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API Reference

Amazon Lambda Core



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Amazon Lambda Core: API Reference

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Welcome

Overview

Amazon Lambda Core is a set of APIs for managing shared infrastructure resources used by Lambda. The Lambda Core API provides operations for creating and managing network connectors that enable Lambda MicroVMs and Lambda Web Functions to access resources in your Amazon Virtual Private Cloud (Amazon VPC).

Network connectors provision elastic network interfaces (ENIs) in your VPC subnets, providing a managed network path from Lambda compute environments to private resources such as Amazon RDS databases, Amazon ElastiCache clusters, and internal APIs. You create a network connector once and attach it to one or more Lambda MicroVMs or Lambda Web Functions at run time.

The *Amazon Lambda Core API Reference* provides information about each of the API methods, including details about the parameters in each API request and response.

You can use Software Development Kits (SDKs), Integrated Development Environment (IDE) Toolkits, and command line tools to access the API. For installation instructions, see Tools for Amazon Web Services.

For a list of Region-specific endpoints that Lambda supports, see Lambda endpoints and quotas in the *Amazon General Reference.*

When making the API calls, you will need to authenticate your request by providing a signature. Lambda supports signature version 4. For more information, see Signature Version 4 signing process in the *Amazon General Reference.*

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Actions

The following actions are supported:

- CreateNetworkConnector
- DeleteNetworkConnector
- GetNetworkConnector
- ListNetworkConnectors
- ListNetworkConnectorVersions
- UpdateNetworkConnector

CreateNetworkConnector

Creates a network connector that enables Lambda compute resources to route outbound traffic through your Amazon VPC. The network connector provisions elastic network interfaces (ENIs) in the subnets you specify, providing a managed network path to private resources such as databases, caches, and internal APIs.

This operation is asynchronous. The network connector starts in `PENDING` state while ENIs are provisioned in your VPC (provisioning typically takes up to 10 minutes). Use `GetNetworkConnector` to poll the connector state until it reaches `ACTIVE`. Once active, you can attach the connector to supported Lambda compute resources — such as MicroVMs and WebFunctions — at run time. For how to attach a connector, see the documentation for the specific compute type.

This operation is idempotent when you provide a `ClientToken` — if you retry a request that completed successfully using the same client token, the operation returns the existing connector without creating a duplicate.

Request Syntax

```
POST /2026-04-04/network-connectors HTTP/1.1
Content-type: application/json

{
   "ClientToken": "string",
   "Configuration": { ... },
   "Name": "string",
   "OperatorRole": "string",
   "Tags": {
      "string" : "string"
   }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

ClientToken

A unique, case-sensitive identifier that you provide to ensure the idempotency of the request. If you retry a request with the same client token, the API returns the existing connector without creating a duplicate.

Type: String

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

Required: No

Configuration

The network configuration for the connector. Specify a `VpcEgressConfiguration` to enable outbound traffic routing through your VPC.

Type: NetworkConnectorConfiguration object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

Name

A unique name for the network connector within your account and Region. You can use the name to identify the connector in subsequent API calls.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)|[a-zA-Z0-9_-]{1,64}`

Required: Yes

OperatorRole

The ARN of the IAM role that Lambda assumes to manage elastic network interfaces in your VPC. This role must have permissions for `ec2:CreateNetworkInterface`, `ec2:DeleteNetworkInterface`, and related describe operations.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

Required: No

Tags

A map of key-value pairs to associate with the network connector for organization, cost allocation, or access control.

Type: String to string map

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

Key Pattern: `([\p{L}\p{Z}\p{N}_.:/=+\-@]*)`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `([\p{L}\p{Z}\p{N}_.:/=+\-@]*)`

Required: No

Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "Arn": "string",
   "Configuration": { ... },
   "Id": "string",
   "Name": "string",
   "OperatorRole": "string",
   "State": "string",
   "Version": number,
   "VersionArn": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

Arn

The Amazon Resource Name (ARN) of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Configuration

The network configuration of the connector, including VPC subnets and security groups.

Type: NetworkConnectorConfiguration object

Note: This object is a Union. Only one member of this object can be specified or returned.

Id

The unique identifier of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Name

The name of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)|[a-zA-Z0-9_-]{1,64}`

OperatorRole

The ARN of the IAM role that Lambda uses to manage the underlying ENI resources for this connector.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

State

The current state of the network connector.

Type: String

Valid Values: `PENDING | ACTIVE | INACTIVE | FAILED | DELETING | DELETE_FAILED`

Version

The version number assigned to the connector. A newly created connector starts at version 1.

Type: Long

Valid Range: Minimum value of 1.

VersionArn

The qualified ARN of the connector version created by this request, including the immutable version suffix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Errors

For information about the errors that are common to all actions, see Common Error Types.

InvalidParameterValueException

One of the parameters in the request is not valid. Check the error message for details about which parameter failed validation.

Type

The exception type.

HTTP Status Code: 400

NetworkConnectorLimitExceededException

The request would exceed a network connector limit. For `CreateNetworkConnector`, the account has reached the maximum number of network connectors allowed. For `UpdateNetworkConnector`, the connector has reached the maximum number of versions allowed.

message

The account has reached the maximum number of network connectors allowed.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

The request could not be completed due to a conflict with the current state of the resource. For example, attempting to update a connector that is not in `ACTIVE` state.

Type

The exception type.

HTTP Status Code: 409

ServiceException

An internal service error occurred. Retry the request with exponential backoff.

Type

The exception type.

HTTP Status Code: 500

TooManyRequestsException

The request was throttled due to exceeding the allowed request rate. Retry the request after a brief wait using exponential backoff.

Reason

The reason for the throttling.

retryAfterSeconds

The number of seconds to wait before retrying the request.

Type

The exception type.

HTTP Status Code: 429

See Also

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

- Amazon Command Line Interface V2
- Amazon SDK for .NET V4
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python (Boto3)
- Amazon SDK for Ruby V3

DeleteNetworkConnector

Initiates deletion of a network connector. The connector transitions to `DELETING` state while elastic network interfaces are cleaned up asynchronously. After deletion completes, subsequent calls to `GetNetworkConnector` return `ResourceNotFoundException`.

This operation is idempotent — calling delete on a connector that is already deleting or has been deleted succeeds without error. You can delete connectors in `ACTIVE` or `FAILED` states. Before deleting a connector, ensure that no Lambda compute resources are using it, as they will lose VPC egress connectivity immediately.

Deleting with an unqualified identifier removes the connector and all of its versions. To remove a single historical version, supply its version-qualified ARN; the connector and its remaining versions are unaffected. You can't delete the latest version on its own — delete the connector to remove it.

Request Syntax

```
DELETE /2026-04-04/network-connectors/Identifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

The identifier of the network connector to delete. Provide an unqualified ARN (or an ID or name) to delete the entire connector and all of its versions, or a version-qualified ARN — one that includes the immutable version suffix — to delete a specific historical version. You can't delete the latest version with a version-qualified identifier; delete the connector instead.

Length Constraints: Minimum length of 1. Maximum length of 140.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "Arn": "string",
   "Configuration": { ... },
   "Id": "string",
   "Name": "string",
   "OperatorRole": "string",
   "State": "string",
   "Version": number,
   "VersionArn": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

Arn

The Amazon Resource Name (ARN) of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Configuration

The network configuration of the connector, including VPC subnets and security groups.

Type: NetworkConnectorConfiguration object

Note: This object is a Union. Only one member of this object can be specified or returned.

Id

The unique identifier of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Name

The name of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)|[a-zA-Z0-9_-]{1,64}`

OperatorRole

The ARN of the IAM role that Lambda uses to manage the underlying ENI resources for this connector.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

State

The current state of the network connector. The State field is typically `DELETING` after this call.

Type: String

Valid Values: `PENDING | ACTIVE | INACTIVE | FAILED | DELETING | DELETE_FAILED`

Version

The version number of the connector version affected by this request.

Type: Long

Valid Range: Minimum value of 1.

VersionArn

The qualified ARN of the connector version affected by this request, including the immutable version suffix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Errors

For information about the errors that are common to all actions, see Common Error Types.

InvalidParameterValueException

One of the parameters in the request is not valid. Check the error message for details about which parameter failed validation.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

The request could not be completed due to a conflict with the current state of the resource. For example, attempting to update a connector that is not in `ACTIVE` state.

Type

The exception type.

HTTP Status Code: 409

ResourceNotFoundException

The specified network connector does not exist. Verify the identifier (ID, name, or ARN) and Region.

Type

The exception type.

HTTP Status Code: 404

ServiceException

An internal service error occurred. Retry the request with exponential backoff.

Type

The exception type.

HTTP Status Code: 500

TooManyRequestsException

The request was throttled due to exceeding the allowed request rate. Retry the request after a brief wait using exponential backoff.

Reason

The reason for the throttling.

retryAfterSeconds

The number of seconds to wait before retrying the request.

Type

The exception type.

HTTP Status Code: 429

See Also

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

- Amazon Command Line Interface V2
- Amazon SDK for .NET V4
- Amazon SDK for C++
- Amazon SDK for Go v2

- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python (Boto3)
- Amazon SDK for Ruby V3

GetNetworkConnector

Retrieves the current configuration, state, and metadata of a network connector. The `Identifier` parameter accepts the connector ID, name, or full ARN. Use this operation to poll connector state after creation or update, or to inspect the current VPC configuration and any failure reasons.

The response includes the full connector configuration, current state, and — if the connector has been updated — the `LastUpdateStatus` and `LastUpdateStatusReasonCode` fields that indicate whether the most recent update succeeded or failed.

Request Syntax

```
GET /2026-04-04/network-connectors/Identifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

The identifier of the network connector to retrieve. You can specify the connector ID, name, or ARN. Provide an unqualified ARN (or an ID or name) to retrieve the connector's latest version, or a version-qualified ARN — one that includes the immutable version suffix — to retrieve a specific historical version.

Length Constraints: Minimum length of 1. Maximum length of 140.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
```

```
   "Arn": "string",
   "Configuration": { ... },
   "Id": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "LatestVersion": number,
   "LatestVersionArn": "string",
   "Name": "string",
   "OperatorRole": "string",
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "Version": number,
   "VersionArn": "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.

Arn

The Amazon Resource Name (ARN) of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Configuration

The network configuration of the connector, including VPC subnets and security groups.

Type: NetworkConnectorConfiguration object

Note: This object is a Union. Only one member of this object can be specified or returned.

Id

The unique identifier of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

LastModified

The date and time when the connector configuration was last modified.

Type: Timestamp

LastUpdateStatus

The status of the most recent update operation (`Successful`, `Failed`, or `InProgress`).

Type: String

Valid Values: `Successful | Failed | InProgress`

LastUpdateStatusReason

A human-readable explanation of the last update status.

Type: String

LastUpdateStatusReasonCode

A machine-readable code indicating the reason for the last update status. Use this for programmatic error handling.

Type: String

Valid Values: `DisallowedByVpcEncryptionControl | Ec2RequestLimitExceeded | InsufficientRolePermissions | InternalError | InvalidSecurityGroup | InvalidSubnet | SecurityGroupsPerInterfaceLimitExceeded | SubnetOutOfIPAddresses`

LatestVersion

The version number of the connector's latest active version. Each configuration update creates a new immutable version; this attribute exposes the most recent one. This field is returned only on a standard (unqualified) request.

Type: Long

Valid Range: Minimum value of 1.

LatestVersionArn

The qualified ARN of the connector's latest active version, including the immutable version suffix. This field is returned only on a standard (unqualified) request; when you supply a version-qualified identifier it is not returned, and `VersionArn` is returned instead.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Name

The name of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)|[a-zA-Z0-9_-]{1,64}`

OperatorRole

The ARN of the IAM role that Lambda uses to manage the underlying ENI resources for this connector.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

State

The current state of the network connector.

Type: String

Valid Values: `PENDING | ACTIVE | INACTIVE | FAILED | DELETING | DELETE_FAILED`

StateReason

A human-readable explanation of the current state, populated when the state is `FAILED` or `DELETE_FAILED`.

Type: String

StateReasonCode

A machine-readable code indicating the reason for the current state. Use this for programmatic error handling.

Type: String

Valid Values: `DisallowedByVpcEncryptionControl | Ec2RequestLimitExceeded | InsufficientRolePermissions | InternalError | InvalidSecurityGroup | InvalidSubnet | SecurityGroupsPerInterfaceLimitExceeded | SubnetOutOfIPAddresses`

Version

The version number of the network connector. On a standard (unqualified) request, this is the connector's current version; each configuration update increments it. When you supply a version-qualified identifier, this is the specific version you requested.

Type: Long

Valid Range: Minimum value of 1.

VersionArn

The qualified ARN of the specific connector version returned by this request, including the immutable version suffix. This is populated only when you supply a version-qualified identifier. On a standard (unqualified) request, this field is not populated; the connector's latest active version is returned instead through the `LatestVersionArn` and `LatestVersion` fields described below.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Errors

For information about the errors that are common to all actions, see Common Error Types.

InvalidParameterValueException

One of the parameters in the request is not valid. Check the error message for details about which parameter failed validation.

Type

The exception type.

HTTP Status Code: 400

ResourceNotFoundException

The specified network connector does not exist. Verify the identifier (ID, name, or ARN) and Region.

Type

The exception type.

HTTP Status Code: 404

ServiceException

An internal service error occurred. Retry the request with exponential backoff.

Type

The exception type.

HTTP Status Code: 500

TooManyRequestsException

The request was throttled due to exceeding the allowed request rate. Retry the request after a brief wait using exponential backoff.

Reason

The reason for the throttling.

retryAfterSeconds

The number of seconds to wait before retrying the request.

Type

The exception type.

HTTP Status Code: 429

See Also

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

- Amazon Command Line Interface V2
- Amazon SDK for .NET V4
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python (Boto3)
- Amazon SDK for Ruby V3

ListNetworkConnectors

Returns a paginated list of network connectors in your account for the current Region. You can optionally filter results by connector state. Use the `Marker` parameter from a previous response to retrieve the next page of results.

Each item in the response includes the connector ARN, name, ID, type, current state, and last modified timestamp. To retrieve full configuration details for a specific connector, use `GetNetworkConnector`.

Request Syntax

```
GET /2026-04-04/network-connectors?Marker=Marker&MaxItems=MaxItems&State=State HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Marker

The pagination token from a previous `ListNetworkConnectors` response. Use this value to retrieve the next page of results.

MaxItems

The maximum number of connectors to return per page. Valid range: 1 to 100.

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

State

Optional filter to return only connectors in the specified state (for example, `ACTIVE` or `FAILED`).

Valid Values: `PENDING | ACTIVE | INACTIVE | FAILED | DELETING | DELETE_FAILED`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "NetworkConnectors": [
      {
         "Arn": "string",
         "Id": "string",
         "LastModified": "string",
         "LatestVersion": number,
         "LatestVersionArn": "string",
         "Name": "string",
         "State": "string",
         "Type": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

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

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

NetworkConnectors

A list of network connector summaries for the current page of results.

Type: Array of NetworkConnectorSummary objects

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

NextMarker

The pagination token to include in a subsequent request to retrieve the next page. This value is null when there are no more results.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

InvalidParameterValueException

One of the parameters in the request is not valid. Check the error message for details about which parameter failed validation.

Type

The exception type.

HTTP Status Code: 400

ServiceException

An internal service error occurred. Retry the request with exponential backoff.

Type

The exception type.

HTTP Status Code: 500

TooManyRequestsException

The request was throttled due to exceeding the allowed request rate. Retry the request after a brief wait using exponential backoff.

Reason

The reason for the throttling.

retryAfterSeconds

The number of seconds to wait before retrying the request.

Type

The exception type.

HTTP Status Code: 429

See Also

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

- Amazon Command Line Interface V2
- Amazon SDK for .NET V4
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python (Boto3)
- Amazon SDK for Ruby V3

ListNetworkConnectorVersions

Returns a paginated list of the versions of a network connector. Each configuration update creates a new immutable version; this operation lists those versions for the connector you specify. You can optionally filter results by version state. Use the `Marker` parameter from a previous response to retrieve the next page of results.

Each item in the response includes the version-qualified ARN, version number, current state, and last modified timestamp for that version. To retrieve the current (latest) configuration of the connector, use `GetNetworkConnector`; to inspect a specific version, call `GetNetworkConnector` with a version-qualified identifier.

Request Syntax

```
GET /2026-04-04/network-connectors/Identifier/versions?
Marker=Marker&MaxItems=MaxItems&State=State HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

The identifier of the network connector whose versions you want to list. You can specify the connector ID, name, or full ARN. Specify an unqualified identifier — this operation lists all versions of the connector, not a specific version.

Length Constraints: Minimum length of 1. Maximum length of 140.

Required: Yes

Marker

The pagination token from a previous `ListNetworkConnectorVersions` response. Use this value to retrieve the next page of results.

MaxItems

The maximum number of versions to return per page. Valid range: 1 to 100.

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

State

Optional filter to return only versions in the specified state (for example, `ACTIVE` or `FAILED`).

Valid Values: `PENDING | ACTIVE | INACTIVE | FAILED | DELETING | DELETE_FAILED`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "NetworkConnectorVersions": [
      {
         "Arn": "string",
         "Id": "string",
         "LastModified": "string",
         "Name": "string",
         "State": "string",
         "StateReason": "string",
         "StateReasonCode": "string",
         "Version": number,
         "VersionArn": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

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

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

NetworkConnectorVersions

A list of connector version summaries for the current page of results.

Type: Array of NetworkConnectorVersionSummary objects

Array Members: Minimum number of 0 items. Maximum number of 100 items.

NextMarker

The pagination token to include in a subsequent request to retrieve the next page. This value is null when there are no more results.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

InvalidParameterValueException

One of the parameters in the request is not valid. Check the error message for details about which parameter failed validation.

Type

The exception type.

HTTP Status Code: 400

ResourceNotFoundException

The specified network connector does not exist. Verify the identifier (ID, name, or ARN) and Region.

Type

The exception type.

HTTP Status Code: 404

ServiceException

An internal service error occurred. Retry the request with exponential backoff.

Type

The exception type.

HTTP Status Code: 500

TooManyRequestsException

The request was throttled due to exceeding the allowed request rate. Retry the request after a brief wait using exponential backoff.

Reason

The reason for the throttling.

retryAfterSeconds

The number of seconds to wait before retrying the request.

Type

The exception type.

HTTP Status Code: 429

See Also

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

- Amazon Command Line Interface V2
- Amazon SDK for .NET V4
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python (Boto3)
- Amazon SDK for Ruby V3

UpdateNetworkConnector

Updates the VPC configuration or operator role of an existing network connector. You can modify the subnet IDs, security group IDs, network protocol, or operator role. The connector must be in `ACTIVE` state to accept updates.

This operation is asynchronous. The connector remains in `ACTIVE` state during the update — existing workloads that reference this connector are not disrupted. Use `GetNetworkConnector` to monitor the `LastUpdateStatus` field, which transitions through `InProgress` to `Successful` or `Failed`. If the update fails, the `LastUpdateStatusReasonCode` field provides a specific error code for troubleshooting. This operation is idempotent when you provide a `ClientToken`.

Each successful configuration change creates a new immutable version. A connector can have a limited number of versions; once that limit is reached, further updates fail with `NetworkConnectorLimitExceededException` until you delete older versions.

Request Syntax

```
PUT /2026-04-04/network-connectors/Identifier HTTP/1.1
Content-type: application/json

{
   "ClientToken": "string",
   "Configuration": { ... },
   "OperatorRole": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

The identifier of the network connector to update. You can specify the connector ID, name, or full ARN.

Length Constraints: Minimum length of 1. Maximum length of 140.

Required: Yes

Request Body

The request accepts the following data in JSON format.

ClientToken

A unique, case-sensitive identifier to ensure idempotency of the update request.

Type: String

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

Required: No

Configuration

The updated network configuration for the connector. Provide the full `VpcEgressConfiguration` including all subnet IDs and security group IDs — this replaces the existing configuration.

Type: NetworkConnectorConfiguration object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

OperatorRole

The updated ARN of the IAM role that Lambda assumes to manage ENIs. Use this to change the operator role without recreating the connector.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

Required: No

Response Syntax

```
HTTP/1.1 202
Content-type: application/json
```

```
{
   "Arn": "string",
   "Configuration": { ... },
   "Id": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "Name": "string",
   "OperatorRole": "string",
   "State": "string",
   "Version": number,
   "VersionArn": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

Arn

The Amazon Resource Name (ARN) of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Configuration

The network configuration of the connector, including VPC subnets and security groups.

Type: NetworkConnectorConfiguration object

Note: This object is a Union. Only one member of this object can be specified or returned.

Id

The unique identifier of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

LastModified

The timestamp of this update.

Type: Timestamp

LastUpdateStatus

The status of this update operation (typically `InProgress` immediately after the call).

Type: String

Valid Values: `Successful | Failed | InProgress`

LastUpdateStatusReason

A human-readable explanation of the update status.

Type: String

Name

The name of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)|[a-zA-Z0-9_-]{1,64}`

OperatorRole

The ARN of the IAM role that Lambda uses to manage the underlying ENI resources for this connector.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

State

The current state of the network connector.

Type: String

Valid Values: `PENDING | ACTIVE | INACTIVE | FAILED | DELETING | DELETE_FAILED`

Version

The version number of the connector version resulting from this update. A configuration change creates a new, incremented version; a no-op update returns the current version number.

Type: Long

Valid Range: Minimum value of 1.

VersionArn

The qualified ARN of the connector version resulting from this update, including the immutable version suffix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Errors

For information about the errors that are common to all actions, see Common Error Types.

InvalidParameterValueException

One of the parameters in the request is not valid. Check the error message for details about which parameter failed validation.

Type

The exception type.

HTTP Status Code: 400

NetworkConnectorLimitExceededException

The request would exceed a network connector limit. For `CreateNetworkConnector`, the account has reached the maximum number of network connectors allowed. For `UpdateNetworkConnector`, the connector has reached the maximum number of versions allowed.

message

The account has reached the maximum number of network connectors allowed.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

The request could not be completed due to a conflict with the current state of the resource. For example, attempting to update a connector that is not in `ACTIVE` state.

Type

The exception type.

HTTP Status Code: 409

ResourceNotFoundException

The specified network connector does not exist. Verify the identifier (ID, name, or ARN) and Region.

Type

The exception type.

HTTP Status Code: 404

ServiceException

An internal service error occurred. Retry the request with exponential backoff.

Type

The exception type.

HTTP Status Code: 500

TooManyRequestsException

The request was throttled due to exceeding the allowed request rate. Retry the request after a brief wait using exponential backoff.

Reason

The reason for the throttling.

retryAfterSeconds

The number of seconds to wait before retrying the request.

Type

The exception type.

HTTP Status Code: 429

See Also

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

- Amazon Command Line Interface V2
- Amazon SDK for .NET V4
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python (Boto3)
- Amazon SDK for Ruby V3

Data Types

The Amazon Lambda Core 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:

- NetworkConnectorConfiguration
- NetworkConnectorSummary
- NetworkConnectorVersionSummary
- NetworkConnectorVpcEgressConfiguration

NetworkConnectorConfiguration

The network configuration for a network connector. Different connector types use different configuration shapes; specify the configuration that matches your connector type.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

VpcEgressConfiguration

Configuration for a VPC egress network connector. Specifies the subnets, security groups, and network protocol for routing outbound traffic through your VPC.

Type: NetworkConnectorVpcEgressConfiguration object

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

NetworkConnectorSummary

Summary information about a network connector returned by `ListNetworkConnectors`. Contains identifying fields and current state. To retrieve full configuration details, use `GetNetworkConnector`.

Contents

Arn

The ARN of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Required: Yes

Id

The unique identifier of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Required: Yes

Name

The name of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)|[a-zA-Z0-9_-]{1,64}`

Required: Yes

Type

The type of the network connector (VPC_EGRESS).

Type: String

Valid Values: VPC_EGRESS

Required: Yes

LastModified

The date and time when the connector was last modified.

Type: Timestamp

Required: No

LatestVersion

The version number of the connector's latest version. Each configuration update creates a new immutable version; this attribute exposes the most recent one.

Type: Long

Valid Range: Minimum value of 1.

Required: No

LatestVersionArn

The qualified ARN of the connector's latest version, including the immutable version suffix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Required: No

State

The current state of the network connector.

Type: String

Valid Values: `PENDING | ACTIVE | INACTIVE | FAILED | DELETING | DELETE_FAILED`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

NetworkConnectorVersionSummary

Summary information about a single version of a network connector returned by `ListNetworkConnectorVersions`. Each configuration update creates a new immutable version; this shape describes one such version. To retrieve the full configuration of a version, call `GetNetworkConnector` with a version-qualified identifier.

Contents

Arn

The unqualified ARN of the network connector that this version belongs to.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Required: Yes

Id

The unique identifier of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Required: Yes

Name

The name of the network connector.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)|[a-zA-Z0-9_-]{1,64}`

Required: Yes

State

The current state of this connector version.

Type: String

Valid Values: `PENDING | ACTIVE | INACTIVE | FAILED | DELETING | DELETE_FAILED`

Required: Yes

Version

The version number of this connector version.

Type: Long

Valid Range: Minimum value of 1.

Required: Yes

VersionArn

The qualified ARN of this connector version, including the immutable version suffix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:network-connector:[a-zA-Z0-9-_]+(:[1-9][0-9]*)?)`

Required: Yes

LastModified

The date and time when this connector version was last modified.

Type: Timestamp

Required: No

StateReason

A human-readable explanation of the current state, populated when the state is `FAILED`.

Type: String

Required: No

StateReasonCode

A machine-readable code indicating the reason for the current state. Use this for programmatic error handling.

Type: String

Valid Values: `DisallowedByVpcEncryptionControl | Ec2RequestLimitExceeded | InsufficientRolePermissions | InternalError | InvalidSecurityGroup | InvalidSubnet | SecurityGroupsPerInterfaceLimitExceeded | SubnetOutOfIPAddresses`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

NetworkConnectorVpcEgressConfiguration

Configuration for a VPC egress network connector. Specifies the VPC subnets, security groups, network protocol, and associated Lambda compute resource types.

Contents

AssociatedComputeResourceTypes

The types of Lambda compute resources that can use this connector. Valid values are `MicroVm` and `WebFunction`. Specify exactly one value.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `MicroVm | WebFunction`

Required: No

NetworkProtocol

The network protocol for the connector. Specify `IPv4` for IPv4-only networking, or `DualStack` for both IPv4 and IPv6.

Type: String

Valid Values: `IPv4 | DualStack`

Required: No

SecurityGroupIds

The IDs of the VPC security groups to attach to the ENIs. All security groups must be in the same VPC as the subnets.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 16 items.

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `sg-[0-9a-zA-Z]*`

Required: No

SubnetIds

The IDs of the VPC subnets where Lambda provisions elastic network interfaces (ENIs). Specify 1 to 16 subnets. All subnets must be in the same VPC.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 16 items.

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `subnet-[0-9a-z]*`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see Signing Amazon API requests in the *IAM User Guide*.

X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: *access_key*/*YYYYMMDD*/*region*/*service*/aws4_request.

For more information, see Create a signed Amazon API request in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: `20120325T120000Z`.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Elements of an Amazon API request signature in the *IAM User Guide*.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to Amazon Security Token Service (Amazon STS). For a list of services that support temporary security credentials from Amazon STS, see Amazon Web Services services that work with IAM in the *IAM User Guide*.

Condition: If you're using temporary security credentials from Amazon STS, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see Create a signed Amazon API request in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

Common Error Types

This section lists common error types that this Amazon service may return. Not all services return all error types listed here. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You don't have permission to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 403

ExpiredTokenException

The security token included in the request has expired. Request a new security token and try again.

HTTP Status Code: 403

IncompleteSignature

The request signature doesn't conform to Amazon standards. Verify that you're using valid Amazon credentials and that your request is properly formatted. If you're using an SDK, ensure it's up to date.

HTTP Status Code: 403

InternalFailure

The request can't be processed right now because of an internal server issue. Try again later. If the problem persists, contact Amazon Support.

HTTP Status Code: 500

MalformedHttpRequestException

The request body can't be processed. This typically happens when the request body can't be decompressed using the specified content encoding algorithm. Verify that the content encoding header matches the compression format used.

HTTP Status Code: 400

NotAuthorized

You don't have permissions to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 401

OptInRequired

Your Amazon account needs a subscription for this service. Verify that you've enabled the service in your account.

HTTP Status Code: 403

RequestAbortedException

The request was aborted before a response could be returned. This typically happens when the client closes the connection.

HTTP Status Code: 400

RequestEntityTooLargeException

The request entity is too large. Reduce the size of the request body and try again.

HTTP Status Code: 413

RequestTimeoutException

The request timed out. The server didn't receive the complete request within the expected time frame. Try again.

HTTP Status Code: 408

ServiceUnavailable

The service is temporarily unavailable. Try again later.

HTTP Status Code: 503

ThrottlingException

Your request rate is too high. The Amazon SDKs automatically retry requests that receive this exception. Reduce the frequency of requests.

HTTP Status Code: 400

UnknownOperationException

The action or operation isn't recognized. Verify that the action name is spelled correctly and that it's supported by the API version you're using.

HTTP Status Code: 404

UnrecognizedClientException

The X.509 certificate or Amazon access key ID you provided doesn't exist in our records. Verify that you're using valid credentials and that they haven't expired.

HTTP Status Code: 403

ValidationError

The input doesn't meet the required format or constraints. Check that all required parameters are included and that values are valid.

HTTP Status Code: 400