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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 April 2, 2020.
Actions

The following actions are supported:

- CreateMesh (p. 3)
- CreateRoute (p. 7)
- CreateVirtualNode (p. 16)
- CreateVirtualRouter (p. 24)
- CreateVirtualService (p. 29)
- DeleteMesh (p. 34)
- DeleteRoute (p. 37)
- DeleteVirtualNode (p. 43)
- DeleteVirtualRouter (p. 48)
- DeleteVirtualService (p. 52)
- DescribeMesh (p. 56)
- DescribeRoute (p. 59)
- DescribeVirtualNode (p. 65)
- DescribeVirtualRouter (p. 70)
- DescribeVirtualService (p. 74)
- ListMeshes (p. 78)
- ListRoutes (p. 81)
- ListTagsForResource (p. 85)
- ListVirtualNodes (p. 88)
- ListVirtualRouters (p. 92)
- ListVirtualServices (p. 96)
- TagResource (p. 100)
- UntagResource (p. 103)
- UpdateMesh (p. 105)
- UpdateRoute (p. 108)
- UpdateVirtualNode (p. 117)
- UpdateVirtualRouter (p. 125)
- UpdateVirtualService (p. 130)
CreateMesh

Creates a service mesh. A service mesh is a logical boundary for network traffic between the services that reside within it.

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.

Request Syntax

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

{
    "clientToken": "string",
    "meshName": "string",
    "spec": {
        "egressFilter": {
            "type": "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 (p. 3)**

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 (p. 3)**

The name to use for the service mesh.

Type: String

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

Required: Yes

**spec (p. 3)**

The service mesh specification to apply.

Type: MeshSpec (p. 175) object
Required: No

tags (p. 3)

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 (p. 187) 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

```json
{
    "mesh": {
        "meshName": "string",
        "metadata": {
            "arn": "string",
            "createdAt": number,
            "lastUpdatedAt": number,
            "meshOwner": "string",
            "resourceOwner": "string",
            "uid": "string",
            "version": number
        },
        "spec": {
            "egressFilter": {
                "type": "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.

mesh (p. 4)

The full description of your service mesh following the create call.

Type: MeshData (p. 173) 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

**InternalServerException**

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

---

**Example**

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-1:012345678910:mesh/ecs-mesh",
        "createdAt": 1.551295405298E9,
        "lastUpdatedAt": 1.551295405298E9,
        "uid": "2d2911c-f2dd-44a6-b620-33661cf6fe97",
        "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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 use the prefix parameter in your route specification 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.

If your route matches a request, you can distribute traffic to one or more target virtual nodes with relative weighting.

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": [
          {
            "virtualNode": "string",
            "weight": number
          }
        ]
      },
      "match": {
        "metadata": [
          {
            "invert": boolean,
            "match": {
              "exact": "string",
              "prefix": "string",
              "range": {
                "end": number,
                "start": number
              },
              "regex": "string",
              "suffix": "string"
            },
            "name": "string"
          }
        ],
        "methodName": "string",
        "serviceName": "string"
      }
    },
    "retryPolicy": {
      "grpcRetryEvents": [ "string" ],
      "httpRetryEvents": [ "string" ],
      "maxRetries": number,
      "perRetryTimeout": {
        "unit": "string",
        "value": number
      },
      "tcpRetryEvents": [ "string" ]
    }
  }
}
"http2Route": {
"action": {
 "weightedTargets": [ 
{ 
"virtualNode": "string",
"weight": number
 }
],
"match": {
"headers": [ 
{ 
"invert": boolean,
"match": { 
"exact": "string",
"prefix": "string",
"range": { 
"end": number,
"start": number
 },
"regex": "string",
"suffix": "string"
},
"name": "string"
 }
],
"method": "string",
"prefix": "string",
"scheme": "string"
},
"retryPolicy": { 
"httpRetryEvents": [ "string" ],
"maxRetries": number,
"perRetryTimeout": { 
"unit": "string",
"value": number
 },
"tcpRetryEvents": [ "string" ]
 }
},
"httpRoute": {
"action": {
 "weightedTargets": [ 
{ 
"virtualNode": "string",
"weight": number
 }
],
"match": {
"headers": [ 
{ 
"invert": boolean,
"match": { 
"exact": "string",
"prefix": "string",
"range": { 
"end": number,
"start": number
 },
"regex": "string",
"suffix": "string"
},
"name": "string"
 }
]"}
URI Request Parameters

The request requires the following URI parameters.

**meshName (p. 7)**

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

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

**meshOwner (p. 7)**

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 (p. 7)**

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.

**Request Body**

The request accepts the following data in JSON format.
**clientToken (p. 7)**

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 (p. 7)**

The name to use for the route.

Type: String

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

Required: Yes

**spec (p. 7)**

The route specification to apply.

Type: RouteSpec (p. 184) object

Required: Yes

**tags (p. 7)**

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 (p. 187) 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

{
  "route": {
    "meshName": "string",
    "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
    },
    "routeName": "string",
    "spec": {
      "grpcRoute": {
        "action": {
          "weightedTargets": [
```
{
    "virtualNode": "string",
    "weight": number
}
]
,"match": {
    "metadata": [
    {
        "invert": boolean,
        "match": {
            "exact": "string",
            "prefix": "string",
            "range": {
                "end": number,
                "start": number
            },
            "regex": "string",
            "suffix": "string"
        },
        "name": "string"
    }
    ],
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    "match": {
        "headers": [
        {
            "invert": boolean,
            "match": {
                "exact": "string",
                "prefix": "string",
                "range": {
                    "end": number,
                    "start": number
                },
                "regex": "string",
                "suffix": "string"
            },
            "name": "string"
        }
        ],
        "method": "string",
        "prefix": "string",
        "scheme": "string"
    }
}
"retryPolicy": {
  "httpRetryEvents": [ "string" ],
  "maxRetries": number,
  "perRetryTimeout": {
    "unit": "string",
    "value": number
  },
  "tcpRetryEvents": [ "string" ]
},
"httpRoute": {
  "action": {
    "weightedTargets": [
      {
        "virtualNode": "string",
        "weight": number
      }
    ],
    "match": {
      "headers": [
        {
          "invert": boolean,
          "match": {
            "exact": "string",
            "prefix": "string",
            "range": {
              "end": number,
              "start": number
            },
            "regex": "string",
            "suffix": "string"
          },
          "name": "string"
        }
      ],
      "method": "string",
      "prefix": "string",
      "scheme": "string"
    },
    "retryPolicy": {
      "httpRetryEvents": [ "string" ],
      "maxRetries": number,
      "perRetryTimeout": {
        "unit": "string",
        "value": number
      },
      "tcpRetryEvents": [ "string" ]
    }
  },
  "priority": number,
  "tcpRoute": {
    "action": {
      "weightedTargets": [
        {
          "virtualNode": "string",
          "weight": 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.

route (p. 10)

The full description of your mesh following the create call.

Type: RouteData (p. 180) 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

LimitExceededExeption

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

Example

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

```http
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
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
```
See Also

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

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

Any inbound traffic that your virtual node expects should be specified as a listener. Any outbound traffic that your virtual node expects to reach should be 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 (either the full ARN or the truncated resource name: for example, mesh/default/virtualNode/simpleapp) as the APPMESH_VIRTUAL_NODE_NAME 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**

If you require your Envoy stats or tracing to use a different name, you can override the node.cluster value that is set by APPMESH_VIRTUAL_NODE_NAME with the APPMESH_VIRTUAL_NODE_CLUSTER environment variable.

For more information about virtual nodes, see [Virtual Nodes](#).

### Request Syntax

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

{
  "clientToken": "string",
  "spec": {
    "backendDefaults": {
      "clientPolicy": {
        "tls": {
          "enforce": boolean,
          "ports": [ number ],
          "validation": {
            "trust": {
              "acm": {
                "certificateAuthorityArns": [ "string" ]
              },
              "file": {
                "certificateChain": "string"
              }
            }
          }
        }
      }
    },
    "backends": [
      {
        "virtualService": {
          "clientPolicy": {
            "tls": {
              "enforce": boolean,
              "ports": [ number ],
              "validation": {
                "trust": {
                  "acm": {
                    "certificateAuthorityArns": [ "string" ]
                  },
                  "file": {
                    "certificateChain": "string"
                  }
                }
              }
            }
          }
        }
      }
    ]
  }
}
```

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"file": {
    "certificateChain": "string"
  }
},
"virtualServiceName": "string"
}
],
"listeners": [
  {
    "healthCheck": {
      "healthyThreshold": number,
      "intervalMillis": number,
      "path": "string",
      "port": number,
      "protocol": "string",
      "timeoutMillis": number,
      "unhealthyThreshold": number
    },
    "portMapping": {
      "port": number,
      "protocol": "string"
    },
    "tls": {
      "certificate": {
        "acm": {
          "certificateArn": "string"
        },
        "file": {
          "certificateChain": "string",
          "privateKey": "string"
        }
      },
      "mode": "string"
    }
  },
  "logging": {
    "accessLog": {
      "file": {
        "path": "string"
      }
    }
  },
  "serviceDiscovery": {
    "awsCloudMap": {
      "attributes": [
        {
          "key": "string",
          "value": "string"
        }
      ],
      "namespaceName": "string",
      "serviceName": "string"
    },
    "dns": {
      "hostname": "string"
    }
  },
  "tags": [
    {
      "key": "string",
      "value": "string"
    }
  ]}
URI Request Parameters

The request requires the following URI parameters.

meshName (p. 16)

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

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

meshOwner (p. 16)

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 (p. 16)

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 (p. 16)

The virtual node specification to apply.

Type: VirtualNodeSpec (p. 198) object

Required: Yes

tags (p. 16)

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 (p. 187) objects

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

Required: No

virtualNodeName (p. 16)

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

{  
  "virtualNode": {  
    "meshName": "string",
    "metadata": {  
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
    },  
  "spec": {  
    "backendDefaults": {  
      "clientPolicy": {  
        "tls": {  
          "enforce": boolean,
          "ports": [ number ],
          "validation": {  
            "trust": {  
              "acm": {  
                "certificateAuthorityArns": [ "string" ]
              },
              "file": {  
                "certificateChain": "string"
              }
            }  
          }  
        }  
      }  
    },  
  "backends": [  
    {  
      "virtualService": {  
        "clientPolicy": {  
          "tls": {  
            "enforce": boolean,
            "ports": [ number ],
            "validation": {  
              "trust": {  
                "acm": {  
                  "certificateAuthorityArns": [ "string" ]
                },
                "file": {  
                  "certificateChain": "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.
virtualNode (p. 19)
The full description of your virtual node following the create call.
Type: VirtualNodeData (p. 194) 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

Example

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": "c148cbbb-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": {
  "createdAt": 1.551295471546E9,
  "lastUpdatedAt": 1.551295471546E9,
  "uid": "887cfab8-a727-41b2-8cd7-2fdebf6304e",
  "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
- AWS SDK for Java
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateVirtualRouter

Creates a virtual router within a service mesh.

Any inbound traffic that your virtual router expects should be specified as a listener.

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 requires the following URI parameters.

meshName (p. 24)

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

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

meshOwner (p. 24)

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 (p. 24)

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 (p. 24)

The virtual router specification to apply.

Type: VirtualRouterSpec (p. 206) object
Required: Yes

tags (p. 24)

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 (p. 187) objects
Array Members: Minimum number of 0 items. Maximum number of 50 items.
Required: No

virtualRouterName (p. 24)

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

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

**virtualRouter (p. 25)**

The full description of your virtual router following the create call.

Type: VirtualRouterData (p. 201) 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

**InternalServerException**

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

HTTP Status Code: 500

**LimitExceedededException**

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

**Example**

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**

```plaintext
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**

```plaintext
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-1:012345678910: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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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": {
            "virtualNode": {
                "virtualNodeName": "string"
            },
            "virtualRouter": {
                "virtualRouterName": "string"
            }
        }
    },
    "tags": [
        {
            "key": "string",
            "value": "string"
        }
    ],
    "virtualServiceName": "string"
}
```

URI Request Parameters

The request requires the following URI parameters.

**meshName (p. 29)**

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

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

**meshOwner (p. 29)**

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 (p. 29)

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 (p. 29)

The virtual service specification to apply.

Type: VirtualServiceSpec (p. 213) object

Required: Yes

tags (p. 29)

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 (p. 187) objects

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

Required: No

virtualServiceName (p. 29)

The name to use for the virtual service.

Type: String

Required: Yes

Response Syntax

HTTP/1.1 200
Content-type: application/json

{
  "virtualService": {
    "meshName": "string",
    "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
    },
    "spec": {
      "provider": {
        "virtualNode": {
          "virtualNodeName": "string"
        },
        "virtualRouter": {
          "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.

**virtualService (p. 30)**

The full description of your virtual service following the create call.

Type: `VirtualServiceData (p. 209)` 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

**InternalServerException**

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

**Example**

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**

```plaintext
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**

```plaintext
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-1:012345678910: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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

meshName (p. 34)

The name of the service mesh to delete.

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

Request Body

The request does not have a request body.

Response Syntax

HTTP/1.1 200
Content-type: application/json

{  
  "mesh": {  
    "meshName": "string",
    "metadata": {  
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
    },
    "spec": {  
      "egressFilter": {  
        "type": "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.

**mesh (p. 34)**

The service mesh that was deleted.

Type: *MeshData (p. 173)* 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

**Example**

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-1:012345678910:mesh/ecs-mesh",
    "createdAt": 1.551295405298E9,
    "lastUpdatedAt": 1.551299905963E9,
    "uid": "2d29a11c-f2dd-44a6-b620-33661cfdf25f",
    "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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

meshName (p. 37)

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

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

meshOwner (p. 37)

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 (p. 37)

The name of the route to delete.

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

virtualRouterName (p. 37)

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

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

Request Body

The request does not have a request body.

Response Syntax

HTTP/1.1 200
Content-type: application/json

{
    "route": {
        "meshName": "string",
        "metadata": {
            "arn": "string",
            "createdAt": number,
            "lastUpdatedAt": number,
            "meshOwner": "string",
        }
    }
}
"resourceOwner": "string",
"uid": "string",
"version": number
},
"routeName": "string",
"spec": {
  "grpcRoute": {
    "action": {
      "weightedTargets": [
      {
        "virtualNode": "string",
        "weight": number
      }
      ],
      "match": {
        "metadata": [
        {
          "invert": boolean,
          "match": {
            "exact": "string",
            "prefix": "string",
            "range": {
              "end": number,
              "start": number
            },
            "regex": "string",
            "suffix": "string"
          },
          "name": "string"
        }
        ],
        "methodName": "string",
        "serviceName": "string"
      },
      "retryPolicy": {
        "grpcRetryEvents": [ "string" ],
        "httpRetryEvents": [ "string" ],
        "maxRetries": number,
        "perRetryTimeout": {
          "unit": "string",
          "value": number
        },
        "tcpRetryEvents": [ "string" ]
      }
    },
  "http2Route": {
    "action": {
      "weightedTargets": [
      {
        "virtualNode": "string",
        "weight": number
      }
      ],
      "match": {
        "headers": [
        {
          "invert": boolean,
          "match": {
            "exact": "string",
            "prefix": "string",
            "range": {
              "end": number,
              "start": number
            }
          },
          "name": "string"
        },
        "method": "string",
        "serviceName": "string"
      },
    },
  }
}
}
 Response Syntax

```
"regex": "string",
"suffix": "string"
},
"name": "string"
],
"method": "string",
"prefix": "string",
"scheme": "string"
},
"retryPolicy": {
    "httpRetryEvents": [ "string" ],
    "maxRetries": number,
    "perRetryTimeout": {
        "unit": "string",
        "value": number
    },
    "tcpRetryEvents": [ "string" ]
}
},
"httpRoute": {
    "action": {
        "weightedTargets": [
            { "virtualNode": "string",
              "weight": number
            }
        ],
    "match": {
        "headers": [
            {
                "invert": boolean,
                "match": {
                    "exact": "string",
                    "prefix": "string",
                    "range": {
                        "end": number,
                        "start": number
                    },
                    "regex": "string",
                    "suffix": "string"
                },
                "name": "string"
            }
        ],
        "method": "string",
        "prefix": "string",
        "scheme": "string"
    },
    "retryPolicy": {
        "httpRetryEvents": [ "string" ],
        "maxRetries": number,
        "perRetryTimeout": {
            "unit": "string",
            "value": number
        },
        "tcpRetryEvents": [ "string" ]
    }
},
"priority": number,
"tcpRoute": {
    "action": {
        "weightedTargets": [
            { "virtualNode": "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.

**route (p. 37)**

The route that was deleted.

Type: RouteData (p. 180) 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

Example

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": {
    "createdAt": "2019-02-27T20:33:28Z",
    "lastUpdatedAt": "2019-02-27T20:33:28Z",
    "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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

meshName (p. 43)

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

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

meshOwner (p. 43)

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 (p. 43)

The name of the virtual node to delete.

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

Request Body

The request does not have a request body.

Response Syntax

HTTP/1.1 200
Content-type: application/json

{
    "virtualNode": {
        "meshName": "string",
        "metadata": {
            "arn": "string",
            "createdAt": number,
            "lastUpdatedAt": number,
            "meshOwner": "string",
            "resourceOwner": "string",
            "uid": "string",
            "version": number
        }
    }
}
"spec": {
   "backendDefaults": {
      "clientPolicy": {
         "tls": {
            "enforce": boolean,
            "ports": [ number ],
            "validation": {
               "trust": {
                  "acm": {
                     "certificateAuthorityArns": [ "string" ]
                  },
                  "file": {
                     "certificateChain": "string"
                  }
               }
            }
         }
      }
   },
   "backends": [
      {
         "virtualService": {
            "clientPolicy": {
               "tls": {
                  "enforce": boolean,
                  "ports": [ number ],
                  "validation": {
                     "trust": {
                        "acm": {
                           "certificateAuthorityArns": [ "string" ]
                        },
                        "file": {
                           "certificateChain": "string"
                        }
                     }
                  }
               }
            },
            "virtualServiceName": "string"
         }
      }
   ],
   "listeners": [
      {
         "healthCheck": {
            "healthyThreshold": number,
            "intervalMillis": number,
            "path": "string",
            "port": number,
            "protocol": "string",
            "timeoutMillis": number,
            "unhealthyThreshold": number
         },
         "portMapping": {
            "port": number,
            "protocol": "string"
         },
         "tls": {
            "certificate": {
               "acm": {
                  "certificateArn": "string"
               },
               "file": {
                  "certificateChain": "string",
                  "privateKey": "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.

**virtualNode (p. 43)**

The virtual node that was deleted.

Type: `VirtualNodeData (p. 194)` 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

**Example**

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": {
    "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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

meshName (p. 48)

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


meshOwner (p. 48)

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 (p. 48)

The name of the virtual router to delete.


Request Body

The request does not have a request body.

Response Syntax

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

{
   "virtualRouter": {
      "meshName": "string",
      "metadata": {
         "arn": "string",
         "createdAt": number,
         "lastUpdatedAt": number,
         "meshOwner": "string",
         "resourceOwner": "string",
         "uid": "string",
         "version": number
      },
      "spec": {
```

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"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.

**virtualRouter (p. 48)**

The virtual router that was deleted.

Type: VirtualRouterData (p. 201) 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

**Example**

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**

```plaintext
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**

```plaintext
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-1:012345678910: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,
```
See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

- **meshName (p. 52)**
  
  The name of the service mesh to delete the virtual service in.
  
  Length Constraints: Minimum length of 1. Maximum length of 255.

- **meshOwner (p. 52)**
  
  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 (p. 52)**
  
  The name of the virtual service to delete.

**Request Body**

The request does not have a request body.

**Response Syntax**

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

{
  "virtualService": {
    "meshName": "string",
    "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
    },
    "spec": {
      "provider": {
        "virtualNode": {
          "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.

virtualService (p. 52)

The virtual service that was deleted.

Type: VirtualServiceData (p. 209) 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
Example

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
x-envoy-upstream-service-time: 78
server: envoy
Connection: keep-alive

{
  "meshName": "ecs-mesh",
  "metadata": {
    "arn": "arn:aws:appmesh:us-east-1:012345678910:mesh/ecs-mesh/virtualService/colorgateway.default.svc.cluster.local",
    "createdAt": 1551307250696E9,
    "lastUpdatedAt": 1551309198729E9,
    "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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

meshName (p. 56)

The name of the service mesh to describe.

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

meshOwner (p. 56)

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

```json
{
  "mesh": {
    "meshName": "string",
    "metadata": {
      "arn": "string",
      "createdAt": number,
      "lastUpdatedAt": number,
      "meshOwner": "string",
      "resourceOwner": "string",
      "uid": "string",
      "version": number
    },
    "spec": {
      "egressFilter": {
        "type": "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.

mesh (p. 56)

The full description of your service mesh.

Type: MeshData (p. 173) 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

Example

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**

```plaintext
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**

```plaintext
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-1:012345678910: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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

**meshName (p. 59)**

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

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

**meshOwner (p. 59)**

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 (p. 59)**

The name of the route to describe.

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

**virtualRouterName (p. 59)**

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

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

**Request Body**

The request does not have a request body.

**Response Syntax**

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

{
    "route": {
        "meshName": "string",
        "metadata": {
            "arn": "string",
            "createdAt": number,
            "lastUpdatedAt": number,
            "meshOwner": "string",
            "resourceOwner": "string",
```
"uid": "string",
"version": number
},
"routeName": "string",
"spec": {
"grpcRoute": {
"action": {
"weightedTargets": [
{
"virtualNode": "string",
"weight": number
}
],
"match": {
"metadata": [
{
"invert": boolean,
"match": {
"exact": "string",
"prefix": "string",
"range": {
"end": number,
"start": number
},
"regex": "string",
"suffix": "string"
},
"name": "string"
}
],
"methodName": "string",
"serviceName": "string"
},
"retryPolicy": {
"grpcRetryEvents": [ "string" ],
"httpRetryEvents": [ "string" ],
"maxRetries": number,
"perRetryTimeout": {
"unit": "string",
"value": number
},
"tcpRetryEvents": [ "string" ]
},
"http2Route": {
"action": {
"weightedTargets": [
{
"virtualNode": "string",
"weight": number
}
],
"match": {
"headers": [
{
"invert": boolean,
"match": {
"exact": "string",
"prefix": "string",
"range": {
"end": number,
"start": number
},
"regex": "string",
"suffix": "string"
},
"name": "string"
"suffix": "string",
"name": "string"
}
,
"method": "string",
"prefix": "string",
"scheme": "string"
},
"retryPolicy": {
  "httpRetryEvents": [ "string" ],
  "maxRetries": number,
  "perRetryTimeout": {
    "unit": "string",
    "value": number
  },
  "tcpRetryEvents": [ "string" ]
},
"httpRoute": {
  "action": {
    "weightedTargets": [ {
      "virtualNode": "string",
      "weight": number
    }
  ],
  "match": {
    "headers": [ {
      "invert": boolean,
      "match": {
        "exact": "string",
        "prefix": "string",
        "range": {
          "end": number,
          "start": number
        },
        "regex": "string",
        "suffix": "string"
      },
      "name": "string"
    }
  },
  "method": "string",
  "prefix": "string",
  "scheme": "string"
},
"retryPolicy": {
  "httpRetryEvents": [ "string" ],
  "maxRetries": number,
  "perRetryTimeout": {
    "unit": "string",
    "value": number
  },
  "tcpRetryEvents": [ "string" ]
},
"priority": number,
"tcpRoute": {
  "action": {
    "weightedTargets": [ {
      "virtualNode": "string",
      "weight": number
    }
  ]
}
Response Elements

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

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

route (p. 59)

The full description of your route.

Type: RouteData (p. 180) 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
Example

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
server: envoy
Connection: keep-alive

{
    "meshName": "ecs-mesh",
    "metadata": {
        "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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

**meshName (p. 65)**

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

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

**meshOwner (p. 65)**

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 (p. 65)**

The name of the virtual node to describe.

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

Request Body

The request does not have a request body.

Response Syntax

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

{
    "virtualNode": {
        "meshName": "string",
        "metadata": {
            "arn": "string",
            "createdAt": number,
            "lastUpdatedAt": number,
            "meshOwner": "string",
            "resourceOwner": "string",
            "uid": "string",
            "version": number
        },
        "spec": {
            "backendDefaults": {
                "clientPolicy": {
                    "tls": {
```

API Version 2019-01-25
"enforce": boolean,
"ports": [ number ],
"validation": {
  "trust": {
    "acm": {
      "certificateAuthorityArns": [ "string" ]
    },
    "file": {
      "certificateChain": "string"
    }
  }
},
"backends": [
  {
    "virtualService": {
      "clientPolicy": {
        "tls": {
          "enforce": boolean,
          "ports": [ number ],
          "validation": {
            "trust": {
              "acm": {
                "certificateAuthorityArns": [ "string" ]
              },
              "file": {
                "certificateChain": "string"
              }
            }
          }
        },
        "virtualServiceName": "string"
      }
    },
    "listeners": [
      {
        "healthCheck": {
          "healthyThreshold": number,
          "intervalMillis": number,
          "path": "string",
          "port": number,
          "protocol": "string",
          "timeoutMillis": number,
          "unhealthyThreshold": number
        },
        "portMapping": {
          "port": number,
          "protocol": "string"
        },
        "tls": {
          "certificate": {
            "acm": {
              "certificateArn": "string"
            },
            "file": {
              "certificateChain": "string",
              "privateKey": "string"
            }
          },
          "mode": "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.

virtualNode (p. 65)

The full description of your virtual node.

Type: VirtualNodeData (p. 194) 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

---

**Example**

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)](https://aws.amazon.com/cli/) or one of the [AWS SDKs](https://aws.amazon.com/sdk/) 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": {
    "createdAt": 1551311799179E9,
  }
}
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 Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

- **meshName (p. 70)**
  - The name of the service mesh that the virtual router resides in.

- **meshOwner (p. 70)**
  - 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 (p. 70)**
  - The name of the virtual router to describe.

**Request Body**

The request does not have a request body.

**Response Syntax**

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

{
    "virtualRouter": {
        "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.

**virtualRouter (p. 70)**

The full description of your virtual router.

Type: VirtualRouterData (p. 201) 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

Example

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

```plaintext
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

```plaintext
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-1:012345678910: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"
    }
}
```
See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

**meshName (p. 74)**

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

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

**meshOwner (p. 74)**

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 (p. 74)**

The name of the virtual service to describe.

**Request Body**

The request does not have a request body.

**Response Syntax**

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

{   
    "virtualService": {   
        "meshName": "string",
        "metadata": {   
            "arn": "string",
            "createdAt": number,
            "lastUpdatedAt": number,
            "meshOwner": "string",
            "resourceOwner": "string",
            "uid": "string",
            "version": number
        },
        "spec": {   
            "provider": {   
                "virtualNode": {   
                    "virtualNodeName": "string"
                }
            }
        }
    }
}
```

API Version 2019-01-25
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.

virtualService (p. 74)

The full description of your virtual service.

Type: VirtualServiceData (p. 209) 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
Example

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-1:012345678910: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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

limit (p. 78)

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 (p. 78)

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",
            "meshName": "string",
            "meshOwner": "string",
            "resourceOwner": "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.

meshes (p. 78)
- The list of existing service meshes.
  - Type: Array of MeshRef (p. 174) objects

nextToken (p. 78)
- The nextToken value to include in a future ListMesbes request. When the results of a ListMesbes 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

Example

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
server: envoy
Connection: keep-alive
{
  "meshes": [
    {
      "arn": "arn:aws:appmesh:us-east-1:012345678910:mesh/ecs-mesh",
      "meshName": "ecs-mesh"
    },
    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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

**limit (p. 81)**

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 (p. 81)**

The name of the service mesh to list routes in.

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

**meshOwner (p. 81)**

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 (p. 81)**

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 (p. 81)**

The name of the virtual router to list routes in.

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

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```
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 (p. 81)

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 (p. 81)

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

Type: Array of RouteRef (p. 182) 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

Example

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": [
        {
            "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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

limit (p. 85)

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.


nextToken (p. 85)

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 (p. 85)

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

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 (p. 85)**

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 (p. 85)**

The tags for the resource.

Type: Array of `TagRef` (p. 187) 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
See Also

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

- **limit (p. 88)**
  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 (p. 88)**
  The name of the service mesh to list virtual nodes in.

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

- **meshOwner (p. 88)**
  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 (p. 88)**
  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",
}
```
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 (p. 88)

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 (p. 88)

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

Type: Array of VirtualNodeRef (p. 195) 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

Example

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: 8fb6448-5519-4f45-97d1-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": [
        {
            "meshName": "ecs-mesh",
            "virtualNodeName": "colorteller-vn"
        },
        {
            "arn": "arn:aws:appmesh:us-east-1:012345678910:mesh/ecs-mesh/virtualNode/tcpecho-vn",
            "meshName": "ecs-mesh",
            "virtualNodeName": "tcpecho-vn"
        },
        {
            "meshName": "ecs-mesh",
            "virtualNodeName": "colorteller-black-vn"
        }
    ]
}
```
```json
{

  "meshName": "ecs-mesh",
  "virtualNodeName": "colorgateway-vn"
},

{
  "meshName": "ecs-mesh",
  "virtualNodeName": "colorteller-black-vn"
},

{
  "meshName": "ecs-mesh",
  "virtualNodeName": "colorteller-red-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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

**limit (p. 92)**

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 (p. 92)**

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

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

**meshOwner (p. 92)**

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 (p. 92)**

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",
    "meshName": "string",
    "meshOwner": "string",
    "resourceOwner": "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.

nextToken (p. 92)

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 (p. 92)

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

Type: Array of VirtualRouterRef (p. 203) 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

Example

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-1:012345678910:mesh/ecs-mesh/virtualRouter/colorteller-vr",
      "meshName": "ecs-mesh",
      "virtualRouterName": "colorteller-vr"
    },
    {
      "arn": "arn:aws:appmesh:us-east-1:012345678910: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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

**limit (p. 96)**

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 (p. 96)**

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

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

**meshOwner (p. 96)**

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 (p. 96)**

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",
    "meshName": "string",
    "meshOwner": "string",
    "resourceOwner": "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.

nextToken (p. 96)

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 (p. 96)

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

Type: Array of `VirtualServiceRef (p. 211)` 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

Example

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-1:012345678910:mesh/ecs-mesh/virtualService/tcpecho.default.svc.cluster.local",
            "meshName": "ecs-mesh",
            "virtualServiceName": "tcpecho.default.svc.cluster.local"
        },
        {
            "meshName": "ecs-mesh",
            "virtualServiceName": "colorteller.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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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

```plaintext
PUT /v20190125/tag?resourceArn=resourceArn HTTP/1.1
Content-type: application/json
{
  "tags": [
    {
      "key": "string",
      "value": "string"
    }
  ]
}
```

URI Request Parameters

The request requires the following URI parameters.

- `resourceArn (p. 100)`

  The Amazon Resource Name (ARN) of the resource to add tags to.

Request Body

The request accepts the following data in JSON format.

- `tags (p. 100)`

  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 (p. 187) 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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 requires the following URI parameters.

- **resourceArn (p. 103)**
  - The Amazon Resource Name (ARN) of the resource to delete tags from.

**Request Body**

The request accepts the following data in JSON format.

- **tagKeys (p. 103)**
  - The keys of the tags to be removed.
  - Type: Array of strings
  - 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

**See Also**

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

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

Updates an existing service mesh.

Request Syntax

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

{
   "clientToken": "string",
   "spec": {
      "egressFilter": {
         "type": "string"
      }
   }
}
```

URI Request Parameters

The request requires the following URI parameters.

meshName (p. 105)

The name of the service mesh to update.

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

Request Body

The request accepts the following data in JSON format.

clientToken (p. 105)

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 (p. 105)

The service mesh specification to apply.

Type: MeshSpec (p. 175) object

Required: No

Response Syntax

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

mesh (p. 105)

An object that represents a service mesh returned by a describe operation.

Type: MeshData (p. 173) 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

InternalServerErroException

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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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": [
          {
            "virtualNode": "string",
            "weight": number
          }
        ]
      },
      "match": {
        "metadata": [
          {
            "invert": boolean,
            "match": {
              "exact": "string",
              "prefix": "string",
              "range": {
                "end": number,
                "start": number
              },
              "regex": "string",
              "suffix": "string"
            },
            "name": "string"
          }
        ],
        "methodName": "string",
        "serviceName": "string"
      }
    },
    "retryPolicy": {
      "grpcRetryEvents": [ "string" ],
      "httpRetryEvents": [ "string" ],
      "maxRetries": number,
      "perRetryTimeout": {
        "unit": "string",
        "value": number
      },
      "tcpRetryEvents": [ "string" ]
    },
    "http2Route": {
      "action": {
        "weightedTargets": [
          {
            "virtualNode": "string",
            "weight": number
          }
        ]
      },
      "match": {
        "metadata": [
          {
            "invert": boolean,
            "match": {
              "exact": "string",
              "prefix": "string",
              "range": {
                "end": number,
                "start": number
              },
              "regex": "string",
              "suffix": "string"
            },
            "name": "string"
          }
        ],
        "methodName": "string",
        "serviceName": "string"
      }
    }
  }
}
"headers": [
  {
    "invert": boolean,
    "match": {
      "exact": "string",
      "prefix": "string",
      "range": {
        "end": number,
        "start": number
      },
      "regex": "string",
      "suffix": "string"
    },
    "name": "string"
  },
  {
    "method": "string",
    "prefix": "string",
    "scheme": "string"
  },
  "retryPolicy": {
    "httpRetryEvents": [ "string" ],
    "maxRetries": number,
    "perRetryTimeout": {
      "unit": "string",
      "value": number
    },
    "tcpRetryEvents": [ "string" ]
  }
],
"httpRoute": {
  "action": {
    "weightedTargets": [ {
        "virtualNode": "string",
        "weight": number
      }
    ],
  },
  "match": {
    "headers": [
      {
        "invert": boolean,
        "match": {
          "exact": "string",
          "prefix": "string",
          "range": {
            "end": number,
            "start": number
          },
          "regex": "string",
          "suffix": "string"
        },
        "name": "string"
      }
    ],
    "method": "string",
    "prefix": "string",
    "scheme": "string"
  },
  "retryPolicy": {
    "httpRetryEvents": [ "string" ],
    "maxRetries": number,
    "perRetryTimeout": {
      "unit": "string",
      "value": number
    }
  }
}
URI Request Parameters

The request requires the following URI parameters.

**meshName (p. 108)**

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

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

**meshOwner (p. 108)**

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 (p. 108)**

The name of the route to update.

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

**virtualRouterName (p. 108)**

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

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

Request Body

The request accepts the following data in JSON format.

**clientToken (p. 108)**

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 (p. 108)**

The new route specification to apply. This overwrites the existing data.
Type: RouteSpec (p. 184) object

Required: Yes

## Response Syntax

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

{
    "route": {
        "meshName": "string",
        "metadata": {
            "arn": "string",
            "createdAt": number,
            "lastUpdatedAt": number,
            "meshOwner": "string",
            "resourceOwner": "string",
            "uid": "string",
            "version": number
        },
        "routeName": "string",
        "spec": {
            "grpcRoute": {
                "action": {
                    "weightedTargets": [
                        {
                            "virtualNode": "string",
                            "weight": number
                        }
                    ]
                },
                "match": {
                    "metadata": [
                        {
                            "invert": boolean,
                            "match": {
                                "exact": "string",
                                "prefix": "string",
                                "range": {
                                    "end": number,
                                    "start": number
                                },
                                "regex": "string",
                                "suffix": "string"
                            },
                            "name": "string"
                        }
                    ],
                    "methodName": "string",
                    "serviceName": "string"
                }
            },
            "retryPolicy": {
                "grpcRetryEvents": [ "string" ],
                "httpRetryEvents": [ "string" ],
                "maxRetries": number,
                "perRetryTimeout": {
                    "unit": "string",
                    "value": number
                },
                "tcpRetryEvents": [ "string" ]
            }
        }
    }
}
```

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"http2Route": {
  "action": {
    "weightedTargets": [
      {
        "virtualNode": "string",
        "weight": number
      }
    ],
  },
  "match": {
    "headers": [
      {
        "invert": boolean,
        "match": {
          "exact": "string",
          "prefix": "string",
          "range": {  
            "end": number,
            "start": number
          },
          "regex": "string",
          "suffix": "string"
        },
        "name": "string"
      }
    ],
    "method": "string",
    "prefix": "string",
    "scheme": "string"
  },
  "retryPolicy": {
    "httpRetryEvents": [ "string" ],
    "maxRetries": number,
    "perRetryTimeout": {
      "unit": "string",
      "value": number
    },
    "tcpRetryEvents": [ "string" ]
  }
},
"httpRoute": {
  "action": {
    "weightedTargets": [
      {
        "virtualNode": "string",
        "weight": number
      }
    ],
  },
  "match": {
    "headers": [
      {
        "invert": boolean,
        "match": {
          "exact": "string",
          "prefix": "string",
          "range": {  
            "end": number,
            "start": number
          },
          "regex": "string",
          "suffix": "string"
        },
        "name": "string"
      }
    ],
  },
"method": "string",
"prefix": "string",
"scheme": "string"
},
"retryPolicy": {
  "httpRetryEvents": [ "string" ],
  "maxRetries": number,
  "perRetryTimeout": {
    "unit": "string",
    "value": number
  },
  "tcpRetryEvents": [ "string" ]
},
"priority": number,
"tcpRoute": {
  "action": {
    "weightedTargets": [
      {
        "virtualNode": "string",
        "weight": 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.

route (p. 111)

A full description of the route that was updated.

Type: RouteData (p. 180) 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
LimitExceeded Exception
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

Example

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

```bash
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": {
        "createdAt": 1.551311817276E9,
        "lastUpdatedAt": 1.551312932979E9,
        "uid": "lcf3109a-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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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": {
          "enforce": boolean,
          "ports": [ number ],
          "validation": {
            "trust": {
              "acm": {
                "certificateAuthorityArns": [ "string" ]
              },
              "file": {
                "certificateChain": "string"
              }
            }
          }
        }
      }
    },
    "backends": [
      {
        "virtualService": {
          "clientPolicy": {
            "tls": {
              "enforce": boolean,
              "ports": [ number ],
              "validation": {
                "trust": {
                  "acm": {
                    "certificateAuthorityArns": [ "string" ]
                  },
                  "file": {
                    "certificateChain": "string"
                  }
                }
              }
            }
          },
          "virtualServiceName": "string"
        }
      }
    ],
    "listeners": [
      {
        "healthCheck": {
          "healthyThreshold": number,
          "intervalMillis": number,
          "path": "string",
          "port": number,
          "protocol": "string",
          "timeoutMillis": number,
          "unhealthyThreshold": number
        }
      }
    ]
  }
}
URI Request Parameters

The request requires the following URI parameters.

**meshName (p. 117)**

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

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

**meshOwner (p. 117)**

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 (p. 117)**

The name of the virtual node to update.
Length Constraints: Minimum length of 1. Maximum length of 255.

Request Body

The request accepts the following data in JSON format.

clientToken (p. 117)

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 (p. 117)

The new virtual node specification to apply. This overwrites the existing data.

Type: VirtualNodeSpec (p. 198) object
Required: Yes

Response Syntax

HTTP/1.1 200
Content-type: application/json

```json
{
   "virtualNode": {
      "meshName": "string",
      "metadata": {
         "arn": "string",
         "createdAt": number,
         "lastUpdatedAt": number,
         "meshOwner": "string",
         "resourceOwner": "string",
         "uid": "string",
         "version": number
      },
      "spec": {
         "backendDefaults": {
            "clientPolicy": {
               "tls": {
                  "enforce": boolean,
                  "ports": [ number ],
                  "validation": {
                     "trust": {
                        "acm": {
                           "certificateAuthorityArns": [ "string" ]
                        },
                        "file": {
                           "certificateChain": "string"
                        }
                     }
                  }
               }
            }
         },
         "backends": [
            
```
"virtualService": {
  "clientPolicy": {
    "tls": {
      "enforce": boolean,
      "ports": [ number ],
      "validation": {
        "trust": {
          "acm": {
            "certificateAuthorityArns": [ "string" ]
          },
          "file": {
            "certificateChain": "string"
          }
        }
      }
    },
    "virtualServiceName": "string"
  }
},
"listeners": [
  {
    "healthCheck": {
      "healthyThreshold": number,
      "intervalMillis": number,
      "path": "string",
      "port": number,
      "protocol": "string",
      "timeoutMillis": number,
      "unhealthyThreshold": number
    },
    "portMapping": {
      "port": number,
      "protocol": "string"
    },
    "tls": {
      "certificate": {
        "acm": {
          "certificateArn": "string"
        },
        "file": {
          "certificateChain": "string",
          "privateKey": "string"
        }
      },
      "mode": "string"
    }
  },
  "logging": {
    "accessLog": {
      "file": {
        "path": "string"
      }
    }
  },
  "serviceDiscovery": {
    "awsCloudMap": {
      "attributes": [
        {
          "key": "string",
          "value": "string"
        }
      ],
      "namespaceName": "string",
      "virtualServiceName": "string"
    }
  }
}]
{
    "serviceName": "string",
    "dns": {
      "hostname": "string"
    },
    "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.

**virtualNode (p. 119)**

A full description of the virtual node that was updated.

Type: VirtualNodeData (p. 194) 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

**LimitExceedededException**

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

Example

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": {
      
```
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": {
    "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
• AWS SDK for Java
• AWS SDK for JavaScript
• 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 requires the following URI parameters.

**meshName (p. 125)**

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

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

**meshOwner (p. 125)**

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 (p. 125)**

The name of the virtual router to update.

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

**Request Body**

The request accepts the following data in JSON format.

**clientToken (p. 125)**

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 (p. 125)

The new virtual router specification to apply. This overwrites the existing data.

Type: VirtualRouterSpec (p. 206) object

Required: Yes

Response Syntax

HTTP/1.1 200
Content-type: application/json

```json
{
  "virtualRouter": {
    "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.

virtualRouter (p. 126)

A full description of the virtual router that was updated.

Type: VirtualRouterData (p. 201) 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

**InternalServerException**

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](https://aws.amazon.com/app-mesh/user-guide/) 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

**Example**

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](https://aws.amazon.com/documentation/general/latest/ac/signature-version-4/) 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)](https://aws.amazon.com/cli/) or one of the [AWS SDKs](https://aws.amazon.com/sdk/) 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
```

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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-1:012345678910: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
- AWS SDK for Java
- AWS SDK for JavaScript
- 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**

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

{
  "clientToken": "string",
  "spec": {
    "provider": {
      "virtualNode": {
        "virtualNodeName": "string"
      },
      "virtualRouter": {
        "virtualRouterName": "string"
      }
    }
  }
}
```

**URI Request Parameters**

The request requires the following URI parameters.

**meshName (p. 130)**

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

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

**meshOwner (p. 130)**

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 (p. 130)**

The name of the virtual service to update.

**Request Body**

The request accepts the following data in JSON format.

**clientToken (p. 130)**

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
**Response Syntax**

HTTP/1.1 200
Content-type: application/json

```json
{
    "virtualService": {
        "meshName": "string",
        "metadata": {
            "arn": "string",
            "createdAt": number,
            "lastUpdatedAt": number,
            "meshOwner": "string",
            "resourceOwner": "string",
            "uid": "string",
            "version": number
        },
        "spec": {
            "provider": {
                "virtualNode": {
                    "virtualNodeName": "string"
                },
                "virtualRouter": {
                    "virtualRouterName": "string"
                }
            }
        },
        "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.

- **virtualService (p. 131)**
  
  A full description of the virtual service that was updated.
  
  Type: `VirtualServiceData (p. 209)` 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

**InternalServerException**

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

**Example**

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

```plaintext
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

```plaintext
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-1:012345678910: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
See Also

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for JavaScript
- 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 (p. 137)
- AwsCloudMapInstanceAttribute (p. 138)
- AwsCloudMapServiceDiscovery (p. 139)
- Backend (p. 140)
- BackendDefaults (p. 141)
- ClientPolicy (p. 142)
- ClientPolicyTls (p. 143)
- DnsServiceDiscovery (p. 144)
- Duration (p. 145)
- EgressFilter (p. 146)
- FileAccessLog (p. 147)
- GrpcRetryPolicy (p. 148)
- GrpcRoute (p. 150)
- GrpcRouteAction (p. 151)
- GrpcRouteMatch (p. 152)
- GrpcRouteMetadata (p. 153)
- GrpcRouteMetadataMatchMethod (p. 154)
- HeaderMatchMethod (p. 156)
- HealthCheckPolicy (p. 158)
- HttpRetryPolicy (p. 160)
- HttpRoute (p. 162)
- HttpRouteAction (p. 163)
- HttpRouteHeader (p. 164)
- HttpRouteMatch (p. 165)
- Listener (p. 166)
- ListenerTls (p. 167)
- ListenerTlsAcmCertificate (p. 168)
- ListenerTlsCertificate (p. 169)
- ListenerTlsFileCertificate (p. 170)
- Logging (p. 171)
- MatchRange (p. 172)
- MeshData (p. 173)
- MeshRef (p. 174)
- MeshSpec (p. 175)
- MeshStatus (p. 176)
• PortMapping (p. 177)
• ResourceMetadata (p. 178)
• RouteData (p. 180)
• RouteRef (p. 182)
• RouteSpec (p. 184)
• RouteStatus (p. 185)
• ServiceDiscovery (p. 186)
• TagRef (p. 187)
• TcpRoute (p. 188)
• TcpRouteAction (p. 189)
• TlsValidationContext (p. 190)
• TlsValidationContextAcmTrust (p. 191)
• TlsValidationContextFileTrust (p. 192)
• TlsValidationContextTrust (p. 193)
• VirtualNodeData (p. 194)
• VirtualNodeRef (p. 195)
• VirtualNodeServiceProvider (p. 197)
• VirtualNodeSpec (p. 198)
• VirtualNodeStatus (p. 200)
• VirtualRouterData (p. 201)
• VirtualRouterListener (p. 202)
• VirtualRouterRef (p. 203)
• VirtualRouterServiceProvider (p. 205)
• VirtualRouterSpec (p. 206)
• VirtualRouterStatus (p. 207)
• VirtualServiceBackend (p. 208)
• VirtualServiceData (p. 209)
• VirtualServiceProvider (p. 210)
• VirtualServiceRef (p. 211)
• VirtualServiceSpec (p. 213)
• VirtualServiceStatus (p. 214)
• WeightedTarget (p. 215)
AccessLog

An object that represents the access logging information for a virtual node.

Contents

file

The file object to send virtual node access logs to.

Type: FileAccessLog (p. 147) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3
**AwsCloudMapInstanceAttribute**

An object that represents the AWS Cloud Map attribute information for your virtual node.

**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


Pattern: `^[a-zA-Z0-9!-~][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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
**AwsCloudMapServiceDiscovery**

An object that represents the AWS Cloud Map service discovery information for your virtual node.

**Contents**

**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 (p. 138)` objects

Required: No

**namespaceName**

The name of the AWS Cloud Map namespace to use.

Type: String


Pattern: `((?=^.{1,127}$)^([a-zA-Z0-9_][a-zA-Z0-9-_]{0,61}[a-zA-Z0-9_]|[a-zA-Z0-9])(.([a-zA-Z0-9_][a-zA-Z0-9-_]{0,61}[a-zA-Z0-9_]|[a-zA-Z0-9]))*$)|(^.$)`

Required: Yes

**serviceName**

The name of the AWS Cloud Map service to use.

Type: String


Pattern: `((?=^.{1,127}$)^([a-zA-Z0-9_][a-zA-Z0-9-_]{0,61}[a-zA-Z0-9_]|[a-zA-Z0-9])(.([a-zA-Z0-9_][a-zA-Z0-9-_]{0,61}[a-zA-Z0-9_]|[a-zA-Z0-9]))*$)|(^.$)`

Required: Yes

**See Also**

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3
Backend

An object that represents the backends that a virtual node is expected to send outbound traffic to.

Contents

virtualService

Specifies a virtual service to use as a backend for a virtual node.

Type: VirtualServiceBackend (p. 208) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 142) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 143) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3
ClientPolicyTls

An object that represents a Transport Layer Security (TLS) client policy.

Contents

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


Required: No

validation

A reference to an object that represents a TLS validation context.

Type: TlsValidationContext (p. 190) object

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- 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.

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 Go
- AWS SDK for Java
- 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

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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.

Contents

**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.


Required: No

**maxRetries**

The maximum number of retry attempts.

Type: Long

Valid Range: Minimum value of 0.

Required: Yes

**perRetryTimeout**

An object that represents a duration of time.

Type: Duration (p. 145) object

Required: Yes

**tcpRetryEvents**

Specify a valid value.

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 Go
- AWS SDK for Java
- 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 (p. 151) object

Required: Yes

match

An object that represents the criteria for determining a request match.

Type: GrpcRouteMatch (p. 152) object

Required: Yes

retryPolicy

An object that represents a retry policy.

Type: GrpcRetryPolicy (p. 148) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 215) 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 Go
- AWS SDK for Java
- 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 (p. 153) 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


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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
GrpcRouteMetadata

An object that represents the match metadata for the route.

Contents

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 (p. 154) object

Required: No

name

The name of the route.

Type: String


Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3
GrpcRouteMetadataMatchMethod

An object that represents the match method. Specify one of the match values.

Contents

**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 (p. 172) 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 Go
See Also

- AWS SDK for Java
- 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

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 (p. 172) 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 Go
• AWS SDK for Java
• 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


Required: Yes

**intervalMillis**

The time period in milliseconds between each health check execution.

Type: Long


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 (p. 177) for the listener.

Type: Integer


Required: No

**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

Required: Yes

**unhealthyThreshold**

The number of consecutive failed health checks that must occur before declaring a virtual node unhealthy.

Type: Integer


Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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.

Contents

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.

Required: No

maxRetries

The maximum number of retry attempts.

Type: Long

Valid Range: Minimum value of 0.

Required: Yes

perRetryTimeout

An object that represents a duration of time.

Type: `Duration (p. 145)` object

Required: Yes

tcpRetryEvents

Specify a valid value.

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++
See Also

- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 163) object

Required: Yes

match

An object that represents the criteria for determining a request match.

Type: HttpRouteMatch (p. 165) object

Required: Yes

retryPolicy

An object that represents a retry policy.

Type: HttpRetryPolicy (p. 160) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 215) 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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
HttpRouteHeader

An object that represents the HTTP header in the request.

Contents

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 (p. 156) object
Required: No

name

A name for the HTTP header in the client request that will be matched on.

Type: String
Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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

An object that represents the client request headers to match on.

Type: Array of [HttpRouteHeader](p. 164) 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

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: Yes

scheme

The client request scheme to match on. Specify only one.

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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
Listener

An object that represents a listener for a virtual node.

Contents

healthCheck

The health check information for the listener.

Type: HealthCheckPolicy (p. 158) object

Required: No

portMapping

The port mapping information for the listener.

Type: PortMapping (p. 177) object

Required: Yes

tls

A reference to an object that represents the Transport Layer Security (TLS) properties for a listener.

Type: ListenerTls (p. 167) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 TLS certificate.

Type: ListenerTlsCertificate (p. 169) object

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

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3
ListenerTlsAcmCertificate

An object that represents an AWS Certificate Manager (ACM) 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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
ListenerTlsCertificate

An object that represents a listener's Transport Layer Security (TLS) certificate.

Contents

acm

A reference to an object that represents an AWS Certificate Manager (ACM) certificate.

Type: ListenerTlsAcmCertificate (p. 168) object

Required: No

file

A reference to an object that represents a local file certificate.

Type: ListenerTlsFileCertificate (p. 170) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- 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 (p. 137) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- 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 (p. 178) object
Required: Yes

spec

The associated specification for the service mesh.
Type: MeshSpec (p. 175) object
Required: Yes

status

The status of the service mesh.
Type: MeshStatus (p. 176) object
Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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

**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

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 146) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
PortMapping

An object that represents a port mapping.

Contents

port

The port used for the port mapping.

Type: Integer


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 Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- 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 (p. 178) 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 (p. 184) object

Required: Yes

status

The status of the route.

Type: RouteStatus (p. 185) 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:
See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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

**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

**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 Go
- AWS SDK for Java
- 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 (p. 150) object

Required: No

HTTP/2 Route

An object that represents the specification of an HTTP/2 route.

Type: HttpRoute (p. 162) object

Required: No

HTTP Route

An object that represents the specification of an HTTP route.

Type: HttpRoute (p. 162) 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 (p. 188) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
**ServiceDiscovery**

An object that represents the service discovery information for a virtual node.

**Contents**

**awsCloudMap**

Specifies any AWS Cloud Map information for the virtual node.

Type: `AwsCloudMapServiceDiscovery (p. 139)` object

Required: No

**dns**

Specifies the DNS information for the virtual node.

Type: `DnsServiceDiscovery (p. 144)` object

Required: No

**See Also**

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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


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: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 189)` object

Required: Yes

**See Also**

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 215) 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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
TlsValidationContext

An object that represents a Transport Layer Security (TLS) validation context.

Contents

trust

A reference to an object that represents a TLS validation context trust.

Type: TlsValidationContextTrust (p. 193) object

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3
TlsValidationContextAcmTrust

An object that represents a TLS validation context trust for an AWS Certificate Manager (ACM) 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 Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
TlsValidationContextTrust

An object that represents a Transport Layer Security (TLS) validation context trust.

Contents

acm

A reference to an object that represents a TLS validation context trust for an AWS Certificate Manager (ACM) certificate.

Type: TlsValidationContextAcmTrust (p. 191) object

Required: No

file

An object that represents a TLS validation context trust for a local file.

Type: TlsValidationContextFileTrust (p. 192) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 178) object
Required: Yes

spec

The specifications of the virtual node.
Type: VirtualNodeSpec (p. 198) object
Required: Yes

status

The current status for the virtual node.
Type: VirtualNodeStatus (p. 200) 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 Go
- AWS SDK for Java
- 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

**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

**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 Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- 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 (p. 141) object

Required: No

backends

The backends that the virtual node is expected to send outbound traffic to.

Type: Array of Backend (p. 140) 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 (p. 166) objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Required: No

logging

The inbound and outbound access logging information for the virtual node.

Type: Logging (p. 171) 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 (p. 186) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- 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 (p. 178) object

Required: Yes

spec

The specifications of the virtual router.

Type: VirtualRouterSpec (p. 206) object

Required: Yes

status

The current status of the virtual router.

Type: VirtualRouterStatus (p. 207) 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 Go
- AWS SDK for Java
- 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 (p. 177) object

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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

**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

**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:
See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- 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. You can specify one listener.

Type: Array of `VirtualRouterListener` objects

Array Members: Fixed number of 1 item.

Required: Yes

**See Also**

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
VirtualServiceBackend

An object that represents a virtual service backend for a virtual node.

Contents

cientPolicy

A reference to an object that represents the client policy for a backend.

Type: ClientPolicy (p. 142) object

Required: No

virtualServiceName

The name of the virtual service that is acting as a virtual node backend.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 178) object

Required: Yes

spec

The specifications of the virtual service.

Type: VirtualServiceSpec (p. 213) object

Required: Yes

status

The current status of the virtual service.

Type: VirtualServiceStatus (p. 214) 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 Go
- AWS SDK for Java
- AWS SDK for Ruby V3
VirtualServiceProvider

An object that represents the provider for a virtual service.

Contents

virtualNode

The virtual node associated with a virtual service.

Type: VirtualNodeServiceProvider (p. 197) object

Required: No

virtualRouter

The virtual router associated with a virtual service.

Type: VirtualRouterServiceProvider (p. 205) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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

**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

**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++
See Also

- AWS SDK for Go
- AWS SDK for Java
- 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 (p. 210) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- 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 Go
- AWS SDK for Java
- 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

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3