

# Amazon Lambda



# 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](#)
- [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](#)
- [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. Call the `GetFunction` or the `GetAlias` API operation 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 PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)



# AddPermission

Grants an Amazon Web Service, Amazon Web Services account, or Amazon organization 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, the principal is a domain-style identifier that the service defines, such as `s3.amazonaws.com` or `sns.amazonaws.com`. For Amazon Web 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 Service or Amazon Web Services account 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: `^[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 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, 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. Call the `GetFunction` or the `GetAlias` API operation 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 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 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"
}
```

## 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

## 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 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 stream sources (DynamoDB and Kinesis):

- `BisectBatchOnFunctionError` – If the function returns an error, split the batch in two and retry.
- `DestinationConfig` – Send discarded records to an Amazon SQS queue or Amazon SNS topic.
- `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 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"
  },
  "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" ],
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "ParallelizationFactor": number,
```

```
"Queues": [ "string" ],
"ScalingConfig": {
  "MaximumConcurrency": number
},
"SelfManagedEventSource": {
  "Endpoints": {
    "string": [ "string" ]
  }
},
"SelfManagedKafkaEventSourceConfig": {
  "ConsumerGroupId": "string"
},
"SourceAccessConfigurations": [
  {
    "Type": "string",
    "URI": "string"
  }
],
"StartingPosition": "string",
"StartingPositionTimestamp": number,
"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

## 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 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

### 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

### 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

### 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"
  },
  "BatchSize": number,
  "BisectBatchOnFunctionError": boolean,
  "DestinationConfig": {
    "OnFailure": {
      "Destination": "string"
    },
    "OnSuccess": {
      "Destination": "string"
    }
  },
  "DocumentDBEventSourceConfig": {
    "CollectionName": "string",
    "DatabaseName": "string",
    "FullDocument": "string"
  },
  "EventSourceArn": "string",
  "FilterCriteria": {
    "Filters": [
      {
        "Pattern": "string"
      }
    ]
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "LastModified": number,
  "LastProcessingResult": "string",
  "MaximumBatchingWindowInSeconds": number,
```

```

"MaximumRecordAgeInSeconds": number,
"MaximumRetryAttempts": number,
"ParallelizationFactor": number,
"Queues": [ "string" ],
"ScalingConfig": {
  "MaximumConcurrency": number
},
"SelfManagedEventSource": {
  "Endpoints": {
    "string" : [ "string" ]
  }
},
"SelfManagedKafkaEventSourceConfig": {
  "ConsumerGroupId": "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})?:(.*)`

## 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

## 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`

## 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 last Lambda invocation of your function.

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.

## 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.

## 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 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, 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 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, 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",
    "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 your function's [environment variables](#). When [Lambda SnapStart](#) is activated,

Lambda also uses this key to encrypt your function's snapshot. If you deploy your function using a container image, Lambda also uses this key to encrypt your function when it's deployed. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). If you don't provide a customer managed key, Lambda uses a default service 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.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21

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-_\.])(:(\d{12}|[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 Amazon KMS key that's used to encrypt the function's [environment variables](#). When [Lambda SnapStart](#) is activated, this key is also used to encrypt the function's snapshot. This key is returned only if you've configured a customer 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-_\u0026]+(:(\u0024LATEST|[a-zA-Z0-9-_\u0026]+))?`

## 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.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21`

## RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

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 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 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 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 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"
  },
  "BatchSize": number,
  "BisectBatchOnFunctionError": boolean,
  "DestinationConfig": {
    "OnFailure": {
      "Destination": "string"
    }
  },
}
```

```
    "OnSuccess": {
      "Destination": "string"
    }
  },
  "DocumentDBEventSourceConfig": {
    "CollectionName": "string",
    "DatabaseName": "string",
    "FullDocument": "string"
  },
  "EventSourceArn": "string",
  "FilterCriteria": {
    "Filters": [
      {
        "Pattern": "string"
      }
    ]
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "LastModified": number,
  "LastProcessingResult": "string",
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "ParallelizationFactor": number,
  "Queues": [ "string" ],
  "ScalingConfig": {
    "MaximumConcurrency": number
  },
  "SelfManagedEventSource": {
    "Endpoints": {
      "string": [ "string" ]
    }
  },
  "SelfManagedKafkaEventSourceConfig": {
    "ConsumerGroupId": "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}]?:[a-z]{1,2})?:(.*)`

## 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

## 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

### 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 last Lambda invocation of your function.

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.

**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.

**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 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 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 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 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 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 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 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 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 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 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 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 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"
  },
  "BatchSize": number,
  "BisectBatchOnFunctionError": boolean,
  "DestinationConfig": {
    "OnFailure": {
      "Destination": "string"
    },
    "OnSuccess": {
      "Destination": "string"
    }
  }
}
```

```
},
  "DocumentDBEventSourceConfig": {
    "CollectionName": "string",
    "DatabaseName": "string",
    "FullDocument": "string"
  },
  "EventSourceArn": "string",
  "FilterCriteria": {
    "Filters": [
      {
        "Pattern": "string"
      }
    ]
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "LastModified": number,
  "LastProcessingResult": "string",
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "ParallelizationFactor": number,
  "Queues": [ "string" ],
  "ScalingConfig": {
    "MaximumConcurrency": number
  },
  "SelfManagedEventSource": {
    "Endpoints": {
      "string" : [ "string" ]
    }
  },
  "SelfManagedKafkaEventSourceConfig": {
    "ConsumerGroupId": "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}]?:[a-z]{1,2})?:(.*)`

## 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

## 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

### 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 last Lambda invocation of your function.

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.

**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.

**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 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"
  },
  "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"
}
}
```

## 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](#).

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 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 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 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 Amazon KMS key that's used to encrypt the function's [environment variables](#). When [Lambda SnapStart](#) is activated, this key is also used to encrypt the function's snapshot. This key is returned only if you've configured a customer 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.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.a12 | 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 | python3.11 |  
nodejs20.x | provided.al2023 | python3.12 | java21

### RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

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 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.
- **Topic** - The ARN of a standard SNS topic.

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

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 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 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"
},
"CreateDate": "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 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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21

## Content

Details about the layer version.

Type: [LayerVersionContentOutput](#) object

## CreateDate

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 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"
  },
  "CreateDate": "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 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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21

## 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 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](#)
- [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 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 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 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 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.

### Status Code

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.

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 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.

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 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.

### Status Code

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: ( $\backslash$ \$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.

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 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 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 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"
      },
      "BatchSize": number,
      "BisectBatchOnFunctionError": boolean,
      "DestinationConfig": {
        "OnFailure": {
          "Destination": "string"
        },
        "OnSuccess": {
          "Destination": "string"
        }
      }
    }
  ]
}
```

```

    }
  },
  "DocumentDBEventSourceConfig": {
    "CollectionName": "string",
    "DatabaseName": "string",
    "FullDocument": "string"
  },
  "EventSourceArn": "string",
  "FilterCriteria": {
    "Filters": [
      {
        "Pattern": "string"
      }
    ]
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "LastModified": number,
  "LastProcessingResult": "string",
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "ParallelizationFactor": number,
  "Queues": [ "string" ],
  "ScalingConfig": {
    "MaximumConcurrency": number
  },
  "SelfManagedEventSource": {
    "Endpoints": {
      "string" : [ "string" ]
    }
  },
  "SelfManagedKafkaEventSourceConfig": {
    "ConsumerGroupId": "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 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 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 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 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 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. For example, java21.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21

### [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 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. For example, java21.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21

### 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 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 PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

# ListTags

Returns a function's [tags](#). You can also view 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 function's Amazon Resource Name (ARN). Note: Lambda does not support adding tags to aliases or versions.

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

{
  "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 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 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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21

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"
  },
  "CreateDate": "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 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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21

### 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 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 Amazon KMS key that's used to encrypt the function's [environment variables](#). When [Lambda SnapStart](#) is activated, this key is also used to encrypt the function's snapshot. This key is returned only if you've configured a customer 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-_]+(:(\d{12}|[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.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21`

### RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

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. Call the GetFunction or the GetAlias API operation 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 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 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 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, 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.

## 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.



- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

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.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

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 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 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-_\u0026;]+(:(\u0024LATEST|[a-zA-Z0-9-_\u0026;]+))?`

## 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 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. Call the `GetFunction` or the `GetAlias` API operation 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 PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

# RemovePermission

Revokes function-use permission from an Amazon Web 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. Call the `GetFunction` or the `GetAlias` API operation 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 PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)



# TagResource

Adds [tags](#) to a function.

## 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 function's Amazon Resource Name (ARN).

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.

### [Tags](#)

A list of tags to apply to the function.

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 PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)



# UntagResource

Removes [tags](#) from a function.

## 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 function's Amazon Resource Name (ARN).

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

### [TagKeys](#)

A list of tag keys to remove from the function.

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 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. Call the `GetFunction` or the `GetAlias` API operation 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 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 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 stream sources (DynamoDB and Kinesis):

- `BisectBatchOnFunctionError` – If the function returns an error, split the batch in two and retry.
- `DestinationConfig` – Send discarded records to an Amazon SQS queue or Amazon SNS topic.
- `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 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
```

```
{
  "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" ],
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "ParallelizationFactor": number,
  "ScalingConfig": {
    "MaximumConcurrency": number
  },
  "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.

### 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

## 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 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

### 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

### 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

### 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"
  },
  "BatchSize": number,
  "BisectBatchOnFunctionError": boolean,
  "DestinationConfig": {
```

```
    "OnFailure": {
      "Destination": "string"
    },
    "OnSuccess": {
      "Destination": "string"
    }
  },
  "DocumentDBEventSourceConfig": {
    "CollectionName": "string",
    "DatabaseName": "string",
    "FullDocument": "string"
  },
  "EventSourceArn": "string",
  "FilterCriteria": {
    "Filters": [
      {
        "Pattern": "string"
      }
    ]
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "LastModified": number,
  "LastProcessingResult": "string",
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "ParallelizationFactor": number,
  "Queues": [ "string" ],
  "ScalingConfig": {
    "MaximumConcurrency": number
  },
  "SelfManagedEventSource": {
    "Endpoints": {
      "string": [ "string" ]
    }
  },
  "SelfManagedKafkaEventSourceConfig": {
    "ConsumerGroupId": "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}]?:[a-z]{1,2})?:(.*)`

### 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

### 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

### 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 last Lambda invocation of your function.

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.

**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.

**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 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",
  "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

### 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 Amazon KMS key that's used to encrypt the function's [environment variables](#). When [Lambda SnapStart](#) is activated, this key is also used to encrypt the function's snapshot. This key is returned only if you've configured a customer 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.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21`

## RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

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. Call the `GetFunction` or the `GetAlias` API operation 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 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 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 your function's [environment variables](#). When [Lambda SnapStart](#) is activated, Lambda also uses this key to encrypt your function's snapshot. If you deploy your function using a container image, Lambda also uses this key to encrypt your function when it's deployed. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). If you don't provide a customer managed key, Lambda uses a default service 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.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21`

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 Amazon KMS key that's used to encrypt the function's [environment variables](#). When [Lambda SnapStart](#) is activated, this key is also used to encrypt the function's snapshot. This key is returned only if you've configured a customer 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.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

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 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21`

### RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

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. Call the `GetFunction` or the `GetAlias` API operation 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 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.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

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.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

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 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-\_\+])(:(\d{12}|[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 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](#)
- [FileSystemConfig](#)
- [Filter](#)

- [FilterCriteria](#)
- [FunctionCode](#)
- [FunctionCodeLocation](#)
- [FunctionConfiguration](#)
- [FunctionEventInvokeConfig](#)
- [FunctionUrlConfig](#)
- [ImageConfig](#)
- [ImageConfigError](#)
- [ImageConfigResponse](#)
- [InvokeResponseStreamUpdate](#)
- [InvokeWithResponseStreamCompleteEvent](#)
- [InvokeWithResponseStreamResponseEvent](#)
- [Layer](#)
- [LayersListItem](#)
- [LayerVersionContentInput](#)
- [LayerVersionContentOutput](#)
- [LayerVersionsListItem](#)
- [LoggingConfig](#)
- [OnFailure](#)
- [OnSuccess](#)
- [ProvisionedConcurrencyConfigListItem](#)
- [RuntimeVersionConfig](#)
- [RuntimeVersionError](#)
- [ScalingConfig](#)
- [SelfManagedEventSource](#)
- [SelfManagedKafkaEventSourceConfig](#)
- [SnapStart](#)
- [SnapStartResponse](#)
- [SourceAccessConfiguration](#)
- [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

## 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 identifier 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.

## Contents

### OnFailure

The destination configuration for failed invocations.

Type: [OnFailure](#) object

Required: No

### OnSuccess

The destination configuration for successful invocations.

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

## 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

## 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

### **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 last Lambda invocation of your function.

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

### **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

## 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](#)

# 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](#)

# 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

## 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

## 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 Amazon KMS key that's used to encrypt the function's [environment variables](#). When [Lambda SnapStart](#) is activated, this key is also used to encrypt the function's snapshot. This key is returned only if you've configured a customer 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.

The following list includes deprecated runtimes. For more information, see [Runtime deprecation policy](#).

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.a12 | 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.a12 | nodejs18.x | python3.10 | java17 | ruby3.2 | python3.11 | nodejs20.x | provided.a12023 | python3.12 | java21`

Required: No

## RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

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.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

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](#)

# 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 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.a12 | 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.a12 | nodejs18.x | python3.10 | java17 | ruby3.2 | python3.11 | nodejs20.x | provided.a12023 | python3.12 | java21

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.

## Contents

### Destination

The Amazon Resource Name (ARN) of the destination resource.

To retain records of [asynchronous invocations](#), you can configure an Amazon SNS topic, Amazon SQS queue, Lambda function, or Amazon EventBridge event bus as the destination.

To retain records of failed invocations from [Kinesis and DynamoDB event sources](#), you can configure an Amazon SNS topic or Amazon SQS queue as the destination.

To retain records of failed invocations from [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.

## 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-_\u0026;]+(:(\u0024LATEST|[a-zA-Z0-9-_\u0026;]+))?`

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](#)



# RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

## 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

## 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](#)

# 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 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