



API Reference

AWS Lambda



API Version 2015-03-31

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AWS Lambda: API Reference

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Table of Contents

Welcome	1
Certificate errors when using an SDK	1
Actions	3
AddLayerVersionPermission	6
Request Syntax	6
URI Request Parameters	6
Request Body	7
Response Syntax	8
Response Elements	8
Errors	9
See Also	10
AddPermission	11
Request Syntax	11
URI Request Parameters	11
Request Body	12
Response Syntax	15
Response Elements	15
Errors	15
See Also	16
CreateAlias	18
Request Syntax	18
URI Request Parameters	18
Request Body	19
Response Syntax	20
Response Elements	20
Errors	21
See Also	22
CreateCodeSigningConfig	24
Request Syntax	24
URI Request Parameters	24
Request Body	24
Response Syntax	25
Response Elements	26
Errors	26

See Also	26
CreateEventSourceMapping	28
Request Syntax	29
URI Request Parameters	31
Request Body	31
Response Syntax	39
Response Elements	41
Errors	48
See Also	48
CreateFunction	50
Request Syntax	51
URI Request Parameters	52
Request Body	52
Response Syntax	59
Response Elements	61
Errors	68
See Also	69
CreateFunctionUrlConfig	71
Request Syntax	71
URI Request Parameters	71
Request Body	72
Response Syntax	73
Response Elements	73
Errors	75
See Also	75
DeleteAlias	77
Request Syntax	77
URI Request Parameters	77
Request Body	78
Response Syntax	78
Response Elements	78
Errors	78
See Also	78
DeleteCodeSigningConfig	80
Request Syntax	80
URI Request Parameters	80

Request Body	80
Response Syntax	80
Response Elements	80
Errors	80
See Also	81
DeleteEventSourceMapping	82
Request Syntax	82
URI Request Parameters	82
Request Body	82
Response Syntax	82
Response Elements	85
Errors	91
See Also	92
DeleteFunction	94
Request Syntax	94
URI Request Parameters	94
Request Body	95
Response Syntax	95
Response Elements	95
Errors	95
See Also	96
DeleteFunctionCodeSigningConfig	97
Request Syntax	97
URI Request Parameters	97
Request Body	97
Response Syntax	97
Response Elements	98
Errors	98
See Also	99
DeleteFunctionConcurrency	100
Request Syntax	100
URI Request Parameters	100
Request Body	100
Response Syntax	100
Response Elements	101
Errors	101

See Also	101
DeleteFunctionEventInvokeConfig	103
Request Syntax	103
URI Request Parameters	103
Request Body	104
Response Syntax	104
Response Elements	104
Errors	104
See Also	105
DeleteFunctionUrlConfig	106
Request Syntax	106
URI Request Parameters	106
Request Body	107
Response Syntax	107
Response Elements	107
Errors	107
See Also	107
DeleteLayerVersion	109
Request Syntax	109
URI Request Parameters	109
Request Body	109
Response Syntax	109
Response Elements	110
Errors	110
See Also	110
DeleteProvisionedConcurrencyConfig	111
Request Syntax	111
URI Request Parameters	111
Request Body	112
Response Syntax	112
Response Elements	112
Errors	112
See Also	113
GetAccountSettings	114
Request Syntax	114
URI Request Parameters	114

Request Body	114
Response Syntax	114
Response Elements	114
Errors	115
See Also	115
GetAlias	117
Request Syntax	117
URI Request Parameters	117
Request Body	118
Response Syntax	118
Response Elements	118
Errors	119
See Also	120
GetCodeSigningConfig	121
Request Syntax	121
URI Request Parameters	121
Request Body	121
Response Syntax	121
Response Elements	122
Errors	122
See Also	122
GetEventSourceMapping	124
Request Syntax	124
URI Request Parameters	124
Request Body	124
Response Syntax	124
Response Elements	127
Errors	133
See Also	134
GetFunction	135
Request Syntax	135
URI Request Parameters	135
Request Body	136
Response Syntax	136
Response Elements	138
Errors	139

See Also	140
GetFunctionCodeSigningConfig	141
Request Syntax	141
URI Request Parameters	141
Request Body	141
Response Syntax	141
Response Elements	142
Errors	143
See Also	143
GetFunctionConcurrency	145
Request Syntax	145
URI Request Parameters	145
Request Body	145
Response Syntax	145
Response Elements	146
Errors	146
See Also	147
GetFunctionConfiguration	148
Request Syntax	148
URI Request Parameters	148
Request Body	149
Response Syntax	149
Response Elements	151
Errors	158
See Also	159
GetFunctionEventInvokeConfig	160
Request Syntax	160
URI Request Parameters	160
Request Body	161
Response Syntax	161
Response Elements	161
Errors	162
See Also	163
GetFunctionRecursionConfig	164
Request Syntax	164
URI Request Parameters	164

Request Body	164
Response Syntax	164
Response Elements	164
Errors	165
See Also	166
GetFunctionUrlConfig	167
Request Syntax	167
URI Request Parameters	167
Request Body	168
Response Syntax	168
Response Elements	168
Errors	170
See Also	170
GetLayerVersion	172
Request Syntax	172
URI Request Parameters	172
Request Body	172
Response Syntax	172
Response Elements	173
Errors	175
See Also	176
GetLayerVersionByArn	177
Request Syntax	177
URI Request Parameters	177
Request Body	177
Response Syntax	177
Response Elements	178
Errors	180
See Also	181
GetLayerVersionPolicy	182
Request Syntax	182
URI Request Parameters	182
Request Body	182
Response Syntax	182
Response Elements	183
Errors	183

See Also	184
GetPolicy	185
Request Syntax	185
URI Request Parameters	185
Request Body	186
Response Syntax	186
Response Elements	186
Errors	186
See Also	187
GetProvisionedConcurrencyConfig	188
Request Syntax	188
URI Request Parameters	188
Request Body	189
Response Syntax	189
Response Elements	189
Errors	190
See Also	191
GetRuntimeManagementConfig	192
Request Syntax	192
URI Request Parameters	192
Request Body	193
Response Syntax	193
Response Elements	193
Errors	194
See Also	194
Invoke	196
Request Syntax	196
URI Request Parameters	197
Request Body	198
Response Syntax	198
Response Elements	199
Errors	200
See Also	204
InvokeAsync	205
Request Syntax	205
URI Request Parameters	205

Request Body	206
Response Syntax	206
Response Elements	206
Errors	206
See Also	207
InvokeWithResponseStream	208
Request Syntax	208
URI Request Parameters	208
Request Body	209
Response Syntax	210
Response Elements	210
Errors	211
See Also	215
ListAliases	217
Request Syntax	217
URI Request Parameters	217
Request Body	218
Response Syntax	218
Response Elements	218
Errors	219
See Also	219
ListCodeSigningConfigs	221
Request Syntax	221
URI Request Parameters	221
Request Body	221
Response Syntax	221
Response Elements	222
Errors	222
See Also	223
ListEventSourceMappings	224
Request Syntax	224
URI Request Parameters	224
Request Body	225
Response Syntax	225
Response Elements	228
Errors	228

See Also	229
ListFunctionEventInvokeConfigs	230
Request Syntax	230
URI Request Parameters	230
Request Body	231
Response Syntax	231
Response Elements	231
Errors	232
See Also	232
ListFunctions	234
Request Syntax	234
URI Request Parameters	234
Request Body	235
Response Syntax	235
Response Elements	237
Errors	238
See Also	238
ListFunctionsByCodeSigningConfig	240
Request Syntax	240
URI Request Parameters	240
Request Body	240
Response Syntax	240
Response Elements	241
Errors	241
See Also	242
ListFunctionUrlConfigs	243
Request Syntax	243
URI Request Parameters	243
Request Body	244
Response Syntax	244
Response Elements	244
Errors	245
See Also	245
ListLayers	247
Request Syntax	247
URI Request Parameters	247

Request Body	248
Response Syntax	248
Response Elements	248
Errors	249
See Also	249
ListLayerVersions	251
Request Syntax	251
URI Request Parameters	251
Request Body	252
Response Syntax	252
Response Elements	253
Errors	253
See Also	254
ListProvisionedConcurrencyConfigs	255
Request Syntax	255
URI Request Parameters	255
Request Body	256
Response Syntax	256
Response Elements	256
Errors	257
See Also	257
ListTags	259
Request Syntax	259
URI Request Parameters	259
Request Body	259
Response Syntax	259
Response Elements	260
Errors	260
See Also	261
ListVersionsByFunction	262
Request Syntax	262
URI Request Parameters	262
Request Body	263
Response Syntax	263
Response Elements	265
Errors	266

See Also	266
PublishLayerVersion	268
Request Syntax	268
URI Request Parameters	268
Request Body	269
Response Syntax	270
Response Elements	271
Errors	273
See Also	274
PublishVersion	275
Request Syntax	275
URI Request Parameters	275
Request Body	276
Response Syntax	276
Response Elements	279
Errors	286
See Also	287
PutFunctionCodeSigningConfig	288
Request Syntax	288
URI Request Parameters	288
Request Body	288
Response Syntax	289
Response Elements	289
Errors	290
See Also	291
PutFunctionConcurrency	292
Request Syntax	292
URI Request Parameters	292
Request Body	293
Response Syntax	293
Response Elements	293
Errors	294
See Also	294
PutFunctionEventInvokeConfig	296
Request Syntax	296
URI Request Parameters	297

Request Body	297
Response Syntax	298
Response Elements	299
Errors	300
See Also	301
PutFunctionRecursionConfig	302
Request Syntax	302
URI Request Parameters	302
Request Body	303
Response Syntax	304
Response Elements	304
Errors	304
See Also	305
PutProvisionedConcurrencyConfig	306
Request Syntax	306
URI Request Parameters	306
Request Body	307
Response Syntax	307
Response Elements	307
Errors	309
See Also	309
PutRuntimeManagementConfig	311
Request Syntax	311
URI Request Parameters	311
Request Body	312
Response Syntax	313
Response Elements	313
Errors	314
See Also	315
RemoveLayerVersionPermission	316
Request Syntax	316
URI Request Parameters	316
Request Body	317
Response Syntax	317
Response Elements	317
Errors	317

See Also	318
RemovePermission	319
Request Syntax	319
URI Request Parameters	319
Request Body	320
Response Syntax	320
Response Elements	320
Errors	320
See Also	321
TagResource	323
Request Syntax	323
URI Request Parameters	323
Request Body	323
Response Syntax	324
Response Elements	324
Errors	324
See Also	325
UntagResource	326
Request Syntax	326
URI Request Parameters	326
Request Body	326
Response Syntax	326
Response Elements	327
Errors	327
See Also	327
UpdateAlias	329
Request Syntax	329
URI Request Parameters	329
Request Body	330
Response Syntax	331
Response Elements	331
Errors	332
See Also	333
UpdateCodeSigningConfig	335
Request Syntax	335
URI Request Parameters	335

Request Body	335
Response Syntax	336
Response Elements	337
Errors	337
See Also	337
UpdateEventSourceMapping	339
Request Syntax	340
URI Request Parameters	342
Request Body	342
Response Syntax	348
Response Elements	350
Errors	357
See Also	358
UpdateFunctionCode	359
Request Syntax	359
URI Request Parameters	360
Request Body	360
Response Syntax	363
Response Elements	365
Errors	372
See Also	373
UpdateFunctionConfiguration	375
Request Syntax	375
URI Request Parameters	376
Request Body	377
Response Syntax	382
Response Elements	384
Errors	391
See Also	392
UpdateFunctionEventInvokeConfig	394
Request Syntax	394
URI Request Parameters	394
Request Body	395
Response Syntax	396
Response Elements	396
Errors	398

See Also	399
UpdateFunctionUrlConfig	400
Request Syntax	400
URI Request Parameters	400
Request Body	401
Response Syntax	402
Response Elements	402
Errors	404
See Also	405
Data Types	406
AccountLimit	409
Contents	409
See Also	410
AccountUsage	411
Contents	411
See Also	411
AliasConfiguration	412
Contents	412
See Also	413
AliasRoutingConfiguration	414
Contents	414
See Also	414
AllowedPublishers	415
Contents	415
See Also	415
AmazonManagedKafkaEventSourceConfig	416
Contents	416
See Also	416
CodeSigningConfig	417
Contents	417
See Also	418
CodeSigningPolicies	419
Contents	419
See Also	419
Concurrency	420
Contents	420

See Also	420
Cors	421
Contents	421
See Also	423
DeadLetterConfig	424
Contents	424
See Also	424
DestinationConfig	425
Contents	425
See Also	425
DocumentDBEventSourceConfig	426
Contents	426
See Also	427
Environment	428
Contents	428
See Also	428
EnvironmentError	429
Contents	429
See Also	429
EnvironmentResponse	430
Contents	430
See Also	430
EphemeralStorage	431
Contents	431
See Also	431
EventSourceMappingConfiguration	432
Contents	432
See Also	440
EventSourceMappingMetricsConfig	441
Contents	441
See Also	441
FileSystemConfig	442
Contents	442
See Also	442
Filter	443
Contents	443

See Also	443
FilterCriteria	444
Contents	444
See Also	444
FilterCriteriaError	445
Contents	445
See Also	445
FunctionCode	446
Contents	446
See Also	447
FunctionCodeLocation	448
Contents	448
See Also	449
FunctionConfiguration	450
Contents	450
See Also	458
FunctionEventInvokeConfig	459
Contents	459
See Also	460
FunctionUrlConfig	461
Contents	461
See Also	462
ImageConfig	464
Contents	464
See Also	464
ImageConfigError	466
Contents	466
See Also	466
ImageConfigResponse	467
Contents	467
See Also	467
InvokeResponseStreamUpdate	468
Contents	468
See Also	468
InvokeWithResponseStreamCompleteEvent	469
Contents	469

See Also	469
InvokeWithResponseStreamResponseEvent	470
Contents	470
See Also	470
KafkaSchemaRegistryAccessConfig	471
Contents	471
See Also	471
KafkaSchemaRegistryConfig	473
Contents	473
See Also	474
KafkaSchemaValidationConfig	475
Contents	475
See Also	475
Layer	476
Contents	476
See Also	477
LayersListItem	478
Contents	478
See Also	478
LayerVersionContentInput	480
Contents	480
See Also	481
LayerVersionContentOutput	482
Contents	482
See Also	483
LayerVersionsListItem	484
Contents	484
See Also	486
LoggingConfig	487
Contents	487
See Also	488
OnFailure	489
Contents	489
See Also	489
OnSuccess	490
Contents	490

See Also	490
ProvisionedConcurrencyConfigListItem	491
Contents	491
See Also	492
ProvisionedPollerConfig	493
Contents	493
See Also	493
RuntimeVersionConfig	494
Contents	494
See Also	494
RuntimeVersionError	495
Contents	495
See Also	495
ScalingConfig	496
Contents	496
See Also	496
SelfManagedEventSource	497
Contents	497
See Also	497
SelfManagedKafkaEventSourceConfig	498
Contents	498
See Also	498
SnapStart	499
Contents	499
See Also	499
SnapStartResponse	500
Contents	500
See Also	500
SourceAccessConfiguration	501
Contents	501
See Also	502
TagsError	503
Contents	503
See Also	503
TracingConfig	504
Contents	504

See Also 504

TracingConfigResponse 505

 Contents 505

 See Also 505

VpcConfig 506

 Contents 506

 See Also 506

VpcConfigResponse 508

 Contents 508

 See Also 508

Common Parameters 510

Common Errors 513

Welcome

This section contains the AWS Lambda API Reference documentation. Instead of making requests to the API directly from your application, we recommend that you use one of the AWS Software Development Kits (SDKs) for your programming language. The AWS SDKs take care of request authentication, serialization, and connection management. If you don't use the AWS SDK, you will need to authenticate your request by providing a signature. AWS 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 AWS SDKs use the CA certificates from your computer, changes to the certificates on the AWS 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 AWS Lambda management console or AWS 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 [AWS Certificate Manager FAQs](#).

Actions

The following actions are supported:

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

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

- [RemoveLayerVersionPermission](#)
- [RemovePermission](#)
- [TagResource](#)
- [UntagResource](#)
- [UpdateAlias](#)
- [UpdateCodeSigningConfig](#)
- [UpdateEventSourceMapping](#)
- [UpdateFunctionCode](#)
- [UpdateFunctionConfiguration](#)
- [UpdateFunctionEventInvokeConfig](#)
- [UpdateFunctionUrlConfig](#)

AddLayerVersionPermission

Adds permissions to the resource-based policy of a version of an [AWS 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 AWS 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: Minimum length of 0. 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: Minimum length of 0. 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 AWS accounts (if `organizationId` is not specified). For the last case, make sure that you really do want all AWS accounts to have usage permission to this layer.

Type: String

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

Required: Yes

StatementId

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

Type: String

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

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

Required: Yes

Response Syntax

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

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

Response Elements

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

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

RevisionId

A unique identifier for the current revision of the policy.

Type: String

Statement

The permission statement.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PolicyLengthExceededException

The permissions policy for the resource is too large. For more information, see [Lambda quotas](#).

HTTP Status Code: 400

PreconditionFailedException

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

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

HTTP Status Code: 412

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

AddPermission

Grants a [principal](#) permission to use a function. You can apply the policy at the function level, or specify a qualifier to restrict access to a single version or alias. If you use a qualifier, the invoker must use the full Amazon Resource Name (ARN) of that version or alias to invoke the function.

Note: Lambda does not support adding policies to version \$LATEST.

To grant permission to another account, specify the account ID as the `Principal`. To grant permission to an organization defined in AWS Organizations, specify the organization ID as the `PrincipalOrgID`. For AWS services, the principal is a domain-style identifier that the service defines, such as `s3.amazonaws.com` or `sns.amazonaws.com`. For AWS 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-_]+)(:(\d{12}|[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 AWS service, AWS account, IAM user, or IAM role that invokes the function. If you specify a service, use `SourceArn` or `SourceAccount` to limit who can invoke the function through that service.

Type: String

Pattern: [^\s]+

Required: Yes

PrincipalOrgID

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

Type: String

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

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

Required: No

RevisionId

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

Type: String

Required: No

SourceAccount

For AWS service, the ID of the AWS 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: Minimum length of 0. Maximum length of 12.

Pattern: `\d{12}`

Required: No

SourceArn

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

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

Type: String

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

Required: No

StatementId

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

Type: String

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

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

Required: Yes

Response Syntax

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

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

Response Elements

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

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

Statement

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

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PolicyLengthExceededException

The permissions policy for the resource is too large. For more information, see [Lambda quotas](#).

HTTP Status Code: 400

PreconditionFailedException

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

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

HTTP Status Code: 412

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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-_]+)(:(\d{12}|[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: (\d{12}|[a-zA-Z0-9-_]+)

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 AWS 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 AWS SDKs, see the following:

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

CreateCodeSigningConfig

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

Request Syntax

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

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

[AllowedPublishers](#)

Signing profiles for this code signing configuration.

Type: [AllowedPublishers](#) object

Required: Yes

[CodeSigningPolicies](#)

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

Type: [CodeSigningPolicies](#) object

Required: No

[Description](#)

Descriptive name for this code signing configuration.

Type: String

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

Required: No

[Tags](#)

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

Type: String to string map

Required: No

Response Syntax

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

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

Response Elements

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

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

[CodeSigningConfig](#)

The code signing configuration.

Type: [CodeSigningConfig](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ServiceException

The AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

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

CreateEventSourceMapping

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

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

- [Amazon DynamoDB Streams](#)
- [Amazon Kinesis](#)
- [Amazon SQS](#)
- [Amazon MQ and RabbitMQ](#)
- [Amazon MSK](#)
- [Apache Kafka](#)
- [Amazon DocumentDB](#)

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

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

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

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

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

- [Amazon DynamoDB Streams](#)

- [Amazon Kinesis](#)
- [Amazon SQS](#)
- [Amazon MQ and RabbitMQ](#)
- [Amazon MSK](#)
- [Apache Kafka](#)
- [Amazon DocumentDB](#)

Request Syntax

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

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



```

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

```

```

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

```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

AmazonManagedKafkaEventSourceConfig

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

Type: [AmazonManagedKafkaEventSourceConfig](#) object

Required: No

BatchSize

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

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

Type: Integer

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

Required: No

BisectBatchOnFunctionError

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

Type: Boolean

Required: No

DestinationConfig

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

Type: [DestinationConfig](#) object

Required: No

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: [DocumentDBEventSourceConfig](#) object

Required: No

[Enabled](#)

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

Default: True

Type: Boolean

Required: No

[EventSourceArn](#)

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

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

Type: String

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

Required: No

[FilterCriteria](#)

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

Type: [FilterCriteria](#) object

Required: No

FunctionName

The name or ARN of the Lambda function.

Name formats

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

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

Type: String

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

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

Required: Yes

FunctionResponseTypes

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

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

Required: No

KMSKeyArn

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

Type: String

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

Required: No

MaximumBatchingWindowInSeconds

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

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

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

Type: Integer

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

Required: No

MaximumRecordAgeInSeconds

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

Type: Integer

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

Required: No

MaximumRetryAttempts

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

Type: Integer

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

Required: No

MetricsConfig

The metrics configuration for your event source. For more information, see [Event source mapping metrics](#).

Type: [EventSourceMappingMetricsConfig](#) object

Required: No

ParallelizationFactor

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

Type: Integer

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

Required: No

ProvisionedPollerConfig

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

Type: [ProvisionedPollerConfig](#) object

Required: No

Queues

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

Type: Array of strings

Array Members: Fixed number of 1 item.

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

Pattern: `[\s\S]*`

Required: No

ScalingConfig

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

Type: [ScalingConfig](#) object

Required: No

SelfManagedEventSource

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

Type: [SelfManagedEventSource](#) object

Required: No

SelfManagedKafkaEventSourceConfig

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

Type: [SelfManagedKafkaEventSourceConfig](#) object

Required: No

SourceAccessConfigurations

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

Type: Array of [SourceAccessConfiguration](#) objects

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

Required: No

StartingPosition

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

Type: String

Valid Values: TRIM_HORIZON | LATEST | AT_TIMESTAMP

Required: No

StartingPositionTimestamp

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

Type: Timestamp

Required: No

Tags

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

Type: String to string map

Required: No

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

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

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

Required: No

TumblingWindowInSeconds

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

Type: Integer

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

Required: No

Response Syntax

HTTP/1.1 202

Content-type: application/json

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

```

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

```

```

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

```

Response Elements

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

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

[AmazonManagedKafkaEventSourceConfig](#)

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

Type: [AmazonManagedKafkaEventSourceConfig](#) object

[BatchSize](#)

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

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

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

Type: Integer

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

BisectBatchOnFunctionError

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

Type: Boolean

DestinationConfig

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

Type: [DestinationConfig](#) object

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: [DocumentDBEventSourceConfig](#) object

EventSourceArn

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

Type: String

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

EventSourceMappingArn

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

Type: String

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

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

FilterCriteria

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

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

Type: [FilterCriteria](#) object

FilterCriteriaError

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

Type: [FilterCriteriaError](#) object

FunctionArn

The ARN of the Lambda function.

Type: String

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

FunctionResponseTypes

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

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

KMSKeyArn

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

Type: String

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

LastModified

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

Type: Timestamp

LastProcessingResult

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

Type: String

MaximumBatchingWindowInSeconds

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

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

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

Type: Integer

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

MaximumRecordAgeInSeconds

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

Note

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

Type: Integer

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

MaximumRetryAttempts

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

Type: Integer

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

MetricsConfig

The metrics configuration for your event source. For more information, see [Event source mapping metrics](#).

Type: [EventSourceMappingMetricsConfig](#) object

ParallelizationFactor

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

Type: Integer

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

ProvisionedPollerConfig

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

Type: [ProvisionedPollerConfig](#) object

Queues

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

Type: Array of strings

Array Members: Fixed number of 1 item.

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

Pattern: `[\s\S]*`

ScalingConfig

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

Type: [ScalingConfig](#) object

SelfManagedEventSource

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

Type: [SelfManagedEventSource](#) object

SelfManagedKafkaEventSourceConfig

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

Type: [SelfManagedKafkaEventSourceConfig](#) object

SourceAccessConfigurations

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

Type: Array of [SourceAccessConfiguration](#) objects

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

StartingPosition

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

Type: String

Valid Values: TRIM_HORIZON | LATEST | AT_TIMESTAMP

StartingPositionTimestamp

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

Type: Timestamp

State

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

Type: String

StateTransitionReason

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

Type: String

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

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

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

TumblingWindowInSeconds

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

Type: Integer

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

UUID

The identifier of the event source mapping.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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 AWS services, such as Amazon CloudWatch Logs for log streaming and AWS 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 AWS account or an AWS service invokes your function, use [AddPermission](#) to grant permission by creating a resource-based AWS 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 AWS services, create an event source mapping ([CreateEventSourceMapping](#)), or configure a function trigger in the other service. For more information, see [Invoking Lambda functions](#).

Request Syntax

```
POST /2015-03-31/functions HTTP/1.1
```

```
Content-type: application/json
```

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

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

Architectures

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

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: x86_64 | arm64

Required: No

Code

The code for the function.

Type: [FunctionCode](#) object

Required: Yes

CodeSigningConfigArn

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

Type: String

Length Constraints: Minimum length of 0. 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: Minimum number of 0 items. 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-_.]+)(:(\d{4}|[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: Minimum length of 0. 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 AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's [environment variables](#).
- The function's [Lambda SnapStart](#) snapshots.

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

If you don't provide a customer managed key, Lambda uses an [AWS owned key](#) or an [AWS managed key](#).

Type: String

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

Required: No

[Layers](#)

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

Type: Array of strings

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

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

Required: No

[LoggingConfig](#)

The function's Amazon CloudWatch Logs configuration settings.

Type: [LoggingConfig](#) object

Required: No

[MemorySize](#)

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

Type: Integer

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

Required: No

PackageType

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

Type: String

Valid Values: Zip | Image

Required: No

Publish

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

Type: Boolean

Required: No

Role

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

Type: String

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

Required: Yes

Runtime

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

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: String

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

Required: No

SnapStart

The function's [SnapStart](#) setting.

Type: [SnapStart](#) object

Required: No

Tags

A list of [tags](#) to apply to the function.

Type: String to string map

Required: No

Timeout

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

Type: Integer

Valid Range: Minimum value of 1.

Required: No

TracingConfig

Set Mode to Active to sample and trace a subset of incoming requests with [X-Ray](#).

Type: [TracingConfig](#) object

Required: No

VpcConfig

For network connectivity to AWS 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 AWS 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: Minimum number of 0 items. 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: Minimum length of 0. Maximum length of 128.

Pattern: `[\^\s]+`

ImageConfigResponse

The function's image configuration values.

Type: [ImageConfigResponse](#) object

KMSKeyArn

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

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

If you don't provide a customer managed key, Lambda uses an [AWS owned key](#) or an [AWS 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-Z0-9+=,.\@-_/]+`

Runtime

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

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: String

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

RuntimeVersionConfig

The ARN of the runtime and any errors that 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})?:([a-z]{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})?:([a-z]{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 AWS 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 AWS 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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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 200 MB.

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 200 MB.

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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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 AWS 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 AWS SDKs, see the following:

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

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: Minimum length of 0. 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 AWS 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 AWS SDKs, see the following:

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

DeleteEventSourceMapping

Deletes an [event source mapping](#). You can get the identifier of a mapping from the output of [ListEventSourceMappings](#).

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

Request Syntax

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

URI Request Parameters

The request uses the following URI parameters.

UUID

The identifier of the event source mapping.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

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

```

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

```

```

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

```

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

Response Elements

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

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

[AmazonManagedKafkaEventSourceConfig](#)

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

Type: [AmazonManagedKafkaEventSourceConfig](#) object

[BatchSize](#)

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

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

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

Type: Integer

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

[BisectBatchOnFunctionError](#)

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

Type: Boolean

DestinationConfig

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

Type: DestinationConfig object

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: `DocumentDBEventSourceConfig` object

EventSourceArn

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

Type: String

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

EventSourceMappingArn

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

Type: String

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

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

FilterCriteria

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

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

Type: [FilterCriteria](#) object

[FilterCriteriaError](#)

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

Type: [FilterCriteriaError](#) object

[FunctionArn](#)

The ARN of the Lambda function.

Type: String

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

[FunctionResponseTypes](#)

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

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

[KMSKeyArn](#)

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

Type: String

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

[LastModified](#)

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

Type: Timestamp

[LastProcessingResult](#)

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

Type: String

MaximumBatchingWindowInSeconds

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

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

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

Type: Integer

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

MaximumRecordAgeInSeconds

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

Note

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

Type: Integer

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

MaximumRetryAttempts

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

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

Type: Integer

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

MetricsConfig

The metrics configuration for your event source. For more information, see [Event source mapping metrics](#).

Type: [EventSourceMappingMetricsConfig](#) object

ParallelizationFactor

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

Type: Integer

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

ProvisionedPollerConfig

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

Type: [ProvisionedPollerConfig](#) object

Queues

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

Type: Array of strings

Array Members: Fixed number of 1 item.

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

Pattern: `[\s\S]*`

ScalingConfig

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

Type: [ScalingConfig](#) object

[SelfManagedEventSource](#)

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

Type: [SelfManagedEventSource](#) object

[SelfManagedKafkaEventSourceConfig](#)

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

Type: [SelfManagedKafkaEventSourceConfig](#) object

[SourceAccessConfigurations](#)

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

Type: Array of [SourceAccessConfiguration](#) objects

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

[StartingPosition](#)

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

Type: String

Valid Values: TRIM_HORIZON | LATEST | AT_TIMESTAMP

[StartingPositionTimestamp](#)

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

Type: Timestamp

[State](#)

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

Type: String

StateTransitionReason

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

Type: String

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

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

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

TumblingWindowInSeconds

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

Type: Integer

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

UUID

The identifier of the event source mapping.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceInUseException

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

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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 AWS 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 AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

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

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-_]+)(:(\d{4}|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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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 AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

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

DeleteLayerVersion

Deletes a version of an [AWS 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 AWS 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 AWS SDKs, see the following:

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

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-_]+)(:(\d{12}|[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 AWS 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 AWS SDKs, see the following:

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

GetAccountSettings

Retrieves details about your account's [limits](#) and usage in an AWS 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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)

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

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 AWS 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 AWS SDKs, see the following:

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

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: Minimum length of 0. 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 AWS 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 AWS SDKs, see the following:

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

GetEventSourceMapping

Returns details about an event source mapping. You can get the identifier of a mapping from the output of [ListEventSourceMappings](#).

Request Syntax

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

URI Request Parameters

The request uses the following URI parameters.

UUID

The identifier of the event source mapping.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

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

```

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

```



```

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

```

```
"TumblingWindowInSeconds": number,  
"UUID": "string"  
}
```

Response Elements

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

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

[AmazonManagedKafkaEventSourceConfig](#)

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

Type: [AmazonManagedKafkaEventSourceConfig](#) object

[BatchSize](#)

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

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

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

Type: Integer

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

[BisectBatchOnFunctionError](#)

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

Type: Boolean

[DestinationConfig](#)

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

Type: [DestinationConfig](#) object

[DocumentDBEventSourceConfig](#)

Specific configuration settings for a DocumentDB event source.

Type: [DocumentDBEventSourceConfig](#) object

[EventSourceArn](#)

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

Type: String

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

[EventSourceMappingArn](#)

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

Type: String

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

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

[FilterCriteria](#)

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

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

Type: [FilterCriteria](#) object

[FilterCriteriaError](#)

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

Type: [FilterCriteriaError](#) object

FunctionArn

The ARN of the Lambda function.

Type: String

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

FunctionResponseTypes

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

Type: Array of strings

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

Valid Values: ReportBatchItemFailures

KMSKeyArn

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

Type: String

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

LastModified

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

Type: Timestamp

LastProcessingResult

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

Type: String

MaximumBatchingWindowInSeconds

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

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

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

Type: Integer

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

MaximumRecordAgeInSeconds

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

Note

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

Type: Integer

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

MaximumRetryAttempts

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

Type: Integer

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

MetricsConfig

The metrics configuration for your event source. For more information, see [Event source mapping metrics](#).

Type: [EventSourceMappingMetricsConfig](#) object

ParallelizationFactor

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

Type: Integer

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

ProvisionedPollerConfig

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

Type: [ProvisionedPollerConfig](#) object

Queues

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

Type: Array of strings

Array Members: Fixed number of 1 item.

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

Pattern: `[\s\S]*`

ScalingConfig

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

Type: [ScalingConfig](#) object

SelfManagedEventSource

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

Type: [SelfManagedEventSource](#) object

[SelfManagedKafkaEventSourceConfig](#)

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

Type: [SelfManagedKafkaEventSourceConfig](#) object

[SourceAccessConfigurations](#)

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

Type: Array of [SourceAccessConfiguration](#) objects

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

[StartingPosition](#)

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

Type: String

Valid Values: TRIM_HORIZON | LATEST | AT_TIMESTAMP

[StartingPositionTimestamp](#)

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

Type: Timestamp

[State](#)

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

Type: String

[StateTransitionReason](#)

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

Type: String

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

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

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

TumblingWindowInSeconds

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

Type: Integer

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

UUID

The identifier of the event source mapping.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

GetFunction

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

Request Syntax

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

URI Request Parameters

The request uses the following URI parameters.

FunctionName

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

Name formats

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

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

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

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

Required: Yes

Qualifier

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

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

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

Request Body

The request does not have a request body.

Response Syntax

HTTP/1.1 200

Content-type: application/json

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

```

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

```

```

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

```

Response Elements

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

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

Code

The deployment package of the function or version.

Type: [FunctionCodeLocation](#) object

Concurrency

The function's [reserved concurrency](#).

Type: [Concurrency](#) object

Configuration

The configuration of the function or version.

Type: [FunctionConfiguration](#) object

Tags

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

Type: String to string map

TagsError

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

Type: [TagsError](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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: Minimum length of 0. 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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)

- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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 AWS 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 AWS SDKs, see the following:

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

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 AWS 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: Minimum number of 0 items. 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{4}|LATEST|[a-zA-Z0-9-_\.\.]+))?`

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[\^\\s]+`

ImageConfigResponse

The function's image configuration values.

Type: [ImageConfigResponse](#) object

KMSKeyArn

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

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

If you don't provide a customer managed key, Lambda uses an [AWS owned key](#) or an [AWS 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-Z0-9+=,.\@-_/]+`

Runtime

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

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: String

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

RuntimeVersionConfig

The ARN of the runtime and any errors that 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})?:([a-z]{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})?:([a-z]{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 AWS 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 AWS 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 AWS SDKs, see the following:

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

GetFunctionEventInvokeConfig

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

To configure options for asynchronous invocation, use [PutFunctionEventInvokeConfig](#).

Request Syntax

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

URI Request Parameters

The request uses the following URI parameters.

FunctionName

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

Name formats

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

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

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

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

Required: Yes

Qualifier

A version number or alias name.

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

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

Request Body

The request does not have a request body.

Response Syntax

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

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

Response Elements

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

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

DestinationConfig

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

Destinations

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

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

Note

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

Type: [DestinationConfig](#) object

FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

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

LastModified

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

Type: Timestamp

MaximumEventAgeInSeconds

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

Type: Integer

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

MaximumRetryAttempts

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

Type: Integer

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

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

GetFunctionRecursionConfig

Returns your function's [recursive loop detection](#) configuration.

Request Syntax

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

URI Request Parameters

The request uses the following URI parameters.

[FunctionName](#)

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

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "RecursiveLoop": "string"
}
```

Response Elements

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

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

RecursiveLoop

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

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

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

Type: String

Valid Values: `Allow` | `Terminate`

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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-_]+)(:(\dLATEST|[a-zA-Z0-9-_]+))?

Required: Yes

Qualifier

The alias name.

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

Pattern: (^\$\dLATEST\$)|((?!^[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 200 MB.

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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetLayerVersion

Returns information about a version of an [AWS 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: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: x86_64 | arm64

CompatibleRuntimes

The layer's compatible runtimes.

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

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

Content

Details about the layer version.

Type: [LayerVersionContentOutput](#) object

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: Minimum length of 0. 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 AWS 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 AWS SDKs, see the following:

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

GetLayerVersionByArn

Returns information about a version of an [AWS 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: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: x86_64 | arm64

CompatibleRuntimes

The layer's compatible runtimes.

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

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

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

Content

Details about the layer version.

Type: [LayerVersionContentOutput](#) object

CreatedDate

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

Type: String

Description

The description of the version.

Type: String

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

LayerArn

The ARN of the layer.

Type: String

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

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

LayerVersionArn

The ARN of the layer version.

Type: String

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

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

LicenseInfo

The layer's software license.

Type: String

Length Constraints: Minimum length of 0. 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 AWS 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 AWS SDKs, see the following:

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

GetLayerVersionPolicy

Returns the permission policy for a version of an [AWS 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 AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

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

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-_]+)(:(\d{12}|[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 AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

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

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 AWS Lambda during Lambda function initialization using the execution role provided for the function.

HTTP Status Code: 502

EC2UnexpectedException

AWS 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

AWS Lambda couldn't create an elastic network interface in the VPC, specified as part of Lambda function configuration, because the limit for network interfaces has been reached. For more information, see [Lambda quotas](#).

HTTP Status Code: 502

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

InvalidRequestContentException

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

HTTP Status Code: 400

InvalidRuntimeException

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

InvalidSecurityGroupIDException

The security group ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

InvalidSubnetIDException

The subnet ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

InvalidZipFileException

AWS Lambda could not unzip the deployment package.

HTTP Status Code: 502

KMSAccessDeniedException

Lambda couldn't decrypt the environment variables because AWS 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 AWS 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 AWS 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 AWS 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 AWS 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 AWS 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

AWS 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 AWS SDKs, see the following:

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

InvokeAsync

This action has been deprecated.

Important

For asynchronous function invocation, use [Invoke](#).

Invokes a function asynchronously.

Note

If you do use the InvokeAsync action, note that it doesn't support the use of X-Ray active tracing. Trace ID is not propagated to the function, even if X-Ray active tracing is turned on.

Request Syntax

```
POST /2014-11-13/functions/FunctionName/invoke-async HTTP/1.1
```

InvokeArgs

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

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

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

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

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

Required: Yes

Request Body

The request accepts the following binary data.

InvokeArgs

The JSON that you want to provide to your Lambda function as input.

Required: Yes

Response Syntax

```
HTTP/1.1 Status
```

Response Elements

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

Status

The status code.

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidRequestContentException

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

HTTP Status Code: 400

InvalidRuntimeException

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

InvokeWithResponseStream

Configure your Lambda functions to stream response payloads back to clients. For more information, see [Configuring a Lambda function to stream responses](#).

This operation requires permission for the [lambda:InvokeFunction](#) action. For details on how to set up permissions for cross-account invocations, see [Granting function access to other accounts](#).

Request Syntax

```
POST /2021-11-15/functions/FunctionName/response-streaming-invocations?
Qualifier=Qualifier HTTP/1.1
X-Amz-Invocation-Type: InvocationType
X-Amz-Log-Type: LogType
X-Amz-Client-Context: ClientContext
```

Payload

URI Request Parameters

The request uses the following URI parameters.

ClientContext

Up to 3,583 bytes of base64-encoded data about the invoking client to pass to the function in the context object.

FunctionName

The name or ARN of the Lambda function.

Name formats

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

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

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

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

Required: Yes

InvocationType

Use one of the following options:

- **RequestResponse** (default) – Invoke the function synchronously. Keep the connection open until the function returns a response or times out. The API operation response includes the function response and additional data.
- **DryRun** – Validate parameter values and verify that the IAM user or role has permission to invoke the function.

Valid Values: `RequestResponse` | `DryRun`

LogType

Set to `Tail` to include the execution log in the response. Applies to synchronously invoked functions only.

Valid Values: `None` | `Tail`

Qualifier

The alias name.

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

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

Request Body

The request accepts the following binary data.

Payload

The JSON that you want to provide to your Lambda function as input.

You can enter the JSON directly. For example, `--payload '{ "key": "value" }'`. You can also specify a file path. For example, `--payload file://payload.json`.

Response Syntax

```
HTTP/1.1 StatusCode
X-Amz-Executed-Version: ExecutedVersion
Content-Type: ResponseStreamContentType
Content-type: application/json
```

```
{
  "InvokeComplete": {
    "ErrorCode": "string",
    "ErrorDetails": "string",
    "LogResult": "string"
  },
  "PayloadChunk": {
    "Payload": blob
  }
}
```

Response Elements

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

StatusCode

For a successful request, the HTTP status code is in the 200 range. For the `RequestResponse` invocation type, this status code is 200. For the `DryRun` invocation type, this status code is 204.

The response returns the following HTTP headers.

ExecutedVersion

The version of the function that executed. When you invoke a function with an alias, this indicates which version the alias resolved to.

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

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

ResponseStreamContentType

The type of data the stream is returning.

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

InvokeComplete

An object that's returned when the stream has ended and all the payload chunks have been returned.

Type: [InvokeWithResponseStreamCompleteEvent](#) object

PayloadChunk

A chunk of the streamed response payload.

Type: [InvokeResponseStreamUpdate](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

EC2AccessDeniedException

Need additional permissions to configure VPC settings.

HTTP Status Code: 502

EC2ThrottledException

Amazon EC2 throttled AWS Lambda during Lambda function initialization using the execution role provided for the function.

HTTP Status Code: 502

EC2UnexpectedException

AWS 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

AWS Lambda couldn't create an elastic network interface in the VPC, specified as part of Lambda function configuration, because the limit for network interfaces has been reached. For more information, see [Lambda quotas](#).

HTTP Status Code: 502

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

InvalidRequestContentException

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

HTTP Status Code: 400

InvalidRuntimeException

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

InvalidSecurityGroupIDException

The security group ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

InvalidSubnetIDException

The subnet ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

InvalidZipFileException

AWS Lambda could not unzip the deployment package.

HTTP Status Code: 502

KMSAccessDeniedException

Lambda couldn't decrypt the environment variables because AWS 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 AWS 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 AWS 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 AWS 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 AWS 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 AWS 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

AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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 AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

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

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})?:([a-z]{12})?:(.*)`

FunctionName

The name or ARN of the Lambda function.

Name formats

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

- **Partial ARN** – 123456789012:function:MyFunction.

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

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

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

Marker

A pagination token returned by a previous call.

MaxItems

The maximum number of event source mappings to return. Note that ListEventSourceMappings returns a maximum of 100 items in each response, even if you set the number higher.

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

Request Body

The request does not have a request body.

Response Syntax

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

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

```

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

```

```

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

```

```
    "Topics": [ "string" ],
    "TumblingWindowInSeconds": number,
    "UUID": "string"
  }
],
"NextMarker": "string"
}
```

Response Elements

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

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

[EventSourceMappings](#)

A list of event source mappings.

Type: Array of [EventSourceMappingConfiguration](#) objects

[NextMarker](#)

A pagination token that's returned when the response doesn't contain all event source mappings.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)

- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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 AWS 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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)

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

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: Minimum length of 0. 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 AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ListLayers

Lists [AWS Lambda layers](#) and shows information about the latest version of each. Specify a [runtime identifier](#) to list only layers that indicate that they're compatible with that runtime. Specify a compatible architecture to include only layers that are compatible with that [instruction set architecture](#).

Request Syntax

```
GET /2018-10-31/layers?  
CompatibleArchitecture=CompatibleArchitecture&CompatibleRuntime=CompatibleRuntime&Marker=Marker  
HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CompatibleArchitecture

The compatible [instruction set architecture](#).

Valid Values: x86_64 | arm64

CompatibleRuntime

A runtime identifier.

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

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

Marker

A pagination token returned by a previous call.

MaxItems

The maximum number of layers to return.

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

Request Body

The request does not have a request body.

Response Syntax

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

{
  "Layers": [
    {
      "LatestMatchingVersion": {
        "CompatibleArchitectures": [ "string" ],
        "CompatibleRuntimes": [ "string" ],
        "CreateDate": "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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ListLayerVersions

Lists the versions of an [AWS Lambda layer](#). Versions that have been deleted aren't listed. Specify a [runtime identifier](#) to list only versions that indicate that they're compatible with that runtime. Specify a compatible architecture to include only layer versions that are compatible with that architecture.

Request Syntax

```
GET /2018-10-31/layers/LayerName/versions?  
CompatibleArchitecture=CompatibleArchitecture&CompatibleRuntime=CompatibleRuntime&Marker=Marker  
HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CompatibleArchitecture

The compatible [instruction set architecture](#).

Valid Values: x86_64 | arm64

CompatibleRuntime

A runtime identifier.

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

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

LayerName

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

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

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

Required: Yes

Marker

A pagination token returned by a previous call.

MaxItems

The maximum number of versions to return.

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

Request Body

The request does not have a request body.

Response Syntax

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

{
  "LayerVersions": [
    {
      "CompatibleArchitectures": [ "string" ],
      "CompatibleRuntimes": [ "string" ],
      "CreatedDate": "string",
      "Description": "string",
      "LayerVersionArn": "string",
      "LicenseInfo": "string",
      "Version": number
    }
  ],
  "NextMarker": "string"
}
```

```
}
```

Response Elements

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

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

LayerVersions

A list of versions.

Type: Array of [LayerVersionsListItem](#) objects

NextMarker

A pagination token returned when the response doesn't contain all versions.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

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

ListTags

Returns a function, event source mapping, or code signing configuration's [tags](#). You can also view function tags with [GetFunction](#).

Request Syntax

```
GET /2017-03-31/tags/Resource HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

[Resource](#)

The resource's Amazon Resource Name (ARN). Note: Lambda does not support adding tags to function aliases or versions.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_\+](:(\$\{LATEST|[a-zA-Z0-9-_\+])?)?|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12})`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "Tags": {
```

```
    "string" : "string"  
  }  
}
```

Response Elements

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

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

Tags

The function's tags.

Type: String to string map

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)

- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

PublishLayerVersion

Creates an [AWS 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: Minimum number of 0 items. 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: Minimum number of 0 items. Maximum number of 15 items.

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

Required: No

Content

The function layer archive.

Type: [LayerVersionContentInput](#) object

Required: Yes

Description

The description of the version.

Type: String

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

Required: No

LicenseInfo

The layer's software license. It can be any of the following:

- An [SPDX license identifier](#). For example, MIT.
- The URL of a license hosted on the internet. For example, `https://opensource.org/licenses/MIT`.
- The full text of the license.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 512.

Required: No

Response Syntax

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

{
  "CompatibleArchitectures": [ "string" ],
  "CompatibleRuntimes": [ "string" ],
  "Content": {
    "CodeSha256": "string",
    "CodeSize": number,
    "Location": "string",
    "SigningJobArn": "string",
    "SigningProfileVersionArn": "string"
  },
  "CreatedDate": "string",
```

```
"Description": "string",  
"LayerArn": "string",  
"LayerVersionArn": "string",  
"LicenseInfo": "string",  
"Version": number  
}
```

Response Elements

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

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

CompatibleArchitectures

A list of compatible [instruction set architectures](#).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: x86_64 | arm64

CompatibleRuntimes

The layer's compatible runtimes.

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

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

| ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 |
java21 | python3.13 | nodejs22.x

Content

Details about the layer version.

Type: [LayerVersionContentOutput](#) object

CreatedDate

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

Type: String

Description

The description of the version.

Type: String

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

LayerArn

The ARN of the layer.

Type: String

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

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

LayerVersionArn

The ARN of the layer version.

Type: String

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

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

LicenseInfo

The layer's software license.

Type: String

Length Constraints: Minimum length of 0. 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 AWS 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 AWS 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 AWS SDKs, see the following:

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

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.

AWS 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-_]+)(:(\d{12}|[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 AWS 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: Minimum number of 0 items. 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: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

ImageConfigResponse

The function's image configuration values.

Type: [ImageConfigResponse](#) object

KMSKeyArn

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

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

If you don't provide a customer managed key, Lambda uses an [AWS owned key](#) or an [AWS managed key](#).

Type: String

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

LastModified

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

Type: String

LastUpdateStatus

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

Type: String

Valid Values: Successful | Failed | InProgress

LastUpdateStatusReason

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

Type: String

LastUpdateStatusReasonCode

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

Type: String

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

Layers

The function's [layers](#).

Type: Array of [Layer](#) objects

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: [LoggingConfig](#) object

MasterArn

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

Type: String

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

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

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

PackageType

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

Type: String

Valid Values: Zip | Image

RevisionId

The latest updated revision of the function or alias.

Type: String

Role

The function's execution role.

Type: String

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

Runtime

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

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: String

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

RuntimeVersionConfig

The ARN of the runtime and any errors that 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})?:([a-z]{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})?:([a-z]{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 AWS 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 AWS account has exceeded its maximum total code size. For more information, see [Lambda quotas](#).

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

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

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

HTTP Status Code: 412

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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: Minimum length of 0. 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: Minimum length of 0. 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 AWS 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 AWS SDKs, see the following:

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

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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

PutFunctionEventInvokeConfig

Configures options for [asynchronous invocation](#) on a function, version, or alias. If a configuration already exists for a function, version, or alias, this operation overwrites it. If you exclude any settings, they are removed. To set one option without affecting existing settings for other options, use [UpdateFunctionEventInvokeConfig](#).

By default, Lambda retries an asynchronous invocation twice if the function returns an error. It retains events in a queue for up to six hours. When an event fails all processing attempts or stays in the asynchronous invocation queue for too long, Lambda discards it. To retain discarded events, configure a dead-letter queue with [UpdateFunctionConfiguration](#).

To send an invocation record to a queue, topic, S3 bucket, function, or event bus, specify a [destination](#). You can configure separate destinations for successful invocations (on-success) and events that fail all processing attempts (on-failure). You can configure destinations in addition to or instead of a dead-letter queue.

Note

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

Request Syntax

```
PUT /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier HTTP/1.1
Content-type: application/json
```

```
{
  "DestinationConfig": {
    "OnFailure": {
      "Destination": "string"
    },
    "OnSuccess": {
      "Destination": "string"
    }
  },
  "MaximumEventAgeInSeconds": number,
  "MaximumRetryAttempts": number
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

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

Name formats

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

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

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

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

Required: Yes

Qualifier

A version number or alias name.

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

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

Request Body

The request accepts the following data in JSON format.

DestinationConfig

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

Destinations

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

Note

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

Type: [DestinationConfig](#) object

Required: No

[MaximumEventAgeInSeconds](#)

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

Type: Integer

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

Required: No

[MaximumRetryAttempts](#)

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

Type: Integer

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

Required: No

Response Syntax

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

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

Response Elements

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

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

DestinationConfig

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

Destinations

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

Note

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

Type: DestinationConfig object

FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

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

LastModified

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

Type: Timestamp

MaximumEventAgeInSeconds

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

Type: Integer

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

MaximumRetryAttempts

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

Type: Integer

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

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

PutFunctionRecursionConfig

Sets your function's [recursive loop detection](#) configuration.

When you configure a Lambda function to output to the same service or resource that invokes the function, it's possible to create an infinite recursive loop. For example, a Lambda function might write a message to an Amazon Simple Queue Service (Amazon SQS) queue, which then invokes the same function. This invocation causes the function to write another message to the queue, which in turn invokes the function again.

Lambda can detect certain types of recursive loops shortly after they occur. When Lambda detects a recursive loop and your function's recursive loop detection configuration is set to `Terminate`, it stops your function being invoked and notifies you.

Request Syntax

```
PUT /2024-08-31/functions/FunctionName/recursion-config HTTP/1.1
Content-type: application/json

{
  "RecursiveLoop": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

[FunctionName](#)

The name or ARN of the Lambda function.

Name formats

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

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

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

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

RecursiveLoop

If you set your function's recursive loop detection configuration to `Allow`, Lambda doesn't take any action when it detects your function being invoked as part of a recursive loop. We recommend that you only use this setting if your design intentionally uses a Lambda function to write data back to the same AWS resource that invokes it.

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

By default, Lambda sets your function's configuration to `Terminate`.

Important

If your design intentionally uses a Lambda function to write data back to the same AWS resource that invokes the function, then use caution and implement suitable guard rails to prevent unexpected charges being billed to your AWS account. To learn more about best practices for using recursive invocation patterns, see [Recursive patterns that cause run-away Lambda functions](#) in Serverless Land.

Type: String

Valid Values: `Allow` | `Terminate`

Required: Yes

Response Syntax

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

{
  "RecursiveLoop": "string"
}
```

Response Elements

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

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

[RecursiveLoop](#)

The status of your function's recursive loop detection configuration.

When this value is set to `Allow` and Lambda detects your function being invoked as part of a recursive loop, it doesn't take any action.

When this value is set to `Terminate` and Lambda detects your function being invoked as part of a recursive loop, it stops your function being invoked and notifies you.

Type: String

Valid Values: `Allow` | `Terminate`

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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-_]+)(:(\d+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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

PutRuntimeManagementConfig

Sets the runtime management configuration for a function's version. For more information, see [Runtime updates](#).

Request Syntax

```
PUT /2021-07-20/functions/FunctionName/runtime-management-config?Qualifier=Qualifier
HTTP/1.1
Content-type: application/json

{
  "RuntimeVersionArn": "string",
  "UpdateRuntimeOn": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

[FunctionName](#)

The name or ARN of the Lambda function.

Name formats

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

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

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

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

Required: Yes

Qualifier

Specify a version of the function. This can be `$LATEST` or a published version number. If no value is specified, the configuration for the `$LATEST` version is returned.

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

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

Request Body

The request accepts the following data in JSON format.

RuntimeVersionArn

The ARN of the runtime version you want the function to use.

Note

This is only required if you're using the **Manual** runtime update mode.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `arn:(aws[a-zA-Z-]*) :lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:..+`

Required: No

UpdateRuntimeOn

Specify the runtime update mode.

- **Auto (default)** - Automatically update to the most recent and secure runtime version using a [Two-phase runtime version rollout](#). This is the best choice for most customers to ensure they always benefit from runtime updates.
- **Function update** - Lambda updates the runtime of your function to the most recent and secure runtime version when you update your function. This approach synchronizes runtime updates with function deployments, giving you control over when runtime updates are

applied and allowing you to detect and mitigate rare runtime update incompatibilities early. When using this setting, you need to regularly update your functions to keep their runtime up-to-date.

- **Manual** - You specify a runtime version in your function configuration. The function will use this runtime version indefinitely. In the rare case where a new runtime version is incompatible with an existing function, this allows you to roll back your function to an earlier runtime version. For more information, see [Roll back a runtime version](#).

Type: String

Valid Values: Auto | Manual | FunctionUpdate

Required: Yes

Response Syntax

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

{
  "FunctionArn": "string",
  "RuntimeVersionArn": "string",
  "UpdateRuntimeOn": "string"
}
```

Response Elements

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

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

[FunctionArn](#)

The ARN of the function

Type: String

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

RuntimeVersionArn

The ARN of the runtime the function is configured to use. If the runtime update mode is **manual**, the ARN is returned, otherwise `null` is returned.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:..+`

UpdateRuntimeOn

The runtime update mode.

Type: String

Valid Values: `Auto` | `Manual` | `FunctionUpdate`

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

RemoveLayerVersionPermission

Removes a statement from the permissions policy for a version of an [AWS Lambda layer](#). For more information, see [AddLayerVersionPermission](#).

Request Syntax

```
DELETE /2018-10-31/layers/LayerName/versions/VersionNumber/policy/StatementId?  
RevisionId=RevisionId HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

LayerName

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

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

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

Required: Yes

RevisionId

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

StatementId

The identifier that was specified when the statement was added.

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

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

Required: Yes

VersionNumber

The version number.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

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

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

HTTP Status Code: 412

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

RemovePermission

Revokes function-use permission from an AWS service or another AWS account. You can get the ID of the statement from the output of [GetPolicy](#).

Request Syntax

```
DELETE /2015-03-31/functions/FunctionName/policy/StatementId?
Qualifier=Qualifier&RevisionId=RevisionId HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

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

Name formats

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

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

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

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

Required: Yes

Qualifier

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

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

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

RevisionId

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

StatementId

Statement ID of the permission to remove.

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

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

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

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

HTTP Status Code: 412

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

TagResource

Adds [tags](#) to a function, event source mapping, or code signing configuration.

Request Syntax

```
POST /2017-03-31/tags/Resource HTTP/1.1
Content-type: application/json
```

```
{
  "Tags": {
    "string" : "string"
  }
}
```

URI Request Parameters

The request uses the following URI parameters.

[Resource](#)

The resource's Amazon Resource Name (ARN).

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_]+(:($LATEST|[a-zA-Z0-9-_]+))?)|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12})`

Required: Yes

Request Body

The request accepts the following data in JSON format.

[Tags](#)

A list of tags to apply to the resource.

Type: String to string map

Required: Yes

Response Syntax

```
HTTP/1.1 204
```

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

UntagResource

Removes [tags](#) from a function, event source mapping, or code signing configuration.

Request Syntax

```
DELETE /2017-03-31/tags/Resource?tagKeys=TagKeys HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

[Resource](#)

The resource's Amazon Resource Name (ARN).

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?)|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12})`

Required: Yes

[TagKeys](#)

A list of tag keys to remove from the resource.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

UpdateAlias

Updates the configuration of a Lambda function [alias](#).

Request Syntax

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

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

URI Request Parameters

The request uses the following URI parameters.

[FunctionName](#)

The name or ARN of the Lambda function.

Name formats

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

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

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

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

Required: Yes

Name

The name of the alias.

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

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

Description

A description of the alias.

Type: String

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

Required: No

FunctionVersion

The function version that the alias invokes.

Type: String

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

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

Required: No

RevisionId

Only update the alias if the revision ID matches the ID that's specified. Use this option to avoid modifying an alias that has changed since you last read it.

Type: String

Required: No

RoutingConfig

The [routing configuration](#) of the alias.

Type: [AliasRoutingConfiguration](#) object

Required: No

Response Syntax

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

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

Response Elements

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

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

AliasArn

The Amazon Resource Name (ARN) of the alias.

Type: String

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

Description

A description of the alias.

Type: String

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

FunctionVersion

The function version that the alias invokes.

Type: String

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

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

Name

The name of the alias.

Type: String

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

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

RevisionId

A unique identifier that changes when you update the alias.

Type: String

RoutingConfig

The [routing configuration](#) of the alias.

Type: [AliasRoutingConfiguration](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

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

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

HTTP Status Code: 412

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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: Minimum length of 0. 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 AWS 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 AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)

- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

UpdateEventSourceMapping

Updates an event source mapping. You can change the function that AWS Lambda invokes, or pause invocation and resume later from the same location.

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

- [Amazon DynamoDB Streams](#)
- [Amazon Kinesis](#)
- [Amazon SQS](#)
- [Amazon MQ and RabbitMQ](#)
- [Amazon MSK](#)
- [Apache Kafka](#)
- [Amazon DocumentDB](#)

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

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

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

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

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

- [Amazon DynamoDB Streams](#)

- [Amazon Kinesis](#)
- [Amazon SQS](#)
- [Amazon MQ and RabbitMQ](#)
- [Amazon MSK](#)
- [Apache Kafka](#)
- [Amazon DocumentDB](#)

Request Syntax

PUT /2015-03-31/event-source-mappings/*UUID* HTTP/1.1
Content-type: application/json

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

```

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

```



```
        "Attribute": "string"
      }
    ]
  },
  "SourceAccessConfigurations": [
    {
      "Type": "string",
      "URI": "string"
    }
  ],
  "TumblingWindowInSeconds": number
}
```

URI Request Parameters

The request uses the following URI parameters.

UUID

The identifier of the event source mapping.

Required: Yes

Request Body

The request accepts the following data in JSON format.

AmazonManagedKafkaEventSourceConfig

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

Type: [AmazonManagedKafkaEventSourceConfig](#) object

Required: No

BatchSize

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

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

Type: Integer

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

Required: No

[BisectBatchOnFunctionError](#)

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

Type: Boolean

Required: No

[DestinationConfig](#)

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

Type: [DestinationConfig](#) object

Required: No

[DocumentDBEventSourceConfig](#)

Specific configuration settings for a DocumentDB event source.

Type: [DocumentDBEventSourceConfig](#) object

Required: No

Enabled

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

Default: True

Type: Boolean

Required: No

FilterCriteria

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

Type: [FilterCriteria](#) object

Required: No

FunctionName

The name or ARN of the Lambda function.

Name formats

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

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

Type: String

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

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

Required: No

FunctionResponseTypes

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

Type: Array of strings

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

Valid Values: ReportBatchItemFailures

Required: No

KMSKeyArn

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

Type: String

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

Required: No

MaximumBatchingWindowInSeconds

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

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

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

Type: Integer

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

Required: No

MaximumRecordAgeInSeconds

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

Type: Integer

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

Required: No

MaximumRetryAttempts

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

Type: Integer

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

Required: No

MetricsConfig

The metrics configuration for your event source. For more information, see [Event source mapping metrics](#).

Type: [EventSourceMappingMetricsConfig](#) object

Required: No

ParallelizationFactor

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

Type: Integer

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

Required: No

ProvisionedPollerConfig

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

Type: [ProvisionedPollerConfig](#) object

Required: No

ScalingConfig

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

Type: [ScalingConfig](#) object

Required: No

SelfManagedKafkaEventSourceConfig

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

Type: [SelfManagedKafkaEventSourceConfig](#) object

Required: No

SourceAccessConfigurations

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

Type: Array of [SourceAccessConfiguration](#) objects

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

Required: No

TumblingWindowInSeconds

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

Type: Integer

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

Required: No

Response Syntax

HTTP/1.1 202

Content-type: application/json

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

```

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

```



```

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

```

Response Elements

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

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

[AmazonManagedKafkaEventSourceConfig](#)

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

Type: [AmazonManagedKafkaEventSourceConfig](#) object

[BatchSize](#)

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

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

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

Type: Integer

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

BisectBatchOnFunctionError

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

Type: Boolean

DestinationConfig

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

Type: [DestinationConfig](#) object

DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: [DocumentDBEventSourceConfig](#) object

EventSourceArn

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

Type: String

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

EventSourceMappingArn

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

Type: String

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

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

FilterCriteria

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

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

Type: [FilterCriteria](#) object

FilterCriteriaError

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

Type: [FilterCriteriaError](#) object

FunctionArn

The ARN of the Lambda function.

Type: String

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

FunctionResponseTypes

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

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

KMSKeyArn

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

Type: String

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

LastModified

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

Type: Timestamp

LastProcessingResult

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

Type: String

MaximumBatchingWindowInSeconds

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

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

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

Type: Integer

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

MaximumRecordAgeInSeconds

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

Note

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

Type: Integer

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

MaximumRetryAttempts

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

Type: Integer

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

MetricsConfig

The metrics configuration for your event source. For more information, see [Event source mapping metrics](#).

Type: [EventSourceMappingMetricsConfig](#) object

ParallelizationFactor

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

Type: Integer

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

ProvisionedPollerConfig

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

Type: [ProvisionedPollerConfig](#) object

Queues

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

Type: Array of strings

Array Members: Fixed number of 1 item.

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

Pattern: `[\s\S]*`

ScalingConfig

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

Type: [ScalingConfig](#) object

SelfManagedEventSource

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

Type: [SelfManagedEventSource](#) object

SelfManagedKafkaEventSourceConfig

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

Type: [SelfManagedKafkaEventSourceConfig](#) object

SourceAccessConfigurations

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

Type: Array of [SourceAccessConfiguration](#) objects

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

StartingPosition

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

Type: String

Valid Values: TRIM_HORIZON | LATEST | AT_TIMESTAMP

StartingPositionTimestamp

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

Type: Timestamp

State

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

Type: String

StateTransitionReason

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

Type: String

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

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

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

TumblingWindowInSeconds

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

Type: Integer

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

UUID

The identifier of the event source mapping.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceInUseException

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

HTTP Status Code: 400

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

UpdateFunctionCode

Updates a Lambda function's code. If code signing is enabled for the function, the code package must be signed by a trusted publisher. For more information, see [Configuring code signing for Lambda](#).

If the function's package type is Image, then you must specify the code package in `ImageUri` as the URI of a [container image](#) in the Amazon ECR registry.

If the function's package type is Zip, then you must specify the deployment package as a [.zip file archive](#). Enter the Amazon S3 bucket and key of the code .zip file location. You can also provide the function code inline using the `ZipFile` field.

The code in the deployment package must be compatible with the target instruction set architecture of the function (x86-64 or arm64).

The function's code is locked when you publish a version. You can't modify the code of a published version, only the unpublished version.

Note

For a function defined as a container image, Lambda resolves the image tag to an image digest. In Amazon ECR, if you update the image tag to a new image, Lambda does not automatically update the function.

Request Syntax

```
PUT /2015-03-31/functions/FunctionName/code HTTP/1.1
Content-type: application/json
```

```
{
  "Architectures": [ "string" ],
  "DryRun": boolean,
  "ImageUri": "string",
  "Publish": boolean,
  "RevisionId": "string",
  "S3Bucket": "string",
  "S3Key": "string",
  "S3ObjectVersion": "string",
  "SourceKMSKeyArn": "string",
```

```
"ZipFile": blob
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

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

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

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

Pattern: (arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}(-gov)?-[a-z]+\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\dLATEST|[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 AWS Region as your function. The bucket can be in a different AWS account. Use only with a function defined with a .zip file archive deployment package.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\-\_]*(?<!\.)`

Required: No

S3Key

The Amazon S3 key of the deployment package. Use only with a function defined with a .zip file archive deployment package.

Type: String

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

Required: No

S3ObjectVersion

For versioned objects, the version of the deployment package object to use.

Type: String

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

Required: No

SourceKMSKeyArn

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an AWS managed key.

Type: String

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

Required: No

ZipFile

The base64-encoded contents of the deployment package. AWS SDK and AWS 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 AWS 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: Minimum number of 0 items. 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{4}LATEST|[a-zA-Z0-9-_\.\.]+))?

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [^\s]+

ImageConfigResponse

The function's image configuration values.

Type: [ImageConfigResponse](#) object

KMSKeyArn

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

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

If you don't provide a customer managed key, Lambda uses an [AWS owned key](#) or an [AWS managed key](#).

Type: String

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

LastModified

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

Type: String

LastUpdateStatus

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

Type: String

Valid Values: `Successful` | `Failed` | `InProgress`

LastUpdateStatusReason

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

Type: String

LastUpdateStatusReasonCode

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

Type: String

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

Layers

The function's [layers](#).

Type: Array of [Layer](#) objects

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: [LoggingConfig](#) object

MasterArn

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

Type: String

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

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

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

PackageType

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

Type: String

Valid Values: Zip | Image

RevisionId

The latest updated revision of the function or alias.

Type: String

Role

The function's execution role.

Type: String

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

Runtime

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

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: String

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

[RuntimeVersionConfig](#)

The ARN of the runtime and any errors that 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})?:([a-z]{12})?:([a-z]{1})

[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})?:([a-z]{12})?:([a-z]{1})

[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 AWS 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 AWS account has exceeded its maximum total code size. For more information, see [Lambda quotas](#).

HTTP Status Code: 400

CodeVerificationFailedException

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

HTTP Status Code: 400

InvalidCodeSignatureException

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

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

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

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

HTTP Status Code: 412

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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 AWS account or AWS 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-_]+)(:(\d{4}|[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: Minimum number of 0 items. 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: Minimum length of 0. 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 AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

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

If you don't provide a customer managed key, Lambda uses an [AWS owned key](#) or an [AWS managed key](#).

Type: String

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

Required: No

[Layers](#)

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

Type: Array of strings

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

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

Required: No

[LoggingConfig](#)

The function's Amazon CloudWatch Logs configuration settings.

Type: [LoggingConfig](#) object

Required: No

MemorySize

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

Type: Integer

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

Required: No

RevisionId

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

Type: String

Required: No

Role

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

Type: String

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

Required: No

Runtime

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

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: String

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

Required: No

SnapStart

The function's [SnapStart](#) setting.

Type: [SnapStart](#) object

Required: No

Timeout

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

Type: Integer

Valid Range: Minimum value of 1.

Required: No

TracingConfig

Set Mode to Active to sample and trace a subset of incoming requests with [X-Ray](#).

Type: [TracingConfig](#) object

Required: No

VpcConfig

For network connectivity to AWS 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 AWS 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: Minimum number of 0 items. 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{4}|[a-zA-Z0-9-_\.\.]+))?`

Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[\^\\s]+`

ImageConfigResponse

The function's image configuration values.

Type: [ImageConfigResponse](#) object

KMSKeyArn

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

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

If you don't provide a customer managed key, Lambda uses an [AWS owned key](#) or an [AWS 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` | `InternalServerError` | `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-Z0-9+=,.\@-_/]+`

Runtime

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

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

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: String

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

RuntimeVersionConfig

The ARN of the runtime and any errors that 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})?:([a-z]{12})?:([a-z]{1})`

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})?:([a-z]{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 AWS X-Ray tracing configuration.

Type: [TracingConfigResponse](#) object

Version

The version of the Lambda function.

Type: String

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

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

VpcConfig

The function's networking configuration.

Type: [VpcConfigResponse](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

CodeSigningConfigNotFoundException

The specified code signing configuration does not exist.

HTTP Status Code: 404

CodeVerificationFailedException

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

HTTP Status Code: 400

InvalidCodeSignatureException

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

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

PreconditionFailedException

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

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

HTTP Status Code: 412

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

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-_]+)(:(\d{4}|[a-zA-Z0-9-_]+))?`

Required: Yes

Qualifier

A version number or alias name.

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

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

Request Body

The request accepts the following data in JSON format.

DestinationConfig

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

Destinations

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

Note

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

Type: [DestinationConfig](#) object

Required: No

MaximumEventAgeInSeconds

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

Type: Integer

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

Required: No

MaximumRetryAttempts

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

Type: Integer

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

Required: No

Response Syntax

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

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

Response Elements

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

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

DestinationConfig

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

Destinations

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

Note

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

Type: [DestinationConfig](#) object

FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

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

LastModified

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

Type: Timestamp

MaximumEventAgeInSeconds

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

Type: Integer

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

MaximumRetryAttempts

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

Type: Integer

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

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

HTTP Status Code: 400

ResourceConflictException

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

HTTP Status Code: 409

ResourceNotFoundException

The resource specified in the request does not exist.

HTTP Status Code: 404

ServiceException

The AWS 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 AWS SDKs, see the following:

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

UpdateFunctionUrlConfig

Updates the configuration for a Lambda function URL.

Request Syntax

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

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

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

Name formats

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

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

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

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

Required: Yes

Qualifier

The alias name.

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

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

Request Body

The request accepts the following data in JSON format.

AuthType

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

Type: String

Valid Values: `NONE` | `AWS_IAM`

Required: No

Cors

The [cross-origin resource sharing \(CORS\)](#) settings for your function URL.

Type: [Cors](#) object

Required: No

InvokeMode

Use one of the following options:

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

- **RESPONSE_STREAM** – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 200 MB.

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 200 MB.

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 AWS 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 AWS SDKs, see the following:

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

Data Types

The AWS Lambda API contains several data types that various actions use. This section describes each data type in detail.

Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [AccountLimit](#)
- [AccountUsage](#)
- [AliasConfiguration](#)
- [AliasRoutingConfiguration](#)
- [AllowedPublishers](#)
- [AmazonManagedKafkaEventSourceConfig](#)
- [CodeSigningConfig](#)
- [CodeSigningPolicies](#)
- [Concurrency](#)
- [Cors](#)
- [DeadLetterConfig](#)
- [DestinationConfig](#)
- [DocumentDBEventSourceConfig](#)
- [Environment](#)
- [EnvironmentError](#)
- [EnvironmentResponse](#)
- [EphemeralStorage](#)
- [EventSourceMappingConfiguration](#)
- [EventSourceMappingMetricsConfig](#)
- [FileSystemConfig](#)

- [Filter](#)
- [FilterCriteria](#)
- [FilterCriteriaError](#)
- [FunctionCode](#)
- [FunctionCodeLocation](#)
- [FunctionConfiguration](#)
- [FunctionEventInvokeConfig](#)
- [FunctionUrlConfig](#)
- [ImageConfig](#)
- [ImageConfigError](#)
- [ImageConfigResponse](#)
- [InvokeResponseStreamUpdate](#)
- [InvokeWithResponseStreamCompleteEvent](#)
- [InvokeWithResponseStreamResponseEvent](#)
- [KafkaSchemaRegistryAccessConfig](#)
- [KafkaSchemaRegistryConfig](#)
- [KafkaSchemaValidationConfig](#)
- [Layer](#)
- [LayersListItem](#)
- [LayerVersionContentInput](#)
- [LayerVersionContentOutput](#)
- [LayerVersionsListItem](#)
- [LoggingConfig](#)
- [OnFailure](#)
- [OnSuccess](#)
- [ProvisionedConcurrencyConfigListItem](#)
- [ProvisionedPollerConfig](#)
- [RuntimeVersionConfig](#)
- [RuntimeVersionError](#)
- [ScalingConfig](#)

- [SelfManagedEventSource](#)
- [SelfManagedKafkaEventSourceConfig](#)
- [SnapStart](#)
- [SnapStartResponse](#)
- [SourceAccessConfiguration](#)
- [TagsError](#)
- [TracingConfig](#)
- [TracingConfigResponse](#)
- [VpcConfig](#)
- [VpcConfigResponse](#)

AccountLimit

Limits that are related to concurrency and storage. All file and storage sizes are in bytes.

Contents

CodeSizeUnzipped

The maximum size of a function's deployment package and layers when they're extracted.

Type: Long

Required: No

CodeSizeZipped

The maximum size of a deployment package when it's uploaded directly to Lambda. Use Amazon S3 for larger files.

Type: Long

Required: No

ConcurrentExecutions

The maximum number of simultaneous function executions.

Type: Integer

Required: No

TotalCodeSize

The amount of storage space that you can use for all deployment packages and layer archives.

Type: Long

Required: No

UnreservedConcurrentExecutions

The maximum number of simultaneous function executions, minus the capacity that's reserved for individual functions with [PutFunctionConcurrency](#).

Type: Integer

Valid Range: Minimum value of 0.

Required: No

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

AmazonManagedKafkaEventSourceConfig

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

Contents

ConsumerGroupId

The identifier for the Kafka consumer group to join. The consumer group ID must be unique among all your Kafka event sources. After creating a Kafka event source mapping with the consumer group ID specified, you cannot update this value. For more information, see [Customizable consumer group ID](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

Required: No

SchemaRegistryConfig

Specific configuration settings for a Kafka schema registry.

Type: [KafkaSchemaRegistryConfig](#) object

Required: No

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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: Minimum length of 0. 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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: Minimum number of 0 items. Maximum number of 100 items.

Length Constraints: Minimum length of 0. 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: Minimum number of 0 items. Maximum number of 6 items.

Length Constraints: Minimum length of 0. 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: Minimum number of 0 items. 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: Minimum number of 0 items. Maximum number of 100 items.

Length Constraints: Minimum length of 0. 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

DestinationConfig

A configuration object that specifies the destination of an event after Lambda processes it. For more information, see [Adding a destination](#).

Contents

OnFailure

The destination configuration for failed invocations.

Type: [OnFailure](#) object

Required: No

OnSuccess

The destination configuration for successful invocations. Not supported in `CreateEventSourceMapping` or `UpdateEventSourceMapping`.

Type: [OnSuccess](#) object

Required: No

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

EventSourceMappingConfiguration

A mapping between an AWS 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})?:([a-z]{12})?:([a-z]{12})?:([a-z]{12})`

Required: No

EventSourceMappingArn

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

Type: String

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

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

Required: No

FilterCriteria

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

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

Type: [FilterCriteria](#) object

Required: No

FilterCriteriaError

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

Type: [FilterCriteriaError](#) object

Required: No

FunctionArn

The ARN of the Lambda function.

Type: String

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

Required: No

FunctionResponseTypes

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

Type: Array of strings

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

Valid Values: `ReportBatchItemFailures`

Required: No

KMSKeyArn

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

Type: String

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

Required: No

LastModified

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

Type: Timestamp

Required: No

LastProcessingResult

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

Type: String

Required: No

MaximumBatchingWindowInSeconds

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

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

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

Type: Integer

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

Required: No

MaximumRecordAgeInSeconds

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

Note

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

Type: Integer

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

Required: No

MaximumRetryAttempts

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

Type: Integer

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

Required: No

MetricsConfig

The metrics configuration for your event source. For more information, see [Event source mapping metrics](#).

Type: [EventSourceMappingMetricsConfig](#) object

Required: No

ParallelizationFactor

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

Type: Integer

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

Required: No

ProvisionedPollerConfig

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

Type: [ProvisionedPollerConfig](#) object

Required: No

Queues

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

Type: Array of strings

Array Members: Fixed number of 1 item.

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

Pattern: `[\s\S]*`

Required: No

ScalingConfig

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

Type: [ScalingConfig](#) object

Required: No

SelfManagedEventSource

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

Type: [SelfManagedEventSource](#) object

Required: No

SelfManagedKafkaEventSourceConfig

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

Type: [SelfManagedKafkaEventSourceConfig](#) object

Required: No

SourceAccessConfigurations

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of [SourceAccessConfiguration](#) objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

Required: No

StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. AT_TIMESTAMP is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: TRIM_HORIZON | LATEST | AT_TIMESTAMP

Required: No

StartingPositionTimestamp

With StartingPosition set to AT_TIMESTAMP, the time from which to start reading, in Unix time seconds. StartingPositionTimestamp cannot be in the future.

Type: Timestamp

Required: No

State

The state of the event source mapping. It can be one of the following: Creating, Enabling, Enabled, Disabling, Disabled, Updating, or Deleting.

Type: String

Required: No

StateTransitionReason

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

Required: No

Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `[^.]([a-zA-Z0-9\-\_\.]++)`

Required: No

TumblingWindowInSeconds

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

Required: No

UUID

The identifier of the event source mapping.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

EventSourceMappingMetricsConfig

The metrics configuration for your event source. Use this configuration object to define which metrics you want your event source mapping to produce.

Contents

Metrics

The metrics you want your event source mapping to produce. Include `EventCount` to receive event source mapping metrics related to the number of events processed by your event source mapping. For more information about these metrics, see [Event source mapping metrics](#).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: `EventCount`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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: Minimum length of 0. 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: Minimum length of 0. 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

Contents

ErrorCode

The AWS KMS exception that resulted from filter criteria encryption or decryption.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 50.

Pattern: [A-Za-z]+Exception

Required: No

Message

The error message.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 2048.

Pattern: .*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS Region as your function. The bucket can be in a different AWS account.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\-_]*(?<!\. )`

Required: No

S3Key

The Amazon S3 key of the deployment package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

S3ObjectVersion

For versioned objects, the version of the deployment package object to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

SourceKMSKeyArn

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an [AWS owned key](#).

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]++:.*)|()`

Required: No

ZipFile

The base64-encoded contents of the deployment package. AWS SDK and AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

FunctionCodeLocation

Details about a function's deployment package.

Contents

ImageUri

URI of a container image in the Amazon ECR registry.

Type: String

Required: No

Location

A presigned URL that you can use to download the deployment package.

Type: String

Required: No

RepositoryType

The service that's hosting the file.

Type: String

Required: No

ResolvedImageUri

The resolved URI for the image.

Type: String

Required: No

SourceKMSKeyArn

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an [AWS owned key](#).

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

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 AWS 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: Minimum number of 0 items. 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: Minimum length of 0. Maximum length of 128.

Pattern: `^[^\\s]+$`

Required: No

ImageConfigResponse

The function's image configuration values.

Type: [ImageConfigResponse](#) object

Required: No

KMSKeyArn

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's [environment variables](#).
- The function's [Lambda SnapStart](#) snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see [Specifying a customer managed key for Lambda](#).

- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see [Function lifecycle](#).

If you don't provide a customer managed key, Lambda uses an [AWS owned key](#) or an [AWS managed key](#).

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-~.]*|)`

Required: No

LastModified

The date and time that the function was last updated, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: No

LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful` | `Failed` | `InProgress`

Required: No

LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

Required: No

LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded` | `InsufficientRolePermissions` | `InvalidConfiguration` | `InternalError` | `SubnetOutOfIPAddresses` | `InvalidSubnet` | `InvalidSecurityGroup` | `ImageDeleted` | `ImageAccessDenied` | `InvalidImage` | `KMSKeyAccessDenied` | `KMSKeyNotFound` | `InvalidStateKMSKey` | `DisabledKMSKey` | `EFSIOError` | `EFSMountConnectivityError` | `EFSMountFailure` | `EFSMountTimeout` | `InvalidRuntime` | `InvalidZipFileException` | `FunctionError`

Required: No

Layers

The function's [layers](#).

Type: Array of [Layer](#) objects

Required: No

LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: [LoggingConfig](#) object

Required: No

MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 10240.

Required: No

PackageType

The type of deployment package. Set to Image for container image and set Zip for .zip file archive.

Type: String

Valid Values: Zip | Image

Required: No

RevisionId

The latest updated revision of the function or alias.

Type: String

Required: No

Role

The function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.\@-\_/\]+`

Required: No

Runtime

The identifier of the function's [runtime](#). Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see [Runtime use after deprecation](#).

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: String

Valid Values: nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11

| python2.7 | python3.6 | python3.7 | python3.8 | python3.9 |
dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6
| dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided |
provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3
| ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 |
java21 | python3.13 | nodejs22.x

Required: No

RuntimeVersionConfig

The ARN of the runtime and any errors that 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 AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

FunctionEventInvokeConfig

Contents

DestinationConfig

A destination for events after they have been sent to a function for processing.

Destinations

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

Note

S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: [DestinationConfig](#) object

Required: No

FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

LastModified

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

Required: No

MaximumEventAgeInSeconds

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

Required: No

MaximumRetryAttempts

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 200 MB.

Type: String

Valid Values: **BUFFERED** | **RESPONSE_STREAM**

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

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: Minimum number of 0 items. 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: Minimum number of 0 items. Maximum number of 1500 items.

Required: No

WorkingDirectory

Specifies the working directory.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

KafkaSchemaRegistryAccessConfig

Specific access configuration settings that tell Lambda how to authenticate with your schema registry.

If you're working with an AWS Glue schema registry, don't provide authentication details in this object. Instead, ensure that your execution role has the required permissions for Lambda to access your cluster.

If you're working with a Confluent schema registry, choose the authentication method in the Type field, and provide the AWS Secrets Manager secret ARN in the URI field.

Contents

Type

The type of authentication Lambda uses to access your schema registry.

Type: String

Valid Values: BASIC_AUTH | CLIENT_CERTIFICATE_TLS_AUTH |
SERVER_ROOT_CA_CERTIFICATE

Required: No

URI

The URI of the secret (Secrets Manager secret ARN) to authenticate with your schema registry.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9-]+):([a-z]{2}(-gov)?-[a-z]+-\d{1})?:([a-z]{12})?:([a-z]{1,2})`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

KafkaSchemaRegistryConfig

Specific configuration settings for a Kafka schema registry.

Contents

AccessConfigs

An array of access configuration objects that tell Lambda how to authenticate with your schema registry.

Type: Array of [KafkaSchemaRegistryAccessConfig](#) objects

Required: No

EventRecordFormat

The record format that Lambda delivers to your function after schema validation.

- Choose JSON to have Lambda deliver the record to your function as a standard JSON object.
- Choose SOURCE to have Lambda deliver the record to your function in its original source format. Lambda removes all schema metadata, such as the schema ID, before sending the record to your function.

Type: String

Valid Values: JSON | SOURCE

Required: No

SchemaRegistryURI

The URI for your schema registry. The correct URI format depends on the type of schema registry you're using.

- For AWS Glue schema registries, use the ARN of the registry.
- For Confluent schema registries, use the URL of the registry.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10000.

Pattern: `[a-zA-Z0-9-\\/*:_+=.@-]*`

Required: No

SchemaValidationConfigs

An array of schema validation configuration objects, which tell Lambda the message attributes you want to validate and filter using your schema registry.

Type: Array of [KafkaSchemaValidationConfig](#) objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

KafkaSchemaValidationConfig

Specific schema validation configuration settings that tell Lambda the message attributes you want to validate and filter using your schema registry.

Contents

Attribute

The attributes you want your schema registry to validate and filter for. If you selected JSON as the EventRecordFormat, Lambda also deserializes the selected message attributes.

Type: String

Valid Values: KEY | VALUE

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Layer

An [AWS 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})?:([a-zA-Z0-9-_-]+):(.*)`

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})?:([a-z]{12})?:(.*)`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LayersListItem

Details about an [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LayerVersionContentInput

A ZIP archive that contains the contents of an [AWS 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. AWS SDK and AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LayerVersionContentOutput

Details about a version of an [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LayerVersionsListItem

Details about a version of an [AWS Lambda layer](#).

Contents

CompatibleArchitectures

A list of compatible [instruction set architectures](#).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: x86_64 | arm64

Required: No

CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see [Runtime use after deprecation](#).

For a list of all currently supported runtimes, see [Supported runtimes](#).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

Valid Values: nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x

Required: No

CreatedDate

The date that the version was created, in ISO 8601 format. For example, 2018-11-27T15:10:45.123+0000.

Type: String

Required: No

Description

The description of the version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

LayerVersionArn

The ARN of the layer version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_-]+:[0-9]+`

Required: No

LicenseInfo

The layer's open-source license.

Type: String

Length Constraints: Minimum length of 0. 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

OnFailure

A destination for events that failed processing. For more information, see [Adding a destination](#).

Contents

Destination

The Amazon Resource Name (ARN) of the destination resource.

To retain records of unsuccessful [asynchronous invocations](#), you can configure an Amazon SNS topic, Amazon SQS queue, Amazon S3 bucket, Lambda function, or Amazon EventBridge event bus as the destination.

To retain records of failed invocations from [Kinesis](#), [DynamoDB](#), [self-managed Kafka](#) or [Amazon MSK](#), you can configure an Amazon SNS topic, Amazon SQS queue, or Amazon S3 bucket as the destination.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 350.

Pattern: `$|arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-.]+):([a-z]{2}(-gov)?-[a-z]+\d{1})?:([\d{12})?:(.*)`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

OnSuccess

A destination for events that were processed successfully.

To retain records of successful [asynchronous invocations](#), you can configure an Amazon SNS topic, Amazon SQS queue, Lambda function, or Amazon EventBridge event bus as the destination.

Note

OnSuccess is not supported in `CreateEventSourceMapping` or `UpdateEventSourceMapping` requests.

Contents

Destination

The Amazon Resource Name (ARN) of the destination resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 350.

Pattern: `$|arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9-]+):([a-z]{2}(-gov)?-[a-z]+-\d{1})?:([\d{12})?:(.*)`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ProvisionedConcurrencyConfigListItem

Details about the provisioned concurrency configuration for a function alias or version.

Contents

AllocatedProvisionedConcurrentExecutions

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

AvailableProvisionedConcurrentExecutions

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

FunctionArn

The Amazon Resource Name (ARN) of the alias or version.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}(-gov)?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

LastModified

The date and time that a user last updated the configuration, in [ISO 8601 format](#).

Type: String

Required: No

RequestedProvisionedConcurrentExecutions

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

Status

The status of the allocation process.

Type: String

Valid Values: IN_PROGRESS | READY | FAILED

Required: No

StatusReason

For failed allocations, the reason that provisioned concurrency could not be allocated.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ProvisionedPollerConfig

The [provisioned mode](#) configuration for the event source. Use Provisioned Mode to customize the minimum and maximum number of event pollers for your event source. An event poller is a compute unit that provides approximately 5 MBps of throughput.

Contents

MaximumPollers

The maximum number of event pollers this event source can scale up to.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 2000.

Required: No

MinimumPollers

The minimum number of event pollers this event source can scale down to.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 200.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Contents

ConsumerGroupId

The identifier for the Kafka consumer group to join. The consumer group ID must be unique among all your Kafka event sources. After creating a Kafka event source mapping with the consumer group ID specified, you cannot update this value. For more information, see [Customizable consumer group ID](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

Required: No

SchemaRegistryConfig

Specific configuration settings for a Kafka schema registry.

Type: [KafkaSchemaRegistryConfig](#) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TagsError

An object that contains details about an error related to retrieving tags.

Contents

ErrorCode

The error code.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 21.

Pattern: [A-Za-z]+Exception

Required: Yes

Message

The error message.

Type: String

Length Constraints: Minimum length of 84. Maximum length of 1000.

Pattern: .*

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TracingConfig

The function's [AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TracingConfigResponse

The function's AWS 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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: Minimum number of 0 items. Maximum number of 5 items.

Required: No

SubnetIds

A list of VPC subnet IDs.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 16 items.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

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: Minimum number of 0 items. Maximum number of 5 items.

Required: No

SubnetIds

A list of VPC subnet IDs.

Type: Array of strings

Array Members: Minimum number of 0 items. 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 AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS 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 AWS 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 AWS 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 AWS 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 AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS 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 AWS 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 AWS 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 AWS 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 AWS 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 AWS 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 AWS service.

HTTP Status Code: 400