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API Reference

Amazon Lambda

API Version 2015-03-31

Amazon Lambda: API Reference

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Welcome

This section contains the Amazon Lambda API Reference documentation. Instead of making requests to the API directly from your application, we recommend that you use one of the Amazon Software Development Kits (SDKs) for your programming language. The Amazon SDKs take care of request authentication, serialization, and connection management. If you don't use the Amazon SDK, you will need to authenticate your request by providing a signature. Amazon Lambda supports signature version 4. For more information, see Signature Version 4 signing process in the *Amazon Web Services General Reference*.

Certificate errors when using an SDK

Because Amazon SDKs use the CA certificates from your computer, changes to the certificates on the Amazon servers can cause connection failures when you attempt to use an SDK. You can prevent these failures by keeping your computer's CA certificates and operating system up-to-date. If you encounter this issue in a corporate environment and do not manage your own computer, you might need to ask an administrator to assist with the update process. The following list shows minimum operating system and Java versions:

- Microsoft Windows versions that have updates from January 2005 or later installed contain at least one of the required CAs in their trust list.
- Mac OS X 10.4 with Java for Mac OS X 10.4 Release 5 (February 2007), Mac OS X 10.5 (October 2007), and later versions contain at least one of the required CAs in their trust list.
- Red Hat Enterprise Linux 5 (March 2007), 6, and 7 and CentOS 5, 6, and 7 all contain at least one of the required CAs in their default trusted CA list.
- Java 1.4.2_12 (May 2006), 5 Update 2 (March 2005), and all later versions, including Java 6 (December 2006), 7, and 8, contain at least one of the required CAs in their default trusted CA list.

When accessing the Amazon Lambda management console or Amazon Lambda API endpoints, whether through browsers or programmatically, you will need to ensure your client machines support any of the following CAs:

- Amazon Root CA 1
- Starfield Services Root Certificate Authority - G2

- Starfield Class 2 Certification Authority

Root certificates from the first two authorities are available from Amazon trust services, but keeping your computer up-to-date is the more straightforward solution. To learn more about ACM-provided certificates, see Amazon Certificate Manager FAQs.

Actions

The following actions are supported:

- AddLayerVersionPermission
- AddPermission
- CreateAlias
- CreateCodeSigningConfig
- CreateEventSourceMapping
- CreateFunction
- CreateFunctionUrlConfig
- DeleteAlias
- DeleteCodeSigningConfig
- DeleteEventSourceMapping
- DeleteFunction
- DeleteFunctionCodeSigningConfig
- DeleteFunctionConcurrency
- DeleteFunctionEventInvokeConfig
- DeleteFunctionUrlConfig
- DeleteLayerVersion
- DeleteProvisionedConcurrencyConfig
- GetAccountSettings
- GetAlias
- GetCodeSigningConfig
- GetEventSourceMapping
- GetFunction
- GetFunctionCodeSigningConfig
- GetFunctionConcurrency
- GetFunctionConfiguration
- GetFunctionEventInvokeConfig
- GetFunctionRecursionConfig

- GetFunctionUrlConfig
- GetLayerVersion
- GetLayerVersionByArn
- GetLayerVersionPolicy
- GetPolicy
- GetProvisionedConcurrencyConfig
- GetRuntimeManagementConfig
- Invoke
- InvokeAsync
- InvokeWithResponseStream
- ListAliases
- ListCodeSigningConfigs
- ListEventSourceMappings
- ListFunctionEventInvokeConfigs
- ListFunctions
- ListFunctionsByCodeSigningConfig
- ListFunctionUrlConfigs
- ListLayers
- ListLayerVersions
- ListProvisionedConcurrencyConfigs
- ListTags
- ListVersionsByFunction
- PublishLayerVersion
- PublishVersion
- PutFunctionCodeSigningConfig
- PutFunctionConcurrency
- PutFunctionEventInvokeConfig
- PutFunctionRecursionConfig
- PutProvisionedConcurrencyConfig
- PutRuntimeManagementConfig

- RemoveLayerVersionPermission
- RemovePermission
- TagResource
- UntagResource
- UpdateAlias
- UpdateCodeSigningConfig
- UpdateEventSourceMapping
- UpdateFunctionCode
- UpdateFunctionConfiguration
- UpdateFunctionEventInvokeConfig
- UpdateFunctionUrlConfig

AddLayerVersionPermission

Adds permissions to the resource-based policy of a version of an Amazon Lambda layer. Use this action to grant layer usage permission to other accounts. You can grant permission to a single account, all accounts in an organization, or all Amazon accounts.

To revoke permission, call RemoveLayerVersionPermission with the statement ID that you specified when you added it.

Request Syntax

```
POST /2018-10-31/layers/LayerName/versions/VersionNumber/policy?RevisionId=RevisionId
 HTTP/1.1
Content-type: application/json

{
   "Action": "string",
   "OrganizationId": "string",
   "Principal": "string",
   "StatementId": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

LayerName

The name or Amazon Resource Name (ARN) of the layer.

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

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

RevisionId

Only update the policy if the revision ID matches the ID specified. Use this option to avoid modifying a policy that has changed since you last read it.

VersionNumber

The version number.

Required: Yes

Request Body

The request accepts the following data in JSON format.

Action

The API action that grants access to the layer. For example, `lambda:GetLayerVersion`.

Type: String

Length Constraints: Maximum length of 22.

Pattern: `lambda:GetLayerVersion`

Required: Yes

OrganizationId

With the principal set to `*`, grant permission to all accounts in the specified organization.

Type: String

Length Constraints: Maximum length of 34.

Pattern: `o-[a-z0-9]{10,32}`

Required: No

Principal

An account ID, or `*` to grant layer usage permission to all accounts in an organization, or all Amazon accounts (if `organizationId` is not specified). For the last case, make sure that you really do want all Amazon accounts to have usage permission to this layer.

Type: String

Pattern: `\d{12}|\*|arn:(aws[a-zA-Z-]*):iam::\d{12}:root`

Required: Yes

StatementId

An identifier that distinguishes the policy from others on the same layer version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `([a-zA-Z0-9-_]+)`

Required: Yes

Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "RevisionId": "string",
   "Statement": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

RevisionId

A unique identifier for the current revision of the policy.

Type: String

Statement

The permission statement.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PolicyLengthExceededException

The permissions policy for the resource is too large. For more information, see Lambda quotas.

HTTP Status Code: 400

PreconditionFailedException

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

HTTP Status Code: 412

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

AddPermission

Grants a principal permission to use a function. You can apply the policy at the function level, or specify a qualifier to restrict access to a single version or alias. If you use a qualifier, the invoker must use the full Amazon Resource Name (ARN) of that version or alias to invoke the function. Note: Lambda does not support adding policies to version $LATEST.

To grant permission to another account, specify the account ID as the `Principal`. To grant permission to an organization defined in Amazon Organizations, specify the organization ID as the `PrincipalOrgID`. For Amazon Web Services services, the principal is a domain-style identifier that the service defines, such as `s3.amazonaws.com` or `sns.amazonaws.com`. For Amazon Web Services services, you can also specify the ARN of the associated resource as the `SourceArn`. If you grant permission to a service principal without specifying the source, other accounts could potentially configure resources in their account to invoke your Lambda function.

This operation adds a statement to a resource-based permissions policy for the function. For more information about function policies, see Using resource-based policies for Lambda.

Request Syntax

```
POST /2015-03-31/functions/FunctionName/policy?Qualifier=Qualifier HTTP/1.1
Content-type: application/json

{
   "Action": "string",
   "EventSourceToken": "string",
   "FunctionUrlAuthType": "string",
   "Principal": "string",
   "PrincipalOrgID": "string",
   "RevisionId": "string",
   "SourceAccount": "string",
   "SourceArn": "string",
   "StatementId": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

Specify a version or alias to add permissions to a published version of the function.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request accepts the following data in JSON format.

Action

The action that the principal can use on the function. For example, `lambda:InvokeFunction` or `lambda:GetFunction`.

Type: String

Pattern: `(lambda:[*]|lambda:[a-zA-Z]+|[*])`

Required: Yes

EventSourceToken

For Alexa Smart Home functions, a token that the invoker must supply.

Type: String

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

Pattern: `[a-zA-Z0-9._\-]+`

Required: No

FunctionUrlAuthType

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Security and auth model for Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Required: No

Principal

The Amazon Web Services service, Amazon Web Services account, IAM user, or IAM role that invokes the function. If you specify a service, use `SourceArn` or `SourceAccount` to limit who can invoke the function through that service.

Type: String

Pattern: `[^\s]+`

Required: Yes

PrincipalOrgID

The identifier for your organization in Amazon Organizations. Use this to grant permissions to all the Amazon Web Services accounts under this organization.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 34.

Pattern: `^o-[a-z0-9]{10,32}$`

Required: No

RevisionId

Update the policy only if the revision ID matches the ID that's specified. Use this option to avoid modifying a policy that has changed since you last read it.

Type: String

Required: No

SourceAccount

For Amazon Web Services service, the ID of the Amazon Web Services account that owns the resource. Use this together with `SourceArn` to ensure that the specified account owns the resource. It is possible for an Amazon S3 bucket to be deleted by its owner and recreated by another account.

Type: String

Length Constraints: Maximum length of 12.

Pattern: `\d{12}`

Required: No

SourceArn

For Amazon Web Services services, the ARN of the Amazon resource that invokes the function. For example, an Amazon S3 bucket or Amazon SNS topic.

Note that Lambda configures the comparison using the `StringLike` operator.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

StatementId

A statement identifier that differentiates the statement from others in the same policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `([a-zA-Z0-9-_]+)`

Required: Yes

Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "Statement": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

Statement

The permission statement that's added to the function policy.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PolicyLengthExceededException

The permissions policy for the resource is too large. For more information, see Lambda quotas.

HTTP Status Code: 400

PreconditionFailedException

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

HTTP Status Code: 412

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

CreateAlias

Creates an alias for a Lambda function version. Use aliases to provide clients with a function identifier that you can update to invoke a different version.

You can also map an alias to split invocation requests between two versions. Use the `RoutingConfig` parameter to specify a second version and the percentage of invocation requests that it receives.

Request Syntax

```
POST /2015-03-31/functions/FunctionName/aliases HTTP/1.1
Content-type: application/json

{
   "Description": "string",
   "FunctionVersion": "string",
   "Name": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : number
      }
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Description

A description of the alias.

Type: String

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

Required: No

FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Required: Yes

Name

The name of the alias.

Type: String

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

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: Yes

RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

Required: No

Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "AliasArn": "string",
   "Description": "string",
   "FunctionVersion": "string",
   "Name": "string",
   "RevisionId": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : number
      }
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

AliasArn

The Amazon Resource Name (ARN) of the alias.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Description

A description of the alias.

Type: String

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

FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Name

The name of the alias.

Type: String

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

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

RevisionId

A unique identifier that changes when you update the alias.

Type: String

RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

CreateCodeSigningConfig

Creates a code signing configuration. A code signing configuration defines a list of allowed signing profiles and defines the code-signing validation policy (action to be taken if deployment validation checks fail).

Request Syntax

```
POST /2020-04-22/code-signing-configs/ HTTP/1.1
Content-type: application/json

{
   "AllowedPublishers": {
      "SigningProfileVersionArns": [ "string" ]
   },
   "CodeSigningPolicies": {
      "UntrustedArtifactOnDeployment": "string"
   },
   "Description": "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.

AllowedPublishers

Signing profiles for this code signing configuration.

Type: AllowedPublishers object

Required: Yes

CodeSigningPolicies

The code signing policies define the actions to take if the validation checks fail.

Type: CodeSigningPolicies object

Required: No

Description

Descriptive name for this code signing configuration.

Type: String

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

Required: No

Tags

A list of tags to add to the code signing configuration.

Type: String to string map

Required: No

Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "CodeSigningConfig": {
      "AllowedPublishers": {
         "SigningProfileVersionArns": [ "string" ]
      },
      "CodeSigningConfigArn": "string",
      "CodeSigningConfigId": "string",
      "CodeSigningPolicies": {
         "UntrustedArtifactOnDeployment": "string"
      },
      "Description": "string",
      "LastModified": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

CodeSigningConfig

The code signing configuration.

Type: CodeSigningConfig object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

CreateEventSourceMapping

Creates a mapping between an event source and an Amazon Lambda function. Lambda reads items from the event source and invokes the function.

For details about how to configure different event sources, see the following topics.

- Amazon DynamoDB Streams
- Amazon Kinesis
- Amazon SQS
- Amazon MQ and RabbitMQ
- Amazon MSK
- Apache Kafka
- Amazon DocumentDB

The following error handling options are available only for DynamoDB and Kinesis event sources:

- `BisectBatchOnFunctionError` – If the function returns an error, split the batch in two and retry.
- `MaximumRecordAgeInSeconds` – Discard records older than the specified age. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires
- `MaximumRetryAttempts` – Discard records after the specified number of retries. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires.
- `ParallelizationFactor` – Process multiple batches from each shard concurrently.

For stream sources (DynamoDB, Kinesis, Amazon MSK, and self-managed Apache Kafka), the following option is also available:

- `OnFailure` – Send discarded records to an Amazon SQS queue, Amazon SNS topic, or Amazon S3 bucket. For more information, see Adding a destination.

For information about which configuration parameters apply to each event source, see the following topics.

- Amazon DynamoDB Streams

- Amazon Kinesis
- Amazon SQS
- Amazon MQ and RabbitMQ
- Amazon MSK
- Apache Kafka
- Amazon DocumentDB

Request Syntax

```
POST /2015-03-31/event-source-mappings/ HTTP/1.1
Content-type: application/json

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
```

```
    },
    "DocumentDBEventSourceConfig": {
       "CollectionName": "string",
       "DatabaseName": "string",
       "FullDocument": "string"
    },
    "Enabled": boolean,
    "EventSourceArn": "string",
    "FilterCriteria": {
       "Filters": [
          {
             "Pattern": "string"
          }
       ]
    },
    "FunctionName": "string",
    "FunctionResponseTypes": [ "string" ],
    "KMSKeyArn": "string",
    "MaximumBatchingWindowInSeconds": number,
    "MaximumRecordAgeInSeconds": number,
    "MaximumRetryAttempts": number,
    "MetricsConfig": {
       "Metrics": [ "string" ]
    },
    "ParallelizationFactor": number,
    "ProvisionedPollerConfig": {
       "MaximumPollers": number,
       "MinimumPollers": number
    },
    "Queues": [ "string" ],
    "ScalingConfig": {
       "MaximumConcurrency": number
    },
    "SelfManagedEventSource": {
       "Endpoints": {
          "string" : [ "string" ]
       }
    },
    "SelfManagedKafkaEventSourceConfig": {
       "ConsumerGroupId": "string",
       "SchemaRegistryConfig": {
          "AccessConfigs": [
             {
                "Type": "string",
```

```
            "URI": "string"
         }
      ],
      "EventRecordFormat": "string",
      "SchemaRegistryURI": "string",
      "SchemaValidationConfigs": [
         {
            "Attribute": "string"
         }
      ]
   }
},
"SourceAccessConfigurations": [
   {
      "Type": "string",
      "URI": "string"
   }
],
"StartingPosition": "string",
"StartingPositionTimestamp": number,
"Tags": {
   "string" : "string"
},
"Topics": [ "string" ],
"TumblingWindowInSeconds": number
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

Required: No

BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

- **Amazon Kinesis** – Default 100. Max 10,000.
- **Amazon DynamoDB Streams** – Default 100. Max 10,000.
- **Amazon Simple Queue Service** – Default 10. For standard queues the max is 10,000. For FIFO queues the max is 10.
- **Amazon Managed Streaming for Apache Kafka** – Default 100. Max 10,000.
- **Self-managed Apache Kafka** – Default 100. Max 10,000.
- **Amazon MQ (ActiveMQ and RabbitMQ)** – Default 100. Max 10,000.
- **DocumentDB** – Default 100. Max 10,000.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

Required: No

BisectBatchOnFunctionError

(Kinesis and DynamoDB Streams only) If the function returns an error, split the batch in two and retry.

Type: Boolean

Required: No

DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Kafka only) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

Required: No

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

Required: No

Enabled

When true, the event source mapping is active. When false, Lambda pauses polling and invocation.

Default: True

Type: Boolean

Required: No

EventSourceArn

The Amazon Resource Name (ARN) of the event source.

- **Amazon Kinesis** – The ARN of the data stream or a stream consumer.
- **Amazon DynamoDB Streams** – The ARN of the stream.
- **Amazon Simple Queue Service** – The ARN of the queue.
- **Amazon Managed Streaming for Apache Kafka** – The ARN of the cluster or the ARN of the VPC connection (for cross-account event source mappings).
- **Amazon MQ** – The ARN of the broker.
- **Amazon DocumentDB** – The ARN of the DocumentDB change stream.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

Type: FilterCriteria object

Required: No

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `MyFunction`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Version or Alias ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction:PROD`.
- **Partial ARN** – `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it's limited to 64 characters in length.

Type: String

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

FunctionResponseTypes

(Kinesis, DynamoDB Streams, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

Required: No

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that Lambda uses to encrypt your function's filter criteria. By default, Lambda does not encrypt your filter criteria object. Specify this property to encrypt data using your own customer managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For Kinesis, DynamoDB, and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For Kinesis, DynamoDB, and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

Required: No

MaximumRecordAgeInSeconds

(Kinesis and DynamoDB Streams only) Discard records older than the specified age. The default value is infinite (-1).

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

Required: No

MaximumRetryAttempts

(Kinesis and DynamoDB Streams only) Discard records after the specified number of retries. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

Required: No

MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

Required: No

ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process from each shard concurrently.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

ProvisionedPollerConfig

(Amazon MSK and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Required: No

Queues

(MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

Required: No

ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

Required: No

SelfManagedEventSource

The self-managed Apache Kafka cluster to receive records from.

Type: SelfManagedEventSource object

Required: No

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

Required: No

SourceAccessConfigurations

An array of authentication protocols or VPC components required to secure your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

Required: No

StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

Required: No

StartingPositionTimestamp

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

Required: No

Tags

A list of tags to apply to the event source mapping.

Type: String to string map

Required: No

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `^[^.]([a-zA-Z0-9\-_.]+)`

Required: No

TumblingWindowInSeconds

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

Required: No

Response Syntax

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

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "DocumentDBEventSourceConfig": {
      "CollectionName": "string",
      "DatabaseName": "string",
      "FullDocument": "string"
   },
   "EventSourceArn": "string",
   "EventSourceMappingArn": "string",
   "FilterCriteria": {
      "Filters": [
```

```
        {
           "Pattern": "string"
        }
     ]
  },
  "FilterCriteriaError": {
     "ErrorCode": "string",
     "Message": "string"
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "KMSKeyArn": "string",
  "LastModified": number,
  "LastProcessingResult": "string",
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "MetricsConfig": {
     "Metrics": [ "string" ]
  },
  "ParallelizationFactor": number,
  "ProvisionedPollerConfig": {
     "MaximumPollers": number,
     "MinimumPollers": number
  },
  "Queues": [ "string" ],
  "ScalingConfig": {
     "MaximumConcurrency": number
  },
  "SelfManagedEventSource": {
     "Endpoints": {
        "string" : [ "string" ]
     }
  },
  "SelfManagedKafkaEventSourceConfig": {
     "ConsumerGroupId": "string",
     "SchemaRegistryConfig": {
        "AccessConfigs": [
           {
              "Type": "string",
              "URI": "string"
           }
        ],
        "EventRecordFormat": "string",
```

```
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "StartingPosition": "string",
   "StartingPositionTimestamp": number,
   "State": "string",
   "StateTransitionReason": "string",
   "Topics": [ "string" ],
   "TumblingWindowInSeconds": number,
   "UUID": "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.

AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

BisectBatchOnFunctionError

(Kinesis and DynamoDB Streams only) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka event sources only) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

EventSourceArn

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

EventSourceMappingArn

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct Amazon KMS key.

Type: FilterCriteria object

FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

FunctionArn

The ARN of the Lambda function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionResponseTypes

(Kinesis, DynamoDB Streams, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

LastProcessingResult

The result of the event source mapping's last processing attempt.

Type: String

MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

MaximumRecordAgeInSeconds

(Kinesis and DynamoDB Streams only) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

MaximumRetryAttempts

(Kinesis and DynamoDB Streams only) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

ProvisionedPollerConfig

(Amazon MSK and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Queues

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

SelfManagedEventSource

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

SourceAccessConfigurations

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

StartingPositionTimestamp

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

State

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

StateTransitionReason

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `^[^.]([a-zA-Z0-9\-_.]+)`

TumblingWindowInSeconds

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

UUID

The identifier of the event source mapping.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET

- 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
- Amazon SDK for Ruby V3

CreateFunction

Creates a Lambda function. To create a function, you need a deployment package and an execution role. The deployment package is a .zip file archive or container image that contains your function code. The execution role grants the function permission to use Amazon Web Services services, such as Amazon CloudWatch Logs for log streaming and Amazon X-Ray for request tracing.

If the deployment package is a container image, then you set the package type to `Image`. For a container image, the code property must include the URI of a container image in the Amazon ECR registry. You do not need to specify the handler and runtime properties.

If the deployment package is a .zip file archive, then you set the package type to `Zip`. For a .zip file archive, the code property specifies the location of the .zip file. You must also specify the handler and runtime properties. The code in the deployment package must be compatible with the target instruction set architecture of the function (`x86-64` or `arm64`). If you do not specify the architecture, then the default value is `x86-64`.

When you create a function, Lambda provisions an instance of the function and its supporting resources. If your function connects to a VPC, this process can take a minute or so. During this time, you can't invoke or modify the function. The `State`, `StateReason`, and `StateReasonCode` fields in the response from GetFunctionConfiguration indicate when the function is ready to invoke. For more information, see Lambda function states.

A function has an unpublished version, and can have published versions and aliases. The unpublished version changes when you update your function's code and configuration. A published version is a snapshot of your function code and configuration that can't be changed. An alias is a named resource that maps to a version, and can be changed to map to a different version. Use the `Publish` parameter to create version `1` of your function from its initial configuration.

The other parameters let you configure version-specific and function-level settings. You can modify version-specific settings later with UpdateFunctionConfiguration. Function-level settings apply to both the unpublished and published versions of the function, and include tags (TagResource) and per-function concurrency limits (PutFunctionConcurrency).

You can use code signing if your deployment package is a .zip file archive. To enable code signing for this function, specify the ARN of a code-signing configuration. When a user attempts to deploy a code package with UpdateFunctionCode, Lambda checks that the code package has a valid signature from a trusted publisher. The code-signing configuration includes set of signing profiles, which define the trusted publishers for this function.

If another Amazon Web Services account or an Amazon Web Services service invokes your function, use AddPermission to grant permission by creating a resource-based Amazon Identity and Access Management (IAM) policy. You can grant permissions at the function level, on a version, or on an alias.

To invoke your function directly, use Invoke. To invoke your function in response to events in other Amazon Web Services services, create an event source mapping (CreateEventSourceMapping), or configure a function trigger in the other service. For more information, see Invoking Lambda functions.

Request Syntax

```
POST /2015-03-31/functions HTTP/1.1
Content-type: application/json

{
   "Architectures": [ "string" ],
   "Code": {
      "ImageUri": "string",
      "S3Bucket": "string",
      "S3Key": "string",
      "S3ObjectVersion": "string",
      "SourceKMSKeyArn": "string",
      "ZipFile": blob
   },
   "CodeSigningConfigArn": "string",
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "Environment": {
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string"
```

```
      }
   ],
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfig": {
      "Command": [ "string" ],
      "EntryPoint": [ "string" ],
      "WorkingDirectory": "string"
   },
   "KMSKeyArn": "string",
   "Layers": [ "string" ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MemorySize": number,
   "PackageType": "string",
   "Publish": boolean,
   "Role": "string",
   "Runtime": "string",
   "SnapStart": {
      "ApplyOn": "string"
   },
   "Tags": {
      "string" : "string"
   },
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ]
   }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

Architectures

The instruction set architecture that the function supports. Enter a string array with one of the valid values (arm64 or x86_64). The default value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

Required: No

Code

The code for the function.

Type: FunctionCode object

Required: Yes

CodeSigningConfigArn

To enable code signing for this function, specify the ARN of a code-signing configuration. A code-signing configuration includes a set of signing profiles, which define the trusted publishers for this function.

Type: String

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: No

DeadLetterConfig

A dead-letter queue configuration that specifies the queue or topic where Lambda sends asynchronous events when they fail processing. For more information, see Dead-letter queues.

Type: DeadLetterConfig object

Required: No

Description

A description of the function.

Type: String

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

Required: No

Environment

Environment variables that are accessible from function code during execution.

Type: Environment object

Required: No

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

Required: No

FileSystemConfigs

Connection settings for an Amazon EFS file system.

Type: Array of FileSystemConfig objects

Array Members: Maximum number of 1 item.

Required: No

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.

- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Type: String

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Handler

The name of the method within your code that Lambda calls to run your function. Handler is required if the deployment package is a .zip file archive. The format includes the file name. It can also include namespaces and other qualifiers, depending on the runtime. For more information, see Lambda programming model.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[^\s]+`

Required: No

ImageConfig

Container image configuration values that override the values in the container image Dockerfile.

Type: ImageConfig object

Required: No

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.

- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an Amazon owned key or an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

Layers

A list of function layers to add to the function's execution environment. Specify each layer by its ARN, including the version.

Type: Array of strings

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: No

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

Required: No

MemorySize

The amount of memory available to the function at runtime. Increasing the function memory also increases its CPU allocation. The default value is 128 MB. The value can be any multiple of 1 MB.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

Required: No

PackageType

The type of deployment package. Set to `Image` for container image and set to `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

Required: No

Publish

Set to true to publish the first version of the function during creation.

Type: Boolean

Required: No

Role

The Amazon Resource Name (ARN) of the function's execution role.

Type: String

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

Required: Yes

Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Required: No

SnapStart

The function's SnapStart setting.

Type: SnapStart object

Required: No

Tags

A list of tags to apply to the function.

Type: String to string map

Required: No

Timeout

The amount of time (in seconds) that Lambda allows a function to run before stopping it. The default is 3 seconds. The maximum allowed value is 900 seconds. For more information, see Lambda execution environment.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

TracingConfig

Set `Mode` to `Active` to sample and trace a subset of incoming requests with X-Ray.

Type: TracingConfig object

Required: No

VpcConfig

For network connectivity to Amazon resources in a VPC, specify a list of security groups and subnets in the VPC. When you connect a function to a VPC, it can access resources and the internet only through that VPC. For more information, see Configuring a Lambda function to access resources in a VPC.

Type: VpcConfig object

Required: No

Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "Architectures": [ "string" ],
   "CodeSha256": "string",
   "CodeSize": number,
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string"
      }
   ],
```

```
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
```

```
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

Architectures

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is x86_64.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: x86_64 | arm64

CodeSha256

The SHA256 hash of the function's deployment package.

Type: String

CodeSize

The size of the function's deployment package, in bytes.

Type: Long

DeadLetterConfig

The function's dead letter queue.

Type: DeadLetterConfig object

Description

The function's description.

Type: String

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

Environment

The function's environment variables. Omitted from Amazon CloudTrail logs.

Type: EnvironmentResponse object

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

FileSystemConfigs

Connection settings for an Amazon EFS file system.

Type: Array of FileSystemConfig objects

Array Members: Maximum number of 1 item.

FunctionArn

The function's Amazon Resource Name (ARN).

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionName

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[^\s]+`

ImageConfigResponse

The function's image configuration values.

Type: ImageConfigResponse object

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an Amazon owned key or an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Layers

The function's layers.

Type: Array of Layer objects

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

RevisionId

The latest updated revision of the function or alias.

Type: String

Role

The function's execution role.

Type: String

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

Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SnapStart

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

State

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed`

StateReason

The reason for the function's current state.

Type: String

StateReasonCode

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Timeout

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

TracingConfig

The function's Amazon X-Ray tracing configuration.

Type: TracingConfigResponse object

Version

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

VpcConfig

The function's networking configuration.

Type: VpcConfigResponse object

Errors

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

CodeSigningConfigNotFoundException

The specified code signing configuration does not exist.

HTTP Status Code: 404

CodeStorageExceededException

Your Amazon Web Services account has exceeded its maximum total code size. For more information, see Lambda quotas.

HTTP Status Code: 400

CodeVerificationFailedException

The code signature failed one or more of the validation checks for signature mismatch or expiry, and the code signing policy is set to ENFORCE. Lambda blocks the deployment.

HTTP Status Code: 400

InvalidCodeSignatureException

The code signature failed the integrity check. If the integrity check fails, then Lambda blocks deployment, even if the code signing policy is set to WARN.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET

- 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
- Amazon SDK for Ruby V3

CreateFunctionUrlConfig

Creates a Lambda function URL with the specified configuration parameters. A function URL is a dedicated HTTP(S) endpoint that you can use to invoke your function.

Request Syntax

```
POST /2021-10-31/functions/FunctionName/url?Qualifier=Qualifier HTTP/1.1
Content-type: application/json

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "InvokeMode": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

The alias name.

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

Pattern: `(^\$LATEST$)|((?!^[0-9]+$)([a-zA-Z0-9-_]+))`

Request Body

The request accepts the following data in JSON format.

AuthType

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Security and auth model for Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Required: Yes

Cors

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

Required: No

InvokeMode

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.

- RESPONSE_STREAM – Your function streams payload results as they become available. Lambda invokes your function using the InvokeWithResponseStream API operation. The maximum response payload size is 20 MB, however, you can request a quota increase.

Type: String

Valid Values: BUFFERED | RESPONSE_STREAM

Required: No

Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "CreationTime": "string",
   "FunctionArn": "string",
   "FunctionUrl": "string",
   "InvokeMode": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

AuthType

The type of authentication that your function URL uses. Set to AWS_IAM if you want to restrict access to authenticated users only. Set to NONE if you want to bypass IAM authentication to

create a public endpoint. For more information, see Security and auth model for Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Cors

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

CreationTime

When the function URL was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

FunctionArn

The Amazon Resource Name (ARN) of your function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionUrl

The HTTP URL endpoint for your function.

Type: String

Length Constraints: Minimum length of 40. Maximum length of 100.

InvokeMode

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.
- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 20 MB, however, you can request a quota increase.

Type: String

Valid Values: `BUFFERED` | `RESPONSE_STREAM`

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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

- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteAlias

Deletes a Lambda function alias.

Request Syntax

```
DELETE /2015-03-31/functions/FunctionName/aliases/Name HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Name

The name of the alias.

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

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteCodeSigningConfig

Deletes the code signing configuration. You can delete the code signing configuration only if no function is using it.

Request Syntax

```
DELETE /2020-04-22/code-signing-configs/CodeSigningConfigArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteEventSourceMapping

Deletes an event source mapping. You can get the identifier of a mapping from the output of ListEventSourceMappings.

When you delete an event source mapping, it enters a `Deleting` state and might not be completely deleted for several seconds.

Request Syntax

```
DELETE /2015-03-31/event-source-mappings/UUID HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

UUID

The identifier of the event source mapping.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
```

```
        "EventRecordFormat": "string",
        "SchemaRegistryURI": "string",
        "SchemaValidationConfigs": [
           {
              "Attribute": "string"
           }
        ]
     }
  },
  "BatchSize": number,
  "BisectBatchOnFunctionError": boolean,
  "DestinationConfig": {
     "OnFailure": {
        "Destination": "string"
     },
     "OnSuccess": {
        "Destination": "string"
     }
  },
  "DocumentDBEventSourceConfig": {
     "CollectionName": "string",
     "DatabaseName": "string",
     "FullDocument": "string"
  },
  "EventSourceArn": "string",
  "EventSourceMappingArn": "string",
  "FilterCriteria": {
     "Filters": [
        {
           "Pattern": "string"
        }
     ]
  },
  "FilterCriteriaError": {
     "ErrorCode": "string",
     "Message": "string"
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "KMSKeyArn": "string",
  "LastModified": number,
  "LastProcessingResult": "string",
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
```

```
   "MaximumRetryAttempts": number,
   "MetricsConfig": {
      "Metrics": [ "string" ]
   },
   "ParallelizationFactor": number,
   "ProvisionedPollerConfig": {
      "MaximumPollers": number,
      "MinimumPollers": number
   },
   "Queues": [ "string" ],
   "ScalingConfig": {
      "MaximumConcurrency": number
   },
   "SelfManagedEventSource": {
      "Endpoints": {
         "string" : [ "string" ]
      }
   },
   "SelfManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "StartingPosition": "string",
   "StartingPositionTimestamp": number,
```

```
    "State": "string",
    "StateTransitionReason": "string",
    "Topics": [ "string" ],
    "TumblingWindowInSeconds": number,
    "UUID": "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.

AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

BisectBatchOnFunctionError

(Kinesis and DynamoDB Streams only) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka event sources only) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

EventSourceArn

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

EventSourceMappingArn

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct Amazon KMS key.

Type: FilterCriteria object

FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

FunctionArn

The ARN of the Lambda function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionResponseTypes

(Kinesis, DynamoDB Streams, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

LastProcessingResult

The result of the event source mapping's last processing attempt.

Type: String

MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

MaximumRecordAgeInSeconds

(Kinesis and DynamoDB Streams only) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

MaximumRetryAttempts

(Kinesis and DynamoDB Streams only) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When

MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

ProvisionedPollerConfig

(Amazon MSK and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Queues

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

SelfManagedEventSource

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

SourceAccessConfigurations

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

StartingPositionTimestamp

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

State

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

StateTransitionReason

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `^[^.]([a-zA-Z0-9\-_.]+)`

TumblingWindowInSeconds

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

UUID

The identifier of the event source mapping.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceInUseException

The operation conflicts with the resource's availability. For example, you tried to update an event source mapping in the CREATING state, or you tried to delete an event source mapping currently UPDATING.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteFunction

Deletes a Lambda function. To delete a specific function version, use the `Qualifier` parameter. Otherwise, all versions and aliases are deleted. This doesn't require the user to have explicit permissions for DeleteAlias.

To delete Lambda event source mappings that invoke a function, use DeleteEventSourceMapping. For Amazon Web Services services and resources that invoke your function directly, delete the trigger in the service where you originally configured it.

Request Syntax

```
DELETE /2015-03-31/functions/FunctionName?Qualifier=Qualifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function or version.

Name formats

- **Function name** – `my-function` (name-only), `my-function:1` (with version).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

Specify a version to delete. You can't delete a version that an alias references.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteFunctionCodeSigningConfig

Removes the code signing configuration from the function.

Request Syntax

```
DELETE /2020-06-30/functions/FunctionName/code-signing-config HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

CodeSigningConfigNotFoundException

The specified code signing configuration does not exist.

HTTP Status Code: 404

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteFunctionConcurrency

Removes a concurrent execution limit from a function.

Request Syntax

```
DELETE /2017-10-31/functions/FunctionName/concurrency HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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

- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteFunctionEventInvokeConfig

Deletes the configuration for asynchronous invocation for a function, version, or alias.

To configure options for asynchronous invocation, use PutFunctionEventInvokeConfig.

Request Syntax

```
DELETE /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** - `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

A version number or alias name.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteFunctionUrlConfig

Deletes a Lambda function URL. When you delete a function URL, you can't recover it. Creating a new function URL results in a different URL address.

Request Syntax

```
DELETE /2021-10-31/functions/FunctionName/url?Qualifier=Qualifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

The alias name.

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

Pattern: `(^\$LATEST$)|((?!^[0-9]+$)([a-zA-Z0-9-_]+))`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteLayerVersion

Deletes a version of an Amazon Lambda layer. Deleted versions can no longer be viewed or added to functions. To avoid breaking functions, a copy of the version remains in Lambda until no functions refer to it.

Request Syntax

```
DELETE /2018-10-31/layers/LayerName/versions/VersionNumber HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

LayerName

The name or Amazon Resource Name (ARN) of the layer.

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

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

VersionNumber

The version number.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

DeleteProvisionedConcurrencyConfig

Deletes the provisioned concurrency configuration for a function.

Request Syntax

```
DELETE /2019-09-30/functions/FunctionName/provisioned-concurrency?Qualifier=Qualifier
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

The version number or alias name.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetAccountSettings

Retrieves details about your account's limits and usage in an Amazon Region.

Request Syntax

```
GET /2016-08-19/account-settings/ HTTP/1.1
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AccountLimit": {
      "CodeSizeUnzipped": number,
      "CodeSizeZipped": number,
      "ConcurrentExecutions": number,
      "TotalCodeSize": number,
      "UnreservedConcurrentExecutions": number
   },
   "AccountUsage": {
      "FunctionCount": number,
      "TotalCodeSize": 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.

AccountLimit

Limits that are related to concurrency and code storage.

Type: AccountLimit object

AccountUsage

The number of functions and amount of storage in use.

Type: AccountUsage object

Errors

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

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetAlias

Returns details about a Lambda function alias.

Request Syntax

```
GET /2015-03-31/functions/FunctionName/aliases/Name HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Name

The name of the alias.

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

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AliasArn": "string",
   "Description": "string",
   "FunctionVersion": "string",
   "Name": "string",
   "RevisionId": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : 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.

AliasArn

The Amazon Resource Name (ARN) of the alias.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Description

A description of the alias.

Type: String

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

FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Name

The name of the alias.

Type: String

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

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

RevisionId

A unique identifier that changes when you update the alias.

Type: String

RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetCodeSigningConfig

Returns information about the specified code signing configuration.

Request Syntax

```
GET /2020-04-22/code-signing-configs/CodeSigningConfigArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "CodeSigningConfig": {
      "AllowedPublishers": {
         "SigningProfileVersionArns": [ "string" ]
      },
      "CodeSigningConfigArn": "string",
      "CodeSigningConfigId": "string",
      "CodeSigningPolicies": {
         "UntrustedArtifactOnDeployment": "string"
```

```
      },
      "Description": "string",
      "LastModified": "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.

CodeSigningConfig

The code signing configuration

Type: CodeSigningConfig object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetEventSourceMapping

Returns details about an event source mapping. You can get the identifier of a mapping from the output of ListEventSourceMappings.

Request Syntax

```
GET /2015-03-31/event-source-mappings/UUID HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

UUID

The identifier of the event source mapping.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
```

```
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "DocumentDBEventSourceConfig": {
      "CollectionName": "string",
      "DatabaseName": "string",
      "FullDocument": "string"
   },
   "EventSourceArn": "string",
   "EventSourceMappingArn": "string",
   "FilterCriteria": {
      "Filters": [
         {
            "Pattern": "string"
         }
      ]
   },
   "FilterCriteriaError": {
      "ErrorCode": "string",
      "Message": "string"
   },
   "FunctionArn": "string",
   "FunctionResponseTypes": [ "string" ],
   "KMSKeyArn": "string",
   "LastModified": number,
   "LastProcessingResult": "string",
   "MaximumBatchingWindowInSeconds": number,
   "MaximumRecordAgeInSeconds": number,
   "MaximumRetryAttempts": number,
   "MetricsConfig": {
      "Metrics": [ "string" ]
```

```
   },
   "ParallelizationFactor": number,
   "ProvisionedPollerConfig": {
      "MaximumPollers": number,
      "MinimumPollers": number
   },
   "Queues": [ "string" ],
   "ScalingConfig": {
      "MaximumConcurrency": number
   },
   "SelfManagedEventSource": {
      "Endpoints": {
         "string" : [ "string" ]
      }
   },
   "SelfManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "StartingPosition": "string",
   "StartingPositionTimestamp": number,
   "State": "string",
   "StateTransitionReason": "string",
   "Topics": [ "string" ],
```

```
    "TumblingWindowInSeconds": number,
    "UUID": "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.

AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

BisectBatchOnFunctionError

(Kinesis and DynamoDB Streams only) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka event sources only) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

EventSourceArn

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

EventSourceMappingArn

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct Amazon KMS key.

Type: FilterCriteria object

FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

FunctionArn

The ARN of the Lambda function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionResponseTypes

(Kinesis, DynamoDB Streams, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

LastProcessingResult

The result of the event source mapping's last processing attempt.

Type: String

MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

MaximumRecordAgeInSeconds

(Kinesis and DynamoDB Streams only) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

MaximumRetryAttempts

(Kinesis and DynamoDB Streams only) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

ProvisionedPollerConfig

(Amazon MSK and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Queues

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

SelfManagedEventSource

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

SourceAccessConfigurations

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

StartingPositionTimestamp

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

State

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

StateTransitionReason

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `^[^.]([a-zA-Z0-9\-_.]+)`

TumblingWindowInSeconds

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

UUID

The identifier of the event source mapping.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetFunction

Returns information about the function or function version, with a link to download the deployment package that's valid for 10 minutes. If you specify a function version, only details that are specific to that version are returned.

Request Syntax

```
GET /2015-03-31/functions/FunctionName?Qualifier=Qualifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

Specify a version or alias to get details about a published version of the function.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Code": {
      "ImageUri": "string",
      "Location": "string",
      "RepositoryType": "string",
      "ResolvedImageUri": "string",
      "SourceKMSKeyArn": "string"
   },
   "Concurrency": {
      "ReservedConcurrentExecutions": number
   },
   "Configuration": {
      "Architectures": [ "string" ],
      "CodeSha256": "string",
      "CodeSize": number,
      "DeadLetterConfig": {
         "TargetArn": "string"
      },
      "Description": "string",
      "Environment": {
         "Error": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "Variables": {
            "string" : "string"
         }
      },
      "EphemeralStorage": {
         "Size": number
      },
      "FileSystemConfigs": [
         {
            "Arn": "string",
```

```
            "LocalMountPath": "string"
         }
      ],
      "FunctionArn": "string",
      "FunctionName": "string",
      "Handler": "string",
      "ImageConfigResponse": {
         "Error": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "ImageConfig": {
            "Command": [ "string" ],
            "EntryPoint": [ "string" ],
            "WorkingDirectory": "string"
         }
      },
      "KMSKeyArn": "string",
      "LastModified": "string",
      "LastUpdateStatus": "string",
      "LastUpdateStatusReason": "string",
      "LastUpdateStatusReasonCode": "string",
      "Layers": [
         {
            "Arn": "string",
            "CodeSize": number,
            "SigningJobArn": "string",
            "SigningProfileVersionArn": "string"
         }
      ],
      "LoggingConfig": {
         "ApplicationLogLevel": "string",
         "LogFormat": "string",
         "LogGroup": "string",
         "SystemLogLevel": "string"
      },
      "MasterArn": "string",
      "MemorySize": number,
      "PackageType": "string",
      "RevisionId": "string",
      "Role": "string",
      "Runtime": "string",
      "RuntimeVersionConfig": {
         "Error": {
```

```
            "ErrorCode": "string",
            "Message": "string"
         },
         "RuntimeVersionArn": "string"
      },
      "SigningJobArn": "string",
      "SigningProfileVersionArn": "string",
      "SnapStart": {
         "ApplyOn": "string",
         "OptimizationStatus": "string"
      },
      "State": "string",
      "StateReason": "string",
      "StateReasonCode": "string",
      "Timeout": number,
      "TracingConfig": {
         "Mode": "string"
      },
      "Version": "string",
      "VpcConfig": {
         "Ipv6AllowedForDualStack": boolean,
         "SecurityGroupIds": [ "string" ],
         "SubnetIds": [ "string" ],
         "VpcId": "string"
      }
   },
   "Tags": {
      "string" : "string"
   },
   "TagsError": {
      "ErrorCode": "string",
      "Message": "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.

Code

The deployment package of the function or version.

Type: FunctionCodeLocation object

Concurrency

The function's reserved concurrency.

Type: Concurrency object

Configuration

The configuration of the function or version.

Type: FunctionConfiguration object

Tags

The function's tags. Lambda returns tag data only if you have explicit allow permissions for lambda:ListTags.

Type: String to string map

TagsError

An object that contains details about an error related to retrieving tags.

Type: TagsError object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetFunctionCodeSigningConfig

Returns the code signing configuration for the specified function.

Request Syntax

```
GET /2020-06-30/functions/FunctionName/code-signing-config HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "CodeSigningConfigArn": "string",
   "FunctionName": "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.

CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Type: String

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Type: String

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetFunctionConcurrency

Returns details about the reserved concurrency configuration for a function. To set a concurrency limit for a function, use PutFunctionConcurrency.

Request Syntax

```
GET /2019-09-30/functions/FunctionName/concurrency HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "ReservedConcurrentExecutions": 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.

ReservedConcurrentExecutions

The number of simultaneous executions that are reserved for the function.

Type: Integer

Valid Range: Minimum value of 0.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetFunctionConfiguration

Returns the version-specific settings of a Lambda function or version. The output includes only options that can vary between versions of a function. To modify these settings, use UpdateFunctionConfiguration.

To get all of a function's details, including function-level settings, use GetFunction.

Request Syntax

```
GET /2015-03-31/functions/FunctionName/configuration?Qualifier=Qualifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

Specify a version or alias to get details about a published version of the function.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Architectures": [ "string" ],
   "CodeSha256": "string",
   "CodeSize": number,
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string"
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
```

```
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
```

```
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "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.

Architectures

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is x86_64.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: x86_64 | arm64

CodeSha256

The SHA256 hash of the function's deployment package.

Type: String

CodeSize

The size of the function's deployment package, in bytes.

Type: Long

DeadLetterConfig

The function's dead letter queue.

Type: DeadLetterConfig object

Description

The function's description.

Type: String

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

Environment

The function's environment variables. Omitted from Amazon CloudTrail logs.

Type: EnvironmentResponse object

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

FileSystemConfigs

Connection settings for an Amazon EFS file system.

Type: Array of FileSystemConfig objects

Array Members: Maximum number of 1 item.

FunctionArn

The function's Amazon Resource Name (ARN).

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionName

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[^\s]+`

ImageConfigResponse

The function's image configuration values.

Type: ImageConfigResponse object

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an Amazon owned key or an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Layers

The function's layers.

Type: Array of Layer objects

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

RevisionId

The latest updated revision of the function or alias.

Type: String

Role

The function's execution role.

Type: String

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

Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SnapStart

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

State

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed`

StateReason

The reason for the function's current state.

Type: String

StateReasonCode

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Timeout

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

TracingConfig

The function's Amazon X-Ray tracing configuration.

Type: TracingConfigResponse object

Version

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

VpcConfig

The function's networking configuration.

Type: VpcConfigResponse object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetFunctionEventInvokeConfig

Retrieves the configuration for asynchronous invocation for a function, version, or alias.

To configure options for asynchronous invocation, use PutFunctionEventInvokeConfig.

Request Syntax

```
GET /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** - `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

A version number or alias name.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "FunctionArn": "string",
   "LastModified": number,
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": 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.

DestinationConfig

A destination for events after they have been sent to a function for processing.

Destinations

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.

- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

LastModified

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

MaximumEventAgeInSeconds

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

MaximumRetryAttempts

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetFunctionRecursionConfig

Returns your function's recursive loop detection configuration.

Request Syntax

```
GET /2024-08-31/functions/FunctionName/recursion-config HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

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

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "RecursiveLoop": "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.

RecursiveLoop

If your function's recursive loop detection configuration is `Allow`, Lambda doesn't take any action when it detects your function being invoked as part of a recursive loop.

If your function's recursive loop detection configuration is `Terminate`, Lambda stops your function being invoked and notifies you when it detects your function being invoked as part of a recursive loop.

By default, Lambda sets your function's configuration to `Terminate`. You can update this configuration using the PutFunctionRecursionConfig action.

Type: String

Valid Values: `Allow | Terminate`

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetFunctionUrlConfig

Returns details about a Lambda function URL.

Request Syntax

```
GET /2021-10-31/functions/FunctionName/url?Qualifier=Qualifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

The alias name.

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

Pattern: `(^\$LATEST$)|((?!^[0-9]+$)([a-zA-Z0-9-_]+))`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "CreationTime": "string",
   "FunctionArn": "string",
   "FunctionUrl": "string",
   "InvokeMode": "string",
   "LastModifiedTime": "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.

AuthType

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Security and auth model for Lambda function URLs.

Type: String

Valid Values: `NONE` | `AWS_IAM`

Cors

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

CreationTime

When the function URL was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

FunctionArn

The Amazon Resource Name (ARN) of your function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionUrl

The HTTP URL endpoint for your function.

Type: String

Length Constraints: Minimum length of 40. Maximum length of 100.

InvokeMode

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.
- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 20 MB, however, you can request a quota increase.

Type: String

Valid Values: `BUFFERED | RESPONSE_STREAM`

LastModifiedTime

When the function URL configuration was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET

- 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
- Amazon SDK for Ruby V3

GetLayerVersion

Returns information about a version of an Amazon Lambda layer, with a link to download the layer archive that's valid for 10 minutes.

Request Syntax

```
GET /2018-10-31/layers/LayerName/versions/VersionNumber HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

LayerName

The name or Amazon Resource Name (ARN) of the layer.

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

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

VersionNumber

The version number.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "CompatibleArchitectures": [ "string" ],
```

```
   "CompatibleRuntimes": [ "string" ],
   "Content": {
      "CodeSha256": "string",
      "CodeSize": number,
      "Location": "string",
      "SigningJobArn": "string",
      "SigningProfileVersionArn": "string"
   },
   "CreatedDate": "string",
   "Description": "string",
   "LayerArn": "string",
   "LayerVersionArn": "string",
   "LicenseInfo": "string",
   "Version": 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.

CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: Array of strings

Array Members: Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Content

Details about the layer version.

Type: LayerVersionContentOutput object

CreatedDate

The date that the layer version was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Description

The description of the version.

Type: String

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

LayerArn

The ARN of the layer.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+`

LayerVersionArn

The ARN of the layer version.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

LicenseInfo

The layer's software license.

Type: String

Length Constraints: Maximum length of 512.

Version

The version number.

Type: Long

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetLayerVersionByArn

Returns information about a version of an Amazon Lambda layer, with a link to download the layer archive that's valid for 10 minutes.

Request Syntax

```
GET /2018-10-31/layers?find=LayerVersion&Arn=Arn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Arn

The ARN of the layer version.

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "CompatibleArchitectures": [ "string" ],
   "CompatibleRuntimes": [ "string" ],
   "Content": {
      "CodeSha256": "string",
      "CodeSize": number,
```

```
      "Location": "string",
      "SigningJobArn": "string",
      "SigningProfileVersionArn": "string"
   },
   "CreatedDate": "string",
   "Description": "string",
   "LayerArn": "string",
   "LayerVersionArn": "string",
   "LicenseInfo": "string",
   "Version": 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.

CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: Array of strings

Array Members: Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11`

`| python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Content

Details about the layer version.

Type: LayerVersionContentOutput object

CreatedDate

The date that the layer version was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Description

The description of the version.

Type: String

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

LayerArn

The ARN of the layer.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+`

LayerVersionArn

The ARN of the layer version.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

LicenseInfo

The layer's software license.

Type: String

Length Constraints: Maximum length of 512.

Version

The version number.

Type: Long

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetLayerVersionPolicy

Returns the permission policy for a version of an Amazon Lambda layer. For more information, see AddLayerVersionPermission.

Request Syntax

```
GET /2018-10-31/layers/LayerName/versions/VersionNumber/policy HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

LayerName

The name or Amazon Resource Name (ARN) of the layer.

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

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

VersionNumber

The version number.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
```

```
    "Policy": "string",
    "RevisionId": "string"
}
```

Response Elements

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

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

Policy

The policy document.

Type: String

RevisionId

A unique identifier for the current revision of the policy.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
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- 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
- Amazon SDK for Ruby V3

GetPolicy

Returns the resource-based IAM policy for a function, version, or alias.

Request Syntax

```
GET /2015-03-31/functions/FunctionName/policy?Qualifier=Qualifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

Specify a version or alias to get the policy for that resource.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Policy": "string",
   "RevisionId": "string"
}
```

Response Elements

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

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

Policy

The resource-based policy.

Type: String

RevisionId

A unique identifier for the current revision of the policy.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetProvisionedConcurrencyConfig

Retrieves the provisioned concurrency configuration for a function's alias or version.

Request Syntax

```
GET /2019-09-30/functions/FunctionName/provisioned-concurrency?Qualifier=Qualifier
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

The version number or alias name.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AllocatedProvisionedConcurrentExecutions": number,
   "AvailableProvisionedConcurrentExecutions": number,
   "LastModified": "string",
   "RequestedProvisionedConcurrentExecutions": number,
   "Status": "string",
   "StatusReason": "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.

AllocatedProvisionedConcurrentExecutions

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

AvailableProvisionedConcurrentExecutions

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

LastModified

The date and time that a user last updated the configuration, in ISO 8601 format.

Type: String

RequestedProvisionedConcurrentExecutions

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

Status

The status of the allocation process.

Type: String

Valid Values: `IN_PROGRESS | READY | FAILED`

StatusReason

For failed allocations, the reason that provisioned concurrency could not be allocated.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ProvisionedConcurrencyConfigNotFoundException

The specified configuration does not exist.

HTTP Status Code: 404

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

GetRuntimeManagementConfig

Retrieves the runtime management configuration for a function's version. If the runtime update mode is **Manual**, this includes the ARN of the runtime version and the runtime update mode. If the runtime update mode is **Auto** or **Function update**, this includes the runtime update mode and `null` is returned for the ARN. For more information, see Runtime updates.

Request Syntax

```
GET /2021-07-20/functions/FunctionName/runtime-management-config?Qualifier=Qualifier
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

Specify a version of the function. This can be `$LATEST` or a published version number. If no value is specified, the configuration for the `$LATEST` version is returned.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "FunctionArn": "string",
   "RuntimeVersionArn": "string",
   "UpdateRuntimeOn": "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.

FunctionArn

The Amazon Resource Name (ARN) of your function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

RuntimeVersionArn

The ARN of the runtime the function is configured to use. If the runtime update mode is **Manual**, the ARN is returned, otherwise `null` is returned.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:.+$`

UpdateRuntimeOn

The current runtime update mode of the function.

Type: String

Valid Values: `Auto | Manual | FunctionUpdate`

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

Invoke

Invokes a Lambda function. You can invoke a function synchronously (and wait for the response), or asynchronously. By default, Lambda invokes your function synchronously (i.e. the`InvocationType` is `RequestResponse`). To invoke a function asynchronously, set `InvocationType` to `Event`. Lambda passes the `ClientContext` object to your function for synchronous invocations only.

For synchronous invocation, details about the function response, including errors, are included in the response body and headers. For either invocation type, you can find more information in the execution log and trace.

When an error occurs, your function may be invoked multiple times. Retry behavior varies by error type, client, event source, and invocation type. For example, if you invoke a function asynchronously and it returns an error, Lambda executes the function up to two more times. For more information, see Error handling and automatic retries in Lambda.

For asynchronous invocation, Lambda adds events to a queue before sending them to your function. If your function does not have enough capacity to keep up with the queue, events may be lost. Occasionally, your function may receive the same event multiple times, even if no error occurs. To retain events that were not processed, configure your function with a dead-letter queue.

The status code in the API response doesn't reflect function errors. Error codes are reserved for errors that prevent your function from executing, such as permissions errors, quota errors, or issues with your function's code and configuration. For example, Lambda returns `TooManyRequestsException` if running the function would cause you to exceed a concurrency limit at either the account level (`ConcurrentInvocationLimitExceeded`) or function level (`ReservedFunctionConcurrentInvocationLimitExceeded`).

For functions with a long timeout, your client might disconnect during synchronous invocation while it waits for a response. Configure your HTTP client, SDK, firewall, proxy, or operating system to allow for long connections with timeout or keep-alive settings.

This operation requires permission for the lambda:InvokeFunction action. For details on how to set up permissions for cross-account invocations, see Granting function access to other accounts.

Request Syntax

```
POST /2015-03-31/functions/FunctionName/invocations?Qualifier=Qualifier HTTP/1.1
```

```
X-Amz-Invocation-Type: InvocationType
X-Amz-Log-Type: LogType
X-Amz-Client-Context: ClientContext

Payload
```

URI Request Parameters

The request uses the following URI parameters.

ClientContext

Up to 3,583 bytes of base64-encoded data about the invoking client to pass to the function in the context object. Lambda passes the `ClientContext` object to your function for synchronous invocations only.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

InvocationType

Choose from the following options.

- `RequestResponse` (default) – Invoke the function synchronously. Keep the connection open until the function returns a response or times out. The API response includes the function response and additional data.
- `Event` – Invoke the function asynchronously. Send events that fail multiple times to the function's dead-letter queue (if one is configured). The API response only includes a status code.
- `DryRun` – Validate parameter values and verify that the user or role has permission to invoke the function.

Valid Values: `Event | RequestResponse | DryRun`

LogType

Set to `Tail` to include the execution log in the response. Applies to synchronously invoked functions only.

Valid Values: `None | Tail`

Qualifier

Specify a version or alias to invoke a published version of the function.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request accepts the following binary data.

Payload

The JSON that you want to provide to your Lambda function as input.

You can enter the JSON directly. For example, `--payload '{ "key": "value" }'`. You can also specify a file path. For example, `--payload file://payload.json`.

Response Syntax

```
HTTP/1.1 StatusCode
```

```
X-Amz-Function-Error: FunctionError
X-Amz-Log-Result: LogResult
X-Amz-Executed-Version: ExecutedVersion

Payload
```

Response Elements

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

StatusCode

The HTTP status code is in the 200 range for a successful request. For the `RequestResponse` invocation type, this status code is 200. For the `Event` invocation type, this status code is 202. For the `DryRun` invocation type, the status code is 204.

The response returns the following HTTP headers.

ExecutedVersion

The version of the function that executed. When you invoke a function with an alias, this indicates which version the alias resolved to.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

FunctionError

If present, indicates that an error occurred during function execution. Details about the error are included in the response payload.

LogResult

The last 4 KB of the execution log, which is base64-encoded.

The response returns the following as the HTTP body.

Payload

The response from the function, or an error object.

Errors

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

EC2AccessDeniedException

Need additional permissions to configure VPC settings.

HTTP Status Code: 502

EC2ThrottledException

Amazon EC2 throttled Amazon Lambda during Lambda function initialization using the execution role provided for the function.

HTTP Status Code: 502

EC2UnexpectedException

Amazon Lambda received an unexpected Amazon EC2 client exception while setting up for the Lambda function.

HTTP Status Code: 502

EFSIOException

An error occurred when reading from or writing to a connected file system.

HTTP Status Code: 410

EFSMountConnectivityException

The Lambda function couldn't make a network connection to the configured file system.

HTTP Status Code: 408

EFSMountFailureException

The Lambda function couldn't mount the configured file system due to a permission or configuration issue.

HTTP Status Code: 403

EFSMountTimeoutException

The Lambda function made a network connection to the configured file system, but the mount operation timed out.

HTTP Status Code: 408

ENILimitReachedException

Amazon Lambda couldn't create an elastic network interface in the VPC, specified as part of Lambda function configuration, because the limit for network interfaces has been reached. For more information, see Lambda quotas.

HTTP Status Code: 502

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

InvalidRequestContentException

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

HTTP Status Code: 400

InvalidRuntimeException

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

InvalidSecurityGroupIDException

The security group ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

InvalidSubnetIDException

The subnet ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

InvalidZipFileException

Amazon Lambda could not unzip the deployment package.

HTTP Status Code: 502

KMSAccessDeniedException

Lambda couldn't decrypt the environment variables because Amazon KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

KMSDisabledException

Lambda couldn't decrypt the environment variables because the Amazon KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

KMSInvalidStateException

Lambda couldn't decrypt the environment variables because the state of the Amazon KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

KMSNotFoundException

Lambda couldn't decrypt the environment variables because the Amazon KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

RecursiveInvocationException

Lambda has detected your function being invoked in a recursive loop with other Amazon resources and stopped your function's invocation.

HTTP Status Code: 400

RequestTooLargeException

The request payload exceeded the `Invoke` request body JSON input quota. For more information, see Lambda quotas.

HTTP Status Code: 413

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ResourceNotReadyException

The function is inactive and its VPC connection is no longer available. Wait for the VPC connection to reestablish and try again.

HTTP Status Code: 502

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

SnapStartException

The `afterRestore()` runtime hook encountered an error. For more information, check the Amazon CloudWatch logs.

HTTP Status Code: 400

SnapStartNotReadyException

Lambda is initializing your function. You can invoke the function when the function state becomes `Active`.

HTTP Status Code: 409

SnapStartTimeoutException

Lambda couldn't restore the snapshot within the timeout limit.

HTTP Status Code: 408

SubnetIPAddressLimitReachedException

Amazon Lambda couldn't set up VPC access for the Lambda function because one or more configured subnets has no available IP addresses.

HTTP Status Code: 502

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

HTTP Status Code: 429

UnsupportedMediaTypeException

The content type of the `Invoke` request body is not JSON.

HTTP Status Code: 415

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

InvokeAsync

This action has been deprecated.

> **Important**
>
> For asynchronous function invocation, use Invoke.

Invokes a function asynchronously.

> **Note**
>
> If you do use the InvokeAsync action, note that it doesn't support the use of X-Ray active tracing. Trace ID is not propagated to the function, even if X-Ray active tracing is turned on.

Request Syntax

```
POST /2014-11-13/functions/FunctionName/invoke-async/ HTTP/1.1

InvokeArgs
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request accepts the following binary data.

InvokeArgs

The JSON that you want to provide to your Lambda function as input.

Required: Yes

Response Syntax

```
HTTP/1.1 Status
```

Response Elements

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

Status

The status code.

Errors

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

InvalidRequestContentException

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

HTTP Status Code: 400

InvalidRuntimeException

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

InvokeWithResponseStream

Configure your Lambda functions to stream response payloads back to clients. For more information, see Configuring a Lambda function to stream responses.

This operation requires permission for the lambda:InvokeFunction action. For details on how to set up permissions for cross-account invocations, see Granting function access to other accounts.

Request Syntax

```
POST /2021-11-15/functions/FunctionName/response-streaming-invocations?
Qualifier=Qualifier HTTP/1.1
X-Amz-Invocation-Type: InvocationType
X-Amz-Log-Type: LogType
X-Amz-Client-Context: ClientContext

Payload
```

URI Request Parameters

The request uses the following URI parameters.

ClientContext

Up to 3,583 bytes of base64-encoded data about the invoking client to pass to the function in the context object.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

InvocationType

Use one of the following options:

- `RequestResponse` (default) – Invoke the function synchronously. Keep the connection open until the function returns a response or times out. The API operation response includes the function response and additional data.
- `DryRun` – Validate parameter values and verify that the IAM user or role has permission to invoke the function.

Valid Values: `RequestResponse | DryRun`

LogType

Set to `Tail` to include the execution log in the response. Applies to synchronously invoked functions only.

Valid Values: `None | Tail`

Qualifier

The alias name.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request accepts the following binary data.

Payload

The JSON that you want to provide to your Lambda function as input.

You can enter the JSON directly. For example, `--payload '{ "key": "value" }'`. You can also specify a file path. For example, `--payload file://payload.json`.

Response Syntax

```
HTTP/1.1 StatusCode
X-Amz-Executed-Version: ExecutedVersion
Content-Type: ResponseStreamContentType
Content-type: application/json

{
   "InvokeComplete": {
      "ErrorCode": "string",
      "ErrorDetails": "string",
      "LogResult": "string"
   },
   "PayloadChunk": {
      "Payload": blob
   }
}
```

Response Elements

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

StatusCode

For a successful request, the HTTP status code is in the 200 range. For the `RequestResponse` invocation type, this status code is 200. For the `DryRun` invocation type, this status code is 204.

The response returns the following HTTP headers.

ExecutedVersion

The version of the function that executed. When you invoke a function with an alias, this indicates which version the alias resolved to.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

ResponseStreamContentType

The type of data the stream is returning.

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

InvokeComplete

An object that's returned when the stream has ended and all the payload chunks have been returned.

Type: InvokeWithResponseStreamCompleteEvent object

PayloadChunk

A chunk of the streamed response payload.

Type: InvokeResponseStreamUpdate object

Errors

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

EC2AccessDeniedException

Need additional permissions to configure VPC settings.

HTTP Status Code: 502

EC2ThrottledException

Amazon EC2 throttled Amazon Lambda during Lambda function initialization using the execution role provided for the function.

HTTP Status Code: 502

EC2UnexpectedException

Amazon Lambda received an unexpected Amazon EC2 client exception while setting up for the Lambda function.

HTTP Status Code: 502

EFSIOException

An error occurred when reading from or writing to a connected file system.

HTTP Status Code: 410

EFSMountConnectivityException

The Lambda function couldn't make a network connection to the configured file system.

HTTP Status Code: 408

EFSMountFailureException

The Lambda function couldn't mount the configured file system due to a permission or configuration issue.

HTTP Status Code: 403

EFSMountTimeoutException

The Lambda function made a network connection to the configured file system, but the mount operation timed out.

HTTP Status Code: 408

ENILimitReachedException

Amazon Lambda couldn't create an elastic network interface in the VPC, specified as part of Lambda function configuration, because the limit for network interfaces has been reached. For more information, see Lambda quotas.

HTTP Status Code: 502

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

InvalidRequestContentException

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

HTTP Status Code: 400

InvalidRuntimeException

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

InvalidSecurityGroupIDException

The security group ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

InvalidSubnetIDException

The subnet ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

InvalidZipFileException

Amazon Lambda could not unzip the deployment package.

HTTP Status Code: 502

KMSAccessDeniedException

Lambda couldn't decrypt the environment variables because Amazon KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

KMSDisabledException

Lambda couldn't decrypt the environment variables because the Amazon KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

KMSInvalidStateException

Lambda couldn't decrypt the environment variables because the state of the Amazon KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

KMSNotFoundException

Lambda couldn't decrypt the environment variables because the Amazon KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

RecursiveInvocationException

Lambda has detected your function being invoked in a recursive loop with other Amazon resources and stopped your function's invocation.

HTTP Status Code: 400

RequestTooLargeException

The request payload exceeded the `Invoke` request body JSON input quota. For more information, see Lambda quotas.

HTTP Status Code: 413

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ResourceNotReadyException

The function is inactive and its VPC connection is no longer available. Wait for the VPC connection to reestablish and try again.

HTTP Status Code: 502

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

SnapStartException

The `afterRestore()` runtime hook encountered an error. For more information, check the Amazon CloudWatch logs.

HTTP Status Code: 400

SnapStartNotReadyException

Lambda is initializing your function. You can invoke the function when the function state becomes `Active`.

HTTP Status Code: 409

SnapStartTimeoutException

Lambda couldn't restore the snapshot within the timeout limit.

HTTP Status Code: 408

SubnetIPAddressLimitReachedException

Amazon Lambda couldn't set up VPC access for the Lambda function because one or more configured subnets has no available IP addresses.

HTTP Status Code: 502

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

HTTP Status Code: 429

UnsupportedMediaTypeException

The content type of the `Invoke` request body is not JSON.

HTTP Status Code: 415

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListAliases

Returns a list of aliases for a Lambda function.

Request Syntax

```
GET /2015-03-31/functions/FunctionName/aliases?
FunctionVersion=FunctionVersion&Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

FunctionVersion

Specify a function version to only list aliases that invoke that version.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

MaxItems

Limit the number of aliases returned.

Valid Range: Minimum value of 1. Maximum value of 10000.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Aliases": [
      {
         "AliasArn": "string",
         "Description": "string",
         "FunctionVersion": "string",
         "Name": "string",
         "RevisionId": "string",
         "RoutingConfig": {
            "AdditionalVersionWeights": {
               "string" : number
            }
         }
      }
   ],
   "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.

Aliases

A list of aliases.

Type: Array of AliasConfiguration objects

NextMarker

The pagination token that's included if more results are available.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListCodeSigningConfigs

Returns a list of code signing configurations. A request returns up to 10,000 configurations per call. You can use the `MaxItems` parameter to return fewer configurations per call.

Request Syntax

```
GET /2020-04-22/code-signing-configs/?Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

MaxItems

Maximum number of items to return.

Valid Range: Minimum value of 1. Maximum value of 10000.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "CodeSigningConfigs": [
      {
         "AllowedPublishers": {
            "SigningProfileVersionArns": [ "string" ]
         },
         "CodeSigningConfigArn": "string",
```

```
            "CodeSigningConfigId": "string",
            "CodeSigningPolicies": {
               "UntrustedArtifactOnDeployment": "string"
            },
            "Description": "string",
            "LastModified": "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.

CodeSigningConfigs

The code signing configurations

Type: Array of CodeSigningConfig objects

NextMarker

The pagination token that's included if more results are available.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListEventSourceMappings

Lists event source mappings. Specify an `EventSourceArn` to show only event source mappings for a single event source.

Request Syntax

```
GET /2015-03-31/event-source-mappings/?
EventSourceArn=EventSourceArn&FunctionName=FunctionName&Marker=Marker&MaxItems=MaxItems
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

EventSourceArn

The Amazon Resource Name (ARN) of the event source.

- **Amazon Kinesis** – The ARN of the data stream or a stream consumer.
- **Amazon DynamoDB Streams** – The ARN of the stream.
- **Amazon Simple Queue Service** – The ARN of the queue.
- **Amazon Managed Streaming for Apache Kafka** – The ARN of the cluster or the ARN of the VPC connection (for cross-account event source mappings).
- **Amazon MQ** – The ARN of the broker.
- **Amazon DocumentDB** – The ARN of the DocumentDB change stream.

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `MyFunction`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Version or Alias ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction:PROD`.

- **Partial ARN** – `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it's limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Marker

A pagination token returned by a previous call.

MaxItems

The maximum number of event source mappings to return. Note that ListEventSourceMappings returns a maximum of 100 items in each response, even if you set the number higher.

Valid Range: Minimum value of 1. Maximum value of 10000.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "EventSourceMappings": [
      {
         "AmazonManagedKafkaEventSourceConfig": {
            "ConsumerGroupId": "string",
            "SchemaRegistryConfig": {
               "AccessConfigs": [
                  {
                     "Type": "string",
                     "URI": "string"
                  }
               ],
               "EventRecordFormat": "string",
               "SchemaRegistryURI": "string",
```

```
            "SchemaValidationConfigs": [
               {
                  "Attribute": "string"
               }
            ]
         }
      },
      "BatchSize": number,
      "BisectBatchOnFunctionError": boolean,
      "DestinationConfig": {
         "OnFailure": {
            "Destination": "string"
         },
         "OnSuccess": {
            "Destination": "string"
         }
      },
      "DocumentDBEventSourceConfig": {
         "CollectionName": "string",
         "DatabaseName": "string",
         "FullDocument": "string"
      },
      "EventSourceArn": "string",
      "EventSourceMappingArn": "string",
      "FilterCriteria": {
         "Filters": [
            {
               "Pattern": "string"
            }
         ]
      },
      "FilterCriteriaError": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "FunctionArn": "string",
      "FunctionResponseTypes": [ "string" ],
      "KMSKeyArn": "string",
      "LastModified": number,
      "LastProcessingResult": "string",
      "MaximumBatchingWindowInSeconds": number,
      "MaximumRecordAgeInSeconds": number,
      "MaximumRetryAttempts": number,
      "MetricsConfig": {
```

```
            "Metrics": [ "string" ]
         },
         "ParallelizationFactor": number,
         "ProvisionedPollerConfig": {
            "MaximumPollers": number,
            "MinimumPollers": number
         },
         "Queues": [ "string" ],
         "ScalingConfig": {
            "MaximumConcurrency": number
         },
         "SelfManagedEventSource": {
            "Endpoints": {
               "string" : [ "string" ]
            }
         },
         "SelfManagedKafkaEventSourceConfig": {
            "ConsumerGroupId": "string",
            "SchemaRegistryConfig": {
               "AccessConfigs": [
                  {
                     "Type": "string",
                     "URI": "string"
                  }
               ],
               "EventRecordFormat": "string",
               "SchemaRegistryURI": "string",
               "SchemaValidationConfigs": [
                  {
                     "Attribute": "string"
                  }
               ]
            }
         },
         "SourceAccessConfigurations": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "StartingPosition": "string",
         "StartingPositionTimestamp": number,
         "State": "string",
         "StateTransitionReason": "string",
```

```
            "Topics": [ "string" ],
            "TumblingWindowInSeconds": number,
            "UUID": "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.

EventSourceMappings

A list of event source mappings.

Type: Array of EventSourceMappingConfiguration objects

NextMarker

A pagination token that's returned when the response doesn't contain all event source mappings.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListFunctionEventInvokeConfigs

Retrieves a list of configurations for asynchronous invocation for a function.

To configure options for asynchronous invocation, use PutFunctionEventInvokeConfig.

Request Syntax

```
GET /2019-09-25/functions/FunctionName/event-invoke-config/list?
Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `my-function`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

MaxItems

The maximum number of configurations to return.

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

Request Body

The request does not have a request body.

Response Syntax

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

{
   "FunctionEventInvokeConfigs": [
      {
         "DestinationConfig": {
            "OnFailure": {
               "Destination": "string"
            },
            "OnSuccess": {
               "Destination": "string"
            }
         },
         "FunctionArn": "string",
         "LastModified": number,
         "MaximumEventAgeInSeconds": number,
         "MaximumRetryAttempts": number
      }
   ],
   "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.

FunctionEventInvokeConfigs

A list of configurations.

Type: Array of FunctionEventInvokeConfig objects

NextMarker

The pagination token that's included if more results are available.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListFunctions

Returns a list of Lambda functions, with the version-specific configuration of each. Lambda returns up to 50 functions per call.

Set `FunctionVersion` to `ALL` to include all published versions of each function in addition to the unpublished version.

> **Note**
>
> The `ListFunctions` operation returns a subset of the FunctionConfiguration fields. To get the additional fields (State, StateReasonCode, StateReason, LastUpdateStatus, LastUpdateStatusReason, LastUpdateStatusReasonCode, RuntimeVersionConfig) for a function or version, use GetFunction.

Request Syntax

```
GET /2015-03-31/functions/?
FunctionVersion=FunctionVersion&Marker=Marker&MasterRegion=MasterRegion&MaxItems=MaxItems
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionVersion

Set to `ALL` to include entries for all published versions of each function.

Valid Values: `ALL`

Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

MasterRegion

For Lambda@Edge functions, the Amazon Web Services Region of the master function. For example, `us-east-1` filters the list of functions to include only Lambda@Edge

functions replicated from a master function in US East (N. Virginia). If specified, you must set `FunctionVersion` to `ALL`.

Pattern: `ALL|[a-z]{2}(-gov)?-[a-z]+-\d{1}`

MaxItems

The maximum number of functions to return in the response. Note that `ListFunctions` returns a maximum of 50 items in each response, even if you set the number higher.

Valid Range: Minimum value of 1. Maximum value of 10000.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Functions": [
      {
         "Architectures": [ "string" ],
         "CodeSha256": "string",
         "CodeSize": number,
         "DeadLetterConfig": {
            "TargetArn": "string"
         },
         "Description": "string",
         "Environment": {
            "Error": {
               "ErrorCode": "string",
               "Message": "string"
            },
            "Variables": {
               "string" : "string"
            }
         },
         "EphemeralStorage": {
            "Size": number
         },
```

```
      "FileSystemConfigs": [
         {
            "Arn": "string",
            "LocalMountPath": "string"
         }
      ],
      "FunctionArn": "string",
      "FunctionName": "string",
      "Handler": "string",
      "ImageConfigResponse": {
         "Error": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "ImageConfig": {
            "Command": [ "string" ],
            "EntryPoint": [ "string" ],
            "WorkingDirectory": "string"
         }
      },
      "KMSKeyArn": "string",
      "LastModified": "string",
      "LastUpdateStatus": "string",
      "LastUpdateStatusReason": "string",
      "LastUpdateStatusReasonCode": "string",
      "Layers": [
         {
            "Arn": "string",
            "CodeSize": number,
            "SigningJobArn": "string",
            "SigningProfileVersionArn": "string"
         }
      ],
      "LoggingConfig": {
         "ApplicationLogLevel": "string",
         "LogFormat": "string",
         "LogGroup": "string",
         "SystemLogLevel": "string"
      },
      "MasterArn": "string",
      "MemorySize": number,
      "PackageType": "string",
      "RevisionId": "string",
      "Role": "string",
```

```
            "Runtime": "string",
            "RuntimeVersionConfig": {
               "Error": {
                  "ErrorCode": "string",
                  "Message": "string"
               },
               "RuntimeVersionArn": "string"
            },
            "SigningJobArn": "string",
            "SigningProfileVersionArn": "string",
            "SnapStart": {
               "ApplyOn": "string",
               "OptimizationStatus": "string"
            },
            "State": "string",
            "StateReason": "string",
            "StateReasonCode": "string",
            "Timeout": number,
            "TracingConfig": {
               "Mode": "string"
            },
            "Version": "string",
            "VpcConfig": {
               "Ipv6AllowedForDualStack": boolean,
               "SecurityGroupIds": [ "string" ],
               "SubnetIds": [ "string" ],
               "VpcId": "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.

Functions

A list of Lambda functions.

Type: Array of FunctionConfiguration objects

NextMarker

The pagination token that's included if more results are available.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListFunctionsByCodeSigningConfig

List the functions that use the specified code signing configuration. You can use this method prior to deleting a code signing configuration, to verify that no functions are using it.

Request Syntax

```
GET /2020-04-22/code-signing-configs/CodeSigningConfigArn/functions?
Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

MaxItems

Maximum number of items to return.

Valid Range: Minimum value of 1. Maximum value of 10000.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "FunctionArns": [ "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.

FunctionArns

The function ARNs.

Type: Array of strings

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

NextMarker

The pagination token that's included if more results are available.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListFunctionUrlConfigs

Returns a list of Lambda function URLs for the specified function.

Request Syntax

```
GET /2021-10-31/functions/FunctionName/urls?Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

MaxItems

The maximum number of function URLs to return in the response. Note that `ListFunctionUrlConfigs` returns a maximum of 50 items in each response, even if you set the number higher.

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

Request Body

The request does not have a request body.

Response Syntax

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

{
   "FunctionUrlConfigs": [
      {
         "AuthType": "string",
         "Cors": {
            "AllowCredentials": boolean,
            "AllowHeaders": [ "string" ],
            "AllowMethods": [ "string" ],
            "AllowOrigins": [ "string" ],
            "ExposeHeaders": [ "string" ],
            "MaxAge": number
         },
         "CreationTime": "string",
         "FunctionArn": "string",
         "FunctionUrl": "string",
         "InvokeMode": "string",
         "LastModifiedTime": "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.

FunctionUrlConfigs

A list of function URL configurations.

Type: Array of FunctionUrlConfig objects

NextMarker

The pagination token that's included if more results are available.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET

- 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
- Amazon SDK for Ruby V3

ListLayers

Lists Amazon Lambda layers and shows information about the latest version of each. Specify a runtime identifier to list only layers that indicate that they're compatible with that runtime. Specify a compatible architecture to include only layers that are compatible with that instruction set architecture.

Request Syntax

```
GET /2018-10-31/layers?
CompatibleArchitecture=CompatibleArchitecture&CompatibleRuntime=CompatibleRuntime&Marker=Marker
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CompatibleArchitecture

The compatible instruction set architecture.

Valid Values: `x86_64 | arm64`

CompatibleRuntime

A runtime identifier.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Marker

A pagination token returned by a previous call.

MaxItems

The maximum number of layers to return.

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

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Layers": [
      {
         "LatestMatchingVersion": {
            "CompatibleArchitectures": [ "string" ],
            "CompatibleRuntimes": [ "string" ],
            "CreatedDate": "string",
            "Description": "string",
            "LayerVersionArn": "string",
            "LicenseInfo": "string",
            "Version": number
         },
         "LayerArn": "string",
         "LayerName": "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.

Layers

A list of function layers.

Type: Array of LayersListItem objects

NextMarker

A pagination token returned when the response doesn't contain all layers.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET

- 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
- Amazon SDK for Ruby V3

ListLayerVersions

Lists the versions of an Amazon Lambda layer. Versions that have been deleted aren't listed. Specify a runtime identifier to list only versions that indicate that they're compatible with that runtime. Specify a compatible architecture to include only layer versions that are compatible with that architecture.

Request Syntax

```
GET /2018-10-31/layers/LayerName/versions?
CompatibleArchitecture=CompatibleArchitecture&CompatibleRuntime=CompatibleRuntime&Marker=Marker
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CompatibleArchitecture

The compatible instruction set architecture.

Valid Values: `x86_64 | arm64`

CompatibleRuntime

A runtime identifier.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

LayerName

The name or Amazon Resource Name (ARN) of the layer.

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

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

Marker

A pagination token returned by a previous call.

MaxItems

The maximum number of versions to return.

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

Request Body

The request does not have a request body.

Response Syntax

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

{
   "LayerVersions": [
      {
         "CompatibleArchitectures": [ "string" ],
         "CompatibleRuntimes": [ "string" ],
         "CreatedDate": "string",
         "Description": "string",
         "LayerVersionArn": "string",
         "LicenseInfo": "string",
         "Version": number
      }
   ],
   "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.

LayerVersions

A list of versions.

Type: Array of LayerVersionsListItem objects

NextMarker

A pagination token returned when the response doesn't contain all versions.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListProvisionedConcurrencyConfigs

Retrieves a list of provisioned concurrency configurations for a function.

Request Syntax

```
GET /2019-09-30/functions/FunctionName/provisioned-concurrency?
List=ALL&Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

MaxItems

Specify a number to limit the number of configurations returned.

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

Request Body

The request does not have a request body.

Response Syntax

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

{
   "NextMarker": "string",
   "ProvisionedConcurrencyConfigs": [
      {
         "AllocatedProvisionedConcurrentExecutions": number,
         "AvailableProvisionedConcurrentExecutions": number,
         "FunctionArn": "string",
         "LastModified": "string",
         "RequestedProvisionedConcurrentExecutions": number,
         "Status": "string",
         "StatusReason": "string"
      }
   ]
}
```

Response Elements

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

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

NextMarker

The pagination token that's included if more results are available.

Type: String

ProvisionedConcurrencyConfigs

A list of provisioned concurrency configurations.

Type: Array of ProvisionedConcurrencyConfigListItem objects

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListTags

Returns a function, event source mapping, or code signing configuration's tags. You can also view function tags with GetFunction.

Request Syntax

```
GET /2017-03-31/tags/ARN HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ARN

The resource's Amazon Resource Name (ARN). Note: Lambda does not support adding tags to function aliases or versions.

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

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12})`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Tags": {
```

```
        "string" : "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.

Tags

The function's tags.

Type: String to string map

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

ListVersionsByFunction

Returns a list of versions, with the version-specific configuration of each. Lambda returns up to 50 versions per call.

Request Syntax

```
GET /2015-03-31/functions/FunctionName/versions?Marker=Marker&MaxItems=MaxItems
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

MaxItems

The maximum number of versions to return. Note that `ListVersionsByFunction` returns a maximum of 50 items in each response, even if you set the number higher.

Valid Range: Minimum value of 1. Maximum value of 10000.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "NextMarker": "string",
   "Versions": [
      {
         "Architectures": [ "string" ],
         "CodeSha256": "string",
         "CodeSize": number,
         "DeadLetterConfig": {
            "TargetArn": "string"
         },
         "Description": "string",
         "Environment": {
            "Error": {
               "ErrorCode": "string",
               "Message": "string"
            },
            "Variables": {
               "string" : "string"
            }
         },
         "EphemeralStorage": {
            "Size": number
         },
         "FileSystemConfigs": [
            {
               "Arn": "string",
               "LocalMountPath": "string"
            }
         ],
         "FunctionArn": "string",
         "FunctionName": "string",
```

```
      "Handler": "string",
      "ImageConfigResponse": {
         "Error": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "ImageConfig": {
            "Command": [ "string" ],
            "EntryPoint": [ "string" ],
            "WorkingDirectory": "string"
         }
      },
      "KMSKeyArn": "string",
      "LastModified": "string",
      "LastUpdateStatus": "string",
      "LastUpdateStatusReason": "string",
      "LastUpdateStatusReasonCode": "string",
      "Layers": [
         {
            "Arn": "string",
            "CodeSize": number,
            "SigningJobArn": "string",
            "SigningProfileVersionArn": "string"
         }
      ],
      "LoggingConfig": {
         "ApplicationLogLevel": "string",
         "LogFormat": "string",
         "LogGroup": "string",
         "SystemLogLevel": "string"
      },
      "MasterArn": "string",
      "MemorySize": number,
      "PackageType": "string",
      "RevisionId": "string",
      "Role": "string",
      "Runtime": "string",
      "RuntimeVersionConfig": {
         "Error": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "RuntimeVersionArn": "string"
      },
```

```
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string",
         "SnapStart": {
            "ApplyOn": "string",
            "OptimizationStatus": "string"
         },
         "State": "string",
         "StateReason": "string",
         "StateReasonCode": "string",
         "Timeout": number,
         "TracingConfig": {
            "Mode": "string"
         },
         "Version": "string",
         "VpcConfig": {
            "Ipv6AllowedForDualStack": boolean,
            "SecurityGroupIds": [ "string" ],
            "SubnetIds": [ "string" ],
            "VpcId": "string"
         }
      }
   ]
}
```

Response Elements

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

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

NextMarker

The pagination token that's included if more results are available.

Type: String

Versions

A list of Lambda function versions.

Type: Array of FunctionConfiguration objects

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

PublishLayerVersion

Creates an Amazon Lambda layer from a ZIP archive. Each time you call `PublishLayerVersion` with the same layer name, a new version is created.

Add layers to your function with CreateFunction or UpdateFunctionConfiguration.

Request Syntax

```
POST /2018-10-31/layers/LayerName/versions HTTP/1.1
Content-type: application/json

{
   "CompatibleArchitectures": [ "string" ],
   "CompatibleRuntimes": [ "string" ],
   "Content": {
      "S3Bucket": "string",
      "S3Key": "string",
      "S3ObjectVersion": "string",
      "ZipFile": blob
   },
   "Description": "string",
   "LicenseInfo": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

LayerName

The name or Amazon Resource Name (ARN) of the layer.

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

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

Request Body

The request accepts the following data in JSON format.

CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

Required: No

CompatibleRuntimes

A list of compatible function runtimes. Used for filtering with ListLayers and ListLayerVersions.

The following list includes deprecated runtimes. For more information, see Runtime deprecation policy.

Type: Array of strings

Array Members: Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Required: No

Content

The function layer archive.

Type: LayerVersionContentInput object

Required: Yes

Description

The description of the version.

Type: String

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

Required: No

LicenseInfo

The layer's software license. It can be any of the following:

- An SPDX license identifier. For example, `MIT`.
- The URL of a license hosted on the internet. For example, `https://opensource.org/licenses/MIT`.
- The full text of the license.

Type: String

Length Constraints: Maximum length of 512.

Required: No

Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "CompatibleArchitectures": [ "string" ],
   "CompatibleRuntimes": [ "string" ],
   "Content": {
      "CodeSha256": "string",
      "CodeSize": number,
      "Location": "string",
      "SigningJobArn": "string",
      "SigningProfileVersionArn": "string"
   },
   "CreatedDate": "string",
```

```
    "Description": "string",
    "LayerArn": "string",
    "LayerVersionArn": "string",
    "LicenseInfo": "string",
    "Version": number
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: Array of strings

Array Members: Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3`

`| ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Content

Details about the layer version.

Type: LayerVersionContentOutput object

CreatedDate

The date that the layer version was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Description

The description of the version.

Type: String

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

LayerArn

The ARN of the layer.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+`

LayerVersionArn

The ARN of the layer version.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

LicenseInfo

The layer's software license.

Type: String

Length Constraints: Maximum length of 512.

Version

The version number.

Type: Long

Errors

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

CodeStorageExceededException

Your Amazon Web Services account has exceeded its maximum total code size. For more information, see Lambda quotas.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

PublishVersion

Creates a version from the current code and configuration of a function. Use versions to create a snapshot of your function code and configuration that doesn't change.

Amazon Lambda doesn't publish a version if the function's configuration and code haven't changed since the last version. Use UpdateFunctionCode or UpdateFunctionConfiguration to update the function before publishing a version.

Clients can invoke versions directly or with an alias. To create an alias, use CreateAlias.

Request Syntax

```
POST /2015-03-31/functions/FunctionName/versions HTTP/1.1
Content-type: application/json

{
   "CodeSha256": "string",
   "Description": "string",
   "RevisionId": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request accepts the following data in JSON format.

CodeSha256

Only publish a version if the hash value matches the value that's specified. Use this option to avoid publishing a version if the function code has changed since you last updated it. You can get the hash for the version that you uploaded from the output of UpdateFunctionCode.

Type: String

Required: No

Description

A description for the version to override the description in the function configuration.

Type: String

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

Required: No

RevisionId

Only update the function if the revision ID matches the ID that's specified. Use this option to avoid publishing a version if the function configuration has changed since you last updated it.

Type: String

Required: No

Response Syntax

```
HTTP/1.1 201
Content-type: application/json
```

```
{
   "Architectures": [ "string" ],
   "CodeSha256": "string",
   "CodeSize": number,
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string"
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
```

```
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
```

```
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

Architectures

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

CodeSha256

The SHA256 hash of the function's deployment package.

Type: String

CodeSize

The size of the function's deployment package, in bytes.

Type: Long

DeadLetterConfig

The function's dead letter queue.

Type: DeadLetterConfig object

Description

The function's description.

Type: String

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

Environment

The function's environment variables. Omitted from Amazon CloudTrail logs.

Type: EnvironmentResponse object

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

FileSystemConfigs

Connection settings for an Amazon EFS file system.

Type: Array of FileSystemConfig objects

Array Members: Maximum number of 1 item.

FunctionArn

The function's Amazon Resource Name (ARN).

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionName

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[^\s]+`

ImageConfigResponse

The function's image configuration values.

Type: ImageConfigResponse object

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an Amazon owned key or an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Layers

The function's layers.

Type: Array of Layer objects

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

RevisionId

The latest updated revision of the function or alias.

Type: String

Role

The function's execution role.

Type: String

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

Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SnapStart

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

State

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed`

StateReason

The reason for the function's current state.

Type: String

StateReasonCode

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Timeout

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

TracingConfig

The function's Amazon X-Ray tracing configuration.

Type: TracingConfigResponse object

Version

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

VpcConfig

The function's networking configuration.

Type: VpcConfigResponse object

Errors

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

CodeStorageExceededException

Your Amazon Web Services account has exceeded its maximum total code size. For more information, see Lambda quotas.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

HTTP Status Code: 412

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

PutFunctionCodeSigningConfig

Update the code signing configuration for the function. Changes to the code signing configuration take effect the next time a user tries to deploy a code package to the function.

Request Syntax

```
PUT /2020-06-30/functions/FunctionName/code-signing-config HTTP/1.1
Content-type: application/json

{
   "CodeSigningConfigArn": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request accepts the following data in JSON format.

CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Type: String

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

Response Syntax

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

{
   "CodeSigningConfigArn": "string",
   "FunctionName": "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.

CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Type: String

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Type: String

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Errors

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

CodeSigningConfigNotFoundException

The specified code signing configuration does not exist.

HTTP Status Code: 404

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

PutFunctionConcurrency

Sets the maximum number of simultaneous executions for a function, and reserves capacity for that concurrency level.

Concurrency settings apply to the function as a whole, including all published versions and the unpublished version. Reserving concurrency both ensures that your function has capacity to process the specified number of events simultaneously, and prevents it from scaling beyond that level. Use GetFunction to see the current setting for a function.

Use GetAccountSettings to see your Regional concurrency limit. You can reserve concurrency for as many functions as you like, as long as you leave at least 100 simultaneous executions unreserved for functions that aren't configured with a per-function limit. For more information, see Lambda function scaling.

Request Syntax

```
PUT /2017-10-31/functions/FunctionName/concurrency HTTP/1.1
Content-type: application/json

{
   "ReservedConcurrentExecutions": number
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request accepts the following data in JSON format.

ReservedConcurrentExecutions

The number of simultaneous executions to reserve for the function.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

Response Syntax

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

{
   "ReservedConcurrentExecutions": 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.

ReservedConcurrentExecutions

The number of concurrent executions that are reserved for this function. For more information, see Managing Lambda reserved concurrency.

Type: Integer

Valid Range: Minimum value of 0.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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

- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

PutFunctionEventInvokeConfig

Configures options for asynchronous invocation on a function, version, or alias. If a configuration already exists for a function, version, or alias, this operation overwrites it. If you exclude any settings, they are removed. To set one option without affecting existing settings for other options, use UpdateFunctionEventInvokeConfig.

By default, Lambda retries an asynchronous invocation twice if the function returns an error. It retains events in a queue for up to six hours. When an event fails all processing attempts or stays in the asynchronous invocation queue for too long, Lambda discards it. To retain discarded events, configure a dead-letter queue with UpdateFunctionConfiguration.

To send an invocation record to a queue, topic, S3 bucket, function, or event bus, specify a destination. You can configure separate destinations for successful invocations (on-success) and events that fail all processing attempts (on-failure). You can configure destinations in addition to or instead of a dead-letter queue.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Request Syntax

```
PUT /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier HTTP/1.1
Content-type: application/json

{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": number
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** - `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

A version number or alias name.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request accepts the following data in JSON format.

DestinationConfig

A destination for events after they have been sent to a function for processing.

Destinations

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

Required: No

MaximumEventAgeInSeconds

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

Required: No

MaximumRetryAttempts

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

Required: No

Response Syntax

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

```
{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "FunctionArn": "string",
   "LastModified": number,
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": 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.

DestinationConfig

A destination for events after they have been sent to a function for processing.

Destinations

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

LastModified

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

MaximumEventAgeInSeconds

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

MaximumRetryAttempts

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

PutFunctionRecursionConfig

Sets your function's recursive loop detection configuration.

When you configure a Lambda function to output to the same service or resource that invokes the function, it's possible to create an infinite recursive loop. For example, a Lambda function might write a message to an Amazon Simple Queue Service (Amazon SQS) queue, which then invokes the same function. This invocation causes the function to write another message to the queue, which in turn invokes the function again.

Lambda can detect certain types of recursive loops shortly after they occur. When Lambda detects a recursive loop and your function's recursive loop detection configuration is set to `Terminate`, it stops your function being invoked and notifies you.

Request Syntax

```
PUT /2024-08-31/functions/FunctionName/recursion-config HTTP/1.1
Content-type: application/json

{
   "RecursiveLoop": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

RecursiveLoop

If you set your function's recursive loop detection configuration to `Allow`, Lambda doesn't take any action when it detects your function being invoked as part of a recursive loop. We recommend that you only use this setting if your design intentionally uses a Lambda function to write data back to the same Amazon resource that invokes it.

If you set your function's recursive loop detection configuration to `Terminate`, Lambda stops your function being invoked and notifies you when it detects your function being invoked as part of a recursive loop.

By default, Lambda sets your function's configuration to `Terminate`.

> **Important**
>
> If your design intentionally uses a Lambda function to write data back to the same Amazon resource that invokes the function, then use caution and implement suitable guard rails to prevent unexpected charges being billed to your Amazon Web Services account. To learn more about best practices for using recursive invocation patterns, see Recursive patterns that cause run-away Lambda functions in Serverless Land.

Type: String

Valid Values: `Allow | Terminate`

Required: Yes

Response Syntax

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

{
   "RecursiveLoop": "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.

RecursiveLoop

The status of your function's recursive loop detection configuration.

When this value is set to `Allow`and Lambda detects your function being invoked as part of a recursive loop, it doesn't take any action.

When this value is set to `Terminate` and Lambda detects your function being invoked as part of a recursive loop, it stops your function being invoked and notifies you.

Type: String

Valid Values: `Allow | Terminate`

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

PutProvisionedConcurrencyConfig

Adds a provisioned concurrency configuration to a function's alias or version.

Request Syntax

```
PUT /2019-09-30/functions/FunctionName/provisioned-concurrency?Qualifier=Qualifier
 HTTP/1.1
Content-type: application/json

{
   "ProvisionedConcurrentExecutions": number
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

The version number or alias name.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

ProvisionedConcurrentExecutions

The amount of provisioned concurrency to allocate for the version or alias.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

Response Syntax

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

{
   "AllocatedProvisionedConcurrentExecutions": number,
   "AvailableProvisionedConcurrentExecutions": number,
   "LastModified": "string",
   "RequestedProvisionedConcurrentExecutions": number,
   "Status": "string",
   "StatusReason": "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.

AllocatedProvisionedConcurrentExecutions

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

AvailableProvisionedConcurrentExecutions

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

LastModified

The date and time that a user last updated the configuration, in ISO 8601 format.

Type: String

RequestedProvisionedConcurrentExecutions

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

Status

The status of the allocation process.

Type: String

Valid Values: `IN_PROGRESS | READY | FAILED`

StatusReason

For failed allocations, the reason that provisioned concurrency could not be allocated.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

PutRuntimeManagementConfig

Sets the runtime management configuration for a function's version. For more information, see Runtime updates.

Request Syntax

```
PUT /2021-07-20/functions/FunctionName/runtime-management-config?Qualifier=Qualifier
 HTTP/1.1
Content-type: application/json

{
   "RuntimeVersionArn": "string",
   "UpdateRuntimeOn": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

Specify a version of the function. This can be `$LATEST` or a published version number. If no value is specified, the configuration for the `$LATEST` version is returned.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request accepts the following data in JSON format.

RuntimeVersionArn

The ARN of the runtime version you want the function to use.

> **Note**
>
> This is only required if you're using the **Manual** runtime update mode.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:.+$`

Required: No

UpdateRuntimeOn

Specify the runtime update mode.

- **Auto (default)** - Automatically update to the most recent and secure runtime version using a Two-phase runtime version rollout. This is the best choice for most customers to ensure they always benefit from runtime updates.
- **Function update** - Lambda updates the runtime of your function to the most recent and secure runtime version when you update your function. This approach synchronizes runtime updates with function deployments, giving you control over when runtime updates are

applied and allowing you to detect and mitigate rare runtime update incompatibilities early. When using this setting, you need to regularly update your functions to keep their runtime up-to-date.

- **Manual** - You specify a runtime version in your function configuration. The function will use this runtime version indefinitely. In the rare case where a new runtime version is incompatible with an existing function, this allows you to roll back your function to an earlier runtime version. For more information, see Roll back a runtime version.

Type: String

Valid Values: `Auto | Manual | FunctionUpdate`

Required: Yes

Response Syntax

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

{
   "FunctionArn": "string",
   "RuntimeVersionArn": "string",
   "UpdateRuntimeOn": "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.

FunctionArn

The ARN of the function

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

RuntimeVersionArn

The ARN of the runtime the function is configured to use. If the runtime update mode is **manual**, the ARN is returned, otherwise `null` is returned.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:.+$`

UpdateRuntimeOn

The runtime update mode.

Type: String

Valid Values: `Auto | Manual | FunctionUpdate`

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

RemoveLayerVersionPermission

Removes a statement from the permissions policy for a version of an Amazon Lambda layer. For more information, see AddLayerVersionPermission.

Request Syntax

```
DELETE /2018-10-31/layers/LayerName/versions/VersionNumber/policy/StatementId?
RevisionId=RevisionId HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

LayerName

The name or Amazon Resource Name (ARN) of the layer.

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

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

RevisionId

Only update the policy if the revision ID matches the ID specified. Use this option to avoid modifying a policy that has changed since you last read it.

StatementId

The identifier that was specified when the statement was added.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `([a-zA-Z0-9-_]+)`

Required: Yes

VersionNumber

The version number.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

HTTP Status Code: 412

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

RemovePermission

Revokes function-use permission from an Amazon Web Services service or another Amazon Web Services account. You can get the ID of the statement from the output of GetPolicy.

Request Syntax

```
DELETE /2015-03-31/functions/FunctionName/policy/StatementId?
Qualifier=Qualifier&RevisionId=RevisionId HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

Specify a version or alias to remove permissions from a published version of the function.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

RevisionId

Update the policy only if the revision ID matches the ID that's specified. Use this option to avoid modifying a policy that has changed since you last read it.

StatementId

Statement ID of the permission to remove.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `([a-zA-Z0-9-_.]+)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

HTTP Status Code: 412

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

TagResource

Adds tags to a function, event source mapping, or code signing configuration.

Request Syntax

```
POST /2017-03-31/tags/ARN HTTP/1.1
Content-type: application/json

{
   "Tags": {
      "string" : "string"
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

ARN

The resource's Amazon Resource Name (ARN).

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

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12})`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Tags

A list of tags to apply to the resource.

Type: String to string map

Required: Yes

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

UntagResource

Removes tags from a function, event source mapping, or code signing configuration.

Request Syntax

```
DELETE /2017-03-31/tags/ARN?tagKeys=TagKeys HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ARN

The resource's Amazon Resource Name (ARN).

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

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12})`

Required: Yes

TagKeys

A list of tag keys to remove from the resource.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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

- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

UpdateAlias

Updates the configuration of a Lambda function alias.

Request Syntax

```
PUT /2015-03-31/functions/FunctionName/aliases/Name HTTP/1.1
Content-type: application/json

{
   "Description": "string",
   "FunctionVersion": "string",
   "RevisionId": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : number
      }
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Name

The name of the alias.

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

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Description

A description of the alias.

Type: String

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

Required: No

FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Required: No

RevisionId

Only update the alias if the revision ID matches the ID that's specified. Use this option to avoid modifying an alias that has changed since you last read it.

Type: String

Required: No

RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

Required: No

Response Syntax

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

{
   "AliasArn": "string",
   "Description": "string",
   "FunctionVersion": "string",
   "Name": "string",
   "RevisionId": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : 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.

AliasArn

The Amazon Resource Name (ARN) of the alias.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Description

A description of the alias.

Type: String

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

FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Name

The name of the alias.

Type: String

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

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

RevisionId

A unique identifier that changes when you update the alias.

Type: String

RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

HTTP Status Code: 412

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET

- 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
- Amazon SDK for Ruby V3

UpdateCodeSigningConfig

Update the code signing configuration. Changes to the code signing configuration take effect the next time a user tries to deploy a code package to the function.

Request Syntax

```
PUT /2020-04-22/code-signing-configs/CodeSigningConfigArn HTTP/1.1
Content-type: application/json

{
   "AllowedPublishers": {
      "SigningProfileVersionArns": [ "string" ]
   },
   "CodeSigningPolicies": {
      "UntrustedArtifactOnDeployment": "string"
   },
   "Description": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

Request Body

The request accepts the following data in JSON format.

AllowedPublishers

Signing profiles for this code signing configuration.

Type: AllowedPublishers object

Required: No

CodeSigningPolicies

The code signing policy.

Type: CodeSigningPolicies object

Required: No

Description

Descriptive name for this code signing configuration.

Type: String

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

Required: No

Response Syntax

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

{
   "CodeSigningConfig": {
      "AllowedPublishers": {
         "SigningProfileVersionArns": [ "string" ]
      },
      "CodeSigningConfigArn": "string",
      "CodeSigningConfigId": "string",
      "CodeSigningPolicies": {
         "UntrustedArtifactOnDeployment": "string"
      },
      "Description": "string",
      "LastModified": "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.

CodeSigningConfig

The code signing configuration

Type: CodeSigningConfig object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

UpdateEventSourceMapping

Updates an event source mapping. You can change the function that Amazon Lambda invokes, or pause invocation and resume later from the same location.

For details about how to configure different event sources, see the following topics.

- Amazon DynamoDB Streams
- Amazon Kinesis
- Amazon SQS
- Amazon MQ and RabbitMQ
- Amazon MSK
- Apache Kafka
- Amazon DocumentDB

The following error handling options are available only for DynamoDB and Kinesis event sources:

- `BisectBatchOnFunctionError` – If the function returns an error, split the batch in two and retry.
- `MaximumRecordAgeInSeconds` – Discard records older than the specified age. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires
- `MaximumRetryAttempts` – Discard records after the specified number of retries. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires.
- `ParallelizationFactor` – Process multiple batches from each shard concurrently.

For stream sources (DynamoDB, Kinesis, Amazon MSK, and self-managed Apache Kafka), the following option is also available:

- `OnFailure` – Send discarded records to an Amazon SQS queue, Amazon SNS topic, or Amazon S3 bucket. For more information, see Adding a destination.

For information about which configuration parameters apply to each event source, see the following topics.

- Amazon DynamoDB Streams

- Amazon Kinesis
- Amazon SQS
- Amazon MQ and RabbitMQ
- Amazon MSK
- Apache Kafka
- Amazon DocumentDB

Request Syntax

```
PUT /2015-03-31/event-source-mappings/UUID HTTP/1.1
Content-type: application/json

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
```

```
    },
    "DocumentDBEventSourceConfig": {
       "CollectionName": "string",
       "DatabaseName": "string",
       "FullDocument": "string"
    },
    "Enabled": boolean,
    "FilterCriteria": {
       "Filters": [
          {
             "Pattern": "string"
          }
       ]
    },
    "FunctionName": "string",
    "FunctionResponseTypes": [ "string" ],
    "KMSKeyArn": "string",
    "MaximumBatchingWindowInSeconds": number,
    "MaximumRecordAgeInSeconds": number,
    "MaximumRetryAttempts": number,
    "MetricsConfig": {
       "Metrics": [ "string" ]
    },
    "ParallelizationFactor": number,
    "ProvisionedPollerConfig": {
       "MaximumPollers": number,
       "MinimumPollers": number
    },
    "ScalingConfig": {
       "MaximumConcurrency": number
    },
    "SelfManagedKafkaEventSourceConfig": {
       "ConsumerGroupId": "string",
       "SchemaRegistryConfig": {
          "AccessConfigs": [
             {
                "Type": "string",
                "URI": "string"
             }
          ],
          "EventRecordFormat": "string",
          "SchemaRegistryURI": "string",
          "SchemaValidationConfigs": [
             {
```

```
                "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "TumblingWindowInSeconds": number
}
```

URI Request Parameters

The request uses the following URI parameters.

UUID

The identifier of the event source mapping.

Required: Yes

Request Body

The request accepts the following data in JSON format.

AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

Required: No

BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

- **Amazon Kinesis** – Default 100. Max 10,000.
- **Amazon DynamoDB Streams** – Default 100. Max 10,000.
- **Amazon Simple Queue Service** – Default 10. For standard queues the max is 10,000. For FIFO queues the max is 10.
- **Amazon Managed Streaming for Apache Kafka** – Default 100. Max 10,000.
- **Self-managed Apache Kafka** – Default 100. Max 10,000.
- **Amazon MQ (ActiveMQ and RabbitMQ)** – Default 100. Max 10,000.
- **DocumentDB** – Default 100. Max 10,000.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

Required: No

BisectBatchOnFunctionError

(Kinesis and DynamoDB Streams only) If the function returns an error, split the batch in two and retry.

Type: Boolean

Required: No

DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Kafka only) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

Required: No

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

Required: No

Enabled

When true, the event source mapping is active. When false, Lambda pauses polling and invocation.

Default: True

Type: Boolean

Required: No

FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

Type: FilterCriteria object

Required: No

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `MyFunction`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Version or Alias ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction:PROD`.
- **Partial ARN** – `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it's limited to 64 characters in length.

Type: String

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

FunctionResponseTypes

(Kinesis, DynamoDB Streams, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

Required: No

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that Lambda uses to encrypt your function's filter criteria. By default, Lambda does not encrypt your filter criteria object. Specify this property to encrypt data using your own customer managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For Kinesis, DynamoDB, and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For Kinesis, DynamoDB, and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

Required: No

MaximumRecordAgeInSeconds

(Kinesis and DynamoDB Streams only) Discard records older than the specified age. The default value is infinite (-1).

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

Required: No

MaximumRetryAttempts

(Kinesis and DynamoDB Streams only) Discard records after the specified number of retries. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

Required: No

MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

Required: No

ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process from each shard concurrently.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

ProvisionedPollerConfig

(Amazon MSK and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Required: No

ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

Required: No

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

Required: No

SourceAccessConfigurations

An array of authentication protocols or VPC components required to secure your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

Required: No

TumblingWindowInSeconds

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

Required: No

Response Syntax

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

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "DocumentDBEventSourceConfig": {
      "CollectionName": "string",
      "DatabaseName": "string",
      "FullDocument": "string"
   },
   "EventSourceArn": "string",
   "EventSourceMappingArn": "string",
   "FilterCriteria": {
      "Filters": [
```

```
        {
           "Pattern": "string"
        }
     ]
  },
  "FilterCriteriaError": {
     "ErrorCode": "string",
     "Message": "string"
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "KMSKeyArn": "string",
  "LastModified": number,
  "LastProcessingResult": "string",
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "MetricsConfig": {
     "Metrics": [ "string" ]
  },
  "ParallelizationFactor": number,
  "ProvisionedPollerConfig": {
     "MaximumPollers": number,
     "MinimumPollers": number
  },
  "Queues": [ "string" ],
  "ScalingConfig": {
     "MaximumConcurrency": number
  },
  "SelfManagedEventSource": {
     "Endpoints": {
        "string" : [ "string" ]
     }
  },
  "SelfManagedKafkaEventSourceConfig": {
     "ConsumerGroupId": "string",
     "SchemaRegistryConfig": {
        "AccessConfigs": [
           {
              "Type": "string",
              "URI": "string"
           }
        ],
        "EventRecordFormat": "string",
```

```
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "StartingPosition": "string",
   "StartingPositionTimestamp": number,
   "State": "string",
   "StateTransitionReason": "string",
   "Topics": [ "string" ],
   "TumblingWindowInSeconds": number,
   "UUID": "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.

AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

BisectBatchOnFunctionError

(Kinesis and DynamoDB Streams only) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka event sources only) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

EventSourceArn

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

EventSourceMappingArn

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct Amazon KMS key.

Type: FilterCriteria object

FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

FunctionArn

The ARN of the Lambda function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionResponseTypes

(Kinesis, DynamoDB Streams, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

LastProcessingResult

The result of the event source mapping's last processing attempt.

Type: String

MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

MaximumRecordAgeInSeconds

(Kinesis and DynamoDB Streams only) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

MaximumRetryAttempts

(Kinesis and DynamoDB Streams only) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

ProvisionedPollerConfig

(Amazon MSK and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Queues

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

SelfManagedEventSource

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

SourceAccessConfigurations

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

StartingPositionTimestamp

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

State

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

StateTransitionReason

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `^[^.]([a-zA-Z0-9\-_.]+)`

TumblingWindowInSeconds

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

UUID

The identifier of the event source mapping.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceInUseException

The operation conflicts with the resource's availability. For example, you tried to update an event source mapping in the CREATING state, or you tried to delete an event source mapping currently UPDATING.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

UpdateFunctionCode

Updates a Lambda function's code. If code signing is enabled for the function, the code package must be signed by a trusted publisher. For more information, see Configuring code signing for Lambda.

If the function's package type is `Image`, then you must specify the code package in `ImageUri` as the URI of a container image in the Amazon ECR registry.

If the function's package type is `Zip`, then you must specify the deployment package as a .zip file archive. Enter the Amazon S3 bucket and key of the code .zip file location. You can also provide the function code inline using the `ZipFile` field.

The code in the deployment package must be compatible with the target instruction set architecture of the function (`x86-64` or `arm64`).

The function's code is locked when you publish a version. You can't modify the code of a published version, only the unpublished version.

> **Note**
>
> For a function defined as a container image, Lambda resolves the image tag to an image digest. In Amazon ECR, if you update the image tag to a new image, Lambda does not automatically update the function.

Request Syntax

```
PUT /2015-03-31/functions/FunctionName/code HTTP/1.1
Content-type: application/json

{
   "Architectures": [ "string" ],
   "DryRun": boolean,
   "ImageUri": "string",
   "Publish": boolean,
   "RevisionId": "string",
   "S3Bucket": "string",
   "S3Key": "string",
   "S3ObjectVersion": "string",
   "SourceKMSKeyArn": "string",
```

```
    "ZipFile": blob
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Architectures

The instruction set architecture that the function supports. Enter a string array with one of the valid values (arm64 or x86_64). The default value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

Required: No

DryRun

Set to true to validate the request parameters and access permissions without modifying the function code.

Type: Boolean

Required: No

ImageUri

URI of a container image in the Amazon ECR registry. Do not use for a function defined with a .zip file archive.

Type: String

Required: No

Publish

Set to true to publish a new version of the function after updating the code. This has the same effect as calling PublishVersion separately.

Type: Boolean

Required: No

RevisionId

Update the function only if the revision ID matches the ID that's specified. Use this option to avoid modifying a function that has changed since you last read it.

Type: String

Required: No

S3Bucket

An Amazon S3 bucket in the same Amazon Web Services Region as your function. The bucket can be in a different Amazon Web Services account. Use only with a function defined with a .zip file archive deployment package.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `^[0-9A-Za-z\.\-_]*(?<!\.)$`

Required: No

S3Key

The Amazon S3 key of the deployment package. Use only with a function defined with a .zip file archive deployment package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

S3ObjectVersion

For versioned objects, the version of the deployment package object to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

SourceKMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

ZipFile

The base64-encoded contents of the deployment package. Amazon SDK and Amazon CLI clients handle the encoding for you. Use only with a function defined with a .zip file archive deployment package.

Type: Base64-encoded binary data object

Required: No

Response Syntax

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

{
   "Architectures": [ "string" ],
   "CodeSha256": "string",
   "CodeSize": number,
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string"
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
```

```
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "Timeout": number,
```

```
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "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.

Architectures

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

CodeSha256

The SHA256 hash of the function's deployment package.

Type: String

CodeSize

The size of the function's deployment package, in bytes.

Type: Long

DeadLetterConfig

The function's dead letter queue.

Type: DeadLetterConfig object

Description

The function's description.

Type: String

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

Environment

The function's environment variables. Omitted from Amazon CloudTrail logs.

Type: EnvironmentResponse object

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

FileSystemConfigs

Connection settings for an Amazon EFS file system.

Type: Array of FileSystemConfig objects

Array Members: Maximum number of 1 item.

FunctionArn

The function's Amazon Resource Name (ARN).

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionName

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[^\s]+`

ImageConfigResponse

The function's image configuration values.

Type: ImageConfigResponse object

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an Amazon owned key or an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Layers

The function's layers.

Type: Array of Layer objects

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

RevisionId

The latest updated revision of the function or alias.

Type: String

Role

The function's execution role.

Type: String

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

Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SnapStart

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

State

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed`

StateReason

The reason for the function's current state.

Type: String

StateReasonCode

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Timeout

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

TracingConfig

The function's Amazon X-Ray tracing configuration.

Type: TracingConfigResponse object

Version

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

VpcConfig

The function's networking configuration.

Type: VpcConfigResponse object

Errors

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

CodeSigningConfigNotFoundException

The specified code signing configuration does not exist.

HTTP Status Code: 404

CodeStorageExceededException

Your Amazon Web Services account has exceeded its maximum total code size. For more information, see Lambda quotas.

HTTP Status Code: 400

CodeVerificationFailedException

The code signature failed one or more of the validation checks for signature mismatch or expiry, and the code signing policy is set to ENFORCE. Lambda blocks the deployment.

HTTP Status Code: 400

InvalidCodeSignatureException

The code signature failed the integrity check. If the integrity check fails, then Lambda blocks deployment, even if the code signing policy is set to WARN.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

HTTP Status Code: 412

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

UpdateFunctionConfiguration

Modify the version-specific settings of a Lambda function.

When you update a function, Lambda provisions an instance of the function and its supporting resources. If your function connects to a VPC, this process can take a minute. During this time, you can't modify the function, but you can still invoke it. The `LastUpdateStatus`, `LastUpdateStatusReason`, and `LastUpdateStatusReasonCode` fields in the response from GetFunctionConfiguration indicate when the update is complete and the function is processing events with the new configuration. For more information, see Lambda function states.

These settings can vary between versions of a function and are locked when you publish a version. You can't modify the configuration of a published version, only the unpublished version.

To configure function concurrency, use PutFunctionConcurrency. To grant invoke permissions to an Amazon Web Services account or Amazon Web Services service, use AddPermission.

Request Syntax

```
PUT /2015-03-31/functions/FunctionName/configuration HTTP/1.1
Content-type: application/json

{
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "Environment": {
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string"
      }
   ],
```

```
   "Handler": "string",
   "ImageConfig": {
      "Command": [ "string" ],
      "EntryPoint": [ "string" ],
      "WorkingDirectory": "string"
   },
   "KMSKeyArn": "string",
   "Layers": [ "string" ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MemorySize": number,
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "SnapStart": {
      "ApplyOn": "string"
   },
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ]
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.

- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Request Body

The request accepts the following data in JSON format.

DeadLetterConfig

A dead-letter queue configuration that specifies the queue or topic where Lambda sends asynchronous events when they fail processing. For more information, see Dead-letter queues.

Type: DeadLetterConfig object

Required: No

Description

A description of the function.

Type: String

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

Required: No

Environment

Environment variables that are accessible from function code during execution.

Type: Environment object

Required: No

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

Required: No

FileSystemConfigs

Connection settings for an Amazon EFS file system.

Type: Array of FileSystemConfig objects

Array Members: Maximum number of 1 item.

Required: No

Handler

The name of the method within your code that Lambda calls to run your function. Handler is required if the deployment package is a .zip file archive. The format includes the file name. It can also include namespaces and other qualifiers, depending on the runtime. For more information, see Lambda programming model.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[^\s]+`

Required: No

ImageConfig

Container image configuration values that override the values in the container image Docker file.

Type: ImageConfig object

Required: No

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an Amazon owned key or an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

Layers

A list of function layers to add to the function's execution environment. Specify each layer by its ARN, including the version.

Type: Array of strings

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: No

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

Required: No

MemorySize

The amount of memory available to the function at runtime. Increasing the function memory also increases its CPU allocation. The default value is 128 MB. The value can be any multiple of 1 MB.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

Required: No

RevisionId

Update the function only if the revision ID matches the ID that's specified. Use this option to avoid modifying a function that has changed since you last read it.

Type: String

Required: No

Role

The Amazon Resource Name (ARN) of the function's execution role.

Type: String

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

Required: No

Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Required: No

SnapStart

The function's SnapStart setting.

Type: SnapStart object

Required: No

Timeout

The amount of time (in seconds) that Lambda allows a function to run before stopping it. The default is 3 seconds. The maximum allowed value is 900 seconds. For more information, see Lambda execution environment.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

TracingConfig

Set `Mode` to `Active` to sample and trace a subset of incoming requests with X-Ray.

Type: TracingConfig object

Required: No

VpcConfig

For network connectivity to Amazon resources in a VPC, specify a list of security groups and subnets in the VPC. When you connect a function to a VPC, it can access resources and the internet only through that VPC. For more information, see Configuring a Lambda function to access resources in a VPC.

Type: VpcConfig object

Required: No

Response Syntax

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

{
   "Architectures": [ "string" ],
   "CodeSha256": "string",
   "CodeSize": number,
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string"
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
```

```
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
```

```
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "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.

Architectures

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is x86_64.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

CodeSha256

The SHA256 hash of the function's deployment package.

Type: String

CodeSize

The size of the function's deployment package, in bytes.

Type: Long

DeadLetterConfig

The function's dead letter queue.

Type: DeadLetterConfig object

Description

The function's description.

Type: String

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

Environment

The function's environment variables. Omitted from Amazon CloudTrail logs.

Type: EnvironmentResponse object

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

FileSystemConfigs

Connection settings for an Amazon EFS file system.

Type: Array of FileSystemConfig objects

Array Members: Maximum number of 1 item.

FunctionArn

The function's Amazon Resource Name (ARN).

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionName

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[^\s]+`

ImageConfigResponse

The function's image configuration values.

Type: ImageConfigResponse object

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an Amazon owned key or an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Layers

The function's layers.

Type: Array of Layer objects

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

RevisionId

The latest updated revision of the function or alias.

Type: String

Role

The function's execution role.

Type: String

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

Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

SnapStart

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

State

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed`

StateReason

The reason for the function's current state.

Type: String

StateReasonCode

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Timeout

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

TracingConfig

The function's Amazon X-Ray tracing configuration.

Type: TracingConfigResponse object

Version

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

VpcConfig

The function's networking configuration.

Type: VpcConfigResponse object

Errors

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

CodeSigningConfigNotFoundException

The specified code signing configuration does not exist.

HTTP Status Code: 404

CodeVerificationFailedException

The code signature failed one or more of the validation checks for signature mismatch or expiry, and the code signing policy is set to ENFORCE. Lambda blocks the deployment.

HTTP Status Code: 400

InvalidCodeSignatureException

The code signature failed the integrity check. If the integrity check fails, then Lambda blocks deployment, even if the code signing policy is set to WARN.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

HTTP Status Code: 412

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

UpdateFunctionEventInvokeConfig

Updates the configuration for asynchronous invocation for a function, version, or alias.

To configure options for asynchronous invocation, use PutFunctionEventInvokeConfig.

Request Syntax

```
POST /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier
 HTTP/1.1
Content-type: application/json

{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": number
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function, version, or alias.

Name formats

- **Function name** - `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

A version number or alias name.

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

Pattern: `(|[a-zA-Z0-9$_-]+)`

Request Body

The request accepts the following data in JSON format.

DestinationConfig

A destination for events after they have been sent to a function for processing.

Destinations

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

Required: No

MaximumEventAgeInSeconds

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

Required: No

MaximumRetryAttempts

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

Required: No

Response Syntax

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

{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "FunctionArn": "string",
   "LastModified": number,
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": 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.

DestinationConfig

A destination for events after they have been sent to a function for processing.

Destinations

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

LastModified

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

MaximumEventAgeInSeconds

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

MaximumRetryAttempts

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

UpdateFunctionUrlConfig

Updates the configuration for a Lambda function URL.

Request Syntax

```
PUT /2021-10-31/functions/FunctionName/url?Qualifier=Qualifier HTTP/1.1
Content-type: application/json

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "InvokeMode": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

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

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

The alias name.

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

Pattern: `(^\$LATEST$)|((?!^[0-9]+$)([a-zA-Z0-9-_]+))`

Request Body

The request accepts the following data in JSON format.

AuthType

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Security and auth model for Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Required: No

Cors

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

Required: No

InvokeMode

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.

- RESPONSE_STREAM – Your function streams payload results as they become available. Lambda invokes your function using the InvokeWithResponseStream API operation. The maximum response payload size is 20 MB, however, you can request a quota increase.

Type: String

Valid Values: BUFFERED | RESPONSE_STREAM

Required: No

Response Syntax

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

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "CreationTime": "string",
   "FunctionArn": "string",
   "FunctionUrl": "string",
   "InvokeMode": "string",
   "LastModifiedTime": "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.

AuthType

The type of authentication that your function URL uses. Set to AWS_IAM if you want to restrict access to authenticated users only. Set to NONE if you want to bypass IAM authentication to

create a public endpoint. For more information, see Security and auth model for Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Cors

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

CreationTime

When the function URL was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

FunctionArn

The Amazon Resource Name (ARN) of your function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

FunctionUrl

The HTTP URL endpoint for your function.

Type: String

Length Constraints: Minimum length of 40. Maximum length of 100.

InvokeMode

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.
- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 20 MB, however, you can request a quota increase.

Type: String

Valid Values: `BUFFERED` | `RESPONSE_STREAM`

LastModifiedTime

When the function URL configuration was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

The resource already exists, or another operation is in progress.

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The Amazon Lambda service encountered an internal error.

HTTP Status Code: 500

TooManyRequestsException

The request throughput limit was exceeded. For more information, see Lambda quotas.

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
- Amazon SDK for .NET
- 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
- Amazon SDK for Ruby V3

Data Types

The Amazon Lambda 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:

- AccountLimit
- AccountUsage
- AliasConfiguration
- AliasRoutingConfiguration
- AllowedPublishers
- AmazonManagedKafkaEventSourceConfig
- CodeSigningConfig
- CodeSigningPolicies
- Concurrency
- Cors
- DeadLetterConfig
- DestinationConfig
- DocumentDBEventSourceConfig
- Environment
- EnvironmentError
- EnvironmentResponse
- EphemeralStorage
- EventSourceMappingConfiguration
- EventSourceMappingMetricsConfig
- FileSystemConfig

- Filter
- FilterCriteria
- FilterCriteriaError
- FunctionCode
- FunctionCodeLocation
- FunctionConfiguration
- FunctionEventInvokeConfig
- FunctionUrlConfig
- ImageConfig
- ImageConfigError
- ImageConfigResponse
- InvokeResponseStreamUpdate
- InvokeWithResponseStreamCompleteEvent
- InvokeWithResponseStreamResponseEvent
- KafkaSchemaRegistryAccessConfig
- KafkaSchemaRegistryConfig
- KafkaSchemaValidationConfig
- Layer
- LayersListItem
- LayerVersionContentInput
- LayerVersionContentOutput
- LayerVersionsListItem
- LoggingConfig
- OnFailure
- OnSuccess
- ProvisionedConcurrencyConfigListItem
- ProvisionedPollerConfig
- RuntimeVersionConfig
- RuntimeVersionError
- ScalingConfig

- SelfManagedEventSource
- SelfManagedKafkaEventSourceConfig
- SnapStart
- SnapStartResponse
- SourceAccessConfiguration
- TagsError
- TracingConfig
- TracingConfigResponse
- VpcConfig
- VpcConfigResponse

AccountLimit

Limits that are related to concurrency and storage. All file and storage sizes are in bytes.

Contents

CodeSizeUnzipped

The maximum size of a function's deployment package and layers when they're extracted.

Type: Long

Required: No

CodeSizeZipped

The maximum size of a deployment package when it's uploaded directly to Lambda. Use Amazon S3 for larger files.

Type: Long

Required: No

ConcurrentExecutions

The maximum number of simultaneous function executions.

Type: Integer

Required: No

TotalCodeSize

The amount of storage space that you can use for all deployment packages and layer archives.

Type: Long

Required: No

UnreservedConcurrentExecutions

The maximum number of simultaneous function executions, minus the capacity that's reserved for individual functions with PutFunctionConcurrency.

Type: Integer

Valid Range: Minimum value of 0.

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

AccountUsage

The number of functions and amount of storage in use.

Contents

FunctionCount

The number of Lambda functions.

Type: Long

Required: No

TotalCodeSize

The amount of storage space, in bytes, that's being used by deployment packages and layer archives.

Type: Long

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

AliasConfiguration

Provides configuration information about a Lambda function alias.

Contents

AliasArn

The Amazon Resource Name (ARN) of the alias.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

Description

A description of the alias.

Type: String

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

Required: No

FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Required: No

Name

The name of the alias.

Type: String

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

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: No

RevisionId

A unique identifier that changes when you update the alias.

Type: String

Required: No

RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration 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

AliasRoutingConfiguration

The traffic-shifting configuration of a Lambda function alias.

Contents

AdditionalVersionWeights

The second version, and the percentage of traffic that's routed to it.

Type: String to double map

Key Length Constraints: Minimum length of 1. Maximum length of 1024.

Key Pattern: `[0-9]+`

Valid Range: Minimum value of 0.0. Maximum value of 1.0.

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

AllowedPublishers

List of signing profiles that can sign a code package.

Contents

SigningProfileVersionArns

The Amazon Resource Name (ARN) for each of the signing profiles. A signing profile defines a trusted user who can sign a code package.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 20 items.

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: Yes

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

AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Contents

ConsumerGroupId

The identifier for the Kafka consumer group to join. The consumer group ID must be unique among all your Kafka event sources. After creating a Kafka event source mapping with the consumer group ID specified, you cannot update this value. For more information, see Customizable consumer group ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

Required: No

SchemaRegistryConfig

Specific configuration settings for a Kafka schema registry.

Type: KafkaSchemaRegistryConfig 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

CodeSigningConfig

Details about a Code signing configuration.

Contents

AllowedPublishers

List of allowed publishers.

Type: AllowedPublishers object

Required: Yes

CodeSigningConfigArn

The Amazon Resource Name (ARN) of the Code signing configuration.

Type: String

Length Constraints: Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

CodeSigningConfigId

Unique identifer for the Code signing configuration.

Type: String

Pattern: `csc-[a-zA-Z0-9-_\.]{17}`

Required: Yes

CodeSigningPolicies

The code signing policy controls the validation failure action for signature mismatch or expiry.

Type: CodeSigningPolicies object

Required: Yes

LastModified

The date and time that the Code signing configuration was last modified, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: Yes

Description

Code signing configuration description.

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 Amazon SDKs, see the following:

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

CodeSigningPolicies

Code signing configuration policies specify the validation failure action for signature mismatch or expiry.

Contents

UntrustedArtifactOnDeployment

Code signing configuration policy for deployment validation failure. If you set the policy to `Enforce`, Lambda blocks the deployment request if signature validation checks fail. If you set the policy to `Warn`, Lambda allows the deployment and creates a CloudWatch log.

Default value: `Warn`

Type: String

Valid Values: `Warn | Enforce`

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

Concurrency

Contents

ReservedConcurrentExecutions

The number of concurrent executions that are reserved for this function. For more information, see Managing Lambda reserved concurrency.

Type: Integer

Valid Range: Minimum value of 0.

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

Cors

The cross-origin resource sharing (CORS) settings for your Lambda function URL. Use CORS to grant access to your function URL from any origin. You can also use CORS to control access for specific HTTP headers and methods in requests to your function URL.

Contents

AllowCredentials

Whether to allow cookies or other credentials in requests to your function URL. The default is `false`.

Type: Boolean

Required: No

AllowHeaders

The HTTP headers that origins can include in requests to your function URL. For example: `Date`, `Keep-Alive`, `X-Custom-Header`.

Type: Array of strings

Array Members: Maximum number of 100 items.

Length Constraints: Maximum length of 1024.

Pattern: `.*`

Required: No

AllowMethods

The HTTP methods that are allowed when calling your function URL. For example: `GET`, `POST`, `DELETE`, or the wildcard character (`*`).

Type: Array of strings

Array Members: Maximum number of 6 items.

Length Constraints: Maximum length of 6.

Pattern: `.*`

Required: No

AllowOrigins

The origins that can access your function URL. You can list any number of specific origins, separated by a comma. For example: `https://www.example.com`, `http://localhost:60905`.

Alternatively, you can grant access to all origins using the wildcard character (`*`).

Type: Array of strings

Array Members: Maximum number of 100 items.

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `.*`

Required: No

ExposeHeaders

The HTTP headers in your function response that you want to expose to origins that call your function URL. For example: `Date`, `Keep-Alive`, `X-Custom-Header`.

Type: Array of strings

Array Members: Maximum number of 100 items.

Length Constraints: Maximum length of 1024.

Pattern: `.*`

Required: No

MaxAge

The maximum amount of time, in seconds, that web browsers can cache results of a preflight request. By default, this is set to `0`, which means that the browser doesn't cache results.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 86400.

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

DeadLetterConfig

The dead-letter queue for failed asynchronous invocations.

Contents

TargetArn

The Amazon Resource Name (ARN) of an Amazon SQS queue or Amazon SNS topic.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

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

DestinationConfig

A configuration object that specifies the destination of an event after Lambda processes it. For more information, see Adding a destination.

Contents

OnFailure

The destination configuration for failed invocations.

Type: OnFailure object

Required: No

OnSuccess

The destination configuration for successful invocations. Not supported in `CreateEventSourceMapping` or `UpdateEventSourceMapping`.

Type: OnSuccess 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

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Contents

CollectionName

The name of the collection to consume within the database. If you do not specify a collection, Lambda consumes all collections.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 57.

Pattern: `(^(?!(system\x2e)))(^[_a-zA-Z0-9])([^$]*)`

Required: No

DatabaseName

The name of the database to consume within the DocumentDB cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[^ /\.$\x22]*`

Required: No

FullDocument

Determines what DocumentDB sends to your event stream during document update operations. If set to UpdateLookup, DocumentDB sends a delta describing the changes, along with a copy of the entire document. Otherwise, DocumentDB sends only a partial document that contains the changes.

Type: String

Valid Values: `UpdateLookup | Default`

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

Environment

A function's environment variable settings. You can use environment variables to adjust your function's behavior without updating code. An environment variable is a pair of strings that are stored in a function's version-specific configuration.

Contents

Variables

Environment variable key-value pairs. For more information, see Using Lambda environment variables.

Type: String to string map

Key Pattern: `[a-zA-Z]([a-zA-Z0-9_])+`

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

EnvironmentError

Error messages for environment variables that couldn't be applied.

Contents

ErrorCode

The error code.

Type: String

Required: No

Message

The error message.

Type: String

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

EnvironmentResponse

The results of an operation to update or read environment variables. If the operation succeeds, the response contains the environment variables. If it fails, the response contains details about the error.

Contents

Error

Error messages for environment variables that couldn't be applied.

Type: EnvironmentError object

Required: No

Variables

Environment variable key-value pairs. Omitted from Amazon CloudTrail logs.

Type: String to string map

Key Pattern: `[a-zA-Z]([a-zA-Z0-9_])+`

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

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Contents

Size

The size of the function's `/tmp` directory.

Type: Integer

Valid Range: Minimum value of 512. Maximum value of 10240.

Required: Yes

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

EventSourceMappingConfiguration

A mapping between an Amazon resource and a Lambda function. For details, see CreateEventSourceMapping.

Contents

AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

Required: No

BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

Required: No

BisectBatchOnFunctionError

(Kinesis and DynamoDB Streams only) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

Required: No

DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka event sources only) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

Required: No

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

Required: No

EventSourceArn

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

EventSourceMappingArn

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

Required: No

FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct Amazon KMS key.

Type: FilterCriteria object

Required: No

FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

Required: No

FunctionArn

The ARN of the Lambda function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

FunctionResponseTypes

(Kinesis, DynamoDB Streams, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

Required: No

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

LastModified

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

Required: No

LastProcessingResult

The result of the event source mapping's last processing attempt.

Type: String

Required: No

MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

Required: No

MaximumRecordAgeInSeconds

(Kinesis and DynamoDB Streams only) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

Required: No

MaximumRetryAttempts

(Kinesis and DynamoDB Streams only) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

Required: No

MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

Required: No

ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

ProvisionedPollerConfig

(Amazon MSK and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Required: No

Queues

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

Required: No

ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

Required: No

SelfManagedEventSource

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

Required: No

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

Required: No

SourceAccessConfigurations

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

Required: No

StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

Required: No

StartingPositionTimestamp

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

Required: No

State

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

Required: No

StateTransitionReason

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

Required: No

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `^[^.]([a-zA-Z0-9\-_.]+)`

Required: No

TumblingWindowInSeconds

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

Required: No

UUID

The identifier of the event source mapping.

Type: String

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

EventSourceMappingMetricsConfig

The metrics configuration for your event source. Use this configuration object to define which metrics you want your event source mapping to produce.

Contents

Metrics

The metrics you want your event source mapping to produce. Include `EventCount` to receive event source mapping metrics related to the number of events processed by your event source mapping. For more information about these metrics, see Event source mapping metrics.

Type: Array of strings

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

Valid Values: `EventCount`

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

FileSystemConfig

Details about the connection between a Lambda function and an Amazon EFS file system.

Contents

Arn

The Amazon Resource Name (ARN) of the Amazon EFS access point that provides access to the file system.

Type: String

Length Constraints: Maximum length of 200.

Pattern: `arn:aws[a-zA-Z-]*:elasticfilesystem:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:access-point/fsap-[a-f0-9]{17}`

Required: Yes

LocalMountPath

The path where the function can access the file system, starting with `/mnt/`.

Type: String

Length Constraints: Maximum length of 160.

Pattern: `^/mnt/[a-zA-Z0-9-_.]+$`

Required: Yes

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

Filter

A structure within a `FilterCriteria` object that defines an event filtering pattern.

Contents

Pattern

A filter pattern. For more information on the syntax of a filter pattern, see Filter rule syntax.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 4096.

Pattern: `.*`

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

FilterCriteria

An object that contains the filters for an event source.

Contents

Filters

A list of filters.

Type: Array of Filter objects

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

FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

Contents

ErrorCode

The Amazon KMS exception that resulted from filter criteria encryption or decryption.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 50.

Pattern: `[A-Za-z]+Exception`

Required: No

Message

The error message.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 2048.

Pattern: `.*`

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

FunctionCode

The code for the Lambda function. You can either specify an object in Amazon S3, upload a .zip file archive deployment package directly, or specify the URI of a container image.

Contents

ImageUri

URI of a container image in the Amazon ECR registry.

Type: String

Required: No

S3Bucket

An Amazon S3 bucket in the same Amazon Web Services Region as your function. The bucket can be in a different Amazon Web Services account.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `^[0-9A-Za-z\.\-_]*(?<!\.)$`

Required: No

S3Key

The Amazon S3 key of the deployment package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

S3ObjectVersion

For versioned objects, the version of the deployment package object to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

SourceKMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an Amazon owned key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

ZipFile

The base64-encoded contents of the deployment package. Amazon SDK and Amazon CLI clients handle the encoding for you.

Type: Base64-encoded binary data 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

FunctionCodeLocation

Details about a function's deployment package.

Contents

ImageUri

URI of a container image in the Amazon ECR registry.

Type: String

Required: No

Location

A presigned URL that you can use to download the deployment package.

Type: String

Required: No

RepositoryType

The service that's hosting the file.

Type: String

Required: No

ResolvedImageUri

The resolved URI for the image.

Type: String

Required: No

SourceKMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an Amazon owned key.

Type: String

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

FunctionConfiguration

Details about a function's configuration.

Contents

Architectures

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

Required: No

CodeSha256

The SHA256 hash of the function's deployment package.

Type: String

Required: No

CodeSize

The size of the function's deployment package, in bytes.

Type: Long

Required: No

DeadLetterConfig

The function's dead letter queue.

Type: DeadLetterConfig object

Required: No

Description

The function's description.

Type: String

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

Required: No

Environment

The function's environment variables. Omitted from Amazon CloudTrail logs.

Type: EnvironmentResponse object

Required: No

EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

Required: No

FileSystemConfigs

Connection settings for an Amazon EFS file system.

Type: Array of FileSystemConfig objects

Array Members: Maximum number of 1 item.

Required: No

FunctionArn

The function's Amazon Resource Name (ARN).

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

FunctionName

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 170.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[^\s]+`

Required: No

ImageConfigResponse

The function's image configuration values.

Type: ImageConfigResponse object

Required: No

KMSKeyArn

The ARN of the Amazon Key Management Service (Amazon KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.

- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an Amazon owned key or an Amazon managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: No

LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

Required: No

LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

Required: No

LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Required: No

Layers

The function's layers.

Type: Array of Layer objects

Required: No

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

Required: No

MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

Required: No

PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

Required: No

RevisionId

The latest updated revision of the function or alias.

Type: String

Required: No

Role

The function's execution role.

Type: String

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

Required: No

Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11`

`| python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Required: No

RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

Required: No

SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

SnapStart

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

Required: No

State

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed`

Required: No

StateReason

The reason for the function's current state.

Type: String

Required: No

StateReasonCode

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError`

Required: No

Timeout

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

TracingConfig

The function's Amazon X-Ray tracing configuration.

Type: TracingConfigResponse object

Required: No

Version

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Required: No

VpcConfig

The function's networking configuration.

Type: VpcConfigResponse 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

FunctionEventInvokeConfig

Contents

DestinationConfig

A destination for events after they have been sent to a function for processing.

Destinations

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

Required: No

FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

LastModified

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

Required: No

MaximumEventAgeInSeconds

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

Required: No

MaximumRetryAttempts

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

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

FunctionUrlConfig

Details about a Lambda function URL.

Contents

AuthType

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Security and auth model for Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Required: Yes

CreationTime

When the function URL was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: Yes

FunctionArn

The Amazon Resource Name (ARN) of your function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

FunctionUrl

The HTTP URL endpoint for your function.

Type: String

Length Constraints: Minimum length of 40. Maximum length of 100.

Required: Yes

LastModifiedTime

When the function URL configuration was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: Yes

Cors

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

Required: No

InvokeMode

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.
- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 20 MB, however, you can request a quota increase.

Type: String

Valid Values: `BUFFERED | RESPONSE_STREAM`

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

ImageConfig

Configuration values that override the container image Dockerfile settings. For more information, see Container image settings.

Contents

Command

Specifies parameters that you want to pass in with ENTRYPOINT.

Type: Array of strings

Array Members: Maximum number of 1500 items.

Required: No

EntryPoint

Specifies the entry point to their application, which is typically the location of the runtime executable.

Type: Array of strings

Array Members: Maximum number of 1500 items.

Required: No

WorkingDirectory

Specifies the working directory.

Type: String

Length Constraints: Maximum length of 1000.

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

ImageConfigError

Error response to `GetFunctionConfiguration`.

Contents

ErrorCode

Error code.

Type: String

Required: No

Message

Error message.

Type: String

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

ImageConfigResponse

Response to a `GetFunctionConfiguration` request.

Contents

Error

Error response to `GetFunctionConfiguration`.

Type: ImageConfigError object

Required: No

ImageConfig

Configuration values that override the container image Dockerfile.

Type: ImageConfig 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

InvokeResponseStreamUpdate

A chunk of the streamed response payload.

Contents

Payload

Data returned by your Lambda function.

Type: Base64-encoded binary data 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

InvokeWithResponseStreamCompleteEvent

A response confirming that the event stream is complete.

Contents

ErrorCode

An error code.

Type: String

Required: No

ErrorDetails

The details of any returned error.

Type: String

Required: No

LogResult

The last 4 KB of the execution log, which is base64-encoded.

Type: String

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

InvokeWithResponseStreamResponseEvent

An object that includes a chunk of the response payload. When the stream has ended, Lambda includes a `InvokeComplete` object.

Contents

InvokeComplete

An object that's returned when the stream has ended and all the payload chunks have been returned.

Type: InvokeWithResponseStreamCompleteEvent object

Required: No

PayloadChunk

A chunk of the streamed response payload.

Type: InvokeResponseStreamUpdate 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

KafkaSchemaRegistryAccessConfig

Specific access configuration settings that tell Lambda how to authenticate with your schema registry.

If you're working with an Amazon Glue schema registry, don't provide authentication details in this object. Instead, ensure that your execution role has the required permissions for Lambda to access your cluster.

If you're working with a Confluent schema registry, choose the authentication method in the `Type` field, and provide the Amazon Secrets Manager secret ARN in the `URI` field.

Contents

Type

The type of authentication Lambda uses to access your schema registry.

Type: String

Valid Values: `BASIC_AUTH | CLIENT_CERTIFICATE_TLS_AUTH | SERVER_ROOT_CA_CERTIFICATE`

Required: No

URI

The URI of the secret (Secrets Manager secret ARN) to authenticate with your schema registry.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

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

KafkaSchemaRegistryConfig

Specific configuration settings for a Kafka schema registry.

Contents

AccessConfigs

An array of access configuration objects that tell Lambda how to authenticate with your schema registry.

Type: Array of KafkaSchemaRegistryAccessConfig objects

Required: No

EventRecordFormat

The record format that Lambda delivers to your function after schema validation.

- Choose `JSON` to have Lambda deliver the record to your function as a standard JSON object.
- Choose `SOURCE` to have Lambda deliver the record to your function in its original source format. Lambda removes all schema metadata, such as the schema ID, before sending the record to your function.

Type: String

Valid Values: `JSON | SOURCE`

Required: No

SchemaRegistryURI

The URI for your schema registry. The correct URI format depends on the type of schema registry you're using.

- For Amazon Glue schema registries, use the ARN of the registry.
- For Confluent schema registries, use the URL of the registry.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10000.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

Required: No

SchemaValidationConfigs

An array of schema validation configuration objects, which tell Lambda the message attributes you want to validate and filter using your schema registry.

Type: Array of KafkaSchemaValidationConfig objects

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

KafkaSchemaValidationConfig

Specific schema validation configuration settings that tell Lambda the message attributes you want to validate and filter using your schema registry.

Contents

Attribute

The attributes you want your schema registry to validate and filter for. If you selected `JSON` as the `EventRecordFormat`, Lambda also deserializes the selected message attributes.

Type: String

Valid Values: `KEY` | `VALUE`

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

Layer

An Amazon Lambda layer.

Contents

Arn

The Amazon Resource Name (ARN) of the function layer.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: No

CodeSize

The size of the layer archive in bytes.

Type: Long

Required: No

SigningJobArn

The Amazon Resource Name (ARN) of a signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

SigningProfileVersionArn

The Amazon Resource Name (ARN) for a signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

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

LayersListItem

Details about an Amazon Lambda layer.

Contents

LatestMatchingVersion

The newest version of the layer.

Type: LayerVersionsListItem object

Required: No

LayerArn

The Amazon Resource Name (ARN) of the function layer.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+`

Required: No

LayerName

The name of the layer.

Type: String

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

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

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

LayerVersionContentInput

A ZIP archive that contains the contents of an Amazon Lambda layer. You can specify either an Amazon S3 location, or upload a layer archive directly.

Contents

S3Bucket

The Amazon S3 bucket of the layer archive.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `^[0-9A-Za-z\.\-_]*(?<!\.)$`

Required: No

S3Key

The Amazon S3 key of the layer archive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

S3ObjectVersion

For versioned objects, the version of the layer archive object to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

ZipFile

The base64-encoded contents of the layer archive. Amazon SDK and Amazon CLI clients handle the encoding for you.

Type: Base64-encoded binary data 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

LayerVersionContentOutput

Details about a version of an Amazon Lambda layer.

Contents

CodeSha256

The SHA-256 hash of the layer archive.

Type: String

Required: No

CodeSize

The size of the layer archive in bytes.

Type: Long

Required: No

Location

A link to the layer archive in Amazon S3 that is valid for 10 minutes.

Type: String

Required: No

SigningJobArn

The Amazon Resource Name (ARN) of a signing job.

Type: String

Required: No

SigningProfileVersionArn

The Amazon Resource Name (ARN) for a signing profile version.

Type: String

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

LayerVersionsListItem

Details about a version of an Amazon Lambda layer.

Contents

CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

Required: No

CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: Array of strings

Array Members: Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x`

Required: No

CreatedDate

The date that the version was created, in ISO 8601 format. For example, `2018-11-27T15:10:45.123+0000`.

Type: String

Required: No

Description

The description of the version.

Type: String

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

Required: No

LayerVersionArn

The ARN of the layer version.

Type: String

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

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: No

LicenseInfo

The layer's open-source license.

Type: String

Length Constraints: Maximum length of 512.

Required: No

Version

The version number.

Type: Long

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

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Contents

ApplicationLogLevel

Set this property to filter the application logs for your function that Lambda sends to CloudWatch. Lambda only sends application logs at the selected level of detail and lower, where `TRACE` is the highest level and `FATAL` is the lowest.

Type: String

Valid Values: `TRACE | DEBUG | INFO | WARN | ERROR | FATAL`

Required: No

LogFormat

The format in which Lambda sends your function's application and system logs to CloudWatch. Select between plain text and structured JSON.

Type: String

Valid Values: `JSON | Text`

Required: No

LogGroup

The name of the Amazon CloudWatch log group the function sends logs to. By default, Lambda functions send logs to a default log group named `/aws/lambda/<function name>`. To use a different log group, enter an existing log group or enter a new log group name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `[\.\-_/#A-Za-z0-9]+`

Required: No

SystemLogLevel

Set this property to filter the system logs for your function that Lambda sends to CloudWatch. Lambda only sends system logs at the selected level of detail and lower, where `DEBUG` is the highest level and `WARN` is the lowest.

Type: String

Valid Values: `DEBUG | INFO | WARN`

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

OnFailure

A destination for events that failed processing. For more information, see Adding a destination.

Contents

Destination

The Amazon Resource Name (ARN) of the destination resource.

To retain records of unsuccessful asynchronous invocations, you can configure an Amazon SNS topic, Amazon SQS queue, Amazon S3 bucket, Lambda function, or Amazon EventBridge event bus as the destination.

To retain records of failed invocations from Kinesis, DynamoDB, self-managed Kafka or Amazon MSK, you can configure an Amazon SNS topic, Amazon SQS queue, or Amazon S3 bucket as the destination.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 350.

Pattern: `^$|arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

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

OnSuccess

A destination for events that were processed successfully.

To retain records of successful asynchronous invocations, you can configure an Amazon SNS topic, Amazon SQS queue, Lambda function, or Amazon EventBridge event bus as the destination.

> **Note**
>
> `OnSuccess` is not supported in `CreateEventSourceMapping` or `UpdateEventSourceMapping` requests.

Contents

Destination

The Amazon Resource Name (ARN) of the destination resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 350.

Pattern: `^$|arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

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

ProvisionedConcurrencyConfigListItem

Details about the provisioned concurrency configuration for a function alias or version.

Contents

AllocatedProvisionedConcurrentExecutions

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

AvailableProvisionedConcurrentExecutions

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

FunctionArn

The Amazon Resource Name (ARN) of the alias or version.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

LastModified

The date and time that a user last updated the configuration, in ISO 8601 format.

Type: String

Required: No

RequestedProvisionedConcurrentExecutions

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

Status

The status of the allocation process.

Type: String

Valid Values: `IN_PROGRESS | READY | FAILED`

Required: No

StatusReason

For failed allocations, the reason that provisioned concurrency could not be allocated.

Type: String

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

ProvisionedPollerConfig

The provisioned mode configuration for the event source. Use Provisioned Mode to customize the minimum and maximum number of event pollers for your event source. An event poller is a compute unit that provides approximately 5 MBps of throughput.

Contents

MaximumPollers

The maximum number of event pollers this event source can scale up to.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 2000.

Required: No

MinimumPollers

The minimum number of event pollers this event source can scale down to.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 200.

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

RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Contents

Error

Error response when Lambda is unable to retrieve the runtime version for a function.

Type: RuntimeVersionError object

Required: No

RuntimeVersionArn

The ARN of the runtime version you want the function to use.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:.+$`

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

RuntimeVersionError

Any error returned when the runtime version information for the function could not be retrieved.

Contents

ErrorCode

The error code.

Type: String

Required: No

Message

The error message.

Type: String

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

ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. To remove the configuration, pass an empty value.

Contents

MaximumConcurrency

Limits the number of concurrent instances that the Amazon SQS event source can invoke.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 1000.

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

SelfManagedEventSource

The self-managed Apache Kafka cluster for your event source.

Contents

Endpoints

The list of bootstrap servers for your Kafka brokers in the following format: `"KAFKA_BOOTSTRAP_SERVERS": ["abc.xyz.com:xxxx","abc2.xyz.com:xxxx"]`.

Type: String to array of strings map

Map Entries: Maximum number of 2 items.

Valid Keys: `KAFKA_BOOTSTRAP_SERVERS`

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Length Constraints: Minimum length of 1. Maximum length of 300.

Pattern: `^(([a-zA-Z0-9]|[a-zA-Z0-9][a-zA-Z0-9\-]*[a-zA-Z0-9])\.)*([A-Za-z0-9]|[A-Za-z0-9][A-Za-z0-9\-]*[A-Za-z0-9]):[0-9]{1,5}`

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

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Contents

ConsumerGroupId

The identifier for the Kafka consumer group to join. The consumer group ID must be unique among all your Kafka event sources. After creating a Kafka event source mapping with the consumer group ID specified, you cannot update this value. For more information, see Customizable consumer group ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

Required: No

SchemaRegistryConfig

Specific configuration settings for a Kafka schema registry.

Type: KafkaSchemaRegistryConfig 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

SnapStart

The function's Lambda SnapStart setting. Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version.

Contents

ApplyOn

Set to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version.

Type: String

Valid Values: `PublishedVersions | None`

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

SnapStartResponse

The function's SnapStart setting.

Contents

ApplyOn

When set to `PublishedVersions`, Lambda creates a snapshot of the execution environment when you publish a function version.

Type: String

Valid Values: `PublishedVersions | None`

Required: No

OptimizationStatus

When you provide a qualified Amazon Resource Name (ARN), this response element indicates whether SnapStart is activated for the specified function version.

Type: String

Valid Values: `On | Off`

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

SourceAccessConfiguration

To secure and define access to your event source, you can specify the authentication protocol, VPC components, or virtual host.

Contents

Type

The type of authentication protocol, VPC components, or virtual host for your event source. For example: `"Type":"SASL_SCRAM_512_AUTH"`.

- `BASIC_AUTH` – (Amazon MQ) The Amazon Secrets Manager secret that stores your broker credentials.
- `BASIC_AUTH` – (Self-managed Apache Kafka) The Secrets Manager ARN of your secret key used for SASL/PLAIN authentication of your Apache Kafka brokers.
- `VPC_SUBNET` – (Self-managed Apache Kafka) The subnets associated with your VPC. Lambda connects to these subnets to fetch data from your self-managed Apache Kafka cluster.
- `VPC_SECURITY_GROUP` – (Self-managed Apache Kafka) The VPC security group used to manage access to your self-managed Apache Kafka brokers.
- `SASL_SCRAM_256_AUTH` – (Self-managed Apache Kafka) The Secrets Manager ARN of your secret key used for SASL SCRAM-256 authentication of your self-managed Apache Kafka brokers.
- `SASL_SCRAM_512_AUTH` – (Amazon MSK, Self-managed Apache Kafka) The Secrets Manager ARN of your secret key used for SASL SCRAM-512 authentication of your self-managed Apache Kafka brokers.
- `VIRTUAL_HOST` –- (RabbitMQ) The name of the virtual host in your RabbitMQ broker. Lambda uses this RabbitMQ host as the event source. This property cannot be specified in an UpdateEventSourceMapping API call.
- `CLIENT_CERTIFICATE_TLS_AUTH` – (Amazon MSK, self-managed Apache Kafka) The Secrets Manager ARN of your secret key containing the certificate chain (X.509 PEM), private key (PKCS#8 PEM), and private key password (optional) used for mutual TLS authentication of your MSK/Apache Kafka brokers.
- `SERVER_ROOT_CA_CERTIFICATE` – (Self-managed Apache Kafka) The Secrets Manager ARN of your secret key containing the root CA certificate (X.509 PEM) used for TLS encryption of your Apache Kafka brokers.

Type: String

Valid Values: `BASIC_AUTH | VPC_SUBNET | VPC_SECURITY_GROUP | SASL_SCRAM_512_AUTH | SASL_SCRAM_256_AUTH | VIRTUAL_HOST | CLIENT_CERTIFICATE_TLS_AUTH | SERVER_ROOT_CA_CERTIFICATE`

Required: No

URI

The value for your chosen configuration in `Type`. For example: `"URI": "arn:aws:secretsmanager:us-east-1:01234567890:secret:MyBrokerSecretName"`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

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

TagsError

An object that contains details about an error related to retrieving tags.

Contents

ErrorCode

The error code.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 21.

Pattern: `[A-Za-z]+Exception`

Required: Yes

Message

The error message.

Type: String

Length Constraints: Minimum length of 84. Maximum length of 1000.

Pattern: `^.*$`

Required: Yes

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

TracingConfig

The function's Amazon X-Ray tracing configuration. To sample and record incoming requests, set `Mode` to `Active`.

Contents

Mode

The tracing mode.

Type: String

Valid Values: `Active | PassThrough`

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

TracingConfigResponse

The function's Amazon X-Ray tracing configuration.

Contents

Mode

The tracing mode.

Type: String

Valid Values: `Active | PassThrough`

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

VpcConfig

The VPC security groups and subnets that are attached to a Lambda function. For more information, see Configuring a Lambda function to access resources in a VPC.

Contents

Ipv6AllowedForDualStack

Allows outbound IPv6 traffic on VPC functions that are connected to dual-stack subnets.

Type: Boolean

Required: No

SecurityGroupIds

A list of VPC security group IDs.

Type: Array of strings

Array Members: Maximum number of 5 items.

Required: No

SubnetIds

A list of VPC subnet IDs.

Type: Array of strings

Array Members: Maximum number of 16 items.

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

VpcConfigResponse

The VPC security groups and subnets that are attached to a Lambda function.

Contents

Ipv6AllowedForDualStack

Allows outbound IPv6 traffic on VPC functions that are connected to dual-stack subnets.

Type: Boolean

Required: No

SecurityGroupIds

A list of VPC security group IDs.

Type: Array of strings

Array Members: Maximum number of 5 items.

Required: No

SubnetIds

A list of VPC subnet IDs.

Type: Array of strings

Array Members: Maximum number of 16 items.

Required: No

VpcId

The ID of the VPC.

Type: String

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*.

Action

The action to be performed.

Type: string

Required: Yes

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

X-Amz-Algorithm

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

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

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

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

For more information, see 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 Errors

This section lists the errors common to the API actions of all Amazon services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

ExpiredTokenException

The security token included in the request is expired

HTTP Status Code: 403

IncompleteSignature

The request signature does not conform to Amazon standards.

HTTP Status Code: 403

InternalFailure

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

HTTP Status Code: 500

MalformedHttpRequestException

Problems with the request at the HTTP level, e.g. we can't decompress the body according to the decompression algorithm specified by the content-encoding.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 401

OptInRequired

The Amazon access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestAbortedException

Convenient exception that can be used when a request is aborted before a reply is sent back (e.g. client closed connection).

HTTP Status Code: 400

RequestEntityTooLargeException

Problems with the request at the HTTP level. The request entity is too large.

HTTP Status Code: 413

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

RequestTimeoutException

Problems with the request at the HTTP level. Reading the Request timed out.

HTTP Status Code: 408

ServiceUnavailable

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

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

UnrecognizedClientException

The X.509 certificate or Amazon access key ID provided does not exist in our records.

HTTP Status Code: 403

UnknownOperationException

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 404

ValidationError

The input fails to satisfy the constraints specified by an Amazon service.

HTTP Status Code: 400