when the resource was last updated.

Type: Timestamp

Required: Yes

meshName

The name of the service mesh that the resource resides in.

Type: String

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

resourceOwner

The AWS IAM account ID of the resource owner. If the account ID is not your own, then it's the ID of the mesh owner or of another account that the mesh is shared with. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

version

The version of the resource. Resources are created at version 1, and this version is incremented each time that they're updated.

Type: Long

Required: Yes

virtualGatewayName

The name of the resource.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

VirtualGatewaySpec

An object that represents the specification of a service mesh resource.

Contents

listeners

The listeners that the mesh endpoint is expected to receive inbound traffic from. You can specify one listener.

Type: Array of VirtualGatewayListener objects

Required: Yes

backendDefaults

A reference to an object that represents the defaults for backends.

Type: VirtualGatewayBackendDefaults object

Required: No

logging

An object that represents logging information.

Type: VirtualGatewayLogging object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayStatus

An object that represents the status of the mesh resource.

Contents

status

The current status.

Type: String

Valid Values: `ACTIVE | INACTIVE | DELETED`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayTlsValidationContext

An object that represents a Transport Layer Security (TLS) validation context.

Contents

trust

A reference to where to retrieve the trust chain when validating a peer's Transport Layer Security (TLS) certificate.

Type: VirtualGatewayTlsValidationContextTrust object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

subjectAlternativeNames

A reference to an object that represents the SANs for a virtual gateway's listener's Transport Layer Security (TLS) validation context.

Type: SubjectAlternativeNames object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayTlsValidationContextAcmTrust

An object that represents a Transport Layer Security (TLS) validation context trust for an AWS Certificate Manager certificate.

Contents

certificateAuthorityArns

One or more ACM Amazon Resource Name (ARN)s.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 3 items.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayTlsValidationContextFileTrust

An object that represents a Transport Layer Security (TLS) validation context trust for a local file.

Contents

certificateChain

The certificate trust chain for a certificate stored on the file system of the virtual node that the proxy is running on.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayTlsValidationContextSdsTrust

An object that represents a virtual gateway's listener's Transport Layer Security (TLS) Secret Discovery Service validation context trust. The proxy must be configured with a local SDS provider via a Unix Domain Socket. See App Mesh TLS documentation for more info.

Contents

secretName

A reference to an object that represents the name of the secret for a virtual gateway's Transport Layer Security (TLS) Secret Discovery Service validation context trust.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualGatewayTlsValidationContextTrust

An object that represents a Transport Layer Security (TLS) validation context trust.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

acm

A reference to an object that represents a Transport Layer Security (TLS) validation context trust for an AWS Certificate Manager certificate.

Type: VirtualGatewayTlsValidationContextAcmTrust object

Required: No

file

An object that represents a Transport Layer Security (TLS) validation context trust for a local file.

Type: VirtualGatewayTlsValidationContextFileTrust object

Required: No

sds

A reference to an object that represents a virtual gateway's Transport Layer Security (TLS) Secret Discovery Service validation context trust.

Type: VirtualGatewayTlsValidationContextSdsTrust object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeConnectionPool

An object that represents the type of virtual node connection pool.

Only one protocol is used at a time and should be the same protocol as the one chosen under port mapping.

If not present the default value for `maxPendingRequests` is `2147483647`.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

grpc

An object that represents a type of connection pool.

Type: VirtualNodeGrpcConnectionPool object

Required: No

http

An object that represents a type of connection pool.

Type: VirtualNodeHttpConnectionPool object

Required: No

http2

An object that represents a type of connection pool.

Type: VirtualNodeHttp2ConnectionPool object

Required: No

tcp

An object that represents a type of connection pool.

Type: VirtualNodeTcpConnectionPool object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeData

An object that represents a virtual node returned by a describe operation.

Contents

meshName

The name of the service mesh that the virtual node resides in.

Type: String

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

Required: Yes

metadata

The associated metadata for the virtual node.

Type: ResourceMetadata object

Required: Yes

spec

The specifications of the virtual node.

Type: VirtualNodeSpec object

Required: Yes

status

The current status for the virtual node.

Type: VirtualNodeStatus object

Required: Yes

virtualNodeName

The name of the virtual node.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeGrpcConnectionPool

An object that represents a type of connection pool.

Contents

maxRequests

Maximum number of inflight requests Envoy can concurrently support across hosts in upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeHttp2ConnectionPool

An object that represents a type of connection pool.

Contents

maxRequests

Maximum number of inflight requests Envoy can concurrently support across hosts in upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeHttpConnectionPool

An object that represents a type of connection pool.

Contents

maxConnections

Maximum number of outbound TCP connections Envoy can establish concurrently with all hosts in upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

maxPendingRequests

Number of overflowing requests after `max_connections` Envoy will queue to upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeRef

An object that represents a virtual node returned by a list operation.

Contents

arn

The full Amazon Resource Name (ARN) for the virtual node.

Type: String

Required: Yes

createdAt

The Unix epoch timestamp in seconds for when the resource was created.

Type: Timestamp

Required: Yes

lastUpdatedAt

The Unix epoch timestamp in seconds for when the resource was last updated.

Type: Timestamp

Required: Yes

meshName

The name of the service mesh that the virtual node resides in.

Type: String

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

resourceOwner

The AWS IAM account ID of the resource owner. If the account ID is not your own, then it's the ID of the mesh owner or of another account that the mesh is shared with. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

version

The version of the resource. Resources are created at version 1, and this version is incremented each time that they're updated.

Type: Long

Required: Yes

virtualNodeName

The name of the virtual node.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

VirtualNodeServiceProvider

An object that represents a virtual node service provider.

Contents

virtualNodeName

The name of the virtual node that is acting as a service provider.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeSpec

An object that represents the specification of a virtual node.

Contents

backendDefaults

A reference to an object that represents the defaults for backends.

Type: BackendDefaults object

Required: No

backends

The backends that the virtual node is expected to send outbound traffic to.

> **Important**
>
> App Mesh doesn't validate the existence of those virtual services specified in backends. This is to prevent a cyclic dependency between virtual nodes and virtual services creation. Make sure the virtual service name is correct. The virtual service can be created afterwards if it doesn't already exist.

Type: Array of Backend objects

Required: No

listeners

The listener that the virtual node is expected to receive inbound traffic from. You can specify one listener.

Type: Array of Listener objects

Required: No

logging

The inbound and outbound access logging information for the virtual node.

Type: Logging object

Required: No

serviceDiscovery

The service discovery information for the virtual node. If your virtual node does not expect ingress traffic, you can omit this parameter. If you specify a `listener`, then you must specify service discovery information.

Type: ServiceDiscovery object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeStatus

An object that represents the current status of the virtual node.

Contents

status

The current status of the virtual node.

Type: String

Valid Values: `ACTIVE | INACTIVE | DELETED`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualNodeTcpConnectionPool

An object that represents a type of connection pool.

Contents

maxConnections

Maximum number of outbound TCP connections Envoy can establish concurrently with all hosts in upstream cluster.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualRouterData

An object that represents a virtual router returned by a describe operation.

Contents

meshName

The name of the service mesh that the virtual router resides in.

Type: String

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

Required: Yes

metadata

The associated metadata for the virtual router.

Type: ResourceMetadata object

Required: Yes

spec

The specifications of the virtual router.

Type: VirtualRouterSpec object

Required: Yes

status

The current status of the virtual router.

Type: VirtualRouterStatus object

Required: Yes

virtualRouterName

The name of the virtual router.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualRouterListener

An object that represents a virtual router listener.

Contents

portMapping

An object that represents a port mapping.

Type: PortMapping object

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualRouterRef

An object that represents a virtual router returned by a list operation.

Contents

arn

The full Amazon Resource Name (ARN) for the virtual router.

Type: String

Required: Yes

createdAt

The Unix epoch timestamp in seconds for when the resource was created.

Type: Timestamp

Required: Yes

lastUpdatedAt

The Unix epoch timestamp in seconds for when the resource was last updated.

Type: Timestamp

Required: Yes

meshName

The name of the service mesh that the virtual router resides in.

Type: String

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

resourceOwner

The AWS IAM account ID of the resource owner. If the account ID is not your own, then it's the ID of the mesh owner or of another account that the mesh is shared with. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

version

The version of the resource. Resources are created at version 1, and this version is incremented each time that they're updated.

Type: Long

Required: Yes

virtualRouterName

The name of the virtual router.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

VirtualRouterServiceProvider

An object that represents a virtual node service provider.

Contents

virtualRouterName

The name of the virtual router that is acting as a service provider.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualRouterSpec

An object that represents the specification of a virtual router.

Contents

listeners

The listeners that the virtual router is expected to receive inbound traffic from.

Type: Array of VirtualRouterListener objects

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualRouterStatus

An object that represents the status of a virtual router.

Contents

status

The current status of the virtual router.

Type: String

Valid Values: `ACTIVE | INACTIVE | DELETED`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualServiceBackend

An object that represents a virtual service backend for a virtual node.

Contents

virtualServiceName

The name of the virtual service that is acting as a virtual node backend.

> **Important**
>
> App Mesh doesn't validate the existence of those virtual services specified in backends. This is to prevent a cyclic dependency between virtual nodes and virtual services creation. Make sure the virtual service name is correct. The virtual service can be created afterwards if it doesn't already exist.

Type: String

Required: Yes

clientPolicy

A reference to an object that represents the client policy for a backend.

Type: ClientPolicy object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualServiceData

An object that represents a virtual service returned by a describe operation.

Contents

meshName

The name of the service mesh that the virtual service resides in.

Type: String

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

Required: Yes

metadata

An object that represents metadata for a resource.

Type: ResourceMetadata object

Required: Yes

spec

The specifications of the virtual service.

Type: VirtualServiceSpec object

Required: Yes

status

The current status of the virtual service.

Type: VirtualServiceStatus object

Required: Yes

virtualServiceName

The name of the virtual service.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualServiceProvider

An object that represents the provider for a virtual service.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

virtualNode

The virtual node associated with a virtual service.

Type: VirtualNodeServiceProvider object

Required: No

virtualRouter

The virtual router associated with a virtual service.

Type: VirtualRouterServiceProvider object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualServiceRef

An object that represents a virtual service returned by a list operation.

Contents

arn

The full Amazon Resource Name (ARN) for the virtual service.

Type: String

Required: Yes

createdAt

The Unix epoch timestamp in seconds for when the resource was created.

Type: Timestamp

Required: Yes

lastUpdatedAt

The Unix epoch timestamp in seconds for when the resource was last updated.

Type: Timestamp

Required: Yes

meshName

The name of the service mesh that the virtual service resides in.

Type: String

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

Required: Yes

meshOwner

The AWS IAM account ID of the service mesh owner. If the account ID is not your own, then it's the ID of the account that shared the mesh with your account. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

resourceOwner

The AWS IAM account ID of the resource owner. If the account ID is not your own, then it's the ID of the mesh owner or of another account that the mesh is shared with. For more information about mesh sharing, see Working with shared meshes.

Type: String

Length Constraints: Fixed length of 12.

Required: Yes

version

The version of the resource. Resources are created at version 1, and this version is incremented each time that they're updated.

Type: Long

Required: Yes

virtualServiceName

The name of the virtual service.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualServiceSpec

An object that represents the specification of a virtual service.

Contents

provider

The App Mesh object that is acting as the provider for a virtual service. You can specify a single virtual node or virtual router.

Type: VirtualServiceProvider object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VirtualServiceStatus

An object that represents the status of a virtual service.

Contents

status

The current status of the virtual service.

Type: String

Valid Values: `ACTIVE | INACTIVE | DELETED`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WeightedTarget

An object that represents a target and its relative weight. Traffic is distributed across targets according to their relative weight. For example, a weighted target with a relative weight of 50 receives five times as much traffic as one with a relative weight of 10. The total weight for all targets combined must be less than or equal to 100.

Contents

virtualNode

The virtual node to associate with the weighted target.

Type: String

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

Required: Yes

weight

The relative weight of the weighted target.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: Yes

port

The targeted port of the weighted object.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3