



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	12
Request Syntax	12
URI Request Parameters	12
Request Body	13
Response Syntax	16
Response Elements	16
Errors	16
See Also	18
CheckpointDurableExecution	19
Request Syntax	19
URI Request Parameters	20
Request Body	20
Response Syntax	21
Response Elements	23
Errors	23
See Also	24
CreateAlias	26
Request Syntax	26
URI Request Parameters	26
Request Body	27
Response Syntax	28
Response Elements	28
Errors	29

See Also	31
CreateCapacityProvider	32
Request Syntax	32
URI Request Parameters	32
Request Body	33
Response Syntax	34
Response Elements	35
Errors	35
See Also	37
CreateCodeSigningConfig	38
Request Syntax	38
URI Request Parameters	38
Request Body	38
Response Syntax	39
Response Elements	40
Errors	40
See Also	40
CreateEventSourceMapping	42
Request Syntax	43
URI Request Parameters	45
Request Body	45
Response Syntax	53
Response Elements	55
Errors	62
See Also	63
CreateFunction	65
Request Syntax	66
URI Request Parameters	68
Request Body	68
Response Syntax	75
Response Elements	78
Errors	86
See Also	88
CreateFunctionUrlConfig	89
Request Syntax	89
URI Request Parameters	89

Request Body	90
Response Syntax	91
Response Elements	91
Errors	93
See Also	94
DeleteAlias	95
Request Syntax	95
URI Request Parameters	95
Request Body	96
Response Syntax	96
Response Elements	96
Errors	96
See Also	97
DeleteCapacityProvider	98
Request Syntax	98
URI Request Parameters	98
Request Body	98
Response Syntax	98
Response Elements	99
Errors	99
See Also	101
DeleteCodeSigningConfig	102
Request Syntax	102
URI Request Parameters	102
Request Body	102
Response Syntax	102
Response Elements	102
Errors	102
See Also	103
DeleteEventSourceMapping	105
Request Syntax	105
URI Request Parameters	105
Request Body	105
Response Syntax	105
Response Elements	108
Errors	114

See Also	116
DeleteFunction	117
Request Syntax	117
URI Request Parameters	117
Request Body	118
Response Syntax	118
Response Elements	118
Errors	118
See Also	119
DeleteFunctionCodeSigningConfig	121
Request Syntax	121
URI Request Parameters	121
Request Body	121
Response Syntax	121
Response Elements	122
Errors	122
See Also	123
DeleteFunctionConcurrency	124
Request Syntax	124
URI Request Parameters	124
Request Body	124
Response Syntax	125
Response Elements	125
Errors	125
See Also	126
DeleteFunctionEventInvokeConfig	127
Request Syntax	127
URI Request Parameters	127
Request Body	128
Response Syntax	128
Response Elements	128
Errors	128
See Also	129
DeleteFunctionUrlConfig	130
Request Syntax	130
URI Request Parameters	130

Request Body	131
Response Syntax	131
Response Elements	131
Errors	131
See Also	132
DeleteLayerVersion	133
Request Syntax	133
URI Request Parameters	133
Request Body	133
Response Syntax	133
Response Elements	134
Errors	134
See Also	134
DeleteProvisionedConcurrencyConfig	136
Request Syntax	136
URI Request Parameters	136
Request Body	137
Response Syntax	137
Response Elements	137
Errors	137
See Also	138
GetAccountSettings	139
Request Syntax	139
URI Request Parameters	139
Request Body	139
Response Syntax	139
Response Elements	139
Errors	140
See Also	140
GetAlias	142
Request Syntax	142
URI Request Parameters	142
Request Body	143
Response Syntax	143
Response Elements	143
Errors	144

See Also	145
GetCapacityProvider	147
Request Syntax	147
URI Request Parameters	147
Request Body	147
Response Syntax	147
Response Elements	148
Errors	148
See Also	149
GetCodeSigningConfig	151
Request Syntax	151
URI Request Parameters	151
Request Body	151
Response Syntax	151
Response Elements	152
Errors	152
See Also	153
GetDurableExecution	154
Request Syntax	154
URI Request Parameters	154
Request Body	154
Response Syntax	154
Response Elements	155
Errors	157
See Also	158
GetDurableExecutionHistory	160
Request Syntax	160
URI Request Parameters	160
Request Body	161
Response Syntax	161
Response Elements	166
Errors	167
See Also	167
GetDurableExecutionState	169
Request Syntax	169
URI Request Parameters	169

Request Body	170
Response Syntax	170
Response Elements	172
Errors	172
See Also	173
GetEventSourceMapping	174
Request Syntax	174
URI Request Parameters	174
Request Body	174
Response Syntax	174
Response Elements	177
Errors	183
See Also	184
GetFunction	186
Request Syntax	186
URI Request Parameters	186
Request Body	187
Response Syntax	187
Response Elements	190
Errors	191
See Also	191
GetFunctionCodeSigningConfig	193
Request Syntax	193
URI Request Parameters	193
Request Body	193
Response Syntax	193
Response Elements	194
Errors	195
See Also	195
GetFunctionConcurrency	197
Request Syntax	197
URI Request Parameters	197
Request Body	197
Response Syntax	198
Response Elements	198
Errors	198

See Also	199
GetFunctionConfiguration	200
Request Syntax	200
URI Request Parameters	200
Request Body	201
Response Syntax	201
Response Elements	203
Errors	212
See Also	213
GetFunctionEventInvokeConfig	214
Request Syntax	214
URI Request Parameters	214
Request Body	215
Response Syntax	215
Response Elements	215
Errors	217
See Also	217
GetFunctionRecursionConfig	219
Request Syntax	219
URI Request Parameters	219
Request Body	219
Response Syntax	219
Response Elements	219
Errors	220
See Also	221
GetFunctionScalingConfig	222
Request Syntax	222
URI Request Parameters	222
Request Body	222
Response Syntax	222
Response Elements	223
Errors	224
See Also	224
GetFunctionUrlConfig	226
Request Syntax	226
URI Request Parameters	226

Request Body	227
Response Syntax	227
Response Elements	227
Errors	229
See Also	230
GetLayerVersion	231
Request Syntax	231
URI Request Parameters	231
Request Body	231
Response Syntax	231
Response Elements	232
Errors	234
See Also	235
GetLayerVersionByArn	236
Request Syntax	236
URI Request Parameters	236
Request Body	236
Response Syntax	236
Response Elements	237
Errors	239
See Also	240
GetLayerVersionPolicy	241
Request Syntax	241
URI Request Parameters	241
Request Body	241
Response Syntax	241
Response Elements	242
Errors	242
See Also	243
GetPolicy	244
Request Syntax	244
URI Request Parameters	244
Request Body	245
Response Syntax	245
Response Elements	245
Errors	245

See Also	246
GetProvisionedConcurrencyConfig	248
Request Syntax	248
URI Request Parameters	248
Request Body	249
Response Syntax	249
Response Elements	249
Errors	250
See Also	251
GetRuntimeManagementConfig	253
Request Syntax	253
URI Request Parameters	253
Request Body	254
Response Syntax	254
Response Elements	254
Errors	255
See Also	256
Invoke	257
Request Syntax	258
URI Request Parameters	258
Request Body	260
Response Syntax	260
Response Elements	260
Errors	261
See Also	268
InvokeAsync	270
Request Syntax	270
URI Request Parameters	270
Request Body	271
Response Syntax	271
Response Elements	271
Errors	272
See Also	273
InvokeWithResponseStream	274
Request Syntax	274
URI Request Parameters	274

Request Body	275
Response Syntax	276
Response Elements	276
Errors	277
See Also	284
ListAliases	285
Request Syntax	285
URI Request Parameters	285
Request Body	286
Response Syntax	286
Response Elements	286
Errors	287
See Also	288
ListCapacityProviders	289
Request Syntax	289
URI Request Parameters	289
Request Body	289
Response Syntax	289
Response Elements	290
Errors	291
See Also	291
ListCodeSigningConfigs	293
Request Syntax	293
URI Request Parameters	293
Request Body	293
Response Syntax	293
Response Elements	294
Errors	294
See Also	295
ListDurableExecutionsByFunction	296
Request Syntax	296
URI Request Parameters	296
Request Body	297
Response Syntax	297
Response Elements	298
Errors	298

See Also	299
ListEventSourceMappings	300
Request Syntax	300
URI Request Parameters	300
Request Body	301
Response Syntax	301
Response Elements	304
Errors	304
See Also	305
ListFunctionEventInvokeConfigs	307
Request Syntax	307
URI Request Parameters	307
Request Body	308
Response Syntax	308
Response Elements	308
Errors	309
See Also	310
ListFunctions	311
Request Syntax	311
URI Request Parameters	311
Request Body	312
Response Syntax	312
Response Elements	315
Errors	315
See Also	316
ListFunctionsByCodeSigningConfig	317
Request Syntax	317
URI Request Parameters	317
Request Body	317
Response Syntax	317
Response Elements	318
Errors	318
See Also	319
ListFunctionUrlConfigs	320
Request Syntax	320
URI Request Parameters	320

Request Body	321
Response Syntax	321
Response Elements	321
Errors	322
See Also	323
ListFunctionVersionsByCapacityProvider	324
Request Syntax	324
URI Request Parameters	324
Request Body	324
Response Syntax	324
Response Elements	325
Errors	326
See Also	326
ListLayers	328
Request Syntax	328
URI Request Parameters	328
Request Body	329
Response Syntax	329
Response Elements	329
Errors	330
See Also	331
ListLayerVersions	332
Request Syntax	332
URI Request Parameters	332
Request Body	333
Response Syntax	333
Response Elements	334
Errors	334
See Also	335
ListProvisionedConcurrencyConfigs	336
Request Syntax	336
URI Request Parameters	336
Request Body	337
Response Syntax	337
Response Elements	337
Errors	338

See Also	339
ListTags	340
Request Syntax	340
URI Request Parameters	340
Request Body	340
Response Syntax	340
Response Elements	341
Errors	341
See Also	342
ListVersionsByFunction	343
Request Syntax	343
URI Request Parameters	343
Request Body	344
Response Syntax	344
Response Elements	347
Errors	347
See Also	348
PublishLayerVersion	349
Request Syntax	349
URI Request Parameters	349
Request Body	350
Response Syntax	351
Response Elements	352
Errors	354
See Also	355
PublishVersion	356
Request Syntax	356
URI Request Parameters	356
Request Body	357
Response Syntax	358
Response Elements	360
Errors	368
See Also	370
PutFunctionCodeSigningConfig	372
Request Syntax	372
URI Request Parameters	372

Request Body	373
Response Syntax	373
Response Elements	373
Errors	374
See Also	375
PutFunctionConcurrency	377
Request Syntax	377
URI Request Parameters	377
Request Body	378
Response Syntax	378
Response Elements	378
Errors	379
See Also	380
PutFunctionEventInvokeConfig	381
Request Syntax	381
URI Request Parameters	382
Request Body	382
Response Syntax	383
Response Elements	384
Errors	385
See Also	386
PutFunctionRecursionConfig	388
Request Syntax	388
URI Request Parameters	388
Request Body	389
Response Syntax	390
Response Elements	390
Errors	390
See Also	391
PutFunctionScalingConfig	393
Request Syntax	393
URI Request Parameters	393
Request Body	394
Response Syntax	394
Response Elements	394
Errors	394

See Also	396
PutProvisionedConcurrencyConfig	397
Request Syntax	397
URI Request Parameters	397
Request Body	398
Response Syntax	398
Response Elements	398
Errors	400
See Also	401
PutRuntimeManagementConfig	402
Request Syntax	402
URI Request Parameters	402
Request Body	403
Response Syntax	404
Response Elements	404
Errors	405
See Also	406
RemoveLayerVersionPermission	408
Request Syntax	408
URI Request Parameters	408
Request Body	409
Response Syntax	409
Response Elements	409
Errors	409
See Also	410
RemovePermission	412
Request Syntax	412
URI Request Parameters	412
Request Body	413
Response Syntax	413
Response Elements	413
Errors	413
See Also	415
SendDurableExecutionCallbackFailure	416
Request Syntax	416
URI Request Parameters	416

Request Body	416
Response Syntax	417
Response Elements	417
Errors	417
See Also	418
SendDurableExecutionCallbackHeartbeat	420
Request Syntax	420
URI Request Parameters	420
Request Body	420
Response Syntax	420
Response Elements	420
Errors	420
See Also	422
SendDurableExecutionCallbackSuccess	423
Request Syntax	423
URI Request Parameters	423
Request Body	423
Response Syntax	423
Response Elements	424
Errors	424
See Also	425
StopDurableExecution	426
Request Syntax	426
URI Request Parameters	426
Request Body	426
Response Syntax	427
Response Elements	427
Errors	428
See Also	429
TagResource	430
Request Syntax	430
URI Request Parameters	430
Request Body	430
Response Syntax	431
Response Elements	431
Errors	431

See Also	432
UntagResource	433
Request Syntax	433
URI Request Parameters	433
Request Body	433
Response Syntax	433
Response Elements	434
Errors	434
See Also	435
UpdateAlias	436
Request Syntax	436
URI Request Parameters	436
Request Body	437
Response Syntax	438
Response Elements	438
Errors	439
See Also	441
UpdateCapacityProvider	442
Request Syntax	442
URI Request Parameters	442
Request Body	442
Response Syntax	443
Response Elements	444
Errors	444
See Also	445
UpdateCodeSigningConfig	446
Request Syntax	446
URI Request Parameters	446
Request Body	446
Response Syntax	447
Response Elements	448
Errors	448
See Also	449
UpdateEventSourceMapping	450
Request Syntax	451
URI Request Parameters	453

Request Body	453
Response Syntax	459
Response Elements	461
Errors	468
See Also	470
UpdateFunctionCode	471
Request Syntax	471
URI Request Parameters	472
Request Body	472
Response Syntax	475
Response Elements	477
Errors	486
See Also	488
UpdateFunctionConfiguration	489
Request Syntax	489
URI Request Parameters	491
Request Body	491
Response Syntax	496
Response Elements	499
Errors	507
See Also	509
UpdateFunctionEventInvokeConfig	510
Request Syntax	510
URI Request Parameters	510
Request Body	511
Response Syntax	512
Response Elements	512
Errors	514
See Also	515
UpdateFunctionUrlConfig	516
Request Syntax	516
URI Request Parameters	516
Request Body	517
Response Syntax	518
Response Elements	518
Errors	520

See Also	521
Data Types	522
AccountLimit	527
Contents	527
See Also	528
AccountUsage	529
Contents	529
See Also	529
AliasConfiguration	530
Contents	530
See Also	531
AliasRoutingConfiguration	532
Contents	532
See Also	532
AllowedPublishers	533
Contents	533
See Also	533
AmazonManagedKafkaEventSourceConfig	534
Contents	534
See Also	534
CallbackDetails	535
Contents	535
See Also	535
CallbackFailedDetails	537
Contents	537
See Also	537
CallbackOptions	538
Contents	538
See Also	538
CallbackStartedDetails	539
Contents	539
See Also	539
CallbackSucceededDetails	541
Contents	541
See Also	541
CallbackTimedOutDetails	542

Contents	542
See Also	542
CapacityProvider	543
Contents	543
See Also	544
CapacityProviderConfig	545
Contents	545
See Also	545
CapacityProviderPermissionsConfig	546
Contents	546
See Also	546
CapacityProviderScalingConfig	547
Contents	547
See Also	547
CapacityProviderVpcConfig	549
Contents	549
See Also	549
ChainedInvokeDetails	550
Contents	550
See Also	550
ChainedInvokeFailedDetails	551
Contents	551
See Also	551
ChainedInvokeOptions	552
Contents	552
See Also	552
ChainedInvokeStartedDetails	554
Contents	554
See Also	555
ChainedInvokeStoppedDetails	556
Contents	556
See Also	556
ChainedInvokeSucceededDetails	557
Contents	557
See Also	557
ChainedInvokeTimedOutDetails	558

Contents	558
See Also	558
CheckpointUpdatedExecutionState	559
Contents	559
See Also	559
CodeSigningConfig	560
Contents	560
See Also	561
CodeSigningPolicies	562
Contents	562
See Also	562
Concurrency	563
Contents	563
See Also	563
ContextDetails	564
Contents	564
See Also	564
ContextFailedDetails	566
Contents	566
See Also	566
ContextOptions	567
Contents	567
See Also	567
ContextStartedDetails	568
Contents	568
See Also	568
ContextSucceededDetails	569
Contents	569
See Also	569
Cors	570
Contents	570
See Also	572
DeadLetterConfig	573
Contents	573
See Also	573
DestinationConfig	574

Contents	574
See Also	574
DocumentDBEventSourceConfig	575
Contents	575
See Also	576
DurableConfig	577
Contents	577
See Also	577
Environment	578
Contents	578
See Also	578
EnvironmentError	579
Contents	579
See Also	579
EnvironmentResponse	580
Contents	580
See Also	580
EphemeralStorage	581
Contents	581
See Also	581
ErrorObject	582
Contents	582
See Also	582
Event	584
Contents	584
See Also	590
EventError	591
Contents	591
See Also	591
EventInput	592
Contents	592
See Also	592
EventResult	593
Contents	593
See Also	593
EventSourceMappingConfiguration	594

Contents	594
See Also	602
EventSourceMappingLoggingConfig	603
Contents	603
See Also	603
EventSourceMappingMetricsConfig	604
Contents	604
See Also	604
Execution	605
Contents	605
See Also	606
ExecutionDetails	607
Contents	607
See Also	607
ExecutionFailedDetails	608
Contents	608
See Also	608
ExecutionStartedDetails	609
Contents	609
See Also	609
ExecutionStoppedDetails	610
Contents	610
See Also	610
ExecutionSucceededDetails	611
Contents	611
See Also	611
ExecutionTimedOutDetails	612
Contents	612
See Also	612
FileSystemConfig	613
Contents	613
See Also	613
Filter	615
Contents	615
See Also	615
FilterCriteria	616

Contents	616
See Also	616
FilterCriteriaError	617
Contents	617
See Also	617
FunctionCode	618
Contents	618
See Also	619
FunctionCodeLocation	620
Contents	620
See Also	621
FunctionConfiguration	622
Contents	622
See Also	631
FunctionEventInvokeConfig	633
Contents	633
See Also	634
FunctionScalingConfig	635
Contents	635
See Also	635
FunctionUrlConfig	636
Contents	636
See Also	637
FunctionVersionsByCapacityProviderListItem	639
Contents	639
See Also	639
ImageConfig	641
Contents	641
See Also	641
ImageConfigError	643
Contents	643
See Also	643
ImageConfigResponse	644
Contents	644
See Also	644
InstanceRequirements	645

Contents	645
See Also	646
InvocationCompletedDetails	647
Contents	647
See Also	647
InvokeResponseStreamUpdate	649
Contents	649
See Also	649
InvokeWithResponseStreamCompleteEvent	650
Contents	650
See Also	650
InvokeWithResponseStreamResponseEvent	651
Contents	651
See Also	651
KafkaSchemaRegistryAccessConfig	652
Contents	652
See Also	652
KafkaSchemaRegistryConfig	654
Contents	654
See Also	655
KafkaSchemaValidationConfig	656
Contents	656
See Also	656
LambdaManagedInstancesCapacityProviderConfig	657
Contents	657
See Also	657
Layer	659
Contents	659
See Also	660
LayersListItem	661
Contents	661
See Also	661
LayerVersionContentInput	663
Contents	663
See Also	664
LayerVersionContentOutput	665

Contents	665
See Also	666
LayerVersionsListItem	667
Contents	667
See Also	669
LoggingConfig	670
Contents	670
See Also	671
OnFailure	672
Contents	672
See Also	672
OnSuccess	674
Contents	674
See Also	675
Operation	676
Contents	676
See Also	679
OperationUpdate	680
Contents	680
See Also	683
ProvisionedConcurrencyConfigListItem	684
Contents	684
See Also	685
ProvisionedPollerConfig	686
Contents	686
See Also	687
RetryDetails	688
Contents	688
See Also	688
RuntimeVersionConfig	689
Contents	689
See Also	689
RuntimeVersionError	690
Contents	690
See Also	690
ScalingConfig	691

Contents	691
See Also	691
SelfManagedEventSource	692
Contents	692
See Also	692
SelfManagedKafkaEventSourceConfig	693
Contents	693
See Also	693
SnapStart	694
Contents	694
See Also	694
SnapStartResponse	695
Contents	695
See Also	695
SourceAccessConfiguration	696
Contents	696
See Also	697
StepDetails	698
Contents	698
See Also	699
StepFailedDetails	700
Contents	700
See Also	700
StepOptions	701
Contents	701
See Also	701
StepStartedDetails	702
Contents	702
See Also	702
StepSucceededDetails	703
Contents	703
See Also	703
TagsError	704
Contents	704
See Also	704
TargetTrackingScalingPolicy	705

Contents	705
See Also	705
TenancyConfig	706
Contents	706
See Also	706
TraceHeader	707
Contents	707
See Also	707
TracingConfig	708
Contents	708
See Also	708
TracingConfigResponse	709
Contents	709
See Also	709
VpcConfig	710
Contents	710
See Also	710
VpcConfigResponse	712
Contents	712
See Also	712
WaitCancelledDetails	714
Contents	714
See Also	714
WaitDetails	715
Contents	715
See Also	715
WaitOptions	716
Contents	716
See Also	716
WaitStartedDetails	717
Contents	717
See Also	717
WaitSucceededDetails	718
Contents	718
See Also	718
Common Parameters	719

Common Error Types 722

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](#)
- [CheckpointDurableExecution](#)
- [CreateAlias](#)
- [CreateCapacityProvider](#)
- [CreateCodeSigningConfig](#)
- [CreateEventSourceMapping](#)
- [CreateFunction](#)
- [CreateFunctionUrlConfig](#)
- [DeleteAlias](#)
- [DeleteCapacityProvider](#)
- [DeleteCodeSigningConfig](#)
- [DeleteEventSourceMapping](#)
- [DeleteFunction](#)
- [DeleteFunctionCodeSigningConfig](#)
- [DeleteFunctionConcurrency](#)
- [DeleteFunctionEventInvokeConfig](#)
- [DeleteFunctionUrlConfig](#)
- [DeleteLayerVersion](#)
- [DeleteProvisionedConcurrencyConfig](#)
- [GetAccountSettings](#)
- [GetAlias](#)
- [GetCapacityProvider](#)
- [GetCodeSigningConfig](#)
- [GetDurableExecution](#)
- [GetDurableExecutionHistory](#)
- [GetDurableExecutionState](#)

- [GetEventSourceMapping](#)
- [GetFunction](#)
- [GetFunctionCodeSigningConfig](#)
- [GetFunctionConcurrency](#)
- [GetFunctionConfiguration](#)
- [GetFunctionEventInvokeConfig](#)
- [GetFunctionRecursionConfig](#)
- [GetFunctionScalingConfig](#)
- [GetFunctionUrlConfig](#)
- [GetLayerVersion](#)
- [GetLayerVersionByArn](#)
- [GetLayerVersionPolicy](#)
- [GetPolicy](#)
- [GetProvisionedConcurrencyConfig](#)
- [GetRuntimeManagementConfig](#)
- [Invoke](#)
- [InvokeAsync](#)
- [InvokeWithResponseStream](#)
- [ListAliases](#)
- [ListCapacityProviders](#)
- [ListCodeSigningConfigs](#)
- [ListDurableExecutionsByFunction](#)
- [ListEventSourceMappings](#)
- [ListFunctionEventInvokeConfigs](#)
- [ListFunctions](#)
- [ListFunctionsByCodeSigningConfig](#)
- [ListFunctionUrlConfigs](#)
- [ListFunctionVersionsByCapacityProvider](#)
- [ListLayers](#)
- [ListLayerVersions](#)

- [ListProvisionedConcurrencyConfigs](#)
- [ListTags](#)
- [ListVersionsByFunction](#)
- [PublishLayerVersion](#)
- [PublishVersion](#)
- [PutFunctionCodeSigningConfig](#)
- [PutFunctionConcurrency](#)
- [PutFunctionEventInvokeConfig](#)
- [PutFunctionRecursionConfig](#)
- [PutFunctionScalingConfig](#)
- [PutProvisionedConcurrencyConfig](#)
- [PutRuntimeManagementConfig](#)
- [RemoveLayerVersionPermission](#)
- [RemovePermission](#)
- [SendDurableExecutionCallbackFailure](#)
- [SendDurableExecutionCallbackHeartbeat](#)
- [SendDurableExecutionCallbackSuccess](#)
- [StopDurableExecution](#)
- [TagResource](#)
- [UntagResource](#)
- [UpdateAlias](#)
- [UpdateCapacityProvider](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 412

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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",
  "InvokedViaFunctionUrl": boolean,
  "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 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(\.\PUBLISHED)?\}|[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: \\$(LATEST(\.\PUBLISHED)?\)|[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 [Control access to Lambda function URLs](#).

Type: String

Valid Values: `NONE` | `AWS_IAM`

Required: No

InvokedViaFunctionUrl

Indicates whether the permission applies when the function is invoked through a function URL.

Type: Boolean

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})?:([a-z]{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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 412

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

CheckpointDurableExecution

Saves the progress of a [durable function](#) execution during runtime. This API is used by the Lambda durable functions SDK to checkpoint completed steps and schedule asynchronous operations. You typically don't need to call this API directly as the SDK handles checkpointing automatically.

Each checkpoint operation consumes the current checkpoint token and returns a new one for the next checkpoint. This ensures that checkpoints are applied in the correct order and prevents duplicate or out-of-order state updates.

Request Syntax

```
POST /2025-12-01/durable-executions/DurableExecutionArn/checkpoint HTTP/1.1
Content-type: application/json
```

```
{
  "CheckpointToken": "string",
  "ClientToken": "string",
  "Updates": [
    {
      "Action": "string",
      "CallbackOptions": {
        "HeartbeatTimeoutSeconds": number,
        "TimeoutSeconds": number
      },
      "ChainedInvokeOptions": {
        "FunctionName": "string",
        "TenantId": "string"
      },
      "ContextOptions": {
        "ReplayChildren": boolean
      },
      "Error": {
        "ErrorData": "string",
        "ErrorMessage": "string",
        "ErrorType": "string",
        "StackTrace": [ "string" ]
      },
      "Id": "string",
      "Name": "string",
      "ParentId": "string",
      "Payload": "string",
```

```
    "StepOptions": {
      "NextAttemptDelaySeconds": number
    },
    "SubType": "string",
    "Type": "string",
    "WaitOptions": {
      "WaitSeconds": number
    }
  }
]
```

URI Request Parameters

The request uses the following URI parameters.

DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\..PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

CheckpointToken

A unique token that identifies the current checkpoint state. This token is provided by the Lambda runtime and must be used to ensure checkpoints are applied in the correct order. Each checkpoint operation consumes this token and returns a new one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `[A-Za-z0-9+/\]+= {0,2}`

Required: Yes

ClientToken

An optional idempotency token to ensure that duplicate checkpoint requests are handled correctly. If provided, Lambda uses this token to detect and handle duplicate requests within a 15-minute window.

Type: String

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

Pattern: `[\x21-\x7E]+`

Required: No

Updates

An array of state updates to apply during this checkpoint. Each update represents a change to the execution state, such as completing a step, starting a callback, or scheduling a timer. Updates are applied atomically as part of the checkpoint operation.

Type: Array of [OperationUpdate](#) objects

Required: No

Response Syntax

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

{
  "CheckpointToken": "string",
  "NewExecutionState": {
    "NextMarker": "string",
    "Operations": [
      {
        "CallbackDetails": {
          "CallbackId": "string",
          "Error": {
            "ErrorData": "string",
            "ErrorMessage": "string",
            "ErrorType": "string",
            "StackTrace": [ "string" ]
          }
        }
      }
    ]
  }
}
```

```

    },
    "Result": "string"
  },
  "ChainedInvokeDetails": {
    "Error": {
      "ErrorData": "string",
      "ErrorMessage": "string",
      "ErrorType": "string",
      "StackTrace": [ "string" ]
    },
    "Result": "string"
  },
  "ContextDetails": {
    "Error": {
      "ErrorData": "string",
      "ErrorMessage": "string",
      "ErrorType": "string",
      "StackTrace": [ "string" ]
    },
    "ReplayChildren": boolean,
    "Result": "string"
  },
  "EndTimestamp": number,
  "ExecutionDetails": {
    "InputPayload": "string"
  },
  "Id": "string",
  "Name": "string",
  "ParentId": "string",
  "StartTimestamp": number,
  "Status": "string",
  "StepDetails": {
    "Attempt": number,
    "Error": {
      "ErrorData": "string",
      "ErrorMessage": "string",
      "ErrorType": "string",
      "StackTrace": [ "string" ]
    },
    "NextAttemptTimestamp": number,
    "Result": "string"
  },
  "SubType": "string",
  "Type": "string",

```

```
    "WaitDetails": {  
      "ScheduledEndTimestamp": 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.

CheckpointToken

A new checkpoint token to use for the next checkpoint operation. This token replaces the one provided in the request and must be used for subsequent checkpoints to maintain proper ordering.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: [A-Za-z0-9+/-]{0,2}

NewExecutionState

Updated execution state information that includes any changes that occurred since the last checkpoint, such as completed callbacks or expired timers. This allows the SDK to update its internal state during replay.

Type: [CheckpointUpdatedExecutionState](#) object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\ \$LATEST|[a-zA-Z0-9-_]+))?

Required: Yes

Request Body

The request accepts the following data in JSON format.

Description

A description of the alias.

Type: String

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

Required: No

FunctionVersion

The function version that the alias invokes.

Type: String

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

Pattern: (\ \$LATEST(\ .PUBLISHED)?|[0-9]+)

Required: Yes

Name

The name of the alias.

Type: String

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

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

Required: Yes

RoutingConfig

The [routing configuration](#) of the alias.

Type: [AliasRoutingConfiguration](#) object

Required: No

Response Syntax

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

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

Response Elements

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

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

[AliasArn](#)

The Amazon Resource Name (ARN) of the alias.

Type: String

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

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

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

CreateCapacityProvider

Creates a capacity provider that manages compute resources for Lambda functions

Request Syntax

POST /2025-11-30/capacity-providers HTTP/1.1

Content-type: application/json

```
{
  "CapacityProviderName": "string",
  "CapacityProviderScalingConfig": {
    "MaxVCpuCount": number,
    "ScalingMode": "string",
    "ScalingPolicies": [
      {
        "PredefinedMetricType": "string",
        "TargetValue": number
      }
    ]
  },
  "InstanceRequirements": {
    "AllowedInstanceTypes": [ "string" ],
    "Architectures": [ "string" ],
    "ExcludedInstanceTypes": [ "string" ]
  },
  "KmsKeyArn": "string",
  "PermissionsConfig": {
    "CapacityProviderOperatorRoleArn": "string"
  },
  "Tags": {
    "string" : "string"
  },
  "VpcConfig": {
    "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.

CapacityProviderName

The name of the capacity provider.

Type: String

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}:capacity-provider:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

CapacityProviderScalingConfig

The scaling configuration that defines how the capacity provider scales compute instances, including maximum vCPU count and scaling policies.

Type: [CapacityProviderScalingConfig](#) object

Required: No

InstanceRequirements

The instance requirements that specify the compute instance characteristics, including architectures and allowed or excluded instance types.

Type: [InstanceRequirements](#) object

Required: No

KmsKeyArn

The ARN of the KMS key used to encrypt data associated with the capacity provider.

Type: String

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

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

Required: No

PermissionsConfig

The permissions configuration that specifies the IAM role ARN used by the capacity provider to manage compute resources.

Type: [CapacityProviderPermissionsConfig](#) object

Required: Yes

Tags

A list of tags to associate with the capacity provider.

Type: String to string map

Required: No

VpcConfig

The VPC configuration for the capacity provider, including subnet IDs and security group IDs where compute instances will be launched.

Type: [CapacityProviderVpcConfig](#) object

Required: Yes

Response Syntax

HTTP/1.1 202

Content-type: application/json

```
{
  "CapacityProvider": {
    "CapacityProviderArn": "string",
    "CapacityProviderScalingConfig": {
      "MaxVCpuCount": number,
      "ScalingMode": "string",
      "ScalingPolicies": [
        {
          "PredefinedMetricType": "string",
          "TargetValue": number
        }
      ]
    }
  }
}
```

```

    }
  ]
},
"InstanceRequirements": {
  "AllowedInstanceTypes": [ "string" ],
  "Architectures": [ "string" ],
  "ExcludedInstanceTypes": [ "string" ]
},
"KmsKeyArn": "string",
"LastModified": "string",
"PermissionsConfig": {
  "CapacityProviderOperatorRoleArn": "string"
},
"State": "string",
"VpcConfig": {
  "SecurityGroupIds": [ "string" ],
  "SubnetIds": [ "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.

[CapacityProvider](#)

Information about the capacity provider that was created.

Type: [CapacityProvider](#) object

Errors

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

CapacityProviderLimitExceededException

The maximum number of capacity providers for your account has been exceeded. For more information, see [Lambda quotas](#)

Type

The exception type.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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 V2](#)
- [AWS SDK for .NET V4](#)

- [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 for stream sources (DynamoDB, Kinesis, Amazon MSK, and self-managed Apache Kafka):

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

The following option is available only for DynamoDB and Kinesis event sources:

- `ParallelizationFactor` – Process multiple batches from each shard concurrently.

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

- [Amazon DynamoDB Streams](#)

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

Request Syntax

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

```
{
  "AmazonManagedKafkaEventSourceConfig": {
    "ConsumerGroupId": "string",
    "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",
"LoggingConfig": {
  "SystemLogLevel": "string"
},
"MaximumBatchingWindowInSeconds": number,
"MaximumRecordAgeInSeconds": number,
"MaximumRetryAttempts": number,
"MetricsConfig": {
  "Metrics": [ "string" ]
},
"ParallelizationFactor": number,
"ProvisionedPollerConfig": {
  "MaximumPollers": number,
  "MinimumPollers": number,
  "PollerGroupName": "string"
},
"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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 Apache Kafka) 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})?:([a-z]{12})?:([a-z]{1,2})`

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 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\}|\.\{PUBLISHED\})?|[a-zA-Z0-9-_\.\.]+)?

Required: Yes

FunctionResponseTypes

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, 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

LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see [Event source mapping logging](#).

Type: [EventSourceMappingLoggingConfig](#) object

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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 SQS, 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",
  "LoggingConfig": {
    "SystemLogLevel": "string"
  },
  "MaximumBatchingWindowInSeconds": number,
  "MaximumRecordAgeInSeconds": number,
  "MaximumRetryAttempts": number,
  "MetricsConfig": {
    "Metrics": [ "string" ]
  },
  "ParallelizationFactor": number,
  "ProvisionedPollerConfig": {
    "MaximumPollers": number,
    "MinimumPollers": number,
    "PollerGroupName": "string"
  },
  "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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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) 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]{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

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

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-_]+))?`

FunctionResponseTypes

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, 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

LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see [Event source mapping logging](#).

Type: [EventSourceMappingLoggingConfig](#) object

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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 SQS, 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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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" ],
  "CapacityProviderConfig": {
    "LambdaManagedInstancesCapacityProviderConfig": {
      "CapacityProviderArn": "string",
      "ExecutionEnvironmentMemoryGiBPerVCpu": number,
      "PerExecutionEnvironmentMaxConcurrency": number
    }
  },
  "Code": {
    "ImageUri": "string",
    "S3Bucket": "string",
    "S3Key": "string",
    "S3ObjectVersion": "string",
    "SourceKMSKeyArn": "string",
    "ZipFile": blob
  },
  "CodeSigningConfigArn": "string",
  "DeadLetterConfig": {
    "TargetArn": "string"
  },
  "Description": "string",
  "DurableConfig": {
    "ExecutionTimeout": number,
    "RetentionPeriodInDays": number
  },
  "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,
  "PublishTo": "string",
  "Role": "string",
  "Runtime": "string",
  "SnapStart": {
    "ApplyOn": "string"
  },
  "Tags": {
    "string" : "string"
  },
  "TenancyConfig": {
    "TenantIsolationMode": "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

CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: [CapacityProviderConfig](#) object

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

DurableConfig

Configuration settings for durable functions. Enables creating functions with durability that can remember their state and continue execution even after interruptions.

Type: [DurableConfig](#) object

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 or an Amazon S3 Files 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)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\+)(:(\$LATEST|[a-zA-Z0-9-_\+))?)?)?

Required: Yes

Handler

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

Type: String

Length Constraints: 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 32768.

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

PublishTo

Specifies where to publish the function version or configuration.

Type: String

Valid Values: LATEST_PUBLISHED

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 | nodejs24.x | python3.14 | java25 |
dotnet10

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

TenancyConfig

Configuration for multi-tenant applications that use Lambda functions. Defines tenant isolation settings and resource allocations. Required for functions supporting multiple tenants.

Type: [TenancyConfig](#) 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/1.1 201
```

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

```
{
  "Architectures": [ "string" ],
  "CapacityProviderConfig": {
    "LambdaManagedInstancesCapacityProviderConfig": {
      "CapacityProviderArn": "string",
      "ExecutionEnvironmentMemoryGiBPerVCpu": number,
      "PerExecutionEnvironmentMaxConcurrency": number
    }
  },
  "CodeSha256": "string",
  "CodeSize": number,
  "ConfigSha256": "string",
  "DeadLetterConfig": {
    "TargetArn": "string"
  },
  "Description": "string",
  "DurableConfig": {
    "ExecutionTimeout": number,
    "RetentionPeriodInDays": number
  }
}
```

```

},
"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",
  "TenancyConfig": {
    "TenantIsolationMode": "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

CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: [CapacityProviderConfig](#) object

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

ConfigSha256

The SHA256 hash of the function configuration.

Type: String

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.

DurableConfig

The function's durable execution configuration settings, if the function is configured for durability.

Type: [DurableConfig](#) object

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](#) or an [Amazon S3 Files 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

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

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|PUBLISHED)?|[a-zA-Z0-9-_\.]?))?`

FunctionName

The name of the function.

Type: String

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|PUBLISHED)?|[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` | `VcpuLimitExceeded` | `CapacityProviderScalingLimitExceeded` | `InsufficientCapacity` | `EC2RequestLimitExceeded` |

FunctionError.InitTimeout | FunctionError.RuntimeInitError |
FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint |
FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied |
FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted |
DisallowedByVpcEncryptionControl

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

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

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-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

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` | `nodejs24.x` | `python3.14` | `java25` | `dotnet10`

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` | `Deactivating` | `Deactivated` | `ActiveNonInvocable` | `Deleting`

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 | DrainingDurableExecutions | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl

[TenancyConfig](#)

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: [TenancyConfig](#) object

[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 Error Types](#).

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](#).

Type

The exception type.

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

FunctionVersionsPerCapacityProviderLimitExceededException

The maximum number of function versions that can be associated with a single capacity provider has been exceeded. For more information, see [Lambda quotas](#).

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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: ((?!^\d+\$)^[0-9a-zA-Z-_]+\$)

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 [Control access to 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 [Control access to 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

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

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-_]+))?`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

DeleteCapacityProvider

Deletes a capacity provider. You cannot delete a capacity provider that is currently being used by Lambda functions.

Request Syntax

```
DELETE /2025-11-30/capacity-providers/CapacityProviderName HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CapacityProviderName

The name of the capacity provider to delete.

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}:capacity-provider:[a-zA-Z0-9-_\+)|[a-zA-Z0-9-_\+)

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "CapacityProvider": {
    "CapacityProviderArn": string,
    "CapacityProviderScalingConfig": {
      "MaxVCpuCount": number,
      "ScalingMode": string,
      "ScalingPolicies": [
        {
```

```
        "PredefinedMetricType": "string",
        "TargetValue": number
    }
]
},
"InstanceRequirements": {
    "AllowedInstanceTypes": [ "string" ],
    "Architectures": [ "string" ],
    "ExcludedInstanceTypes": [ "string" ]
},
"KmsKeyArn": "string",
"LastModified": "string",
"PermissionsConfig": {
    "CapacityProviderOperatorRoleArn": "string"
},
"State": "string",
"VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "SubnetIds": [ "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.

CapacityProvider

Information about the deleted capacity provider.

Type: [CapacityProvider](#) object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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 V2](#)

- [AWS SDK for .NET V4](#)
- [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",
  "LoggingConfig": {
    "SystemLogLevel": "string"
  }
}

```

```

},
"MaximumBatchingWindowInSeconds": number,
"MaximumRecordAgeInSeconds": number,
"MaximumRetryAttempts": number,
"MetricsConfig": {
  "Metrics": [ "string" ]
},
"ParallelizationFactor": number,
"ProvisionedPollerConfig": {
  "MaximumPollers": number,
  "MinimumPollers": number,
  "PollerGroupName": "string"
},
"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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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) 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

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

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-_]+))?`

[FunctionResponseTypes](#)

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, 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

LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see [Event source mapping logging](#).

Type: [EventSourceMappingLoggingConfig](#) object

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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 SQS, 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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#).

Note

A deleted Lambda function cannot be recovered. Ensure that you specify the correct function name and version before deleting.

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 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(\.PUBLISHED)?|[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: \\$(LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_\$]+)

Request Body

The request does not have a request body.

Response Syntax

HTTP/1.1 *StatusCode*

Response Elements

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

Status Code

The HTTP status code returned by the operation.

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.PUBLISHED)?|[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 Error Types](#).

CodeSigningConfigNotFoundException

The specified code signing configuration does not exist.

HTTP Status Code: 404

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.PUBLISHED)?|[a-zA-Z0-9-_\.\.]+))?

Required: Yes

Qualifier

A version number or alias name.

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

Pattern: `\$(LATEST(\.PUBLISHED)?)|[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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: ((?!^\d+\$)^[0-9a-zA-Z-_-]+\$)

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 Error Types](#).

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[a-z]+\-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\+)(:(\LATEST|[a-zA-Z0-9-_\+))?)?

Required: Yes

Qualifier

The version number or alias name.

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

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

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

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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

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

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-_]+))?`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

GetCapacityProvider

Retrieves information about a specific capacity provider, including its configuration, state, and associated resources.

Request Syntax

```
GET /2025-11-30/capacity-providers/CapacityProviderName HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CapacityProviderName

The name of the capacity provider to retrieve.

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}:capacity-provider:[a-zA-Z0-9-_\+)|[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
```

```
{
  "CapacityProvider": {
    "CapacityProviderArn": "string",
    "CapacityProviderScalingConfig": {
      "MaxVCpuCount": number,
      "ScalingMode": "string",
      "ScalingPolicies": [
        {
```

```

        "PredefinedMetricType": "string",
        "TargetValue": number
    }
]
},
"InstanceRequirements": {
    "AllowedInstanceTypes": [ "string" ],
    "Architectures": [ "string" ],
    "ExcludedInstanceTypes": [ "string" ]
},
"KmsKeyArn": "string",
"LastModified": "string",
"PermissionsConfig": {
    "CapacityProviderOperatorRoleArn": "string"
},
"State": "string",
"VpcConfig": {
    "SecurityGroupIds": [ "string" ],
    "SubnetIds": [ "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.

CapacityProvider

Information about the capacity provider, including its configuration and current state.

Type: [CapacityProvider](#) object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

GetDurableExecution

Retrieves detailed information about a specific [durable execution](#), including its current status, input payload, result or error information, and execution metadata such as start time and usage statistics.

Request Syntax

```
GET /2025-12-01/durable-executions/DurableExecutionArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.\PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([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

{
  "DurableExecutionArn": string,
  "DurableExecutionName": string,
  "EndTimestamp": number,
  "Error": {
```

```
    "ErrorData": "string",
    "ErrorMessage": "string",
    "ErrorType": "string",
    "StackTrace": [ "string" ]
  },
  "FunctionArn": "string",
  "InputPayload": "string",
  "Result": "string",
  "StartTimestamp": number,
  "Status": "string",
  "TraceHeader": {
    "XAmznTraceId": "string"
  },
  "Version": "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.

DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

Type: String

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

DurableExecutionName

The name of the durable execution. This is either the name you provided when invoking the function, or a system-generated unique identifier if no name was provided.

Type: String

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

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

EndTimeStamp

The date and time when the durable execution ended, in Unix timestamp format. This field is only present if the execution has completed (status is SUCCEEDED, FAILED, TIMED_OUT, or STOPPED).

Type: Timestamp

Error

Error information if the durable execution failed. This field is only present when the execution status is FAILED, TIMED_OUT, or STOPPED. The combined size of all error fields is limited to 256 KB.

Type: [ErrorObject](#) object

FunctionArn

The Amazon Resource Name (ARN) of the Lambda function that was invoked to start this durable execution.

Type: String

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

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|PUBLISHED)?|[a-zA-Z0-9-_\.]?))?`

InputPayload

The JSON input payload that was provided when the durable execution was started. For asynchronous invocations, this is limited to 256 KB. For synchronous invocations, this can be up to 6 MB.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

Result

The JSON result returned by the durable execution if it completed successfully. This field is only present when the execution status is SUCCEEDED. The result is limited to 256 KB.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

StartTimestamp

The date and time when the durable execution started, in Unix timestamp format.

Type: Timestamp

Status

The current status of the durable execution. Valid values are RUNNING, SUCCEEDED, FAILED, TIMED_OUT, and STOPPED.

Type: String

Valid Values: RUNNING | SUCCEEDED | FAILED | TIMED_OUT | STOPPED

TraceHeader

The trace headers associated with the durable execution.

Type: [TraceHeader](#) object

Version

The version of the Lambda function that was invoked for this durable execution. This ensures that all replays during the execution use the same function version.

Type: String

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

Pattern: (\\\$LATEST(\\.PUBLISHED)?|[0-9]+)

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

GetDurableExecutionHistory

Retrieves the execution history for a [durable execution](#), showing all the steps, callbacks, and events that occurred during the execution. This provides a detailed audit trail of the execution's progress over time.

The history is available while the execution is running and for a retention period after it completes (1-90 days, default 30 days). You can control whether to include execution data such as step results and callback payloads.

Request Syntax

```
GET /2025-12-01/durable-executions/DurableExecutionArn/history?
IncludeExecutionData=IncludeExecutionData&Marker=Marker&MaxItems=MaxItems&ReverseOrder=ReverseOrder
HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

[DurableExecutionArn](#)

The Amazon Resource Name (ARN) of the durable execution.

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.\PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

[IncludeExecutionData](#)

Specifies whether to include execution data such as step results and callback payloads in the history events. Set to `true` to include data, or `false` to exclude it for a more compact response. The default is `true`.

[Marker](#)

If `NextMarker` was returned from a previous request, use this value to retrieve the next page of results. Each pagination token expires after 24 hours.

MaxItems

The maximum number of history events to return per call. You can use `Marker` to retrieve additional pages of results. The default is 100 and the maximum allowed is 1000. A value of 0 uses the default.

Valid Range: Minimum value of 0. Maximum value of 1000.

ReverseOrder

When set to `true`, returns the history events in reverse chronological order (newest first). By default, events are returned in chronological order (oldest first).

Request Body

The request does not have a request body.

Response Syntax

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

{
  "Events": [
    {
      "CallbackFailedDetails": {
        "Error": {
          "Payload": {
            "ErrorData": "string",
            "ErrorMessage": "string",
            "ErrorType": "string",
            "StackTrace": [ "string" ]
          },
          "Truncated": boolean
        },
        "CallbackStartedDetails": {
          "CallbackId": "string",
          "HeartbeatTimeout": number,
          "Timeout": number
        },
        "CallbackSucceededDetails": {
          "Result": {
```

```
        "Payload": "string",
        "Truncated": boolean
    },
    "CallbackTimedOutDetails": {
        "Error": {
            "Payload": {
                "ErrorData": "string",
                "ErrorMessage": "string",
                "ErrorType": "string",
                "StackTrace": [ "string" ]
            },
            "Truncated": boolean
        }
    },
    "ChainedInvokeFailedDetails": {
        "Error": {
            "Payload": {
                "ErrorData": "string",
                "ErrorMessage": "string",
                "ErrorType": "string",
                "StackTrace": [ "string" ]
            },
            "Truncated": boolean
        }
    },
    "ChainedInvokeStartedDetails": {
        "DurableExecutionArn": "string",
        "ExecutedVersion": "string",
        "FunctionName": "string",
        "Input": {
            "Payload": "string",
            "Truncated": boolean
        },
        "TenantId": "string"
    },
    "ChainedInvokeStoppedDetails": {
        "Error": {
            "Payload": {
                "ErrorData": "string",
                "ErrorMessage": "string",
                "ErrorType": "string",
                "StackTrace": [ "string" ]
            },
            "Truncated": boolean
        }
    },
    "ChainedInvokeTimedOutDetails": {
        "Error": {
            "Payload": {
                "ErrorData": "string",
                "ErrorMessage": "string",
                "ErrorType": "string",
                "StackTrace": [ "string" ]
            },
            "Truncated": boolean
        }
    }
}
```

```

        "Truncated": boolean
    }
},
"ChainedInvokeSucceededDetails": {
    "Result": {
        "Payload": "string",
        "Truncated": boolean
    }
},
"ChainedInvokeTimedOutDetails": {
    "Error": {
        "Payload": {
            "ErrorData": "string",
            "ErrorMessage": "string",
            "ErrorType": "string",
            "StackTrace": [ "string" ]
        }
    },
    "Truncated": boolean
}
},
"ContextFailedDetails": {
    "Error": {
        "Payload": {
            "ErrorData": "string",
            "ErrorMessage": "string",
            "ErrorType": "string",
            "StackTrace": [ "string" ]
        }
    },
    "Truncated": boolean
}
},
"ContextStartedDetails": {
},
"ContextSucceededDetails": {
    "Result": {
        "Payload": "string",
        "Truncated": boolean
    }
},
"EventId": number,
"EventTimestamp": number,
"EventType": "string",
"ExecutionFailedDetails": {
    "Error": {

```

```
    "Payload": {
      "ErrorData": "string",
      "ErrorMessage": "string",
      "ErrorType": "string",
      "StackTrace": [ "string" ]
    },
    "Truncated": boolean
  }
},
"ExecutionStartedDetails": {
  "ExecutionTimeout": number,
  "Input": {
    "Payload": "string",
    "Truncated": boolean
  }
},
"ExecutionStoppedDetails": {
  "Error": {
    "Payload": {
      "ErrorData": "string",
      "ErrorMessage": "string",
      "ErrorType": "string",
      "StackTrace": [ "string" ]
    },
    "Truncated": boolean
  }
},
"ExecutionSucceededDetails": {
  "Result": {
    "Payload": "string",
    "Truncated": boolean
  }
},
"ExecutionTimedOutDetails": {
  "Error": {
    "Payload": {
      "ErrorData": "string",
      "ErrorMessage": "string",
      "ErrorType": "string",
      "StackTrace": [ "string" ]
    },
    "Truncated": boolean
  }
},
},
```



```

    "Id": "string",
    "InvocationCompletedDetails": {
      "EndTimeStamp": number,
      "Error": {
        "Payload": {
          "ErrorData": "string",
          "ErrorMessage": "string",
          "ErrorType": "string",
          "StackTrace": [ "string" ]
        },
        "Truncated": boolean
      },
      "RequestId": "string",
      "StartTimeStamp": number
    },
    "Name": "string",
    "ParentId": "string",
    "StepFailedDetails": {
      "Error": {
        "Payload": {
          "ErrorData": "string",
          "ErrorMessage": "string",
          "ErrorType": "string",
          "StackTrace": [ "string" ]
        },
        "Truncated": boolean
      },
      "RetryDetails": {
        "CurrentAttempt": number,
        "NextAttemptDelaySeconds": number
      }
    },
    "StepStartedDetails": {
    },
    "StepSucceededDetails": {
      "Result": {
        "Payload": "string",
        "Truncated": boolean
      },
      "RetryDetails": {
        "CurrentAttempt": number,
        "NextAttemptDelaySeconds": number
      }
    },
  },

```

```

    "SubType": "string",
    "WaitCancelledDetails": {
      "Error": {
        "Payload": {
          "ErrorData": "string",
          "ErrorMessage": "string",
          "ErrorType": "string",
          "StackTrace": [ "string" ]
        },
        "Truncated": boolean
      }
    },
    "WaitStartedDetails": {
      "Duration": number,
      "ScheduledEndTimestamp": number
    },
    "WaitSucceededDetails": {
      "Duration": 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.

Events

An array of execution history events, ordered chronologically unless `ReverseOrder` is set to `true`. Each event represents a significant occurrence during the execution, such as step completion or callback resolution.

Type: Array of [Event](#) objects

NextMarker

If present, indicates that more history events are available. Use this value as the `Marker` parameter in a subsequent request to retrieve the next page of results.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)

- [AWS SDK for .NET V4](#)
- [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](#)

GetDurableExecutionState

Retrieves the current execution state required for the replay process during [durable function](#) execution. This API is used by the Lambda durable functions SDK to get state information needed for replay. You typically don't need to call this API directly as the SDK handles state management automatically.

The response contains operations ordered by start sequence number in ascending order. Completed operations with children don't include child operation details since they don't need to be replayed.

Request Syntax

```
GET /2025-12-01/durable-executions/DurableExecutionArn/state?  
CheckpointToken=CheckpointToken&Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

[CheckpointToken](#)

A checkpoint token that identifies the current state of the execution. This token is provided by the Lambda runtime and ensures that state retrieval is consistent with the current execution context.

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `[A-Za-z0-9+/]+= {0,2}`

Required: Yes

[DurableExecutionArn](#)

The Amazon Resource Name (ARN) of the durable execution.

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.\PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

Marker

If `NextMarker` was returned from a previous request, use this value to retrieve the next page of operations. Each pagination token expires after 24 hours.

MaxItems

The maximum number of operations to return per call. You can use `Marker` to retrieve additional pages of results. The default is 100 and the maximum allowed is 1000. A value of 0 uses the default.

Valid Range: Minimum value of 0. Maximum value of 1000.

Request Body

The request does not have a request body.

Response Syntax

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

{
  "NextMarker": "string",
  "Operations": [
    {
      "CallbackDetails": {
        "CallbackId": "string",
        "Error": {
          "ErrorData": "string",
          "ErrorMessage": "string",
          "ErrorType": "string",
          "StackTrace": [ "string" ]
        },
        "Result": "string"
      },
      "ChainedInvokeDetails": {
        "Error": {
          "ErrorData": "string",
          "ErrorMessage": "string",
          "ErrorType": "string",

```

```

        "StackTrace": [ "string" ]
    },
    "Result": "string"
},
"ContextDetails": {
    "Error": {
        "ErrorData": "string",
        "ErrorMessage": "string",
        "ErrorType": "string",
        "StackTrace": [ "string" ]
    },
    "ReplayChildren": boolean,
    "Result": "string"
},
"EndTimeStamp": number,
"ExecutionDetails": {
    "InputPayload": "string"
},
"Id": "string",
"Name": "string",
"ParentId": "string",
"StartTimeStamp": number,
"Status": "string",
"StepDetails": {
    "Attempt": number,
    "Error": {
        "ErrorData": "string",
        "ErrorMessage": "string",
        "ErrorType": "string",
        "StackTrace": [ "string" ]
    },
    "NextAttemptTimeStamp": number,
    "Result": "string"
},
"SubType": "string",
"Type": "string",
"WaitDetails": {
    "ScheduledEndTimeStamp": 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.

[NextMarker](#)

If present, indicates that more operations are available. Use this value as the `Marker` parameter in a subsequent request to retrieve the next page of results.

Type: String

[Operations](#)

An array of operations that represent the current state of the durable execution. Operations are ordered by their start sequence number in ascending order and include information needed for replay processing.

Type: Array of [Operation](#) objects

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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",
"LoggingConfig": {
    "SystemLogLevel": "string"
},
"MaximumBatchingWindowInSeconds": number,
"MaximumRecordAgeInSeconds": number,

```

```

    "MaximumRetryAttempts": number,
    "MetricsConfig": {
        "Metrics": [ "string" ]
    },
    "ParallelizationFactor": number,
    "ProvisionedPollerConfig": {
        "MaximumPollers": number,
        "MinimumPollers": number,
        "PollerGroupName": "string"
    },
    "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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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) 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})?:([a-z]{12})?:([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]{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

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

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-_]+))?`

FunctionResponseTypes

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, 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

LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see [Event source mapping logging](#).

Type: [EventSourceMappingLoggingConfig](#) object

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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 SQS, 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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.PUBLISHED)?|[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: `\$(LATEST(\.PUBLISHED)?)|[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" ],
    "CapacityProviderConfig": {
      "LambdaManagedInstancesCapacityProviderConfig": {
        "CapacityProviderArn": "string",
        "ExecutionEnvironmentMemoryGiBPerVCpu": number,
        "PerExecutionEnvironmentMaxConcurrency": number
      }
    },
    "CodeSha256": "string",
    "CodeSize": number,
    "ConfigSha256": "string",
    "DeadLetterConfig": {
      "TargetArn": "string"
    },
    "Description": "string",
    "DurableConfig": {
      "ExecutionTimeout": number,
      "RetentionPeriodInDays": number
    }
  },
  "Environment": {
    "Variables": {
      "Key": "string",
      "Value": "string"
    }
  },
  "FunctionName": "string",
  "Handler": "string",
  "PackageSize": number,
  "PackageType": "string",
  "Runtime": "string",
  "Timeout": number
}
```

```
"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",
    "TenancyConfig": {
      "TenantIsolationMode": "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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)

- [AWS SDK for .NET V4](#)
- [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 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|PUBLISHED\})?|[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)|(-iso([a-z]?)))?-[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)

- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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}(\.PUBLISHED)?|[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: `\$(LATEST(\.PUBLISHED)?)|[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" ],
  "CapacityProviderConfig": {
    "LambdaManagedInstancesCapacityProviderConfig": {
      "CapacityProviderArn": "string",
      "ExecutionEnvironmentMemoryGiBPerVCpu": number,
      "PerExecutionEnvironmentMaxConcurrency": number
    }
  },
  "CodeSha256": "string",
  "CodeSize": number,
  "ConfigSha256": "string",
  "DeadLetterConfig": {
    "TargetArn": "string"
  },
  "Description": "string",
  "DurableConfig": {
    "ExecutionTimeout": number,
    "RetentionPeriodInDays": number
  },
  "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",
"TenancyConfig": {
  "TenantIsolationMode": "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`

[CapacityProviderConfig](#)

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: [CapacityProviderConfig](#) object

[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

[ConfigSha256](#)

The SHA256 hash of the function configuration.

Type: String

[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.

DurableConfig

The function's durable execution configuration settings, if the function is configured for durability.

Type: [DurableConfig](#) object

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](#) or an [Amazon S3 Files 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

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

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(\.PUBLISHED)?|[a-zA-Z0-9-_\.] +))?`

FunctionName

The name of the function.

Type: String

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\}|\d{1,5}|\d{1,5}PUBLISHED)?|[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` | `VcpuLimitExceeded` | `CapacityProviderScalingLimitExceeded` | `InsufficientCapacity` | `EC2RequestLimitExceeded` | `FunctionError.InitTimeout` | `FunctionError.RuntimeInitError` | `FunctionError.ExtensionInitError` | `FunctionError.InvalidEntryPoint` | `FunctionError.InvalidWorkingDirectory` | `FunctionError.PermissionDenied` | `FunctionError.TooManyExtensions` | `FunctionError.InitResourceExhausted` | `DisallowedByVpcEncryptionControl`

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

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

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-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

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` | `nodejs24.x` | `python3.14` | `java25` | `dotnet10`

RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

Type: [RuntimeVersionConfig](#) object

SigningJobArn

The ARN of the signing job.

Type: String

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

SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

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

SnapStart

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

Type: [SnapStartResponse](#) object

State

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

Type: String

Valid Values: `Pending` | `Active` | `Inactive` | `Failed` | `Deactivating` | `Deactivated` | `ActiveNonInvocable` | `Deleting`

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 | DrainingDurableExecutions | VcpuLimitExceeded
| CapacityProviderScalingLimitExceeded | InsufficientCapacity
| EC2RequestLimitExceeded | FunctionError.InitTimeout |
FunctionError.RuntimeInitError | FunctionError.ExtensionInitError |
FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory
| FunctionError.PermissionDenied | FunctionError.TooManyExtensions |
FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl

TenancyConfig

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: [TenancyConfig](#) object

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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\}|\\$PUBLISHED)?|[a-zA-Z0-9-_\.\.]+))?

Required: Yes

Qualifier

A version number or alias name.

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

Pattern: `\$(LATEST(\.PUBLISHED)?)|[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

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

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-_]+))?`

[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)

- [AWS SDK for .NET V4](#)
- [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

The name of the function.

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

GetFunctionScalingConfig

Retrieves the scaling configuration for a Lambda Managed Instances function.

Request Syntax

```
GET /2025-11-30/functions/FunctionName/function-scaling-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.

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

Qualifier

Specify a version or alias to get the scaling configuration for a published version of the function.

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

Pattern: `(\${LATEST|.PUBLISHED|[0-9]}+)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Content-type: application/json

```
{
  "AppliedFunctionScalingConfig": {
    "MaxExecutionEnvironments": number,
    "MinExecutionEnvironments": number
  },
  "FunctionArn": "string",
  "RequestedFunctionScalingConfig": {
    "MaxExecutionEnvironments": number,
    "MinExecutionEnvironments": 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.

[AppliedFunctionScalingConfig](#)

The scaling configuration that is currently applied to the function. This represents the actual scaling settings in effect.

Type: [FunctionScalingConfig](#) object

[FunctionArn](#)

The Amazon Resource Name (ARN) of the function.

Type: String

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

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-_]+))?`

[RequestedFunctionScalingConfig](#)

The scaling configuration that was requested for the function.

Type: [FunctionScalingConfig](#) object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)

- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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: ((?!^\d+\$)^[0-9a-zA-Z-_]+\$)

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 [Control access to 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

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

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-_]+))?`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 | nodejs24.x | python3.14 | java25 | dotnet10

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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"
  },
  "CreatedDate": "string",
  "Description": "string",
  "LayerArn": "string",
  "LayerVersionArn": "string",
  "LicenseInfo": "string",
  "Version": number
}
```

Response Elements

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

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

[CompatibleArchitectures](#)

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

Type: Array of strings

Array Members: 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 | nodejs24.x | python3.14 | java25 |
dotnet10

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.\.PUBLISHED)?|[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: \\$(LATEST(\.PUBLISHED)?)|[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[a-z]+\-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\+)(:(\$LATEST|[a-zA-Z0-9-_\+))?)?

Required: Yes

Qualifier

The version number or alias name.

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

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "AllocatedProvisionedConcurrentExecutions": number,
  "AvailableProvisionedConcurrentExecutions": number,
  "LastModified": "string",
  "RequestedProvisionedConcurrentExecutions": number,
  "Status": "string",
  "StatusReason": "string"
}
```

Response Elements

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

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

[AllocatedProvisionedConcurrentExecutions](#)

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

[AvailableProvisionedConcurrentExecutions](#)

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

LastModified

The date and time that a user last updated the configuration, in [ISO 8601 format](#).

Type: String

RequestedProvisionedConcurrentExecutions

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

Status

The status of the allocation process.

Type: String

Valid Values: IN_PROGRESS | READY | FAILED

StatusReason

For failed allocations, the reason that provisioned concurrency could not be allocated.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.\PUBLISHED)?|[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: `\$(LATEST(\.PUBLISHED)?)|[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

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

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(\.PUBLISHED)?)|[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 invocations, the maximum payload size is 6 MB. For asynchronous invocations, the maximum payload size is 1 MB.

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
X-Amz-Durable-Execution-Name: DurableExecutionName
X-Amz-Tenant-Id: TenantId
```

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.

DurableExecutionName

Optional unique name for the durable execution. When you start your special function, you can give it a unique name to identify this specific execution. It's like giving a nickname to a task.

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

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

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 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(\.\PUBLISHED)?\}|[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: `\$(LATEST(\.\PUBLISHED)?)|[a-zA-Z0-9-_\.\.]+$`

TenantId

The identifier of the tenant in a multi-tenant Lambda function.

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

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. The maximum payload size is 6 MB for synchronous invocations and 1 MB for asynchronous invocations.

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
X-Amz-Durable-Execution-Arn: DurableExecutionArn
```

Payload

Response Elements

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

StatusCode

The HTTP status code is in the 200 range for a successful request. For the `RequestResponse` invocation type, this status code is 200. For the `Event` invocation type, this status code is 202. For the `DryRun` invocation type, the status code is 204.

The response returns the following HTTP headers.

DurableExecutionArn

The ARN of the durable execution that was started. This is returned when invoking a durable function and provides a unique identifier for tracking the execution.

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\..PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

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 Error Types](#).

DurableExecutionAlreadyStartedException

The durable execution with the specified name has already been started. Each durable execution name must be unique within the function. Use a different name or check the status of the existing execution.

Type

The exception type.

HTTP Status Code: 409

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.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

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

NoPublishedVersionException

The function has no published versions available.

Type

The exception type.

HTTP Status Code: 400

RecursiveInvocationException

Lambda has detected your function being invoked in a recursive loop with other AWS resources and stopped your function's invocation.

Message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 502

S3FilesMountConnectivityException

The Lambda function couldn't make a network connection to the configured S3 Files access point.

Message

The exception message.

Type

The exception type.

HTTP Status Code: 408

S3FilesMountFailureException

The Lambda function couldn't mount the configured S3 Files access point due to a permission or configuration issue.

Message

The exception message.

Type

The exception type.

HTTP Status Code: 403

S3FilesMountTimeoutException

The Lambda function made a network connection to the configured S3 Files access point, but the mount operation timed out.

Message

The exception message.

Type

The exception type.

HTTP Status Code: 408

SerializedRequestEntityTooLargeException

The request payload exceeded the maximum allowed size for serialized request entities.

Type

The error type.

HTTP Status Code: 413

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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.

Note

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

Invokes a function asynchronously.

Note

The payload limit is 256KB. For larger payloads, for up to 1MB, use [Invoke](#).

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 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\}|\{PUBLISHED\})?|[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 Error Types](#).

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.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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
X-Amz-Tenant-Id: TenantId
```

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 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(\.\PUBLISHED)?|[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: `\$(LATEST(\.\PUBLISHED)?)|[a-zA-Z0-9-_\.\.]+`

TenantId

The identifier of the tenant in a multi-tenant Lambda function.

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

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 Error Types](#).

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.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

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

NoPublishedVersionException

The function has no published versions available.

Type

The exception type.

HTTP Status Code: 400

RecursiveInvocationException

Lambda has detected your function being invoked in a recursive loop with other AWS resources and stopped your function's invocation.

Message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 502

S3FilesMountConnectivityException

The Lambda function couldn't make a network connection to the configured S3 Files access point.

Message

The exception message.

Type

The exception type.

HTTP Status Code: 408

S3FilesMountFailureException

The Lambda function couldn't mount the configured S3 Files access point due to a permission or configuration issue.

Message

The exception message.

Type

The exception type.

HTTP Status Code: 403

S3FilesMountTimeoutException

The Lambda function made a network connection to the configured S3 Files access point, but the mount operation timed out.

Message

The exception message.

Type

The exception type.

HTTP Status Code: 408

SerializedRequestEntityTooLargeException

The request payload exceeded the maximum allowed size for serialized request entities.

Type

The error type.

HTTP Status Code: 413

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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(\.PUBLISHED)?|[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

ListCapacityProviders

Returns a list of capacity providers in your account.

Request Syntax

```
GET /2025-11-30/capacity-providers?Marker=Marker&MaxItems=MaxItems&State=State 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

The maximum number of capacity providers to return.

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

State

Filter capacity providers by their current state.

Valid Values: Pending | Active | Failed | Deleting

Request Body

The request does not have a request body.

Response Syntax

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

{
  "CapacityProviders": [
    {
      "CapacityProviderArn": "string",
```

```

    "CapacityProviderScalingConfig": {
      "MaxVCpuCount": number,
      "ScalingMode": "string",
      "ScalingPolicies": [
        {
          "PredefinedMetricType": "string",
          "TargetValue": number
        }
      ]
    },
    "InstanceRequirements": {
      "AllowedInstanceTypes": [ "string " ],
      "Architectures": [ "string " ],
      "ExcludedInstanceTypes": [ "string " ]
    },
    "KmsKeyArn": "string",
    "LastModified": "string",
    "PermissionsConfig": {
      "CapacityProviderOperatorRoleArn": "string"
    },
    "State": "string",
    "VpcConfig": {
      "SecurityGroupIds": [ "string " ],
      "SubnetIds": [ "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.

CapacityProviders

A list of capacity providers in your account.

Type: Array of [CapacityProvider](#) objects

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

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

ListDurableExecutionsByFunction

Returns a list of [durable executions](#) for a specified Lambda function. You can filter the results by execution name, status, and start time range. This API supports pagination for large result sets.

Request Syntax

```
GET /2025-12-01/functions/FunctionName/durable-executions?
DurableExecutionName=DurableExecutionName&Marker=Marker&MaxItems=MaxItems&Qualifier=Qualifier&R
HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

[DurableExecutionName](#)

Filter executions by name. Only executions with names that matches this string are returned.

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

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

[FunctionName](#)

The name or ARN of the Lambda function. You can specify a function name, a partial ARN, or a full 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(\.PUBLISHED)?|[a-zA-Z0-9- _]+))?`

Required: Yes

[Marker](#)

Pagination token from a previous request to continue retrieving results.

[MaxItems](#)

Maximum number of executions to return (1-1000). Default is 100.

Valid Range: Minimum value of 0. Maximum value of 1000.

Qualifier

The function version or alias. If not specified, lists executions for the \$LATEST version.

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

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

ReverseOrder

Set to true to return results in reverse chronological order (newest first). Default is false.

StartedAfter

Filter executions that started after this timestamp (ISO 8601 format).

StartedBefore

Filter executions that started before this timestamp (ISO 8601 format).

Statuses

Filter executions by status. Valid values: RUNNING, SUCCEEDED, FAILED, TIMED_OUT, STOPPED.

Array Members: Fixed number of 1 item.

Valid Values: RUNNING | SUCCEEDED | FAILED | TIMED_OUT | STOPPED

Request Body

The request does not have a request body.

Response Syntax

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

{
  "DurableExecutions": [
    {
      "DurableExecutionArn": "string",
      "DurableExecutionName": "string",
      "EndTimeStamp": number,
```

```
    "FunctionArn": "string",  
    "StartTimestamp": number,  
    "Status": "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.

DurableExecutions

List of durable execution summaries matching the filter criteria.

Type: Array of [Execution](#) objects

NextMarker

Pagination token for retrieving additional results. Present only if there are more results available.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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})?:([d{12})?:(.*)`

FunctionName

The name or ARN of the Lambda function.

Name formats

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

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

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

Length Constraints: Minimum length of 1. Maximum length of 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(\.\PUBLISHED)?|[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",
  "LoggingConfig": {
    "SystemLogLevel": "string"
  },

```

```

    "MaximumBatchingWindowInSeconds": number,
    "MaximumRecordAgeInSeconds": number,
    "MaximumRetryAttempts": number,
    "MetricsConfig": {
        "Metrics": [ "string" ]
    },
    "ParallelizationFactor": number,
    "ProvisionedPollerConfig": {
        "MaximumPollers": number,
        "MinimumPollers": number,
        "PollerGroupName": "string"
    },
    "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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.\ PUBLISHED)?|[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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" ],
      "CapacityProviderConfig": {
        "LambdaManagedInstancesCapacityProviderConfig": {
          "CapacityProviderArn": "string",
          "ExecutionEnvironmentMemoryGiBPerVCpu": number,
          "PerExecutionEnvironmentMaxConcurrency": number
        }
      },
      "CodeSha256": "string",
      "CodeSize": number,
      "ConfigSha256": "string",
      "DeadLetterConfig": {
        "TargetArn": "string"
      },
      "Description": "string",
      "DurableConfig": {
        "ExecutionTimeout": number,
        "RetentionPeriodInDays": number
      },
      "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",
  "TenancyConfig": {
    "TenantIsolationMode": "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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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

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

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-_]+))?`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

ListFunctionVersionsByCapacityProvider

Returns a list of function versions that are configured to use a specific capacity provider.

Request Syntax

```
GET /2025-11-30/capacity-providers/CapacityProviderName/function-versions?  
Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CapacityProviderName

The name of the capacity provider to list function versions for.

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}:capacity-provider:[a-zA-Z0-9-_+)|[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 versions to return in the response.

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

```
{
  "CapacityProviderArn": "string",
  "FunctionVersions": [
    {
      "FunctionArn": "string",
      "State": "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.

[CapacityProviderArn](#)

The Amazon Resource Name (ARN) of the capacity provider.

Type: String

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}:capacity-provider:[a-zA-Z0-9-_\d]{12}`

[FunctionVersions](#)

A list of function versions that use the specified capacity provider.

Type: Array of [FunctionVersionsByCapacityProviderListItem](#) objects

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

[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)

- [AWS SDK for .NET V4](#)
- [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 | nodejs24.x | python3.14 | java25 | dotnet10

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 | nodejs24.x | python3.14 | java25 | dotnet10

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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}|capacity-provider:[a-zA-Z0-9-_]+)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "Tags": {
```



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

Response Elements

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

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

Tags

The function's tags.

Type: String to string map

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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\}|\.\{PUBLISHED\})?|[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" ],
      "CapacityProviderConfig": {
        "LambdaManagedInstancesCapacityProviderConfig": {
          "CapacityProviderArn": "string",
          "ExecutionEnvironmentMemoryGiBPerVCpu": number,
          "PerExecutionEnvironmentMaxConcurrency": number
        }
      },
      "CodeSha256": "string",
      "CodeSize": number,
      "ConfigSha256": "string",
      "DeadLetterConfig": {
        "TargetArn": "string"
      },
      "Description": "string",
      "DurableConfig": {
        "ExecutionTimeout": number,
        "RetentionPeriodInDays": number
      },
      "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",
  "TenancyConfig": {
    "TenantIsolationMode": "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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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-_\d]+)|[a-zA-Z0-9-_\d]+`

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 | nodejs24.x | python3.14 | java25 | dotnet10

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 | nodejs24.x | python3.14 | java25 |
dotnet10

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 Error Types](#).

CodeStorageExceededException

Your AWS account has exceeded its maximum total code size. For more information, see [Lambda quotas](#).

Type

The exception type.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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",
  "PublishTo": "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)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\\$(LATEST|[a-zA-Z0-9-_]+)))?

Required: Yes

Request Body

The request accepts the following data in JSON format.

CodeSha256

Only publish a version if the hash value matches the value that's specified. Use this option to avoid publishing a version if the function code has changed since you last updated it. You can get the hash for the version that you uploaded from the output of [UpdateFunctionCode](#).

Type: String

Required: No

Description

A description for the version to override the description in the function configuration.

Type: String

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

Required: No

PublishTo

Specifies where to publish the function version or configuration.

Type: String

Valid Values: LATEST_PUBLISHED

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" ],
  "CapacityProviderConfig": {
    "LambdaManagedInstancesCapacityProviderConfig": {
      "CapacityProviderArn": "string",
      "ExecutionEnvironmentMemoryGiBPerVCpu": number,
      "PerExecutionEnvironmentMaxConcurrency": number
    }
  },
  "CodeSha256": "string",
  "CodeSize": number,
  "ConfigSha256": "string",
  "DeadLetterConfig": {
    "TargetArn": "string"
  },
  "Description": "string",
  "DurableConfig": {
    "ExecutionTimeout": number,
    "RetentionPeriodInDays": number
  },
  "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",
  "TenancyConfig": {
    "TenantIsolationMode": "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

CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: [CapacityProviderConfig](#) object

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

ConfigSha256

The SHA256 hash of the function configuration.

Type: String

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.

DurableConfig

The function's durable execution configuration settings, if the function is configured for durability.

Type: [DurableConfig](#) object

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](#) or an [Amazon S3 Files 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

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

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(\.PUBLISHED)?|[a-zA-Z0-9-_\.]?))?`

FunctionName

The name of the function.

Type: String

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(\.PUBLISHED)?|[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` | `VcpuLimitExceeded` | `CapacityProviderScalingLimitExceeded` | `InsufficientCapacity` | `EC2RequestLimitExceeded` | `FunctionError.InitTimeout` | `FunctionError.RuntimeInitError` | `FunctionError.ExtensionInitError` | `FunctionError.InvalidEntryPoint` | `FunctionError.InvalidWorkingDirectory` | `FunctionError.PermissionDenied` | `FunctionError.TooManyExtensions` | `FunctionError.InitResourceExhausted` | `DisallowedByVpcEncryptionControl`

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

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

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-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

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+=,.\@-\_/\d]{1,64}`

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 | nodejs24.x | python3.14 | java25 | dotnet10

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]{1,2})`

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` | `Deactivating` | `Deactivated` | `ActiveNonInvocable` | `Deleting`

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` | `DrainingDurableExecutions` | `VcpuLimitExceeded` | `CapacityProviderScalingLimitExceeded` | `InsufficientCapacity` | `EC2RequestLimitExceeded` | `FunctionError.InitTimeout` |

`FunctionError.RuntimeInitError` | `FunctionError.ExtensionInitError` |
`FunctionError.InvalidEntryPoint` | `FunctionError.InvalidWorkingDirectory` |
`FunctionError.PermissionDenied` | `FunctionError.TooManyExtensions` |
`FunctionError.InitResourceExhausted` | `DisallowedByVpcEncryptionControl`

[TenancyConfig](#)

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: [TenancyConfig](#) object

[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 Error Types](#).

CodeStorageExceededException

Your AWS account has exceeded its maximum total code size. For more information, see [Lambda quotas](#).

Type

The exception type.

HTTP Status Code: 400

FunctionVersionsPerCapacityProviderLimitExceededException

The maximum number of function versions that can be associated with a single capacity provider has been exceeded. For more information, see [Lambda quotas](#).

Type

The exception type.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 412

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.\PUBLISHED)?|[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)|(-iso([a-z]?)))?-[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 Error Types](#).

CodeSigningConfigNotFoundException

The specified code signing configuration does not exist.

HTTP Status Code: 404

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.\PUBLISHED)?\}|[a-zA-Z0-9-_\.\.]+))?

Required: Yes

Qualifier

A version number or alias name.

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

Pattern: \\$(LATEST(\.\PUBLISHED)?)|[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

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

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-_]+))?`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

PutFunctionScalingConfig

Sets the scaling configuration for a Lambda Managed Instances function. The scaling configuration defines the minimum and maximum number of execution environments that can be provisioned for the function, allowing you to control scaling behavior and resource allocation.

Request Syntax

```
PUT /2025-11-30/functions/FunctionName/function-scaling-config?Qualifier=Qualifier
HTTP/1.1
Content-type: application/json

{
  "FunctionScalingConfig": {
    "MaxExecutionEnvironments": number,
    "MinExecutionEnvironments": number
  }
}
```

URI Request Parameters

The request uses the following URI parameters.

FunctionName

The name or ARN of the Lambda function.

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

Qualifier

Specify a version or alias to set the scaling configuration for a published version of the function.

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

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

[FunctionScalingConfig](#)

The scaling configuration to apply to the function, including minimum and maximum execution environment limits.

Type: [FunctionScalingConfig](#) object

Required: No

Response Syntax

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

{
  "FunctionState": "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.

[FunctionState](#)

The current state of the function after applying the scaling configuration.

Type: String

Valid Values: Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\\$LATEST|[a-zA-Z0-9-_]+))?

Required: Yes

Qualifier

The version number or alias name.

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

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

Required: Yes

Request Body

The request accepts the following data in JSON format.

ProvisionedConcurrentExecutions

The amount of provisioned concurrency to allocate for the version or alias.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

Response Syntax

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

```
{
  "AllocatedProvisionedConcurrentExecutions": number,
  "AvailableProvisionedConcurrentExecutions": number,
  "LastModified": "string",
  "RequestedProvisionedConcurrentExecutions": number,
  "Status": "string",
  "StatusReason": "string"
}
```

Response Elements

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

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

AllocatedProvisionedConcurrentExecutions

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

AvailableProvisionedConcurrentExecutions

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

LastModified

The date and time that a user last updated the configuration, in [ISO 8601 format](#).

Type: String

RequestedProvisionedConcurrentExecutions

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

Status

The status of the allocation process.

Type: String

Valid Values: IN_PROGRESS | READY | FAILED

StatusReason

For failed allocations, the reason that provisioned concurrency could not be allocated.

Type: String

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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|PUBLISHED\})?|[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: `\$(LATEST(\.PUBLISHED)?)|[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

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

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-_.]+))?`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.PUBLISHED)?|[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: `\$(LATEST(\.PUBLISHED)?)|[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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

SendDurableExecutionCallbackFailure

Sends a failure response for a callback operation in a durable execution. Use this API when an external system cannot complete a callback operation successfully.

Request Syntax

```
POST /2025-12-01/durable-execution-callbacks/CallbackId/fail HTTP/1.1
Content-type: application/json
```

```
{
  "ErrorData": "string",
  "ErrorMessage": "string",
  "ErrorType": "string",
  "StackTrace": [ "string" ]
}
```

URI Request Parameters

The request uses the following URI parameters.

CallbackId

The unique identifier for the callback operation.

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

Pattern: [A-Za-z0-9+ /]+= {0,2}

Required: Yes

Request Body

The request accepts the following data in JSON format.

ErrorData

Machine-readable error data.

Type: String

Required: No

ErrorMessage

A human-readable error message.

Type: String

Required: No

ErrorType

The error type.

Type: String

Required: No

StackTrace

Stack trace information for the error.

Type: Array of strings

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

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

CallbackTimeoutException

The callback ID token has either expired or the callback associated with the token has already been closed.

Type

The exception type.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

SendDurableExecutionCallbackHeartbeat

Sends a heartbeat signal for a long-running callback operation to prevent timeout. Use this API to extend the callback timeout period while the external operation is still in progress.

Request Syntax

```
POST /2025-12-01/durable-execution-callbacks/CallbackId/heartbeat HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

CallbackId

The unique identifier for the callback operation.

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

Pattern: `[A-Za-z0-9+/-]{0,2}`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

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

CallbackTimeoutException

The callback ID token has either expired or the callback associated with the token has already been closed.

Type

The exception type.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

SendDurableExecutionCallbackSuccess

Sends a successful completion response for a callback operation in a durable execution. Use this API when an external system has successfully completed a callback operation.

Request Syntax

```
POST /2025-12-01/durable-execution-callbacks/CallbackId/succeed HTTP/1.1
```

Result

URI Request Parameters

The request uses the following URI parameters.

CallbackId

The unique identifier for the callback operation.

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

Pattern: `[A-Za-z0-9+/-]{0,2}`

Required: Yes

Request Body

The request accepts the following binary data.

Result

The result data from the successful callback operation. Maximum size is 256 KB.

Length Constraints: Minimum length of 0. Maximum length of 262144.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

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

CallbackTimeoutException

The callback ID token has either expired or the callback associated with the token has already been closed.

Type

The exception type.

HTTP Status Code: 400

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

StopDurableExecution

Stops a running [durable execution](#). The execution transitions to STOPPED status and cannot be resumed. Any in-progress operations are terminated.

Request Syntax

```
POST /2025-12-01/durable-executions/DurableExecutionArn/stop HTTP/1.1
Content-type: application/json
```

```
{
  "ErrorData": "string",
  "ErrorMessage": "string",
  "ErrorType": "string",
  "StackTrace": [ "string" ]
}
```

URI Request Parameters

The request uses the following URI parameters.

[DurableExecutionArn](#)

The Amazon Resource Name (ARN) of the durable execution.

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.\PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

[ErrorData](#)

Machine-readable error data.

Type: String

Required: No

ErrorMessage

A human-readable error message.

Type: String

Required: No

ErrorType

The error type.

Type: String

Required: No

StackTrace

Stack trace information for the error.

Type: Array of strings

Required: No

Response Syntax

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

{
  "StopTimestamp": 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.

StopTimestamp

The timestamp when the execution was stopped (ISO 8601 format).

Type: Timestamp

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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}|capacity-provider:[a-zA-Z0-9-_]+)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

[Tags](#)

A list of tags to apply to the 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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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}|capacity-provider:[a-zA-Z0-9-_]+)`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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(\\.PUBLISHED)?|[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

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

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

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 412

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)

UpdateCapacityProvider

Updates the configuration of an existing capacity provider.

Request Syntax

```
PUT /2025-11-30/capacity-providers/CapacityProviderName HTTP/1.1
Content-type: application/json
```

```
{
  "CapacityProviderScalingConfig": {
    "MaxVCpuCount": number,
    "ScalingMode": "string",
    "ScalingPolicies": [
      {
        "PredefinedMetricType": "string",
        "TargetValue": number
      }
    ]
  }
}
```

URI Request Parameters

The request uses the following URI parameters.

CapacityProviderName

The name of the capacity provider to update.

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}:capacity-provider:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+

Required: Yes

Request Body

The request accepts the following data in JSON format.

CapacityProviderScalingConfig

The updated scaling configuration for the capacity provider.

Type: [CapacityProviderScalingConfig](#) object

Required: No

Response Syntax

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

{
  "CapacityProvider": {
    "CapacityProviderArn": "string",
    "CapacityProviderScalingConfig": {
      "MaxVCpuCount": number,
      "ScalingMode": "string",
      "ScalingPolicies": [
        {
          "PredefinedMetricType": "string",
          "TargetValue": number
        }
      ]
    },
    "InstanceRequirements": {
      "AllowedInstanceTypes": [ "string" ],
      "Architectures": [ "string" ],
      "ExcludedInstanceTypes": [ "string" ]
    },
    "KmsKeyArn": "string",
    "LastModified": "string",
    "PermissionsConfig": {
      "CapacityProviderOperatorRoleArn": "string"
    },
    "State": "string",
    "VpcConfig": {
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "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.

CapacityProvider

Information about the updated capacity provider.

Type: [CapacityProvider](#) object

Errors

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

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 for stream sources (DynamoDB, Kinesis, Amazon MSK, and self-managed Apache Kafka):

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

The following option is available only for DynamoDB and Kinesis event sources:

- `ParallelizationFactor` – Process multiple batches from each shard concurrently.

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

- [Amazon DynamoDB Streams](#)

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

Request Syntax

PUT /2015-03-31/event-source-mappings/*UUID* HTTP/1.1
Content-type: application/json

```
{
  "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",
"LoggingConfig": {
  "SystemLogLevel": "string"
},
"MaximumBatchingWindowInSeconds": number,
"MaximumRecordAgeInSeconds": number,
"MaximumRetryAttempts": number,
"MetricsConfig": {
  "Metrics": [ "string" ]
},
"ParallelizationFactor": number,
"ProvisionedPollerConfig": {
  "MaximumPollers": number,
  "MinimumPollers": number,
  "PollerGroupName": "string"
},
"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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 Apache Kafka) 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 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(\.PUBLISHED)?|[a-zA-Z0-9-_\+]))?

Required: No

FunctionResponseTypes

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, 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

LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. Use this configuration object to define the level of logs for your event source mapping.

Type: [EventSourceMappingLoggingConfig](#) object

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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 SQS, 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",
"LoggingConfig": {
  "SystemLogLevel": "string"
},
"MaximumBatchingWindowInSeconds": number,
"MaximumRecordAgeInSeconds": number,
"MaximumRetryAttempts": number,
"MetricsConfig": {
  "Metrics": [ "string" ]
},
"ParallelizationFactor": number,
"ProvisionedPollerConfig": {
  "MaximumPollers": number,
  "MinimumPollers": number,
  "PollerGroupName": "string"
},
"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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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) 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]{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

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

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-_]+))?`

FunctionResponseTypes

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, 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

LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see [Event source mapping logging](#).

Type: [EventSourceMappingLoggingConfig](#) object

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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 SQS, 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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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,
  "PublishTo": "string",
  "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)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\\$\{LATEST|[a-zA-Z0-9-_]+\}))?

Required: Yes

Request Body

The request accepts the following data in JSON format.

Architectures

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

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: x86_64 | arm64

Required: No

DryRun

Set to true to validate the request parameters and access permissions without modifying the function code.

Type: Boolean

Required: No

ImageUri

URI of a container image in the Amazon ECR registry. Do not use for a function defined with a .zip file archive.

Type: String

Required: No

Publish

Set to true to publish a new version of the function after updating the code. This has the same effect as calling [PublishVersion](#) separately.

Type: Boolean

Required: No

PublishTo

Specifies where to publish the function version or configuration.

Type: String

Valid Values: LATEST_PUBLISHED

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" ],
  "CapacityProviderConfig": {
    "LambdaManagedInstancesCapacityProviderConfig": {
      "CapacityProviderArn": "string",
      "ExecutionEnvironmentMemoryGiBPerVCpu": number,
      "PerExecutionEnvironmentMaxConcurrency": number
    }
  },
  "CodeSha256": "string",
  "CodeSize": number,
  "ConfigSha256": "string",
  "DeadLetterConfig": {
    "TargetArn": "string"
  },
  "Description": "string",
  "DurableConfig": {
    "ExecutionTimeout": number,
    "RetentionPeriodInDays": number
  },
  "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",
"TenancyConfig": {
  "TenantIsolationMode": "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`

CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: [CapacityProviderConfig](#) object

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

ConfigSha256

The SHA256 hash of the function configuration.

Type: String

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.

DurableConfig

The function's durable execution configuration settings, if the function is configured for durability.

Type: [DurableConfig](#) object

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](#) or an [Amazon S3 Files 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

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

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(\.PUBLISHED)?|[a-zA-Z0-9-_\.] +))?`

FunctionName

The name of the function.

Type: String

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\}|\d{12}:)?|[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` | `VcpuLimitExceeded` | `CapacityProviderScalingLimitExceeded` | `InsufficientCapacity` | `EC2RequestLimitExceeded` | `FunctionError.InitTimeout` | `FunctionError.RuntimeInitError` | `FunctionError.ExtensionInitError` | `FunctionError.InvalidEntryPoint` | `FunctionError.InvalidWorkingDirectory` | `FunctionError.PermissionDenied` | `FunctionError.TooManyExtensions` | `FunctionError.InitResourceExhausted` | `DisallowedByVpcEncryptionControl`

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

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

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-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

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` | `nodejs24.x` | `python3.14` | `java25` | `dotnet10`

RuntimeVersionConfig

The ARN of the runtime and any errors that occurred.

Type: [RuntimeVersionConfig](#) object

SigningJobArn

The ARN of the signing job.

Type: String

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

SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

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

SnapStart

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

Type: [SnapStartResponse](#) object

State

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

Type: String

Valid Values: `Pending` | `Active` | `Inactive` | `Failed` | `Deactivating` | `Deactivated` | `ActiveNonInvocable` | `Deleting`

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 | DrainingDurableExecutions | VcpuLimitExceeded
| CapacityProviderScalingLimitExceeded | InsufficientCapacity
| EC2RequestLimitExceeded | FunctionError.InitTimeout |
FunctionError.RuntimeInitError | FunctionError.ExtensionInitError |
FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory
| FunctionError.PermissionDenied | FunctionError.TooManyExtensions |
FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl

[TenancyConfig](#)

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: [TenancyConfig](#) object

[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 Error Types](#).

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](#).

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 412

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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
```

```
{
  "CapacityProviderConfig": {
    "LambdaManagedInstancesCapacityProviderConfig": {
      "CapacityProviderArn": "string",
      "ExecutionEnvironmentMemoryGiBPerVCpu": number,
      "PerExecutionEnvironmentMaxConcurrency": number
    }
  },
  "DeadLetterConfig": {
    "TargetArn": "string"
  },
  "Description": "string",
  "DurableConfig": {
    "ExecutionTimeout": number,
    "RetentionPeriodInDays": number
  },
  "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)|(-iso([a-z]?)))?-[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.

CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: [CapacityProviderConfig](#) object

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

DurableConfig

Configuration settings for durable functions. Allows updating execution timeout and retention period for functions with durability enabled.

Type: [DurableConfig](#) object

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 or an Amazon S3 Files 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 32768.

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` | `nodejs24.x` | `python3.14` | `java25` | `dotnet10`

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" ],
  "CapacityProviderConfig": {
    "LambdaManagedInstancesCapacityProviderConfig": {
      "CapacityProviderArn": "string",
      "ExecutionEnvironmentMemoryGiBPerVCpu": number,
      "PerExecutionEnvironmentMaxConcurrency": number
    }
  }
}
```

```

},
"CodeSha256": "string",
"CodeSize": number,
"ConfigSha256": "string",
"DeadLetterConfig": {
  "TargetArn": "string"
},
"Description": "string",
"DurableConfig": {
  "ExecutionTimeout": number,
  "RetentionPeriodInDays": number
},
"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",
"TenancyConfig": {
  "TenantIsolationMode": "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`

CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: [CapacityProviderConfig](#) object

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

[ConfigSha256](#)

The SHA256 hash of the function configuration.

Type: String

[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.

[DurableConfig](#)

The function's durable execution configuration settings, if the function is configured for durability.

Type: [DurableConfig](#) object

[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](#) or an [Amazon S3 Files 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

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

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|PUBLISHED)?|[a-zA-Z0-9-_\.]?))?`

FunctionName

The name of the function.

Type: String

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|PUBLISHED)?|[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` | `VcpuLimitExceeded` | `CapacityProviderScalingLimitExceeded` | `InsufficientCapacity` | `EC2RequestLimitExceeded` | `FunctionError.InitTimeout` | `FunctionError.RuntimeInitError` | `FunctionError.ExtensionInitError` | `FunctionError.InvalidEntryPoint` | `FunctionError.InvalidWorkingDirectory` | `FunctionError.PermissionDenied` | `FunctionError.TooManyExtensions` | `FunctionError.InitResourceExhausted` | `DisallowedByVpcEncryptionControl`

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

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

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-_]+))?`

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

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 | nodejs24.x | python3.14 | java25 |
dotnet10

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` | `Deactivating` | `Deactivated` | `ActiveNonInvocable` | `Deleting`

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` | `DrainingDurableExecutions` | `VcpuLimitExceeded` | `CapacityProviderScalingLimitExceeded` | `InsufficientCapacity` | `EC2RequestLimitExceeded` | `FunctionError.InitTimeout` | `FunctionError.RuntimeInitError` | `FunctionError.ExtensionInitError` | `FunctionError.InvalidEntryPoint` | `FunctionError.InvalidWorkingDirectory` | `FunctionError.PermissionDenied` | `FunctionError.TooManyExtensions` | `FunctionError.InitResourceExhausted` | `DisallowedByVpcEncryptionControl`

TenancyConfig

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: [TenancyConfig](#) object

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 Error Types](#).

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.

message

The exception message.

Type

The exception type.

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.

message

The exception message.

Type

The exception type.

HTTP Status Code: 412

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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 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(\.PUBLISHED)?|[a-zA-Z0-9-_\+]))?`

Required: Yes

Qualifier

A version number or alias name.

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

Pattern: `\$(LATEST(\.PUBLISHED)?|[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

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

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-_.]+))?`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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)|(-iso([a-z]?)))?-[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: ((?!^\d+\$)^[0-9a-zA-Z-_]+\$)

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 [Control access to 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 [Control access to 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

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

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-_]+))?`

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 Error Types](#).

InvalidParameterValueException

One of the parameters in the request is not valid.

message

The exception message.

Type

The exception type.

HTTP Status Code: 400

ResourceConflictException

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

message

The exception message.

Type

The exception type.

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](#).

retryAfterSeconds

The number of seconds the caller should wait before retrying.

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 V2](#)
- [AWS SDK for .NET V4](#)
- [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](#)
- [CallbackDetails](#)
- [CallbackFailedDetails](#)
- [CallbackOptions](#)
- [CallbackStartedDetails](#)
- [CallbackSucceededDetails](#)
- [CallbackTimedOutDetails](#)
- [CapacityProvider](#)
- [CapacityProviderConfig](#)
- [CapacityProviderPermissionsConfig](#)
- [CapacityProviderScalingConfig](#)
- [CapacityProviderVpcConfig](#)
- [ChainedInvokeDetails](#)
- [ChainedInvokeFailedDetails](#)
- [ChainedInvokeOptions](#)

- [ChainedInvokeStartedDetails](#)
- [ChainedInvokeStoppedDetails](#)
- [ChainedInvokeSucceededDetails](#)
- [ChainedInvokeTimedOutDetails](#)
- [CheckpointUpdatedExecutionState](#)
- [CodeSigningConfig](#)
- [CodeSigningPolicies](#)
- [Concurrency](#)
- [ContextDetails](#)
- [ContextFailedDetails](#)
- [ContextOptions](#)
- [ContextStartedDetails](#)
- [ContextSucceededDetails](#)
- [Cors](#)
- [DeadLetterConfig](#)
- [DestinationConfig](#)
- [DocumentDBEventSourceConfig](#)
- [DurableConfig](#)
- [Environment](#)
- [EnvironmentError](#)
- [EnvironmentResponse](#)
- [EphemeralStorage](#)
- [ErrorObject](#)
- [Event](#)
- [EventError](#)
- [EventInput](#)
- [EventResult](#)
- [EventSourceMappingConfiguration](#)
- [EventSourceMappingLoggingConfig](#)
- [EventSourceMappingMetricsConfig](#)

- [Execution](#)
- [ExecutionDetails](#)
- [ExecutionFailedDetails](#)
- [ExecutionStartedDetails](#)
- [ExecutionStoppedDetails](#)
- [ExecutionSucceededDetails](#)
- [ExecutionTimedOutDetails](#)
- [FileSystemConfig](#)
- [Filter](#)
- [FilterCriteria](#)
- [FilterCriteriaError](#)
- [FunctionCode](#)
- [FunctionCodeLocation](#)
- [FunctionConfiguration](#)
- [FunctionEventInvokeConfig](#)
- [FunctionScalingConfig](#)
- [FunctionUrlConfig](#)
- [FunctionVersionsByCapacityProviderListItem](#)
- [ImageConfig](#)
- [ImageConfigError](#)
- [ImageConfigResponse](#)
- [InstanceRequirements](#)
- [InvocationCompletedDetails](#)
- [InvokeResponseStreamUpdate](#)
- [InvokeWithResponseStreamCompleteEvent](#)
- [InvokeWithResponseStreamResponseEvent](#)
- [KafkaSchemaRegistryAccessConfig](#)
- [KafkaSchemaRegistryConfig](#)
- [KafkaSchemaValidationConfig](#)
- [LambdaManagedInstancesCapacityProviderConfig](#)

- [Layer](#)
- [LayersListItem](#)
- [LayerVersionContentInput](#)
- [LayerVersionContentOutput](#)
- [LayerVersionsListItem](#)
- [LoggingConfig](#)
- [OnFailure](#)
- [OnSuccess](#)
- [Operation](#)
- [OperationUpdate](#)
- [ProvisionedConcurrencyConfigListItem](#)
- [ProvisionedPollerConfig](#)
- [RetryDetails](#)
- [RuntimeVersionConfig](#)
- [RuntimeVersionError](#)
- [ScalingConfig](#)
- [SelfManagedEventSource](#)
- [SelfManagedKafkaEventSourceConfig](#)
- [SnapStart](#)
- [SnapStartResponse](#)
- [SourceAccessConfiguration](#)
- [StepDetails](#)
- [StepFailedDetails](#)
- [StepOptions](#)
- [StepStartedDetails](#)
- [StepSucceededDetails](#)
- [TagsError](#)
- [TargetTrackingScalingPolicy](#)
- [TenancyConfig](#)
- [TraceHeader](#)

- [TracingConfig](#)
- [TracingConfigResponse](#)
- [VpcConfig](#)
- [VpcConfigResponse](#)
- [WaitCancelledDetails](#)
- [WaitDetails](#)
- [WaitOptions](#)
- [WaitStartedDetails](#)
- [WaitSucceededDetails](#)

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

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

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-_]+))?`

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](#)

AllowedPublishers

List of signing profiles that can sign a code package.

Contents

SigningProfileVersionArns

The Amazon Resource Name (ARN) for each of the signing profiles. A signing profile defines a trusted user who can sign a code package.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 20 items.

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

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](#)

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](#)

CallbackDetails

Contains details about a callback operation in a durable execution, including the callback token and timeout configuration.

Contents

CallbackId

The callback ID. Callback IDs are generated by the `DurableContext` when a durable function calls `ctx.waitForCallback`.

Type: String

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

Pattern: `[A-Za-z0-9+/\]{0,2}`

Required: No

Error

An error object that contains details about the failure.

Type: [ErrorObject](#) object

Required: No

Result

The response payload from the callback operation as a string.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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](#)

CallbackFailedDetails

Contains details about a failed callback operation, including error information and the reason for failure.

Contents

Error

An error object that contains details about the failure.

Type: [EventError](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

CallbackOptions

Configuration options for callback operations in durable executions, including timeout settings and retry behavior.

Contents

HeartbeatTimeoutSeconds

The heartbeat timeout for the callback operation, in seconds. If not specified or set to 0, heartbeat timeout is disabled.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 999999999.

Required: No

TimeoutSeconds

The timeout for the callback operation in seconds. If not specified or set to 0, the callback has no timeout.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 999999999.

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](#)

CallbackStartedDetails

Contains details about a callback operation that has started, including timing information and callback metadata.

Contents

CallbackId

The callback ID. Callback IDs are generated by the `DurableContext` when a durable function calls `ctx.waitForCallback`.

Type: String

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

Pattern: `[A-Za-z0-9+/-]{0,2}`

Required: Yes

HeartbeatTimeout

The heartbeat timeout value, in seconds.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

Timeout

The timeout value, in seconds.

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](#)

CallbackSucceededDetails

Contains details about a successfully completed callback operation, including the result data and completion timestamp.

Contents

Result

The response payload from the successful operation.

Type: [EventResult](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

CallbackTimedOutDetails

Contains details about a callback operation that timed out, including timeout duration and any partial results.

Contents

Error

Details about the callback timeout.

Type: [EventError](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

CapacityProvider

A capacity provider manages compute resources for Lambda functions.

Contents

CapacityProviderArn

The Amazon Resource Name (ARN) of the capacity provider.

Type: String

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}:capacity-provider:[a-zA-Z0-9-_\d]{12}`

Required: Yes

PermissionsConfig

The permissions configuration for the capacity provider.

Type: [CapacityProviderPermissionsConfig](#) object

Required: Yes

State

The current state of the capacity provider.

Type: String

Valid Values: Pending | Active | Failed | Deleting

Required: Yes

VpcConfig

The VPC configuration for the capacity provider.

Type: [CapacityProviderVpcConfig](#) object

Required: Yes

CapacityProviderScalingConfig

The scaling configuration for the capacity provider.

Type: [CapacityProviderScalingConfig](#) object

Required: No

InstanceRequirements

The instance requirements for compute resources managed by the capacity provider.

Type: [InstanceRequirements](#) object

Required: No

KmsKeyArn

The ARN of the KMS key used to encrypt the capacity provider's resources.

Type: String

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

Required: No

LastModified

The date and time when the capacity provider was last modified.

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](#)

CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Contents

LambdaManagedInstancesCapacityProviderConfig

Configuration for Lambda-managed instances used by the capacity provider.

Type: [LambdaManagedInstancesCapacityProviderConfig](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

CapacityProviderPermissionsConfig

Configuration that specifies the permissions required for the capacity provider to manage compute resources.

Contents

CapacityProviderOperatorRoleArn

The ARN of the IAM role that the capacity provider uses to manage compute instances and other AWS resources.

Type: String

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

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](#)

CapacityProviderScalingConfig

Configuration that defines how the capacity provider scales compute instances based on demand and policies.

Contents

MaxVCpuCount

The maximum number of vCPUs that the capacity provider can provision across all compute instances.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 15000.

Required: No

ScalingMode

The scaling mode that determines how the capacity provider responds to changes in demand.

Type: String

Valid Values: `Auto` | `Manual`

Required: No

ScalingPolicies

A list of scaling policies that define how the capacity provider scales compute instances based on metrics and thresholds.

Type: Array of [TargetTrackingScalingPolicy](#) objects

Array Members: Minimum number of 1 item. Maximum number of 10 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](#)

CapacityProviderVpcConfig

VPC configuration that specifies the network settings for compute instances managed by the capacity provider.

Contents

SecurityGroupIds

A list of security group IDs that control network access for compute instances managed by the capacity provider.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 5 items.

Required: Yes

SubnetIds

A list of subnet IDs where the capacity provider launches compute instances.

Type: Array of strings

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

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ChainedInvokeDetails

Contains details about a chained function invocation in a durable execution, including the target function and invocation parameters.

Contents

Error

Details about the chained invocation failure.

Type: [ErrorObject](#) object

Required: No

Result

The response payload from the chained invocation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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](#)

ChainedInvokeFailedDetails

Contains details about a failed chained function invocation, including error information and failure reason.

Contents

Error

Details about the chained invocation failure.

Type: [EventError](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ChainedInvokeOptions

Configuration options for chained function invocations in durable executions, including retry settings and timeout configuration.

Contents

FunctionName

The name or ARN of the Lambda function to invoke.

Type: String

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\}|\$PUBLISHED)?|[a-zA-Z0-9-_\.\.]+))?`

Required: Yes

TenantId

The tenant identifier for the chained invocation.

Type: String

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

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](#)

ChainedInvokeStartedDetails

Contains details about a chained function invocation that has started execution, including start time and execution context.

Contents

FunctionName

The name or ARN of the Lambda function being invoked.

Type: String

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\}|\.\PUBLISHED)?|[a-zA-Z0-9-_\.\.]+))?`

Required: Yes

DurableExecutionArn

The Amazon Resource Name (ARN) that identifies the durable execution.

Type: String

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9-_\.\.]+):(\$\{LATEST\}|\.\PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9-_\.\.]+)/([a-zA-Z0-9-_\.\.]+)`

Required: No

ExecutedVersion

The version of the function that was executed.

Type: String

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

Pattern: `(\$\{LATEST\}|\.\PUBLISHED)?|[0-9]+)`

Required: No

Input

The JSON input payload provided to the chained invocation.

Type: [EventInput](#) object

Required: No

TenantId

The tenant identifier for the chained invocation.

Type: String

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

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](#)

ChainedInvokeStoppedDetails

Details about a chained invocation that was stopped.

Contents

Error

Details about why the chained invocation stopped.

Type: [EventError](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ChainedInvokeSucceededDetails

Details about a chained invocation that succeeded.

Contents

Result

The response payload from the successful operation.

Type: [EventResult](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ChainedInvokeTimedOutDetails

Details about a chained invocation that timed out.

Contents

Error

Details about the chained invocation timeout.

Type: [EventError](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

CheckpointUpdatedExecutionState

Contains operations that have been updated since the last checkpoint, such as completed asynchronous work like timers or callbacks.

Contents

NextMarker

Indicates that more results are available. Use this value in a subsequent call to retrieve the next page of results.

Type: String

Required: No

Operations

A list of operations that have been updated since the last checkpoint.

Type: Array of [Operation](#) 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](#)

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 issues a new Amazon CloudWatch metric (SignatureValidationErrors) and also stores the warning in the CloudTrail 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](#)

ContextDetails

Details about a durable execution context.

Contents

Error

Details about the context failure.

Type: [ErrorObject](#) object

Required: No

ReplayChildren

Whether the state data of child operations of this completed context should be included in the invoke payload and GetDurableExecutionState response.

Type: Boolean

Required: No

Result

The response payload from the context.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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](#)

ContextFailedDetails

Details about a context that failed.

Contents

Error

Details about the context failure.

Type: [EventError](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ContextOptions

Configuration options for a durable execution context.

Contents

ReplayChildren

Whether the state data of children of the completed context should be included in the invoke payload and `GetDurableExecutionState` response.

Type: Boolean

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](#)

ContextStartedDetails

Details about a context that has started.

Contents

The members of this exception structure are context-dependent.

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](#)

ContextSucceededDetails

Details about a context that succeeded.

Contents

Result

The JSON response payload from the successful context.

Type: [EventResult](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for 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](#)

DurableConfig

Configuration settings for [durable functions](#), including execution timeout and retention period for execution history.

Contents

ExecutionTimeout

The maximum time (in seconds) that a durable execution can run before timing out. This timeout applies to the entire durable execution, not individual function invocations.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 31622400.

Required: No

RetentionPeriodInDays

The number of days to retain execution history after a durable execution completes. After this period, execution history is no longer available through the `GetDurableExecutionHistory` API.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 90.

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](#)

ErrorObject

An object that contains error information.

Contents

ErrorData

Machine-readable error data.

Type: String

Required: No

ErrorMessage

A human-readable error message.

Type: String

Required: No

ErrorType

The error type.

Type: String

Required: No

StackTrace

Stack trace information for the error.

Type: Array of strings

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](#)

Event

An event that occurred during the execution of a durable function.

Contents

CallbackFailedDetails

Contains details about a failed callback operation, including error information and the reason for failure.

Type: [CallbackFailedDetails](#) object

Required: No

CallbackStartedDetails

Contains details about a callback operation that has started, including timing information and callback metadata.

Type: [CallbackStartedDetails](#) object

Required: No

CallbackSucceededDetails

Contains details about a successfully completed callback operation, including the result data and completion timestamp.

Type: [CallbackSucceededDetails](#) object

Required: No

CallbackTimedOutDetails

Contains details about a callback operation that timed out, including timeout duration and any partial results.

Type: [CallbackTimedOutDetails](#) object

Required: No

ChainedInvokeFailedDetails

Contains details about a failed chained function invocation, including error information and failure reason.

Type: [ChainedInvokeFailedDetails](#) object

Required: No

ChainedInvokeStartedDetails

Contains details about a chained function invocation that has started execution, including start time and execution context.

Type: [ChainedInvokeStartedDetails](#) object

Required: No

ChainedInvokeStoppedDetails

Details about a chained invocation that was stopped.

Type: [ChainedInvokeStoppedDetails](#) object

Required: No

ChainedInvokeSucceededDetails

Details about a chained invocation that succeeded.

Type: [ChainedInvokeSucceededDetails](#) object

Required: No

ChainedInvokeTimedOutDetails

Details about a chained invocation that timed out.

Type: [ChainedInvokeTimedOutDetails](#) object

Required: No

ContextFailedDetails

Details about a context that failed.

Type: [ContextFailedDetails](#) object

Required: No

ContextStartedDetails

Details about a context that started.

Type: [ContextStartedDetails](#) object

Required: No

ContextSucceededDetails

Details about a context that succeeded.

Type: [ContextSucceededDetails](#) object

Required: No

EventId

The unique identifier for this event. Event IDs increment sequentially.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

EventTimestamp

The date and time when this event occurred, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: No

EventType

The type of event that occurred.

Type: String

Valid Values: ExecutionStarted | ExecutionSucceeded | ExecutionFailed | ExecutionTimedOut | ExecutionStopped | ContextStarted | ContextSucceeded | ContextFailed | WaitStarted | WaitSucceeded | WaitCancelled | StepStarted | StepSucceeded | StepFailed | ChainedInvokeStarted | ChainedInvokeSucceeded | ChainedInvokeFailed | ChainedInvokeTimedOut | ChainedInvokeStopped | CallbackStarted | CallbackSucceeded | CallbackFailed | CallbackTimedOut | InvocationCompleted

Required: No

ExecutionFailedDetails

Details about an execution that failed.

Type: [ExecutionFailedDetails](#) object

Required: No

ExecutionStartedDetails

Details about an execution that started.

Type: [ExecutionStartedDetails](#) object

Required: No

ExecutionStoppedDetails

Details about an execution that was stopped.

Type: [ExecutionStoppedDetails](#) object

Required: No

ExecutionSucceededDetails

Details about an execution that succeeded.

Type: [ExecutionSucceededDetails](#) object

Required: No

ExecutionTimedOutDetails

Details about an execution that timed out.

Type: [ExecutionTimedOutDetails](#) object

Required: No

Id

The unique identifier for this operation.

Type: String

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

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

Required: No

InvocationCompletedDetails

Details about a function invocation that completed.

Type: [InvocationCompletedDetails](#) object

Required: No

Name

The customer-provided name for this operation.

Type: String

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

Pattern: `[\x20-\x7E]+`

Required: No

ParentId

The unique identifier of the parent operation, if this operation is running within a child context.

Type: String

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

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

Required: No

StepFailedDetails

Details about a step that failed.

Type: [StepFailedDetails](#) object

Required: No

StepStartedDetails

Details about a step that started.

Type: [StepStartedDetails](#) object

Required: No

StepSucceededDetails

Details about a step that succeeded.

Type: [StepSucceededDetails](#) object

Required: No

SubType

The subtype of the event, providing additional categorization.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

Required: No

WaitCancelledDetails

Details about a wait operation that was cancelled.

Type: [WaitCancelledDetails](#) object

Required: No

WaitStartedDetails

Details about a wait operation that started.

Type: [WaitStartedDetails](#) object

Required: No

WaitSucceededDetails

Details about a wait operation that succeeded.

Type: [WaitSucceededDetails](#) 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](#)

EventError

Error information for an event.

Contents

Payload

The error payload.

Type: [ErrorObject](#) object

Required: No

Truncated

Indicates if the error payload was truncated due to size limits.

Type: Boolean

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](#)

EventInput

Input information for an event.

Contents

Payload

The input payload.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

Required: No

Truncated

Indicates if the error payload was truncated due to size limits.

Type: Boolean

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](#)

EventResult

Result information for an event.

Contents

Payload

The result payload.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

Required: No

Truncated

Indicates if the error payload was truncated due to size limits.

Type: Boolean

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](#)

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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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) 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})?:(.*)`

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

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

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-_]+))?`

Required: No

FunctionResponseTypes

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, 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

LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see [Event source mapping logging](#).

Type: [EventSourceMappingLoggingConfig](#) object

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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) 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 SQS, 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](#)

EventSourceMappingLoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. Use this configuration object to define the level of logs for your event source mapping.

Contents

SystemLogLevel

The log level you want your event source mapping to use. Lambda event poller only sends system logs at the selected level of detail and lower, where DEBUG is the highest level and WARN is the lowest. For more information about these metrics, see [Event source mapping logging](#).

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](#)

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, including `EventCount`, `ErrorCount`, `KafkaMetrics`.

- `EventCount` to receive metrics related to the number of events processed by your event source mapping.
- `ErrorCount` (Amazon MSK and self-managed Apache Kafka) to receive metrics related to the number of errors in your event source mapping processing.
- `KafkaMetrics` (Amazon MSK and self-managed Apache Kafka) to receive metrics related to the Kafka consumers from 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 3 items.

Valid Values: `EventCount` | `ErrorCount` | `KafkaMetrics`

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](#)

Execution

Information about a [durable execution](#).

Contents

DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution, if this execution is a durable execution.

Type: String

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

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\..PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

DurableExecutionName

The unique name of the durable execution, if one was provided when the execution was started.

Type: String

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

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

Required: Yes

FunctionArn

The Amazon Resource Name (ARN) of the Lambda function.

Type: String

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

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(\..PUBLISHED)?|[a-zA-Z0-9-_-]+))?`

Required: Yes

StartTimestamp

The date and time when the durable execution started, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

Status

The current status of the durable execution.

Type: String

Valid Values: RUNNING | SUCCEEDED | FAILED | TIMED_OUT | STOPPED

Required: Yes

EndTimestamp

The date and time when the durable execution ended, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

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](#)

ExecutionDetails

Details about a [durable execution](#).

Contents

InputPayload

The original input payload provided for the durable execution.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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](#)

ExecutionFailedDetails

Details about a failed [durable execution](#).

Contents

Error

Details about the execution failure.

Type: [EventError](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ExecutionStartedDetails

Details about a durable execution that started.

Contents

ExecutionTimeout

The maximum amount of time that the durable execution is allowed to run, in seconds.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

Input

The input payload provided for the durable execution.

Type: [EventInput](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ExecutionStoppedDetails

Details about a [durable execution](#) that stopped.

Contents

Error

Details about why the execution stopped.

Type: [EventError](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ExecutionSucceededDetails

Details about a [durable execution](#) that succeeded.

Contents

Result

The response payload from the successful operation.

Type: [EventResult](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ExecutionTimedOutDetails

Details about a [durable execution](#) that timed out.

Contents

Error

Details about the execution timeout.

Type: [EventError](#) 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](#)

FileSystemConfig

Details about the connection between a Lambda function and an [Amazon EFS file system](#) or an [Amazon S3 Files file system](#).

Contents

Arn

The Amazon Resource Name (ARN) of the Amazon EFS or Amazon S3 Files access point that provides access to the file system.

Type: String

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

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}$|^arn:aws[-a-zA-Z-]*:s3files:[0-9a-z-:]+:file-system/fs-[0-9a-f]{17,40}/access-point/fsap-[0-9a-f]{17,40}`

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

CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: [CapacityProviderConfig](#) object

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

ConfigSha256

The SHA256 hash of the function configuration.

Type: String

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

DurableConfig

The function's durable execution configuration settings, if the function is configured for durability.

Type: [DurableConfig](#) object

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](#) or an [Amazon S3 Files 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

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

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(\.PUBLISHED)?|[a-zA-Z0-9-_\.] +))?`

Required: No

FunctionName

The name of the function.

Type: String

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(\.PUBLISHED)?|[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` | `VcpuLimitExceeded` | `CapacityProviderScalingLimitExceeded` | `InsufficientCapacity` | `EC2RequestLimitExceeded` | `FunctionError.InitTimeout` | `FunctionError.RuntimeInitError` | `FunctionError.ExtensionInitError` | `FunctionError.InvalidEntryPoint` | `FunctionError.InvalidWorkingDirectory` | `FunctionError.PermissionDenied` | `FunctionError.TooManyExtensions` | `FunctionError.InitResourceExhausted` | `DisallowedByVpcEncryptionControl`

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

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

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-_]+))?`

Required: No

MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

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` | `nodejs24.x` | `python3.14` | `java25` | `dotnet10`

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})?:([a-z]{12})?:([a-z]{1,2})`

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})?:([a-z]{12})?:([a-z]{1,2})`

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 | Deactivating | Deactivated | ActiveNonInvocable | Deleting

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 | DrainingDurableExecutions | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl

Required: No

TenancyConfig

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: [TenancyConfig](#) object

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

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

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-_]+))?`

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](#)

FunctionScalingConfig

Configuration that defines the scaling behavior for a Lambda Managed Instances function, including the minimum and maximum number of execution environments that can be provisioned.

Contents

MaxExecutionEnvironments

The maximum number of execution environments that can be provisioned for the function.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 15000.

Required: No

MinExecutionEnvironments

The minimum number of execution environments to maintain for the function.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 15000.

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

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

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-_.]+))?`

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](#)

FunctionVersionsByCapacityProviderListItem

Information about a function version that uses a specific capacity provider, including its ARN and current state.

Contents

FunctionArn

The Amazon Resource Name (ARN) of the function version.

Type: String

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

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(\.PUBLISHED)?|[a-zA-Z0-9-_\.] +))?`

Required: Yes

State

The current state of the function version.

Type: String

Valid Values: Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting

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](#)

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](#)

InstanceRequirements

Specifications that define the characteristics and constraints for compute instances used by the capacity provider.

Contents

AllowedInstanceTypes

A list of EC2 instance types that the capacity provider is allowed to use. If not specified, all compatible instance types are allowed.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 400 items.

Length Constraints: Minimum length of 1. Maximum length of 30.

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

Required: No

Architectures

A list of supported CPU architectures for compute instances. Valid values include `x86_64` and `arm64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64` | `arm64`

Required: No

ExcludedInstanceTypes

A list of EC2 instance types that the capacity provider should not use, even if they meet other requirements.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 400 items.

Length Constraints: Minimum length of 1. Maximum length of 30.

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](#)

InvocationCompletedDetails

Details about a function invocation that completed.

Contents

EndTimeStamp

The date and time when the invocation ended, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

RequestId

The request ID for the invocation.

Type: String

Required: Yes

StartTimeStamp

The date and time when the invocation started, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

Error

Details about the invocation failure.

Type: [EventError](#) 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})?:(.*)`

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](#)

LambdaManagedInstancesCapacityProviderConfig

Configuration for Lambda-managed instances used by the capacity provider.

Contents

CapacityProviderArn

The Amazon Resource Name (ARN) of the capacity provider.

Type: String

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}:capacity-provider:[a-zA-Z0-9-_\d]{1,12}`

Required: Yes

ExecutionEnvironmentMemoryGiBPerVCpu

The amount of memory in GiB allocated per vCPU for execution environments.

Type: Double

Valid Range: Minimum value of 2.0. Maximum value of 8.0.

Required: No

PerExecutionEnvironmentMaxConcurrency

The maximum number of concurrent execution environments that can run on each compute instance.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1600.

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})?:([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](#)

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 | nodejs24.x | python3.14 | java25 | dotnet10

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 failed invocations from [Kinesis](#), [DynamoDB](#), [self-managed Apache Kafka](#), or [Amazon MSK](#), you can configure an Amazon SNS topic, Amazon SQS queue, Amazon S3 bucket, or Kafka topic as the destination.

Note

Amazon SNS destinations have a message size limit of 256 KB. If the combined size of the function request and response payload exceeds the limit, Lambda will drop the payload when sending OnFailure event to the destination. For details on this behavior, refer to [Retaining records of asynchronous invocations](#).

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: `$|kafka://([^.]( [a-zA-Z0-9\-\_.] {0,248} ))|arn:(aws[a-zA-Z0-9-]*):( [a-zA-Z0-9\_-] )+:( [a-z]{2}((-gov)|(-iso([a-z]?)))?-[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.

Note

Amazon SNS destinations have a message size limit of 256 KB. If the combined size of the function request and response payload exceeds the limit, Lambda will drop the payload when sending OnFailure event to the destination. For details on this behavior, refer to [Retaining records of asynchronous invocations](#).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 350.

Pattern: `$|kafka://([^.]( [a-zA-Z0-9\-\_.] {0,248} ))|arn:(aws[a-zA-Z0-9-]*) : ([a-zA-Z0-9\_-] )+ : ([a-z]{2} ((-gov) | (-iso( [a-z]? ))) )? - [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](#)

Operation

Information about an operation within a durable execution.

Contents

Id

The unique identifier for this operation.

Type: String

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

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

Required: Yes

StartTimestamp

The date and time when the operation started, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

Status

The current status of the operation.

Type: String

Valid Values: STARTED | PENDING | READY | SUCCEEDED | FAILED | CANCELLED | TIMED_OUT | STOPPED

Required: Yes

Type

The type of operation.

Type: String

Valid Values: EXECUTION | CONTEXT | STEP | WAIT | CALLBACK | CHAINED_INVOKE

Required: Yes

CallbackDetails

Contains details about a callback operation in a durable execution, including the callback token and timeout configuration.

Type: [CallbackDetails](#) object

Required: No

ChainedInvokeDetails

Contains details about a chained function invocation in a durable execution, including the target function and invocation parameters.

Type: [ChainedInvokeDetails](#) object

Required: No

ContextDetails

Details about the context, if this operation represents a context.

Type: [ContextDetails](#) object

Required: No

EndTimestamp

The date and time when the operation ended, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: No

ExecutionDetails

Details about the execution, if this operation represents an execution.

Type: [ExecutionDetails](#) object

Required: No

Name

The customer-provided name for this operation.

Type: String

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

Pattern: `[\x20-\x7E]+`

Required: No

ParentId

The unique identifier of the parent operation, if this operation is running within a child context.

Type: String

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

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

Required: No

StepDetails

Details about the step, if this operation represents a step.

Type: [StepDetails](#) object

Required: No

SubType

The subtype of the operation, providing additional categorization.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

Required: No

WaitDetails

Details about the wait operation, if this operation represents a wait.

Type: [WaitDetails](#) 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](#)

OperationUpdate

An update to be applied to an operation during checkpointing.

Contents

Action

The action to take on the operation.

Type: String

Valid Values: START | SUCCEED | FAIL | RETRY | CANCEL

Required: Yes

Id

The unique identifier for this operation.

Type: String

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

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

Required: Yes

Type

The type of operation to update.

Type: String

Valid Values: EXECUTION | CONTEXT | STEP | WAIT | CALLBACK | CHAINED_INVOKE

Required: Yes

CallbackOptions

Configuration options for callback operations in durable executions, including timeout settings and retry behavior.

Type: [CallbackOptions](#) object

Required: No

ChainedInvokeOptions

Configuration options for chained function invocations in durable executions, including retry settings and timeout configuration.

Type: [ChainedInvokeOptions](#) object

Required: No

ContextOptions

Options for context operations.

Type: [ContextOptions](#) object

Required: No

Error

The error information for failed operations.

Type: [ErrorObject](#) object

Required: No

Name

The customer-provided name for this operation.

Type: String

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

Pattern: `[\x20-\x7E]+`

Required: No

ParentId

The unique identifier of the parent operation, if this operation is running within a child context.

Type: String

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

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

Required: No

Payload

The payload for successful operations. The maximum payload size is 6 MB for synchronous EXECUTION operations (RequestResponse invocationType), 1 MB for asynchronous EXECUTION (Event invocationType) and CHAINED_INVOKE operations, and 256 KB for CONTEXT, STEP, WAIT, and CALLBACK operations.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

Required: No

StepOptions

Options for step operations.

Type: [StepOptions](#) object

Required: No

SubType

The subtype of the operation, providing additional categorization.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

Required: No

WaitOptions

Options for wait operations.

Type: [WaitOptions](#) 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](#)

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

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

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-_]+))?`

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.

Contents

MaximumPollers

The maximum number of event pollers this event source can scale up to. For Amazon SQS events source mappings, default is 200, and minimum value allowed is 2. For Amazon MSK and self-managed Apache Kafka event source mappings, default is 200, and minimum value allowed is 1.

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. For Amazon SQS events source mappings, default is 2, and minimum 2 required. For Amazon MSK and self-managed Apache Kafka event source mappings, default is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 200.

Required: No

PollerGroupName

(Amazon MSK and self-managed Apache Kafka) The name of the provisioned poller group. Use this option to group multiple ESMs within the event source's VPC to share Event Poller Unit (EPU) capacity. You can use this option to optimize Provisioned mode costs for your ESMs. You can group up to 100 ESMs per poller group and aggregate maximum pollers across all ESMs in a group cannot exceed 2000.

Type: String

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

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](#)

RetryDetails

Information about retry attempts for an operation.

Contents

CurrentAttempt

The current attempt number for this operation.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

NextAttemptDelaySeconds

The delay before the next retry attempt, in seconds.

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](#)

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](#)

StepDetails

Details about a step operation.

Contents

Attempt

The current attempt number for this step.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

Error

Details about the step failure.

Type: [ErrorObject](#) object

Required: No

NextAttemptTimestamp

The date and time when the next attempt is scheduled, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD). Only populated when the step is in a pending state.

Type: Timestamp

Required: No

Result

The JSON response payload from the step operation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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](#)

StepFailedDetails

Details about a step that failed.

Contents

Error

Details about the step failure.

Type: [EventError](#) object

Required: Yes

RetryDetails

Information about retry attempts for this step operation.

Type: [RetryDetails](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

StepOptions

Configuration options for a step operation.

Contents

NextAttemptDelaySeconds

The delay in seconds before the next retry attempt.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 31622400.

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](#)

StepStartedDetails

Details about a step that has started.

Contents

The members of this exception structure are context-dependent.

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](#)

StepSucceededDetails

Details about a step that succeeded.

Contents

Result

The response payload from the successful operation.

Type: [EventResult](#) object

Required: Yes

RetryDetails

Information about retry attempts for this step operation.

Type: [RetryDetails](#) object

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for 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](#)

TargetTrackingScalingPolicy

A scaling policy for the capacity provider that automatically adjusts capacity to maintain a target value for a specific metric.

Contents

PredefinedMetricType

The predefined metric type to track for scaling decisions.

Type: String

Valid Values: LambdaCapacityProviderAverageCPUUtilization

Required: Yes

TargetValue

The target value for the metric that the scaling policy attempts to maintain through scaling actions.

Type: Double

Valid Range: Minimum value of 0.0. Maximum value of 100.0.

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](#)

TenancyConfig

Specifies the tenant isolation mode configuration for a Lambda function. This allows you to configure specific tenant isolation strategies for your function invocations. Tenant isolation configuration cannot be modified after function creation.

Contents

TenantIsolationMode

Tenant isolation mode allows for invocation to be sent to a corresponding execution environment dedicated to a specific tenant ID.

Type: String

Valid Values: PER_TENANT

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](#)

TraceHeader

Contains trace headers for the Lambda durable execution.

Contents

XAmznTraceId

The AWS X-Ray trace header associated with the durable execution.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 8192.

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](#)

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](#)

WaitCancelledDetails

Details about a wait operation that was cancelled.

Contents

Error

Details about why the wait operation was cancelled.

Type: [EventError](#) 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](#)

WaitDetails

Details about a wait operation.

Contents

ScheduledEndTimestamp

The date and time when the wait operation is scheduled to complete, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

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](#)

WaitOptions

Specifies how long to pause the durable execution.

Contents

WaitSeconds

The duration to wait, in seconds.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 31622400.

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](#)

WaitStartedDetails

Details about a wait operation that has started.

Contents

Duration

The duration to wait, in seconds.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

ScheduledEndTimestamp

The date and time when the wait operation is scheduled to complete, in [ISO-8601 format](#) (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

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](#)

WaitSucceededDetails

Details about a wait operation that succeeded.

Contents

Duration

The wait duration, in seconds.

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](#)

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*.

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 Error Types

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

AccessDeniedException

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

HTTP Status Code: 403

ExpiredTokenException

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

HTTP Status Code: 403

IncompleteSignature

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

HTTP Status Code: 403

InternalFailure

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

HTTP Status Code: 500

MalformedHttpRequestException

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

HTTP Status Code: 400

NotAuthorized

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

HTTP Status Code: 401

OptInRequired

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

HTTP Status Code: 403

RequestAbortedException

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

HTTP Status Code: 400

RequestEntityTooLargeException

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

HTTP Status Code: 413

RequestTimeoutException

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

HTTP Status Code: 408

ServiceUnavailable

The service is temporarily unavailable. Try again later.

HTTP Status Code: 503

ThrottlingException

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

HTTP Status Code: 400

UnknownOperationException

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

HTTP Status Code: 404

UnrecognizedClientException

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

HTTP Status Code: 403

ValidationError

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

HTTP Status Code: 400