API Reference

AWS CloudTrail

API Version 2013-11-01

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AWS CloudTrail: API Reference

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Table of Contents

Welcome **1**
Actions **2**
AddTags 5
Request Syntax 5
Request Parameters 5
Response Elements 6
Errors 6
See Also 9
CancelQuery 10
Request Syntax 10
Request Parameters 10
Response Syntax 11
Response Elements 11
Errors 12
See Also 14
CreateChannel 15
Request Syntax 15
Request Parameters 15
Response Syntax 17
Response Elements 17
Errors 18
See Also 20
CreateDashboard 21
Request Syntax 21
Request Parameters 22
Response Syntax 23
Response Elements 24
Errors 25
Examples 27
See Also 29
CreateEventDataStore 31
Request Syntax 31
Request Parameters 32
Response Syntax 36

Response Elements ... 37
Errors ... 39
See Also ... 43
CreateTrail ... 44
Request Syntax ... 44
Request Parameters ... 44
Response Syntax ... 48
Response Elements ... 48
Errors ... 51
See Also ... 56
DeleteChannel ... 57
Request Syntax ... 57
Request Parameters ... 57
Response Elements ... 57
Errors ... 58
See Also ... 58
DeleteDashboard ... 60
Request Syntax ... 60
Request Parameters ... 60
Response Elements ... 60
Errors ... 61
See Also ... 61
DeleteEventDataStore ... 63
Request Syntax ... 63
Request Parameters ... 63
Response Elements ... 64
Errors ... 64
See Also ... 66
DeleteResourcePolicy ... 67
Request Syntax ... 67
Request Parameters ... 67
Response Elements ... 67
Errors ... 68
See Also ... 69
DeleteTrail ... 70
Request Syntax ... 70

Request Parameters ... 70
Response Elements ... 71
Errors ... 71
See Also ... 73
DeregisterOrganizationDelegatedAdmin ... 74
Request Syntax ... 74
Request Parameters ... 74
Response Elements ... 74
Errors ... 74
See Also ... 76
DescribeQuery ... 78
Request Syntax ... 78
Request Parameters ... 78
Response Syntax ... 80
Response Elements ... 80
Errors ... 82
See Also ... 83
DescribeTrails ... 85
Request Syntax ... 85
Request Parameters ... 85
Response Syntax ... 86
Response Elements ... 86
Errors ... 87
See Also ... 88
DisableFederation ... 90
Request Syntax ... 90
Request Parameters ... 90
Response Syntax ... 91
Response Elements ... 91
Errors ... 91
Examples ... 94
See Also ... 94
EnableFederation ... 95
Request Syntax ... 95
Request Parameters ... 95
Response Syntax ... 96

Response Elements 96
Errors 97
Examples 100
See Also 100
GenerateQuery 101
Request Syntax 101
Request Parameters 101
Response Syntax 102
Response Elements 102
Errors 103
Examples 104
See Also 105
GetChannel 106
Request Syntax 106
Request Parameters 106
Response Syntax 106
Response Elements 107
Errors 109
See Also 109
GetDashboard 111
Request Syntax 111
Request Parameters 111
Response Syntax 111
Response Elements 112
Errors 114
See Also 114
GetEventConfiguration 116
Request Syntax 116
Request Parameters 116
Response Syntax 116
Response Elements 117
Errors 118
See Also 120
GetEventDataStore 121
Request Syntax 121
Request Parameters 121

Response Syntax 121
Response Elements 122
Errors 125
See Also 126
GetEventSelectors 128
Request Syntax 128
Request Parameters 128
Response Syntax 129
Response Elements 130
Errors 130
See Also 132
GetImport 133
Request Syntax 133
Request Parameters 133
Response Syntax 133
Response Elements 134
Errors 136
See Also 136
GetInsightSelectors 138
Request Syntax 138
Request Parameters 138
Response Syntax 139
Response Elements 139
Errors 140
See Also 142
GetQueryResults 144
Request Syntax 144
Request Parameters 144
Response Syntax 146
Response Elements 146
Errors 147
See Also 149
GetResourcePolicy 150
Request Syntax 150
Request Parameters 150
Response Syntax 151

Response Elements 151
Errors 152
See Also 153
GetTrail 154
Request Syntax 154
Request Parameters 154
Response Syntax 154
Response Elements 155
Errors 155
See Also 156
GetTrailStatus 158
Request Syntax 158
Request Parameters 158
Response Syntax 159
Response Elements 159
Errors 162
See Also 163
ListChannels 165
Request Syntax 165
Request Parameters 165
Response Syntax 166
Response Elements 166
Errors 167
See Also 167
ListDashboards 168
Request Syntax 168
Request Parameters 168
Response Syntax 169
Response Elements 169
Errors 170
See Also 170
ListEventDataStores 172
Request Syntax 172
Request Parameters 172
Response Syntax 173
Response Elements 173

Errors ... 174
See Also ... 175
ListImportFailures ... 176
Request Syntax ... 176
Request Parameters ... 176
Response Syntax ... 177
Response Elements ... 177
Errors ... 178
See Also ... 178
ListImports ... 180
Request Syntax ... 180
Request Parameters ... 180
Response Syntax ... 181
Response Elements ... 182
Errors ... 182
See Also ... 183
ListInsightsData ... 184
Request Syntax ... 184
Request Parameters ... 185
Response Syntax ... 186
Response Elements ... 187
Errors ... 188
See Also ... 188
ListInsightsMetricData ... 190
Request Syntax ... 191
Request Parameters ... 191
Response Syntax ... 194
Response Elements ... 194
Errors ... 196
Examples ... 197
See Also ... 198
ListPublicKeys ... 199
Request Syntax ... 199
Request Parameters ... 199
Response Syntax ... 200
Response Elements ... 200

Errors ... 201
See Also ... 201
ListQueries ... 203
Request Syntax ... 203
Request Parameters ... 203
Response Syntax ... 205
Response Elements ... 205
Errors ... 206
See Also ... 207
ListTags ... 209
Request Syntax ... 209
Request Parameters ... 209
Response Syntax ... 210
Response Elements ... 210
Errors ... 210
See Also ... 213
ListTrails ... 214
Request Syntax ... 214
Request Parameters ... 214
Response Syntax ... 214
Response Elements ... 215
Errors ... 215
See Also ... 215
LookupEvents ... 217
Request Syntax ... 218
Request Parameters ... 218
Response Syntax ... 220
Response Elements ... 220
Errors ... 221
See Also ... 222
PutEventConfiguration ... 223
Request Syntax ... 223
Request Parameters ... 223
Response Syntax ... 224
Response Elements ... 225
Errors ... 226

See Also ... 229
PutEventSelectors ... 231
Request Syntax ... 232
Request Parameters ... 233
Response Syntax ... 234
Response Elements ... 235
Errors ... 235
Examples ... 238
See Also ... 240
PutInsightSelectors ... 241
Request Syntax ... 242
Request Parameters ... 242
Response Syntax ... 243
Response Elements ... 244
Errors ... 245
Examples ... 248
See Also ... 249
PutResourcePolicy ... 251
Request Syntax ... 251
Request Parameters ... 251
Response Syntax ... 252
Response Elements ... 252
Errors ... 253
See Also ... 254
RegisterOrganizationDelegatedAdmin ... 256
Request Syntax ... 256
Request Parameters ... 256
Response Elements ... 256
Errors ... 256
See Also ... 259
RemoveTags ... 260
Request Syntax ... 260
Request Parameters ... 260
Response Elements ... 261
Errors ... 261
See Also ... 264

RestoreEventDataStore ... 265
Request Syntax ... 265
Request Parameters ... 265
Response Syntax ... 266
Response Elements ... 266
Errors ... 269
See Also ... 271
SearchSampleQueries ... 272
Request Syntax ... 272
Request Parameters ... 272
Response Syntax ... 273
Response Elements ... 273
Errors ... 274
See Also ... 274
StartDashboardRefresh ... 276
Request Syntax ... 276
Request Parameters ... 276
Response Syntax ... 277
Response Elements ... 277
Errors ... 278
Examples ... 278
See Also ... 279
StartEventDataStoreIngestion ... 281
Request Syntax ... 281
Request Parameters ... 281
Response Elements ... 282
Errors ... 282
See Also ... 283
StartImport ... 285
Request Syntax ... 285
Request Parameters ... 286
Response Syntax ... 287
Response Elements ... 288
Errors ... 289
See Also ... 291
StartLogging ... 292

Request Syntax ... 292
Request Parameters ... 292
Response Elements ... 292
Errors ... 292
See Also ... 295
StartQuery ... 296
Request Syntax ... 296
Request Parameters ... 296
Response Syntax ... 298
Response Elements ... 298
Errors ... 299
Examples ... 301
See Also ... 301
StopEventDataStoreIngestion ... 303
Request Syntax ... 303
Request Parameters ... 303
Response Elements ... 304
Errors ... 304
See Also ... 305
StopImport ... 307
Request Syntax ... 307
Request Parameters ... 307
Response Syntax ... 307
Response Elements ... 308
Errors ... 310
See Also ... 310
StopLogging ... 312
Request Syntax ... 312
Request Parameters ... 312
Response Elements ... 312
Errors ... 312
See Also ... 315
UpdateChannel ... 316
Request Syntax ... 316
Request Parameters ... 316
Response Syntax ... 317

Response Elements 317
Errors 318
See Also 320
UpdateDashboard 321
Request Syntax 321
Request Parameters 322
Response Syntax 323
Response Elements 323
Errors 325
Examples 326
See Also 328
UpdateEventDataStore 330
Request Syntax 330
Request Parameters 331
Response Syntax 335
Response Elements 336
Errors 338
See Also 343
UpdateTrail 344
Request Syntax 344
Request Parameters 344
Response Syntax 348
Response Elements 348
Errors 351
See Also 357
Data Types 358
AdvancedEventSelector 360
Contents 361
See Also 362
AdvancedFieldSelector 363
Contents 363
See Also 368
AggregationConfiguration 369
Contents 369
See Also 369
Channel 370

Contents 370
See Also 370
ContextKeySelector 372
Contents 372
See Also 372
DashboardDetail 373
Contents 373
See Also 373
DataResource 374
Contents 375
See Also 377
Destination 378
Contents 378
See Also 378
Event 380
Contents 380
See Also 381
EventDataStore 382
Contents 382
See Also 384
EventSelector 385
Contents 385
See Also 386
ImportFailureListItem 388
Contents 388
See Also 389
ImportsListItem 390
Contents 390
See Also 391
ImportSource 392
Contents 392
See Also 392
ImportStatistics 393
Contents 393
See Also 394
IngestionStatus 395

Contents ... 395
See Also ... 396
InsightSelector ... 397
Contents ... 397
See Also ... 398
LookupAttribute ... 399
Contents ... 399
See Also ... 399
PartitionKey ... 400
Contents ... 400
See Also ... 400
PublicKey ... 401
Contents ... 401
See Also ... 401
Query ... 403
Contents ... 403
See Also ... 403
QueryStatistics ... 405
Contents ... 405
See Also ... 405
QueryStatisticsForDescribeQuery ... 406
Contents ... 406
See Also ... 407
RefreshSchedule ... 408
Contents ... 408
See Also ... 408
RefreshScheduleFrequency ... 410
Contents ... 410
See Also ... 410
RequestWidget ... 412
Contents ... 412
See Also ... 413
Resource ... 414
Contents ... 414
See Also ... 414
ResourceTag ... 415

Contents ... 415
See Also ... 415
S3ImportSource ... 416
Contents ... 416
See Also ... 416
SearchSampleQueriesSearchResult ... 417
Contents ... 417
See Also ... 417
SourceConfig ... 419
Contents ... 419
See Also ... 419
Tag ... 420
Contents ... 420
See Also ... 420
Trail ... 421
Contents ... 421
See Also ... 424
TrailInfo ... 425
Contents ... 425
See Also ... 425
Widget ... 426
Contents ... 426
See Also ... 427
Common Parameters ... 428
Common Error Types ... 431

Welcome

This is the CloudTrail API Reference. It provides descriptions of actions, data types, common parameters, and common errors for CloudTrail.

CloudTrail is a web service that records AWS API calls for your AWS account and delivers log files to an Amazon S3 bucket. The recorded information includes the identity of the user, the start time of the AWS API call, the source IP address, the request parameters, and the response elements returned by the service.

> **Note**
>
> As an alternative to the API, you can use one of the AWS SDKs, which consist of libraries and sample code for various programming languages and platforms (Java, Ruby, .NET, iOS, Android, etc.). The SDKs provide programmatic access to AWS CloudTrail. For example, the SDKs handle cryptographically signing requests, managing errors, and retrying requests automatically. For more information about the AWS SDKs, including how to download and install them, see Tools to Build on AWS.

See the AWS CloudTrail User Guide for information about the data that is included with each AWS API call listed in the log files.

This document was last published on October 15, 2026.

Actions

The following actions are supported:

- AddTags
- CancelQuery
- CreateChannel
- CreateDashboard
- CreateEventDataStore
- CreateTrail
- DeleteChannel
- DeleteDashboard
- DeleteEventDataStore
- DeleteResourcePolicy
- DeleteTrail
- DeregisterOrganizationDelegatedAdmin
- DescribeQuery
- DescribeTrails
- DisableFederation
- EnableFederation
- GenerateQuery
- GetChannel
- GetDashboard
- GetEventConfiguration
- GetEventDataStore
- GetEventSelectors
- GetImport
- GetInsightSelectors
- GetQueryResults
- GetResourcePolicy
- GetTrail

- GetTrailStatus
- ListChannels
- ListDashboards
- ListEventDataStores
- ListImportFailures
- ListImports
- ListInsightsData
- ListInsightsMetricData
- ListPublicKeys
- ListQueries
- ListTags
- ListTrails
- LookupEvents
- PutEventConfiguration
- PutEventSelectors
- PutInsightSelectors
- PutResourcePolicy
- RegisterOrganizationDelegatedAdmin
- RemoveTags
- RestoreEventDataStore
- SearchSampleQueries
- StartDashboardRefresh
- StartEventDataStoreIngestion
- StartImport
- StartLogging
- StartQuery
- StopEventDataStoreIngestion
- StopImport
- StopLogging
- UpdateChannel

- UpdateDashboard
- UpdateEventDataStore
- UpdateTrail

AddTags

Adds one or more tags to a trail, event data store, dashboard, or channel, up to a limit of 50. Overwrites an existing tag's value when a new value is specified for an existing tag key. Tag key names must be unique; you cannot have two keys with the same name but different values. If you specify a key without a value, the tag will be created with the specified key and a value of null. You can tag a trail or event data store that applies to all AWS Regions only from the Region in which the trail or event data store was created (also known as its home Region).

Request Syntax

```
{
   "ResourceId": "string",
   "TagsList": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceId

Specifies the ARN of the trail, event data store, dashboard, or channel to which one or more tags will be added.

The format of a trail ARN is: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The format of an event data store ARN is: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The format of a dashboard ARN is: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The format of a channel ARN is: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

Type: String

Required: Yes

TagsList

Contains a list of tags, up to a limit of 50

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

Required: Yes

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.

ChannelARNInvalidException

This exception is thrown when the specified value of `ChannelARN` is not valid.

HTTP Status Code: 400

ChannelNotFoundException

This exception is thrown when CloudTrail cannot find the specified channel.

HTTP Status Code: 400

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InvalidTagParameterException

This exception is thrown when the specified tag key or values are not valid. It can also occur if there are duplicate tags or too many tags on the resource.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

ResourceTypeNotSupportedException

This exception is thrown when the specified resource type is not supported by CloudTrail.

HTTP Status Code: 400

TagsLimitExceededException

The number of tags per trail, event data store, dashboard, or channel has exceeded the permitted amount. Currently, the limit is 50.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

CancelQuery

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Cancels a query if the query is not in a terminated state, such as `CANCELLED`, `FAILED`, `TIMED_OUT`, or `FINISHED`. You must specify an ARN value for `EventDataStore`. The ID of the query that you want to cancel is also required. When you run `CancelQuery`, the query status might show as `CANCELLED` even if the operation is not yet finished.

Request Syntax

```
{
   "EventDataStore": "string",
   "EventDataStoreOwnerAccountId": "string",
   "QueryId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

This parameter has been deprecated.

The ARN (or the ID suffix of the ARN) of an event data store on which the specified query is running.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

EventDataStoreOwnerAccountId

The account ID of the event data store owner.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: `\d+`

Required: No

QueryId

The ID of the query that you want to cancel. The `QueryId` comes from the response of a `StartQuery` operation.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: Yes

Response Syntax

```
{
   "EventDataStoreOwnerAccountId": "string",
   "QueryId": "string",
   "QueryStatus": "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.

EventDataStoreOwnerAccountId

The account ID of the event data store owner.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: `\d+`

QueryId

The ID of the canceled query.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

QueryStatus

Shows the status of a query after a `CancelQuery` request. Typically, the values shown are either `RUNNING` or `CANCELLED`.

Type: String

Valid Values: `QUEUED | RUNNING | FINISHED | FAILED | CANCELLED | TIMED_OUT`

Errors

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

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InactiveQueryException

The specified query cannot be canceled because it is in the `FINISHED`, `FAILED`, `TIMED_OUT`, or `CANCELLED` state.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

QueryIdNotFoundException

The query ID does not exist or does not map to a query.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

CreateChannel

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Creates a channel for CloudTrail to ingest events from a partner or external source. After you create a channel, a CloudTrail Lake event data store can log events from the partner or source that you specify.

Request Syntax

```
{
   "Destinations": [
      {
         "Location": "string",
         "Type": "string"
      }
   ],
   "Name": "string",
   "Source": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Destinations

One or more event data stores to which events arriving through a channel will be logged.

Type: Array of Destination objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Required: Yes

Name

The name of the channel.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Required: Yes

Source

The name of the partner or external event source. You cannot change this name after you create the channel. A maximum of one channel is allowed per source.

A source can be either `Custom` for all valid non-AWS events, or the name of a partner event source. For information about the source names for available partners, see Additional information about integration partners in the CloudTrail User Guide.

Type: String

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

Pattern: `.*`

Required: Yes

Tags

A list of tags.

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

Required: No

Response Syntax

```
{
   "ChannelArn": "string",
   "Destinations": [
      {
         "Location": "string",
         "Type": "string"
      }
   ],
   "Name": "string",
   "Source": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "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.

ChannelArn

The Amazon Resource Name (ARN) of the new channel.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Destinations

The event data stores that log the events arriving through the channel.

Type: Array of Destination objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Name

The name of the new channel.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Source

The partner or external event source name.

Type: String

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

Pattern: `.*`

Tags

A list of tags.

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

Errors

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

ChannelAlreadyExistsException

This exception is thrown when the provided channel already exists.

HTTP Status Code: 400

ChannelMaxLimitExceededException

This exception is thrown when the maximum number of channels limit is exceeded.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InvalidEventDataStoreCategoryException

This exception is thrown when event categories of specified event data stores are not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidSourceException

This exception is thrown when the specified value of `Source` is not valid.

HTTP Status Code: 400

InvalidTagParameterException

This exception is thrown when the specified tag key or values are not valid. It can also occur if there are duplicate tags or too many tags on the resource.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

TagsLimitExceededException

The number of tags per trail, event data store, dashboard, or channel has exceeded the permitted amount. Currently, the limit is 50.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

CreateDashboard

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Creates a custom dashboard or the Highlights dashboard.

- **Custom dashboards** - Custom dashboards allow you to query events in any event data store type. You can add up to 10 widgets to a custom dashboard. You can manually refresh a custom dashboard, or you can set a refresh schedule.
- **Highlights dashboard** - You can create the Highlights dashboard to see a summary of key user activities and API usage across all your event data stores. CloudTrail Lake manages the Highlights dashboard and refreshes the dashboard every 6 hours. To create the Highlights dashboard, you must set and enable a refresh schedule.

CloudTrail runs queries to populate the dashboard's widgets during a manual or scheduled refresh. CloudTrail must be granted permissions to run the `StartQuery` operation on your behalf. To provide permissions, run the `PutResourcePolicy` operation to attach a resource-based policy to each event data store. For more information, see Example: Allow CloudTrail to run queries to populate a dashboard in the *AWS CloudTrail User Guide*.

To set a refresh schedule, CloudTrail must be granted permissions to run the `StartDashboardRefresh` operation to refresh the dashboard on your behalf. To provide permissions, run the `PutResourcePolicy` operation to attach a resource-based policy to the dashboard. For more information, see Resource-based policy example for a dashboard in the *AWS CloudTrail User Guide*.

For more information about dashboards, see CloudTrail Lake dashboards in the *AWS CloudTrail User Guide*.

Request Syntax

```
{
```

```
    "Name": "string",
    "RefreshSchedule": {
       "Frequency": {
          "Unit": "string",
          "Value": number
       },
       "Status": "string",
       "TimeOfDay": "string"
    },
    "TagsList": [
       {
          "Key": "string",
          "Value": "string"
       }
    ],
    "TerminationProtectionEnabled": boolean,
    "Widgets": [
       {
          "QueryParameters": [ "string" ],
          "QueryStatement": "string",
          "ViewProperties": {
             "string" : "string"
          }
       }
    ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Name

The name of the dashboard. The name must be unique to your account.

To create the Highlights dashboard, the name must be `AWSCloudTrail-Highlights`.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Required: Yes

RefreshSchedule

The refresh schedule configuration for the dashboard.

To create the Highlights dashboard, you must set a refresh schedule and set the `Status` to `ENABLED`. The `Unit` for the refresh schedule must be `HOURS` and the `Value` must be 6.

Type: RefreshSchedule object

Required: No

TagsList

A list of tags.

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

Required: No

TerminationProtectionEnabled

Specifies whether termination protection is enabled for the dashboard. If termination protection is enabled, you cannot delete the dashboard until termination protection is disabled.

Type: Boolean

Required: No

Widgets

An array of widgets for a custom dashboard. A custom dashboard can have a maximum of ten widgets.

You do not need to specify widgets for the Highlights dashboard.

Type: Array of RequestWidget objects

Required: No

Response Syntax

```
{
```

```
    "DashboardArn": "string",
    "Name": "string",
    "RefreshSchedule": {
       "Frequency": {
          "Unit": "string",
          "Value": number
       },
       "Status": "string",
       "TimeOfDay": "string"
    },
    "TagsList": [
       {
          "Key": "string",
          "Value": "string"
       }
    ],
    "TerminationProtectionEnabled": boolean,
    "Type": "string",
    "Widgets": [
       {
          "QueryAlias": "string",
          "QueryParameters": [ "string" ],
          "QueryStatement": "string",
          "ViewProperties": {
             "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.

DashboardArn

The ARN for the dashboard.

Type: String

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

Name

The name of the dashboard.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

RefreshSchedule

The refresh schedule for the dashboard, if configured.

Type: RefreshSchedule object

TagsList

A list of tags.

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

TerminationProtectionEnabled

Indicates whether termination protection is enabled for the dashboard.

Type: Boolean

Type

The dashboard type.

Type: String

Valid Values: `MANAGED | CUSTOM`

Widgets

An array of widgets for the dashboard.

Type: Array of Widget objects

Errors

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

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InvalidQueryStatementException

The query that was submitted has validation errors, or uses incorrect syntax or unsupported keywords. For more information about writing a query, see Create or edit a query in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

InvalidTagParameterException

This exception is thrown when the specified tag key or values are not valid. It can also occur if there are duplicate tags or too many tags on the resource.

HTTP Status Code: 400

ServiceQuotaExceededException

This exception is thrown when the quota is exceeded. For information about CloudTrail quotas, see Service quotas in the *AWS General Reference*.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example creates a custom dashboard named `AccountActivityDashboard` with four widgets and a refresh schedule of every 12 hours. This example enables termination protection to prevent the dashboard from being accidentally deleted.

```
{
  "Name": "AccountActivityDashboard",
  "RefreshSchedule": {
    "Frequency": {
      "Unit": "HOURS",
      "Value": 12
    },
    "Status": "ENABLED",
    "TimeOfDay": "00:00"
  },
  "TerminationProtectionEnabled": true,
  "Widgets": [
    {
      "ViewProperties": {
        "Height": "2",
        "Width": "4",
        "Title": "TopErrors",
        "View": "Table"
      },
      "QueryStatement": "SELECT errorCode, COUNT(*) AS eventCount FROM eds WHERE
 eventTime > '?' AND eventTime < '?' AND (errorCode is not null) GROUP BY errorCode
 ORDER BY eventCount DESC LIMIT 100",
```

```
      "QueryParameters": ["$StartTime$", "$EndTime$"]
    },
    {
      "ViewProperties": {
        "Height": "2",
        "Width": "4",
        "Title": "MostActiveRegions",
        "View": "PieChart",
        "LabelColumn": "awsRegion",
        "ValueColumn": "eventCount",
        "FilterColumn": "awsRegion"
      },
      "QueryStatement": "SELECT awsRegion, COUNT(*) AS eventCount FROM eds where
 eventTime > '?' and eventTime < '?' GROUP BY awsRegion ORDER BY eventCount LIMIT 100",
      "QueryParameters": ["$StartTime$", "$EndTime$"]
    },
    {
      "ViewProperties": {
        "Height": "2",
        "Width": "4",
        "Title": "AccountActivity",
        "View": "LineChart",
        "YAxisColumn": "eventCount",
        "XAxisColumn": "eventDate",
        "FilterColumn": "readOnly"
      },
      "QueryStatement": "SELECT DATE_TRUNC('?', eventTime) AS eventDate, IF(readOnly,
 'read', 'write') AS readOnly, COUNT(*) as eventCount FROM eds WHERE eventTime >
 '?' AND eventTime < '?' GROUP BY DATE_TRUNC('?', eventTime), readOnly ORDER BY
 DATE_TRUNC('?', eventTime), readOnly",
      "QueryParameters": ["$Period$", "$StartTime$", "$EndTime$", "$Period$", "$Period
$"]
    },
    {
      "ViewProperties": {
        "Height": "2",
        "Width": "4",
        "Title": "TopServices",
        "View": "BarChart",
        "LabelColumn": "service",
        "ValueColumn": "eventCount",
        "FilterColumn": "service",
        "Orientation": "Horizontal"
      },
```

```
      "QueryStatement": "SELECT REPLACE(eventSource, '.amazonaws.com') AS service,
 COUNT(*) AS eventCount FROM eds WHERE eventTime > '?' AND eventTime < '?' GROUP BY
 eventSource ORDER BY eventCount DESC LIMIT 100",
      "QueryParameters": ["$StartTime$", "$EndTime$"]
    }
  ]
}
```

Example

The following example creates the Highlights dashboard. The Highlights dashboard requires that you set and enable a refresh schedule for every 6 hours.

```
{
  "Name": "AWSCloudTrail-Highlights",
  "RefreshSchedule": {
    "Frequency": {
      "Unit": "HOURS",
      "Value": 6
    },
    "Status": "ENABLED"
  },
  "TerminationProtectionEnabled": true
}
```

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 (Boto3)
- AWS SDK for Ruby V3

CreateEventDataStore

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Creates a new event data store.

Request Syntax

```
{
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
         ],
         "Name": "string"
      }
   ],
   "BillingMode": "string",
   "KmsKeyId": "string",
   "MultiRegionEnabled": boolean,
   "Name": "string",
   "OrganizationEnabled": boolean,
   "RetentionPeriod": number,
   "StartIngestion": boolean,
   "TagsList": [
      {
         "Key": "string",
```

```
        "Value": "string"
      }
    ],
    "TerminationProtectionEnabled": boolean
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

AdvancedEventSelectors

The advanced event selectors to use to select the events for the data store. You can configure up to five advanced event selectors for each event data store.

For more information about how to use advanced event selectors to log CloudTrail events, see Log events by using advanced event selectors in the CloudTrail User Guide.

For more information about how to use advanced event selectors to include AWS Config configuration items in your event data store, see Create an event data store for AWS Config configuration items in the CloudTrail User Guide.

For more information about how to use advanced event selectors to include events outside of AWS events in your event data store, see Create an integration to log events from outside AWS in the CloudTrail User Guide.

Type: Array of AdvancedEventSelector objects

Required: No

BillingMode

The billing mode for the event data store determines the cost for ingesting events and the default and maximum retention period for the event data store.

The following are the possible values:

- `EXTENDABLE_RETENTION_PRICING` - This billing mode is generally recommended if you want a flexible retention period of up to 3653 days (about 10 years). The default retention period for this billing mode is 366 days.

- `FIXED_RETENTION_PRICING` - This billing mode is recommended if you expect to ingest more than 25 TB of event data per month and need a retention period of up to 2557 days (about 7 years). The default retention period for this billing mode is 2557 days.

The default value is `EXTENDABLE_RETENTION_PRICING`.

For more information about CloudTrail pricing, see AWS CloudTrail Pricing and Managing CloudTrail Lake costs.

Type: String

Valid Values: `EXTENDABLE_RETENTION_PRICING | FIXED_RETENTION_PRICING`

Required: No

KmsKeyId

Specifies the AWS KMS key ID to use to encrypt the events delivered by CloudTrail. The value can be an alias name prefixed by `alias/`, a fully specified ARN to an alias, a fully specified ARN to a key, or a globally unique identifier.

> **Important**
>
> Disabling or deleting the KMS key, or removing CloudTrail permissions on the key, prevents CloudTrail from logging events to the event data store, and prevents users from querying the data in the event data store that was encrypted with the key. After you associate an event data store with a KMS key, the KMS key cannot be removed or changed. Before you disable or delete a KMS key that you are using with an event data store, delete or back up your event data store.

CloudTrail also supports AWS KMS multi-Region keys. For more information about multi-Region keys, see Using multi-Region keys in the *AWS Key Management Service Developer Guide*.

Examples:

- `alias/MyAliasName`
- `arn:aws:kms:us-east-2:123456789012:alias/MyAliasName`
- `arn:aws:kms:us-east-2:123456789012:key/12345678-1234-1234-1234-123456789012`

- `12345678-1234-1234-1234-123456789012`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350.

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

Required: No

MultiRegionEnabled

Specifies whether the event data store includes events from all Regions, or only from the Region in which the event data store is created.

Type: Boolean

Required: No

Name

The name of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Required: Yes

OrganizationEnabled

Specifies whether an event data store collects events logged for an organization in AWS Organizations.

Type: Boolean

Required: No

RetentionPeriod

The retention period of the event data store, in days. If `BillingMode` is set to `EXTENDABLE_RETENTION_PRICING`, you can set a retention period of up to 3653 days, the equivalent of 10 years. If `BillingMode` is set to `FIXED_RETENTION_PRICING`, you can set a retention period of up to 2557 days, the equivalent of seven years.

CloudTrail Lake determines whether to retain an event by checking if the `eventTime` of the event is within the specified retention period. For example, if you set a retention period of 90 days, CloudTrail will remove events when the `eventTime` is older than 90 days.

> **Note**
>
> If you plan to copy trail events to this event data store, we recommend that you consider both the age of the events that you want to copy as well as how long you want to keep the copied events in your event data store. For example, if you copy trail events that are 5 years old and specify a retention period of 7 years, the event data store will retain those events for two years.

Type: Integer

Valid Range: Minimum value of 7. Maximum value of 3653.

Required: No

StartIngestion

Specifies whether the event data store should start ingesting live events. The default is true.

Type: Boolean

Required: No

TagsList

A list of tags.

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

Required: No

TerminationProtectionEnabled

Specifies whether termination protection is enabled for the event data store. If termination protection is enabled, you cannot delete the event data store until termination protection is disabled.

Type: Boolean

Required: No

Response Syntax

```
{
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
         ],
         "Name": "string"
      }
   ],
   "BillingMode": "string",
   "CreatedTimestamp": number,
   "EventDataStoreArn": "string",
   "KmsKeyId": "string",
   "MultiRegionEnabled": boolean,
   "Name": "string",
   "OrganizationEnabled": boolean,
   "RetentionPeriod": number,
   "Status": "string",
   "TagsList": [
      {
         "Key": "string",
         "Value": "string"
      }
   ],
   "TerminationProtectionEnabled": boolean,
   "UpdatedTimestamp": 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.

AdvancedEventSelectors

The advanced event selectors that were used to select the events for the data store.

Type: Array of AdvancedEventSelector objects

BillingMode

The billing mode for the event data store.

Type: String

Valid Values: `EXTENDABLE_RETENTION_PRICING | FIXED_RETENTION_PRICING`

CreatedTimestamp

The timestamp that shows when the event data store was created.

Type: Timestamp

EventDataStoreArn

The ARN of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

KmsKeyId

Specifies the AWS KMS key ID that encrypts the events delivered by CloudTrail. The value is a fully specified ARN to a AWS KMS key in the following format.

```
arn:aws:kms:us-
east-2:123456789012:key/12345678-1234-1234-1234-123456789012
```

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350.

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

MultiRegionEnabled

Indicates whether the event data store collects events from all Regions, or only from the Region in which it was created.

Type: Boolean

Name

The name of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

OrganizationEnabled

Indicates whether an event data store is collecting logged events for an organization in AWS Organizations.

Type: Boolean

RetentionPeriod

The retention period of an event data store, in days.

Type: Integer

Valid Range: Minimum value of 7. Maximum value of 3653.

Status

The status of event data store creation.

Type: String

Valid Values: `CREATED | ENABLED | PENDING_DELETION | STARTING_INGESTION | STOPPING_INGESTION | STOPPED_INGESTION`

TagsList

A list of tags.

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

TerminationProtectionEnabled

Indicates whether termination protection is enabled for the event data store.

Type: Boolean

UpdatedTimestamp

The timestamp that shows when an event data store was updated, if applicable. `UpdatedTimestamp` is always either the same or newer than the time shown in `CreatedTimestamp`.

Type: Timestamp

Errors

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

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreAlreadyExistsException

An event data store with that name already exists.

HTTP Status Code: 400

EventDataStoreMaxLimitExceededException

Your account has used the maximum number of event data stores.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InvalidEventSelectorsException

This exception is thrown when the `PutEventSelectors` operation is called with a number of event selectors, advanced event selectors, or data resources that is not valid. The combination of event selectors or advanced event selectors and data resources is not valid. A trail can have up to 5 event selectors. If a trail uses advanced event selectors, a maximum of 500 total values for all conditions in all advanced event selectors is allowed. A trail is limited to 250 data resources. These data resources can be distributed across event selectors, but the overall total cannot exceed 250.

You can:

- Specify a valid number of event selectors (1 to 5) for a trail.

- Specify a valid number of data resources (1 to 250) for an event selector. The limit of number of resources on an individual event selector is configurable up to 250. However, this upper limit is allowed only if the total number of data resources does not exceed 250 across all event selectors for a trail.
- Specify up to 500 values for all conditions in all advanced event selectors for a trail.
- Specify a valid value for a parameter. For example, specifying the `ReadWriteType` parameter with a value of `read-only` is not valid.

HTTP Status Code: 400

InvalidKmsKeyIdException

This exception is thrown when the AWS KMS key ARN is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidTagParameterException

This exception is thrown when the specified tag key or values are not valid. It can also occur if there are duplicate tags or too many tags on the resource.

HTTP Status Code: 400

KmsException

This exception is thrown when there is an issue with the specified AWS KMS key and the trail or event data store can't be updated.

HTTP Status Code: 400

KmsKeyNotFoundException

This exception is thrown when the AWS KMS key does not exist, when the S3 bucket and the AWS KMS key are not in the same Region, or when the AWS KMS key associated with the Amazon SNS topic either does not exist or is not in the same Region.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

CreateTrail

Creates a trail that specifies the settings for delivery of log data to an Amazon S3 bucket.

Request Syntax

```
{
   "CloudWatchLogsLogGroupArn": "string",
   "CloudWatchLogsRoleArn": "string",
   "EnableLogFileValidation": boolean,
   "IncludeGlobalServiceEvents": boolean,
   "IsMultiRegionTrail": boolean,
   "IsOrganizationTrail": boolean,
   "KmsKeyId": "string",
   "Name": "string",
   "RecursiveLogging": boolean,
   "S3BucketName": "string",
   "S3KeyPrefix": "string",
   "SnsTopicName": "string",
   "TagsList": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

CloudWatchLogsLogGroupArn

Specifies a log group name using an Amazon Resource Name (ARN), a unique identifier that represents the log group to which CloudTrail logs will be delivered. You must use a log group that exists in your account.

Not required unless you specify `CloudWatchLogsRoleArn`.

Type: String

Required: No

CloudWatchLogsRoleArn

Specifies the role for the CloudWatch Logs endpoint to assume to write to a user's log group. You must use a role that exists in your account.

Type: String

Required: No

EnableLogFileValidation

Specifies whether log file integrity validation is enabled. The default is false.

> **Note**
>
> When you disable log file integrity validation, the chain of digest files is broken after one hour. CloudTrail does not create digest files for log files that were delivered during a period in which log file integrity validation was disabled. For example, if you enable log file integrity validation at noon on January 1, disable it at noon on January 2, and re-enable it at noon on January 10, digest files will not be created for the log files delivered from noon on January 2 to noon on January 10. The same applies whenever you stop CloudTrail logging or delete a trail.

Type: Boolean

Required: No

IncludeGlobalServiceEvents

Specifies whether the trail is publishing events from global services such as IAM to the log files. Setting this value to `true` only delivers global service events to the trail if the trail is multi-Region or if the trail's home Region is the partition leader Region (for example, us-east-1).

Type: Boolean

Required: No

IsMultiRegionTrail

Specifies whether the trail is created in the current Region or in all Regions. The default is false, which creates a trail only in the Region where you are signed in. As a best practice, consider creating trails that log events in all Regions.

Type: Boolean

Required: No

IsOrganizationTrail

Specifies whether the trail is created for all accounts in an organization in AWS Organizations, or only for the current AWS account. The default is false, and cannot be true unless the call is made on behalf of an AWS account that is the management account or delegated administrator account for an organization in AWS Organizations.

Type: Boolean

Required: No

KmsKeyId

Specifies the AWS KMS key ID to use to encrypt the logs and digest files delivered by CloudTrail. The value can be an alias name prefixed by `alias/`, a fully specified ARN to an alias, a fully specified ARN to a key, or a globally unique identifier.

CloudTrail also supports AWS KMS multi-Region keys. For more information about multi-Region keys, see Using multi-Region keys in the *AWS Key Management Service Developer Guide*.

Examples:

- `alias/MyAliasName`
- `arn:aws:kms:us-east-2:123456789012:alias/MyAliasName`
- `arn:aws:kms:us-east-2:123456789012:key/12345678-1234-1234-1234-123456789012`
- `12345678-1234-1234-1234-123456789012`

Type: String

Required: No

Name

Specifies the name of the trail. The name must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

Type: String

Required: Yes

RecursiveLogging

Specifies whether recursive logging is enabled for the trail. If you set `RecursiveLogging` to `false`, CloudTrail suppresses events generated by CloudTrail when it delivers log files to your trail's destinations, including Amazon S3 and CloudWatch Logs. The default value is `true`.

Type: Boolean

Required: No

S3BucketName

Specifies the name of the Amazon S3 bucket designated for publishing log files. For information about bucket naming rules, see Bucket naming rules in the *Amazon Simple Storage Service User Guide*.

Type: String

Required: Yes

S3KeyPrefix

Specifies the Amazon S3 key prefix that comes after the name of the bucket you have designated for log file delivery. For more information, see Finding Your CloudTrail Log Files. The maximum length is 200 characters.

Type: String

Required: No

SnsTopicName

Specifies the name or ARN of the Amazon SNS topic defined for notification of log file delivery. The maximum length is 256 characters.

Type: String

Required: No

TagsList

A list of tags.

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

Required: No

Response Syntax

```
{
   "CloudWatchLogsLogGroupArn": "string",
   "CloudWatchLogsRoleArn": "string",
   "IncludeGlobalServiceEvents": boolean,
   "IsMultiRegionTrail": boolean,
   "IsOrganizationTrail": boolean,
   "KmsKeyId": "string",
   "LogFileValidationEnabled": boolean,
   "Name": "string",
   "RecursiveLogging": boolean,
   "S3BucketName": "string",
   "S3KeyPrefix": "string",
   "SnsTopicARN": "string",
   "SnsTopicName": "string",
   "TrailARN": "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.

CloudWatchLogsLogGroupArn

Specifies the Amazon Resource Name (ARN) of the log group to which CloudTrail logs will be delivered.

Type: String

CloudWatchLogsRoleArn

Specifies the role for the CloudWatch Logs endpoint to assume to write to a user's log group.

Type: String

IncludeGlobalServiceEvents

Specifies whether the trail is publishing events from global services such as IAM to the log files. Setting this value to `true` only delivers global service events to the trail if the trail is multi-Region or if the trail's home Region is the partition leader Region (for example, us-east-1).

Type: Boolean

IsMultiRegionTrail

Specifies whether the trail exists in one Region or in all Regions.

Type: Boolean

IsOrganizationTrail

Specifies whether the trail is an organization trail.

Type: Boolean

KmsKeyId

Specifies the AWS KMS key ID that encrypts the events delivered by CloudTrail. The value is a fully specified ARN to a AWS KMS key in the following format.

```
arn:aws:kms:us-
east-2:123456789012:key/12345678-1234-1234-1234-123456789012
```

Type: String

LogFileValidationEnabled

Specifies whether log file integrity validation is enabled.

Type: Boolean

Name

Specifies the name of the trail.

Type: String

RecursiveLogging

Specifies whether recursive logging is enabled for the trail.

Type: Boolean

S3BucketName

Specifies the name of the Amazon S3 bucket designated for publishing log files.

Type: String

S3KeyPrefix

Specifies the Amazon S3 key prefix that comes after the name of the bucket you have designated for log file delivery. For more information, see Finding Your CloudTrail Log Files.

Type: String

SnsTopicARN

Specifies the ARN of the Amazon SNS topic that CloudTrail uses to send notifications when log files are delivered. The format of a topic ARN is:

```
arn:aws:sns:us-east-2:123456789012:MyTopic
```

Type: String

SnsTopicName

This parameter has been deprecated.

This field is no longer in use. Use `SnsTopicARN`.

Type: String

TrailARN

Specifies the ARN of the trail that was created. The format of a trail ARN is:

```
arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail
```

Type: String

Errors

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

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

CloudTrailInvalidClientTokenIdException

This exception is thrown when a call results in the `InvalidClientTokenId` error code. This can occur when you are creating or updating a trail to send notifications to an Amazon SNS topic that is in a suspended AWS account.

HTTP Status Code: 400

CloudWatchLogsDeliveryUnavailableException

Cannot set a CloudWatch Logs delivery for this Region.

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InsufficientS3BucketPolicyException

This exception is thrown when the policy on the S3 bucket is not sufficient.

HTTP Status Code: 400

InsufficientSnsTopicPolicyException

This exception is thrown when the policy on the Amazon SNS topic is not sufficient.

HTTP Status Code: 400

InvalidCloudWatchLogsLogGroupArnException

This exception is thrown when the provided CloudWatch Logs log group is not valid.

HTTP Status Code: 400

InvalidCloudWatchLogsRoleArnException

This exception is thrown when the provided role is not valid.

HTTP Status Code: 400

InvalidKmsKeyIdException

This exception is thrown when the AWS KMS key ARN is not valid.

HTTP Status Code: 400

InvalidParameterCombinationException

This exception is thrown when the combination of parameters provided is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidS3BucketNameException

This exception is thrown when the provided S3 bucket name is not valid.

HTTP Status Code: 400

InvalidS3PrefixException

This exception is thrown when the provided S3 prefix is not valid.

HTTP Status Code: 400

InvalidSnsTopicNameException

This exception is thrown when the provided SNS topic name is not valid.

HTTP Status Code: 400

InvalidTagParameterException

This exception is thrown when the specified tag key or values are not valid. It can also occur if there are duplicate tags or too many tags on the resource.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

KmsException

This exception is thrown when there is an issue with the specified AWS KMS key and the trail or event data store can't be updated.

HTTP Status Code: 400

KmsKeyDisabledException

This error has been deprecated.

This exception is no longer in use.

HTTP Status Code: 400

KmsKeyNotFoundException

This exception is thrown when the AWS KMS key does not exist, when the S3 bucket and the AWS KMS key are not in the same Region, or when the AWS KMS key associated with the Amazon SNS topic either does not exist or is not in the same Region.

HTTP Status Code: 400

MaximumNumberOfTrailsExceededException

This exception is thrown when the maximum number of trails is reached.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

S3BucketDoesNotExistException

This exception is thrown when the specified S3 bucket does not exist.

HTTP Status Code: 400

TagsLimitExceededException

The number of tags per trail, event data store, dashboard, or channel has exceeded the permitted amount. Currently, the limit is 50.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailAlreadyExistsException

This exception is thrown when the specified trail already exists.

HTTP Status Code: 400

TrailNotProvidedException

This exception is no longer in use.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

DeleteChannel

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Deletes a channel.

Request Syntax

```
{
   "Channel": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Channel

The ARN or the `UUID` value of the channel that you want to delete.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

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.

ChannelARNInvalidException

This exception is thrown when the specified value of `ChannelARN` is not valid.

HTTP Status Code: 400

ChannelNotFoundException

This exception is thrown when CloudTrail cannot find the specified channel.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

DeleteDashboard

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Deletes the specified dashboard. You cannot delete a dashboard that has termination protection enabled.

Request Syntax

```
{
   "DashboardId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DashboardId

The name or ARN for the dashboard.

Type: String

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

Required: Yes

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.

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)

- AWS SDK for Ruby V3

DeleteEventDataStore

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Disables the event data store specified by `EventDataStore`, which accepts an event data store ARN. After you run `DeleteEventDataStore`, the event data store enters a `PENDING_DELETION` state, and is automatically deleted after a wait period of seven days. `TerminationProtectionEnabled` must be set to `False` on the event data store and the `FederationStatus` must be `DISABLED`. You cannot delete an event data store if `TerminationProtectionEnabled` is `True` or the `FederationStatus` is `ENABLED`.

After you run `DeleteEventDataStore` on an event data store, you cannot run `ListQueries`, `DescribeQuery`, or `GetQueryResults` on queries that are using an event data store in a `PENDING_DELETION` state. An event data store in the `PENDING_DELETION` state does not incur costs.

Request Syntax

```
{
   "EventDataStore": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The ARN (or the ID suffix of the ARN) of the event data store to delete.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

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.

ChannelExistsForEDSException

This exception is thrown when the specified event data store cannot yet be deleted because it is in use by a channel.

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreFederationEnabledException

You cannot delete the event data store because Lake query federation is enabled. To delete the event data store, run the `DisableFederation` operation to disable Lake query federation on the event data store.

HTTP Status Code: 400

EventDataStoreHasOngoingImportException

This exception is thrown when you try to update or delete an event data store that currently has an import in progress.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

EventDataStoreTerminationProtectedException

The event data store cannot be deleted because termination protection is enabled for it.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

DeleteResourcePolicy

Deletes the resource-based policy attached to the CloudTrail event data store, dashboard, or channel.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the CloudTrail event data store, dashboard, or channel you're deleting the resource-based policy from.

Example event data store ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

Example dashboard ARN format: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

Example channel ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

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.

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ResourceARNNotValidException

This exception is thrown when the provided resource does not exist, or the ARN format of the resource is not valid.

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

ResourcePolicyNotFoundException

This exception is thrown when the specified resource policy is not found.

HTTP Status Code: 400

ResourceTypeNotSupportedException

This exception is thrown when the specified resource type is not supported by CloudTrail.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

DeleteTrail

Deletes a trail. This operation must be called from the Region in which the trail was created. `DeleteTrail` cannot be called on the shadow trails (replicated trails in other Regions) of a trail that is enabled in all Regions.

> **Important**
>
> While deleting a CloudTrail trail is an irreversible action, CloudTrail does not delete log files in the Amazon S3 bucket for that trail, the Amazon S3 bucket itself, or the CloudWatchlog group to which the trail delivers events. Deleting a multi-Region trail will stop logging of events in all AWS Regions enabled in your AWS account. Deleting a single-Region trail will stop logging of events in that Region only. It will not stop logging of events in other Regions even if the trails in those other Regions have identical names to the deleted trail. For information about account closure and deletion of CloudTrail trails, see https://docs.aws.eu/awscloudtrail/latest/userguide/cloudtrail-account-closure.html.

Request Syntax

```
{
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Name

Specifies the name or the CloudTrail ARN of the trail to be deleted. The following is the format of a trail ARN. `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Type: String

Required: Yes

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.

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidHomeRegionException

This exception is thrown when an operation is called on a trail from a Region other than the Region in which the trail was created.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

DeregisterOrganizationDelegatedAdmin

Removes CloudTrail delegated administrator permissions from a member account in an organization.

Request Syntax

```
{
   "DelegatedAdminAccountId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DelegatedAdminAccountId

A delegated administrator account ID. This is a member account in an organization that is currently designated as a delegated administrator.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: \d+

Required: Yes

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.

AccountNotFoundException

This exception is thrown when the specified account is not found or not part of an organization.

HTTP Status Code: 400

AccountNotRegisteredException

This exception is thrown when the specified account is not registered as the CloudTrail delegated administrator.

HTTP Status Code: 400

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NotOrganizationManagementAccountException

This exception is thrown when the account making the request is not the organization's management account.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

DescribeQuery

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns metadata about a query, including query run time in milliseconds, number of events scanned and matched, and query status. If the query results were delivered to an S3 bucket, the response also provides the S3 URI and the delivery status.

You must specify either `QueryId` or `QueryAlias`. Specifying the `QueryAlias` parameter returns information about the last query run for the alias. You can provide `RefreshId` along with `QueryAlias` to view the query results of a dashboard query for the specified `RefreshId`.

Request Syntax

```
{
   "EventDataStore": "string",
   "EventDataStoreOwnerAccountId": "string",
   "QueryAlias": "string",
   "QueryId": "string",
   "RefreshId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

This parameter has been deprecated.

The ARN (or the ID suffix of the ARN) of an event data store on which the specified query was run.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

EventDataStoreOwnerAccountId

The account ID of the event data store owner.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: `\d+`

Required: No

QueryAlias

The alias that identifies a query template.

Type: String

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

Pattern: `^[a-zA-Z][a-zA-Z0-9._\-]*$`

Required: No

QueryId

The query ID.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: No

RefreshId

The ID of the dashboard refresh.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 20.

Pattern: \d+

Required: No

Response Syntax

```
{
   "DeliveryS3Uri": "string",
   "DeliveryStatus": "string",
   "ErrorMessage": "string",
   "EventDataStoreOwnerAccountId": "string",
   "Prompt": "string",
   "QueryId": "string",
   "QueryStatistics": {
      "BytesScanned": number,
      "CreationTime": number,
      "EventsMatched": number,
      "EventsScanned": number,
      "ExecutionTimeInMillis": number
   },
   "QueryStatus": "string",
   "QueryString": "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.

DeliveryS3Uri

The URI for the S3 bucket where CloudTrail delivered query results, if applicable.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

DeliveryStatus

The delivery status.

Type: String

Valid Values: `SUCCESS | FAILED | FAILED_SIGNING_FILE | PENDING | RESOURCE_NOT_FOUND | ACCESS_DENIED | ACCESS_DENIED_SIGNING_FILE | CANCELLED | UNKNOWN`

ErrorMessage

The error message returned if a query failed.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

EventDataStoreOwnerAccountId

The account ID of the event data store owner.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: `\d+`

Prompt

The prompt used for a generated query. For information about generated queries, see Create CloudTrail Lake queries from natural language prompts in the *AWS CloudTrail* user guide.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 500.

Pattern: `^[ -~\n]*$`

QueryId

The ID of the query.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

QueryStatistics

Metadata about a query, including the number of events that were matched, the total number of events scanned, the query run time in milliseconds, and the query's creation time.

Type: QueryStatisticsForDescribeQuery object

QueryStatus

The status of a query. Values for `QueryStatus` include `QUEUED`, `RUNNING`, `FINISHED`, `FAILED`, `TIMED_OUT`, or `CANCELLED`

Type: String

Valid Values: `QUEUED | RUNNING | FINISHED | FAILED | CANCELLED | TIMED_OUT`

QueryString

The SQL code of a query.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10000.

Pattern: `(?s).*`

Errors

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

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

QueryIdNotFoundException

The query ID does not exist or does not map to a query.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

DescribeTrails

Retrieves settings for one or more trails associated with the current Region for your account.

Request Syntax

```
{
   "includeShadowTrails": boolean,
   "trailNameList": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

includeShadowTrails

Specifies whether to include shadow trails in the response. A shadow trail is the replication in a Region of a trail that was created in a different Region, or in the case of an organization trail, the replication of an organization trail in member accounts. If you do not include shadow trails, organization trails in a member account and Region replication trails will not be returned. The default is true.

Type: Boolean

Required: No

trailNameList

Specifies a list of trail names, trail ARNs, or both, of the trails to describe. The format of a trail ARN is:

`arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

If an empty list is specified, information for the trail in the current Region is returned.

- If an empty list is specified and `IncludeShadowTrails` is false, then information for all trails in the current Region is returned.
- If an empty list is specified and IncludeShadowTrails is null or true, then information for all trails in the current Region and any associated shadow trails in other Regions is returned.

> **Note**
>
> If one or more trail names are specified, information is returned only if the names match the names of trails belonging only to the current Region and current account. To return information about a trail in another Region, you must specify its trail ARN.

Type: Array of strings

Required: No

Response Syntax

```
{
   "trailList": [
      {
         "CloudWatchLogsLogGroupArn": "string",
         "CloudWatchLogsRoleArn": "string",
         "HasCustomEventSelectors": boolean,
         "HasInsightSelectors": boolean,
         "HomeRegion": "string",
         "IncludeGlobalServiceEvents": boolean,
         "IsMultiRegionTrail": boolean,
         "IsOrganizationTrail": boolean,
         "KmsKeyId": "string",
         "LogFileValidationEnabled": boolean,
         "Name": "string",
         "RecursiveLogging": boolean,
         "S3BucketName": "string",
         "S3KeyPrefix": "string",
         "SnsTopicARN": "string",
         "SnsTopicName": "string",
         "TrailARN": "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.

trailList

The list of trail objects. Trail objects with string values are only returned if values for the objects exist in a trail's configuration. For example, `SNSTopicName` and `SNSTopicARN` are only returned in results if a trail is configured to send SNS notifications. Similarly, `KMSKeyId` only appears in results if a trail's log files are encrypted with AWS KMS customer managed keys.

Type: Array of Trail objects

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters

- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

DisableFederation

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Disables Lake query federation on the specified event data store. When you disable federation, CloudTrail disables the integration with AWS Glue, AWS Lake Formation, and Amazon Athena. After disabling Lake query federation, you can no longer query your event data in Amazon Athena.

No CloudTrail Lake data is deleted when you disable federation and you can continue to run queries in CloudTrail Lake.

Request Syntax

```
{
   "EventDataStore": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The ARN (or ID suffix of the ARN) of the event data store for which you want to disable Lake query federation.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

Response Syntax

```
{
   "EventDataStoreArn": "string",
   "FederationStatus": "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.

EventDataStoreArn

The ARN of the event data store for which you disabled Lake query federation.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

FederationStatus

The federation status.

Type: String

Valid Values: `ENABLING | ENABLED | DISABLING | DISABLED`

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

ConcurrentModificationException

You are trying to update a resource when another request is in progress. Allow sufficient wait time for the previous request to complete, then retry your request.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example shows how to disable CloudTrail Lake federation on an event data store.

```
{
   "EventDataStore": "arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-
f852-4e8f-8bd1-bcf6cEXAMPLE"
}
```

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 (Boto3)
- AWS SDK for Ruby V3

EnableFederation

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Enables Lake query federation on the specified event data store. Federating an event data store lets you view the metadata associated with the event data store in the AWS Glue Data Catalog and run SQL queries against your event data using Amazon Athena. The table metadata stored in the AWS Glue Data Catalog lets the Athena query engine know how to find, read, and process the data that you want to query.

When you enable Lake query federation, CloudTrail creates a managed database named `aws:cloudtrail` (if the database doesn't already exist) and a managed federated table in the AWS Glue Data Catalog. The event data store ID is used for the table name. CloudTrail registers the role ARN and event data store in AWS Lake Formation, the service responsible for allowing fine-grained access control of the federated resources in the AWS Glue Data Catalog.

For more information about Lake query federation, see Federate an event data store.

Request Syntax

```
{
   "EventDataStore": "string",
   "FederationRoleArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The ARN (or ID suffix of the ARN) of the event data store for which you want to enable Lake query federation.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

FederationRoleArn

The ARN of the federation role to use for the event data store. AWS services like AWS Lake Formation use this federation role to access data for the federated event data store. The federation role must exist in your account and provide the required minimum permissions.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 125.

Pattern: `^[a-zA-Z0-9._/\-:@=\+,\.]+$`

Required: Yes

Response Syntax

```
{
   "EventDataStoreArn": "string",
   "FederationRoleArn": "string",
   "FederationStatus": "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.

EventDataStoreArn

The ARN of the event data store for which you enabled Lake query federation.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

FederationRoleArn

The ARN of the federation role.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 125.

Pattern: `^[a-zA-Z0-9._/\-:@=\+,\.]+$`

FederationStatus

The federation status.

Type: String

Valid Values: `ENABLING | ENABLED | DISABLING | DISABLED`

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

ConcurrentModificationException

You are trying to update a resource when another request is in progress. Allow sufficient wait time for the previous request to complete, then retry your request.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreFederationEnabledException

You cannot delete the event data store because Lake query federation is enabled. To delete the event data store, run the `DisableFederation` operation to disable Lake query federation on the event data store.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example shows how to enable CloudTrail Lake federation on an event data store.

```
{
   "EventDataStore": "arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-
f852-4e8f-8bd1-bcf6cEXAMPLE",
   "FederationRoleArn": "arn:aws:iam::123456789012:role/FederationRole"
}
```

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 (Boto3)
- AWS SDK for Ruby V3

GenerateQuery

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Generates a query from a natural language prompt. This operation uses generative artificial intelligence (generative AI) to produce a ready-to-use SQL query from the prompt.

The prompt can be a question or a statement about the event data in your event data store. For example, you can enter prompts like "What are my top errors in the past month?" and “Give me a list of users that used SNS.”

The prompt must be in English. For information about limitations, permissions, and supported Regions, see Create CloudTrail Lake queries from natural language prompts in the *AWS CloudTrail* user guide.

> **Note**
>
> Do not include any personally identifying, confidential, or sensitive information in your prompts.
> This feature uses generative AI large language models (LLMs); we recommend double-checking the LLM response.

Request Syntax

```
{
   "EventDataStores": [ "string" ],
   "Prompt": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStores

The ARN (or ID suffix of the ARN) of the event data store that you want to query. You can only specify one event data store.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

Prompt

The prompt that you want to use to generate the query. The prompt must be in English. For example prompts, see Example prompts in the *AWS CloudTrail* user guide.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 500.

Pattern: `^[ -~\n]*$`

Required: Yes

Response Syntax

```
{
   "EventDataStoreOwnerAccountId": "string",
   "QueryAlias": "string",
   "QueryStatement": "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.

EventDataStoreOwnerAccountId

The account ID of the event data store owner.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: `\d+`

QueryAlias

An alias that identifies the prompt. When you run the `StartQuery` operation, you can pass in either the `QueryAlias` or `QueryStatement` parameter.

Type: String

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

Pattern: `^[a-zA-Z][a-zA-Z0-9._\-]*$`

QueryStatement

The SQL query statement generated from the prompt.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10000.

Pattern: `(?s).*`

Errors

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

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

GenerateResponseException

This exception is thrown when a valid query could not be generated for the provided prompt.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example provides the prompt `"Show me all console login events for the past week"` to generate a query for the specified event data store.

```
{
```

```
   "EventDataStores": [ "arn:aws:cloudtrail:us-east-1:123456789012:eventdatastore/
EXAMPLE-ee54-4813-92d5-999aeEXAMPLE" ],
   "Prompt": "Show me all console login events for the past week"
}
```

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 (Boto3)
- AWS SDK for Ruby V3

GetChannel

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns information about a specific channel.

Request Syntax

```
{
   "Channel": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Channel

The ARN or `UUID` of a channel.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

Response Syntax

```
{
```

```
    "ChannelArn": "string",
    "Destinations": [
       {
          "Location": "string",
          "Type": "string"
       }
    ],
    "IngestionStatus": {
       "LatestIngestionAttemptEventID": "string",
       "LatestIngestionAttemptTime": number,
       "LatestIngestionErrorCode": "string",
       "LatestIngestionSuccessEventID": "string",
       "LatestIngestionSuccessTime": number
    },
    "Name": "string",
    "Source": "string",
    "SourceConfig": {
       "AdvancedEventSelectors": [
          {
             "FieldSelectors": [
                {
                   "EndsWith": [ "string" ],
                   "Equals": [ "string" ],
                   "Field": "string",
                   "NotEndsWith": [ "string" ],
                   "NotEquals": [ "string" ],
                   "NotStartsWith": [ "string" ],
                   "StartsWith": [ "string" ]
                }
             ],
             "Name": "string"
          }
       ],
       "ApplyToAllRegions": boolean
    }
}
```

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.

ChannelArn

The ARN of an channel returned by a `GetChannel` request.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Destinations

The destinations for the channel. For channels created for integrations, the destinations are the event data stores that log events arriving through the channel. For service-linked channels, the destination is the AWS service that created the service-linked channel to receive events.

Type: Array of Destination objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

IngestionStatus

A table showing information about the most recent successful and failed attempts to ingest events.

Type: IngestionStatus object

Name

The name of the CloudTrail channel. For service-linked channels, the name is `aws-service-channel/service-name/custom-suffix` where `service-name` represents the name of the AWS service that created the channel and `custom-suffix` represents the suffix generated by the AWS service.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Source

The source for the CloudTrail channel.

Type: String

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

Pattern: `.*`

SourceConfig

Provides information about the advanced event selectors configured for the channel, and whether the channel applies to all Regions or a single Region.

Type: SourceConfig object

Errors

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

ChannelARNInvalidException

This exception is thrown when the specified value of `ChannelARN` is not valid.

HTTP Status Code: 400

ChannelNotFoundException

This exception is thrown when CloudTrail cannot find the specified channel.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetDashboard

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns the specified dashboard.

Request Syntax

```
{
   "DashboardId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DashboardId

The name or ARN for the dashboard.

Type: String

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

Required: Yes

Response Syntax

```
{
   "CreatedTimestamp": number,
```

```
    "DashboardArn": "string",
    "LastRefreshFailureReason": "string",
    "LastRefreshId": "string",
    "RefreshSchedule": {
       "Frequency": {
          "Unit": "string",
          "Value": number
       },
       "Status": "string",
       "TimeOfDay": "string"
    },
    "Status": "string",
    "TerminationProtectionEnabled": boolean,
    "Type": "string",
    "UpdatedTimestamp": number,
    "Widgets": [
       {
          "QueryAlias": "string",
          "QueryParameters": [ "string" ],
          "QueryStatement": "string",
          "ViewProperties": {
             "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.

CreatedTimestamp

The timestamp that shows when the dashboard was created.

Type: Timestamp

DashboardArn

The ARN for the dashboard.

Type: String

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

LastRefreshFailureReason

Provides information about failures for the last scheduled refresh.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

LastRefreshId

The ID of the last dashboard refresh.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 20.

Pattern: `\d+`

RefreshSchedule

The refresh schedule for the dashboard, if configured.

Type: RefreshSchedule object

Status

The status of the dashboard.

Type: String

Valid Values: `CREATING | CREATED | UPDATING | UPDATED | DELETING`

TerminationProtectionEnabled

Indicates whether termination protection is enabled for the dashboard.

Type: Boolean

Type

The type of dashboard.

Type: String

Valid Values: `MANAGED | CUSTOM`

UpdatedTimestamp

The timestamp that shows when the dashboard was last updated.

Type: Timestamp

Widgets

An array of widgets for the dashboard.

Type: Array of Widget objects

Errors

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

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetEventConfiguration

Retrieves the current event configuration settings for the specified event data store or trail. The response includes maximum event size configuration, the context key selectors configured for the event data store, and any aggregation settings configured for the trail.

Request Syntax

```
{
   "EventDataStore": "string",
   "TrailName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The Amazon Resource Name (ARN) or ID suffix of the ARN of the event data store for which you want to retrieve event configuration settings.

Type: String

Required: No

TrailName

The name of the trail for which you want to retrieve event configuration settings.

Type: String

Required: No

Response Syntax

```
{
   "AggregationConfigurations": [
      {
```

```
            "EventCategory": "string",
            "Templates": [ "string" ]
         }
      ],
      "ContextKeySelectors": [
         {
            "Equals": [ "string" ],
            "Type": "string"
         }
      ],
      "EventDataStoreArn": "string",
      "MaxEventSize": "string",
      "TrailARN": "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.

AggregationConfigurations

The list of aggregation configurations that are configured for the trail.

Type: Array of AggregationConfiguration objects

Array Members: Maximum number of 1 item.

ContextKeySelectors

The list of context key selectors that are configured for the event data store.

Type: Array of ContextKeySelector objects

Array Members: Maximum number of 2 items.

EventDataStoreArn

The Amazon Resource Name (ARN) or ID suffix of the ARN of the event data store for which the event configuration settings are returned.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

MaxEventSize

The maximum allowed size for events stored in the specified event data store.

Type: String

Valid Values: `Standard | Large`

TrailARN

The Amazon Resource Name (ARN) of the trail for which the event configuration settings are returned.

Type: String

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InvalidEventDataStoreCategoryException

This exception is thrown when event categories of specified event data stores are not valid.

HTTP Status Code: 400

InvalidEventDataStoreStatusException

The event data store is not in a status that supports the operation.

HTTP Status Code: 400

InvalidParameterCombinationException

This exception is thrown when the combination of parameters provided is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetEventDataStore

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns information about an event data store specified as either an ARN or the ID portion of the ARN.

Request Syntax

```
{
   "EventDataStore": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The ARN (or ID suffix of the ARN) of the event data store about which you want information.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

Response Syntax

```
{
```

```
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
         ],
         "Name": "string"
      }
   ],
   "BillingMode": "string",
   "CreatedTimestamp": number,
   "EventDataStoreArn": "string",
   "FederationRoleArn": "string",
   "FederationStatus": "string",
   "KmsKeyId": "string",
   "MultiRegionEnabled": boolean,
   "Name": "string",
   "OrganizationEnabled": boolean,
   "PartitionKeys": [
      {
         "Name": "string",
         "Type": "string"
      }
   ],
   "RetentionPeriod": number,
   "Status": "string",
   "TerminationProtectionEnabled": boolean,
   "UpdatedTimestamp": 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.

AdvancedEventSelectors

The advanced event selectors used to select events for the data store.

Type: Array of AdvancedEventSelector objects

BillingMode

The billing mode for the event data store.

Type: String

Valid Values: `EXTENDABLE_RETENTION_PRICING | FIXED_RETENTION_PRICING`

CreatedTimestamp

The timestamp of the event data store's creation.

Type: Timestamp

EventDataStoreArn

The event data store Amazon Resource Number (ARN).

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

FederationRoleArn

If Lake query federation is enabled, provides the ARN of the federation role used to access the resources for the federated event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 125.

Pattern: `^[a-zA-Z0-9._/\-:@=\+,\.]+$`

FederationStatus

Indicates the Lake query federation status. The status is `ENABLED` if Lake query federation is enabled, or `DISABLED` if Lake query federation is disabled. You cannot delete an event data store if the `FederationStatus` is `ENABLED`.

Type: String

Valid Values: `ENABLING | ENABLED | DISABLING | DISABLED`

KmsKeyId

Specifies the AWS KMS key ID that encrypts the events delivered by CloudTrail. The value is a fully specified ARN to a AWS KMS key in the following format.

`arn:aws:kms:us-east-2:123456789012:key/12345678-1234-1234-1234-123456789012`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350.

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

MultiRegionEnabled

Indicates whether the event data store includes events from all Regions, or only from the Region in which it was created.

Type: Boolean

Name

The name of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

OrganizationEnabled

Indicates whether an event data store is collecting logged events for an organization in AWS Organizations.

Type: Boolean

PartitionKeys

The partition keys for the event data store. To improve query performance and efficiency, CloudTrail Lake organizes event data into partitions based on values derived from partition keys.

Type: Array of PartitionKey objects

Array Members: Maximum number of 2 items.

RetentionPeriod

The retention period of the event data store, in days.

Type: Integer

Valid Range: Minimum value of 7. Maximum value of 3653.

Status

The status of an event data store.

Type: String

Valid Values: `CREATED | ENABLED | PENDING_DELETION | STARTING_INGESTION | STOPPING_INGESTION | STOPPED_INGESTION`

TerminationProtectionEnabled

Indicates that termination protection is enabled.

Type: Boolean

UpdatedTimestamp

Shows the time that an event data store was updated, if applicable. `UpdatedTimestamp` is always either the same or newer than the time shown in `CreatedTimestamp`.

Type: Timestamp

Errors

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

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetEventSelectors

Describes the settings for the event selectors that you configured for your trail. The information returned for your event selectors includes the following:

- If your event selector includes read-only events, write-only events, or all events. This applies to management events, data events, and network activity events.
- If your event selector includes management events.
- If your event selector includes network activity events, the event sources for which you are logging network activity events.
- If your event selector includes data events, the resources on which you are logging data events.

For more information about logging management, data, and network activity events, see the following topics in the *AWS CloudTrail User Guide*:

- Logging management events
- Logging data events
- Logging network activity events

Request Syntax

```
{
   "TrailName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

TrailName

Specifies the name of the trail or trail ARN. If you specify a trail name, the string must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)

- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

If you specify a trail ARN, it must be in the format:

`arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Type: String

Required: Yes

Response Syntax

```
{
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
         ],
         "Name": "string"
      }
   ],
   "EventSelectors": [
      {
         "DataResources": [
            {
               "Type": "string",
               "Values": [ "string" ]
            }
         ],
```

```
            "ExcludeManagementEventSources": [ "string" ],
            "IncludeManagementEvents": boolean,
            "ReadWriteType": "string"
        }
    ],
    "TrailARN": "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.

AdvancedEventSelectors

The advanced event selectors that are configured for the trail.

Type: Array of AdvancedEventSelector objects

EventSelectors

The event selectors that are configured for the trail.

Type: Array of EventSelector objects

TrailARN

The specified trail ARN that has the event selectors.

Type: String

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetImport

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns information about a specific import.

Request Syntax

```
{
   "ImportId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ImportId

The ID for the import.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: Yes

Response Syntax

```
{
```

```
    "CreatedTimestamp": number,
    "Destinations": [ "string" ],
    "EndEventTime": number,
    "ImportId": "string",
    "ImportSource": {
       "S3": {
          "S3BucketAccessRoleArn": "string",
          "S3BucketRegion": "string",
          "S3LocationUri": "string"
       }
    },
    "ImportStatistics": {
       "EventsCompleted": number,
       "FailedEntries": number,
       "FilesCompleted": number,
       "PrefixesCompleted": number,
       "PrefixesFound": number
    },
    "ImportStatus": "string",
    "StartEventTime": number,
    "UpdatedTimestamp": 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.

CreatedTimestamp

The timestamp of the import's creation.

Type: Timestamp

Destinations

The ARN of the destination event data store.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 3. Maximum length of 256.

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

EndEventTime

Used with `StartEventTime` to bound a `StartImport` request, and limit imported trail events to only those events logged within a specified time period.

Type: Timestamp

ImportId

The ID of the import.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

ImportSource

The source S3 bucket.

Type: ImportSource object

ImportStatistics

Provides statistics for the import. CloudTrail does not update import statistics in real-time. Returned values for parameters such as `EventsCompleted` may be lower than the actual value, because CloudTrail updates statistics incrementally over the course of the import.

Type: ImportStatistics object

ImportStatus

The status of the import.

Type: String

Valid Values: `INITIALIZING | IN_PROGRESS | FAILED | STOPPED | COMPLETED`

StartEventTime

Used with `EndEventTime` to bound a `StartImport` request, and limit imported trail events to only those events logged within a specified time period.

Type: Timestamp

UpdatedTimestamp

The timestamp of when the import was updated.

Type: Timestamp

Errors

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

ImportNotFoundException

The specified import was not found.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetInsightSelectors

Describes the settings for the Insights event selectors that you configured for your trail or event data store. `GetInsightSelectors` shows if CloudTrail Insights logging is enabled and which Insights types are configured with corresponding event categories. If you run `GetInsightSelectors` on a trail or event data store that does not have Insights events enabled, the operation throws the exception `InsightNotEnabledException`

Specify either the `EventDataStore` parameter to get Insights event selectors for an event data store, or the `TrailName` parameter to the get Insights event selectors for a trail. You cannot specify these parameters together.

For more information, see Working with CloudTrail Insights in the *AWS CloudTrail User Guide*.

Request Syntax

```
{
   "EventDataStore": "string",
   "TrailName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

Specifies the ARN (or ID suffix of the ARN) of the event data store for which you want to get Insights selectors.

You cannot use this parameter with the `TrailName` parameter.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

TrailName

Specifies the name of the trail or trail ARN. If you specify a trail name, the string must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

If you specify a trail ARN, it must be in the format:

`arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

You cannot use this parameter with the `EventDataStore` parameter.

Type: String

Required: No

Response Syntax

```
{
   "EventDataStoreArn": "string",
   "InsightsDestination": "string",
   "InsightSelectors": [
      {
         "EventCategories": [ "string" ],
         "InsightType": "string"
      }
   ],
   "TrailARN": "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.

EventDataStoreArn

The ARN of the source event data store that enabled Insights events.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

InsightsDestination

The ARN of the destination event data store that logs Insights events.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

InsightSelectors

Contains the Insights types that are enabled on a trail or event data store. It also specifies the event categories on which a particular Insight type is enabled. `ApiCallRateInsight` and `ApiErrorRateInsight` are valid Insight types.The EventCategory field can specify `Management` or `Data` events or both. For event data store, you can log Insights for management events only.

Type: Array of InsightSelector objects

TrailARN

The Amazon Resource Name (ARN) of a trail for which you want to get Insights selectors.

Type: String

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

InsightNotEnabledException

If you run `GetInsightSelectors` on a trail or event data store that does not have Insights events enabled, the operation throws the exception `InsightNotEnabledException`.

HTTP Status Code: 400

InvalidParameterCombinationException

This exception is thrown when the combination of parameters provided is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetQueryResults

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Gets event data results of a query. You must specify the `QueryID` value returned by the `StartQuery` operation.

Request Syntax

```
{
   "EventDataStore": "string",
   "EventDataStoreOwnerAccountId": "string",
   "MaxQueryResults": number,
   "NextToken": "string",
   "QueryId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

This parameter has been deprecated.

The ARN (or ID suffix of the ARN) of the event data store against which the query was run.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

EventDataStoreOwnerAccountId

The account ID of the event data store owner.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: `\d+`

Required: No

MaxQueryResults

The maximum number of query results to display on a single page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

NextToken

A token you can use to get the next page of query results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

QueryId

The ID of the query for which you want to get results.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: Yes

Response Syntax

```
{
   "ErrorMessage": "string",
   "NextToken": "string",
   "QueryResultRows": [
      [
         {
            "string" : "string"
         }
      ]
   ],
   "QueryStatistics": {
      "BytesScanned": number,
      "ResultsCount": number,
      "TotalResultsCount": number
   },
   "QueryStatus": "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.

ErrorMessage

The error message returned if a query failed.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

NextToken

A token you can use to get the next page of query results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

QueryResultRows

Contains the individual event results of the query.

Type: Array of arrays of string to string maps

QueryStatistics

Shows the count of query results.

Type: QueryStatistics object

QueryStatus

The status of the query. Values include `QUEUED`, `RUNNING`, `FINISHED`, `FAILED`, `TIMED_OUT`, or `CANCELLED`.

Type: String

Valid Values: `QUEUED | RUNNING | FINISHED | FAILED | CANCELLED | TIMED_OUT`

Errors

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

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InvalidMaxResultsException

This exception is thrown if the limit specified is not valid.

HTTP Status Code: 400

InvalidNextTokenException

A token that is not valid, or a token that was previously used in a request with different parameters. This exception is thrown if the token is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

QueryIdNotFoundException

The query ID does not exist or does not map to a query.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetResourcePolicy

Retrieves the JSON text of the resource-based policy document attached to the CloudTrail event data store, dashboard, or channel.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the CloudTrail event data store, dashboard, or channel attached to the resource-based policy.

Example event data store ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

Example dashboard ARN format: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

Example channel ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

Response Syntax

```
{
   "DelegatedAdminResourcePolicy": "string",
   "ResourceArn": "string",
   "ResourcePolicy": "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.

DelegatedAdminResourcePolicy

The default resource-based policy that is automatically generated for the delegated administrator of an AWS Organizations organization. This policy will be evaluated in tandem with any policy you submit for the resource. For more information about this policy, see Default resource policy for delegated administrators.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

ResourceArn

The Amazon Resource Name (ARN) of the CloudTrail event data store, dashboard, or channel attached to resource-based policy.

Example event data store ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

Example dashboard ARN format: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

Example channel ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

ResourcePolicy

A JSON-formatted string that contains the resource-based policy attached to the CloudTrail event data store, dashboard, or channel.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Errors

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

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ResourceARNNotValidException

This exception is thrown when the provided resource does not exist, or the ARN format of the resource is not valid.

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

ResourcePolicyNotFoundException

This exception is thrown when the specified resource policy is not found.

HTTP Status Code: 400

ResourceTypeNotSupportedException

This exception is thrown when the specified resource type is not supported by CloudTrail.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetTrail

Returns settings information for a specified trail.

Request Syntax

```
{
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Name

The name or the Amazon Resource Name (ARN) of the trail for which you want to retrieve settings information.

Type: String

Required: Yes

Response Syntax

```
{
   "Trail": {
      "CloudWatchLogsLogGroupArn": "string",
      "CloudWatchLogsRoleArn": "string",
      "HasCustomEventSelectors": boolean,
      "HasInsightSelectors": boolean,
      "HomeRegion": "string",
      "IncludeGlobalServiceEvents": boolean,
      "IsMultiRegionTrail": boolean,
      "IsOrganizationTrail": boolean,
      "KmsKeyId": "string",
      "LogFileValidationEnabled": boolean,
      "Name": "string",
```

```
        "RecursiveLogging": boolean,
        "S3BucketName": "string",
        "S3KeyPrefix": "string",
        "SnsTopicARN": "string",
        "SnsTopicName": "string",
        "TrailARN": "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.

Trail

The settings for a trail.

Type: Trail object

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

GetTrailStatus

Returns a JSON-formatted list of information about the specified trail. Fields include information on delivery errors, Amazon SNS and Amazon S3 errors, and start and stop logging times for each trail. This operation returns trail status from a single Region. To return trail status from all Regions, you must call the operation on each Region.

Request Syntax

```
{
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Name

Specifies the name or the CloudTrail ARN of the trail for which you are requesting status. To get the status of a shadow trail (a replication of the trail in another Region), you must specify its ARN.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

> **Note**
> If the trail is an organization trail and you are a member account in the organization in AWS Organizations, you must provide the full ARN of that trail, and not just the name.

Type: String

Required: Yes

Response Syntax

```
{
   "IsLogging": boolean,
   "LatestCloudWatchLogsDeliveryError": "string",
   "LatestCloudWatchLogsDeliveryTime": number,
   "LatestDeliveryAttemptSucceeded": "string",
   "LatestDeliveryAttemptTime": "string",
   "LatestDeliveryError": "string",
   "LatestDeliveryTime": number,
   "LatestDigestDeliveryError": "string",
   "LatestDigestDeliveryTime": number,
   "LatestNotificationAttemptSucceeded": "string",
   "LatestNotificationAttemptTime": "string",
   "LatestNotificationError": "string",
   "LatestNotificationTime": number,
   "StartLoggingTime": number,
   "StopLoggingTime": number,
   "TimeLoggingStarted": "string",
   "TimeLoggingStopped": "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.

IsLogging

Whether the CloudTrail trail is currently logging AWS API calls.

Type: Boolean

LatestCloudWatchLogsDeliveryError

Displays any CloudWatch Logs error that CloudTrail encountered when attempting to deliver logs to CloudWatch Logs.

Type: String

LatestCloudWatchLogsDeliveryTime

Displays the most recent date and time when CloudTrail delivered logs to CloudWatch Logs.

Type: Timestamp

LatestDeliveryAttemptSucceeded

This field is no longer in use.

Type: String

LatestDeliveryAttemptTime

This field is no longer in use.

Type: String

LatestDeliveryError

Displays any Amazon S3 error that CloudTrail encountered when attempting to deliver log files to the designated bucket. For more information, see Error Responses in the Amazon S3 API Reference.

> **Note**
>
> This error occurs only when there is a problem with the destination S3 bucket, and does not occur for requests that time out. To resolve the issue, fix the bucket policy so that CloudTrail can write to the bucket; or create a new bucket and call `UpdateTrail` to specify the new bucket.

Type: String

LatestDeliveryTime

Specifies the date and time that CloudTrail last delivered log files to an account's Amazon S3 bucket.

Type: Timestamp

LatestDigestDeliveryError

Displays any Amazon S3 error that CloudTrail encountered when attempting to deliver a digest file to the designated bucket. For more information, see Error Responses in the Amazon S3 API Reference.

> **Note**
>
> This error occurs only when there is a problem with the destination S3 bucket, and does not occur for requests that time out. To resolve the issue, fix the bucket policy so that CloudTrail can write to the bucket; or create a new bucket and call `UpdateTrail` to specify the new bucket.

Type: String

LatestDigestDeliveryTime

Specifies the date and time that CloudTrail last delivered a digest file to an account's Amazon S3 bucket.

Type: Timestamp

LatestNotificationAttemptSucceeded

This field is no longer in use.

Type: String

LatestNotificationAttemptTime

This field is no longer in use.

Type: String

LatestNotificationError

Displays any Amazon SNS error that CloudTrail encountered when attempting to send a notification. For more information about Amazon SNS errors, see the Amazon SNS Developer Guide.

Type: String

LatestNotificationTime

Specifies the date and time of the most recent Amazon SNS notification that CloudTrail has written a new log file to an account's Amazon S3 bucket.

Type: Timestamp

StartLoggingTime

Specifies the most recent date and time when CloudTrail started recording API calls for an AWS account.

Type: Timestamp

StopLoggingTime

Specifies the most recent date and time when CloudTrail stopped recording API calls for an AWS account.

Type: Timestamp

TimeLoggingStarted

This field is no longer in use.

Type: String

TimeLoggingStopped

This field is no longer in use.

Type: String

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListChannels

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Lists the channels in the current account, and their source names.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxResults

The maximum number of CloudTrail channels to display on a single page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

NextToken

The token to use to get the next page of results after a previous API call. This token must be passed in with the same parameters that were specified in the original call. For example, if the original call specified an AttributeKey of 'Username' with a value of 'root', the call with NextToken should include those same parameters.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

Response Syntax

```
{
   "Channels": [
      {
         "ChannelArn": "string",
         "Name": "string"
      }
   ],
   "NextToken": "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.

Channels

The list of channels in the account.

Type: Array of Channel objects

NextToken

The token to use to get the next page of results after a previous API call.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Errors

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

InvalidNextTokenException

A token that is not valid, or a token that was previously used in a request with different parameters. This exception is thrown if the token is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListDashboards

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns information about all dashboards in the account, in the current Region.

Request Syntax

```
{
   "MaxResults": number,
   "NamePrefix": "string",
   "NextToken": "string",
   "Type": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxResults

The maximum number of dashboards to display on a single page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

NamePrefix

Specify a name prefix to filter on.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Required: No

NextToken

A token you can use to get the next page of dashboard results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

Type

Specify a dashboard type to filter on: `CUSTOM` or `MANAGED`.

Type: String

Valid Values: `MANAGED | CUSTOM`

Required: No

Response Syntax

```
{
   "Dashboards": [
      {
         "DashboardArn": "string",
         "Type": "string"
      }
   ],
   "NextToken": "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.

Dashboards

Contains information about dashboards in the account, in the current Region that match the applied filters.

Type: Array of DashboardDetail objects

NextToken

A token you can use to get the next page of dashboard results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Errors

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

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListEventDataStores

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns information about all event data stores in the account, in the current Region.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxResults

The maximum number of event data stores to display on a single page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

NextToken

A token you can use to get the next page of event data store results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

Response Syntax

```
{
   "EventDataStores": [
      {
         "AdvancedEventSelectors": [
            {
               "FieldSelectors": [
                  {
                     "EndsWith": [ "string" ],
                     "Equals": [ "string" ],
                     "Field": "string",
                     "NotEndsWith": [ "string" ],
                     "NotEquals": [ "string" ],
                     "NotStartsWith": [ "string" ],
                     "StartsWith": [ "string" ]
                  }
               ],
               "Name": "string"
            }
         ],
         "CreatedTimestamp": number,
         "EventDataStoreArn": "string",
         "MultiRegionEnabled": boolean,
         "Name": "string",
         "OrganizationEnabled": boolean,
         "RetentionPeriod": number,
         "Status": "string",
         "TerminationProtectionEnabled": boolean,
         "UpdatedTimestamp": number
      }
   ],
   "NextToken": "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.

EventDataStores

Contains information about event data stores in the account, in the current Region.

Type: Array of EventDataStore objects

NextToken

A token you can use to get the next page of results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Errors

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

InvalidMaxResultsException

This exception is thrown if the limit specified is not valid.

HTTP Status Code: 400

InvalidNextTokenException

A token that is not valid, or a token that was previously used in a request with different parameters. This exception is thrown if the token is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListImportFailures

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns a list of failures for the specified import.

Request Syntax

```
{
   "ImportId": "string",
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ImportId

The ID of the import.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: Yes

MaxResults

The maximum number of failures to display on a single page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

NextToken

A token you can use to get the next page of import failures.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

Response Syntax

```
{
   "Failures": [
      {
         "ErrorMessage": "string",
         "ErrorType": "string",
         "LastUpdatedTime": number,
         "Location": "string",
         "Status": "string"
      }
   ],
   "NextToken": "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.

Failures

Contains information about the import failures.

Type: Array of ImportFailureListItem objects

NextToken

A token you can use to get the next page of results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Errors

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

InvalidNextTokenException

A token that is not valid, or a token that was previously used in a request with different parameters. This exception is thrown if the token is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListImports

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns information on all imports, or a select set of imports by `ImportStatus` or `Destination`.

Request Syntax

```
{
   "Destination": "string",
   "ImportStatus": "string",
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Destination

The ARN of the destination event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

ImportStatus

The status of the import.

Type: String

Valid Values: `INITIALIZING | IN_PROGRESS | FAILED | STOPPED | COMPLETED`

Required: No

MaxResults

The maximum number of imports to display on a single page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

NextToken

A token you can use to get the next page of import results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

Response Syntax

```
{
   "Imports": [
      {
         "CreatedTimestamp": number,
         "Destinations": [ "string" ],
         "ImportId": "string",
         "ImportStatus": "string",
         "UpdatedTimestamp": number
      }
   ],
   "NextToken": "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.

Imports

The list of returned imports.

Type: Array of ImportsListItem objects

NextToken

A token you can use to get the next page of import results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Errors

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

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

InvalidNextTokenException

A token that is not valid, or a token that was previously used in a request with different parameters. This exception is thrown if the token is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListInsightsData

Returns Insights events generated on a trail that logs data events. You can list Insights events that occurred in a Region within the last 90 days.

ListInsightsData supports the following Dimensions for Insights events:

- Event ID
- Event name
- Event source

All dimensions are optional. The default number of results returned is 50, with a maximum of 50 possible. The response includes a token that you can use to get the next page of results.

The rate of ListInsightsData requests is limited to two per second, per account, per Region. If this limit is exceeded, a throttling error occurs.

> **Note**
>
> For data event Insights on organization trails, only the management account and delegated administrator accounts can call `ListInsightsData`. For these callers, the API returns Insights events only for the caller's own account. Member accounts cannot call this API on organization trails.

Request Syntax

```
{
   "DataType": "string",
   "Dimensions": {
      "string" : "string"
   },
   "EndTime": number,
   "InsightSource": "string",
   "MaxResults": number,
   "NextToken": "string",
   "StartTime": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DataType

Specifies the category of events returned. To fetch Insights events, specify `InsightsEvents` as the value of `DataType`

Type: String

Valid Values: `InsightsEvents`

Required: Yes

Dimensions

Contains a map of dimensions. Currently the map can contain only one item.

Type: String to string map

Map Entries: Maximum number of 1 item.

Valid Keys: `EventId | EventName | EventSource`

Value Length Constraints: Minimum length of 1. Maximum length of 2000.

Required: No

EndTime

Specifies that only events that occur before or at the specified time are returned. If the specified end time is before the specified start time, an error is returned.

Type: Timestamp

Required: No

InsightSource

The Amazon Resource Name(ARN) of the trail for which you want to retrieve Insights events.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

MaxResults

The number of events to return. Possible values are 1 through 50. The default is 50.

Type: Integer

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

Required: No

NextToken

The token to use to get the next page of results after a previous API call. This token must be passed in with the same parameters that were specified in the original call. For example, if the original call specified a EventName as a dimension with `PutObject` as a value, the call with NextToken should include those same parameters.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

StartTime

Specifies that only events that occur after or at the specified time are returned. If the specified start time is after the specified end time, an error is returned.

Type: Timestamp

Required: No

Response Syntax

```
{
```

```
   "Events": [
      {
         "AccessKeyId": "string",
         "CloudTrailEvent": "string",
         "EventId": "string",
         "EventName": "string",
         "EventSource": "string",
         "EventTime": number,
         "ReadOnly": "string",
         "Resources": [
            {
               "ResourceName": "string",
               "ResourceType": "string"
            }
         ],
         "Username": "string"
      }
   ],
   "NextToken": "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

A list of events returned based on the InsightSource, DataType or Dimensions specified. The events list is sorted by time. The most recent event is listed first.

Type: Array of Event objects

NextToken

The token to use to get the next page of results after a previous API call. If the token does not appear, there are no more results to return. The token must be passed in with the same parameters as the previous call. For example, if the original call specified a EventName as a dimension with `PutObject` as a value, the call with NextToken should include those same parameters.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Errors

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

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListInsightsMetricData

Returns Insights metrics data for trails that have enabled Insights. The request must include the `EventSource`, `EventName`, and `InsightType` parameters.

If the `InsightType` is set to `ApiErrorRateInsight`, the request must also include the `ErrorCode` parameter.

The following are the available time periods for `ListInsightsMetricData`. Each cutoff is inclusive.

- Data points with a period of 60 seconds (1-minute) are available for 15 days.
- Data points with a period of 300 seconds (5-minute) are available for 63 days.
- Data points with a period of 3600 seconds (1 hour) are available for 90 days.

To use `ListInsightsMetricData` operation, you must have the following permissions:

- If `ListInsightsMetricData` is invoked with `TrailName` parameter, access to the `ListInsightsMetricData` API operation is linked to the `cloudtrail:LookupEvents` action and `cloudtrail:ListInsightsData`. To use this operation, you must have permissions to perform the `cloudtrail:LookupEvents` and `cloudtrail:ListInsightsData` action on the specific trail.
- If `ListInsightsMetricData` is invoked without `TrailName` parameter, access to the `ListInsightsMetricData` API operation is linked to the `cloudtrail:LookupEvents` action only. To use this operation, you must have permissions to perform the `cloudtrail:LookupEvents` action.

> **Note**
>
> For data event Insights on organization trails, only the management account and delegated administrator accounts can call `ListInsightsMetricData`. For these callers, the API returns Insights metrics only for the caller's own account. Member accounts cannot call this API on organization trails.

Request Syntax

```
{
   "DataType": "string",
   "EndTime": number,
   "ErrorCode": "string",
   "EventName": "string",
   "EventSource": "string",
   "InsightType": "string",
   "MaxResults": number,
   "NextToken": "string",
   "Period": number,
   "StartTime": number,
   "TrailName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DataType

Type of data points to return. Valid values are `NonZeroData` and `FillWithZeros`. The default is `NonZeroData`.

Type: String

Valid Values: `FillWithZeros | NonZeroData`

Required: No

EndTime

Specifies, in UTC, the end time for time-series data. The value specified is exclusive; results include data points up to the specified time stamp.

The default is the time of request.

Type: Timestamp

Required: No

ErrorCode

Conditionally required if the `InsightType` parameter is set to `ApiErrorRateInsight`.

If returning metrics for the `ApiErrorRateInsight` Insights type, this is the error to retrieve data for. For example, `AccessDenied`.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `^[\w\d\s_.,\-:\[\]]+$`

Required: No

EventName

The name of the event, typically the AWS API on which unusual levels of activity were recorded.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `^[A-Za-z0-9_]+$`

Required: Yes

EventSource

The AWS service to which the request was made, such as `iam.amazonaws.com` or `s3.amazonaws.com`.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `^[a-z0-9_-]+\.amazonaws\.com$`

Required: Yes

InsightType

The type of CloudTrail Insights event, which is either `ApiCallRateInsight` or `ApiErrorRateInsight`. The `ApiCallRateInsight` Insights type analyzes write-only

management API calls that are aggregated per minute against a baseline API call volume. The `ApiErrorRateInsight` Insights type analyzes management API calls that result in error codes.

Type: String

Valid Values: `ApiCallRateInsight | ApiErrorRateInsight`

Required: Yes

MaxResults

The maximum number of data points to return. Valid values are integers from 1 to 21600. The default value is 21600.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 21600.

Required: No

NextToken

Returned if all datapoints can't be returned in a single call. For example, due to reaching `MaxResults`.

Add this parameter to the request to continue retrieving results starting from the last evaluated point.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 5000.

Required: No

Period

Granularity of data to retrieve, in seconds. Valid values are `60`, `300`, and `3600`. If you specify any other value, you will get an error. The default is 3600 seconds.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 3600.

Required: No

StartTime

Specifies, in UTC, the start time for time-series data. The value specified is inclusive; results include data points with the specified time stamp.

The default is 90 days before the time of request.

Type: Timestamp

Required: No

TrailName

The Amazon Resource Name(ARN) or name of the trail for which you want to retrieve Insights metrics data. This parameter should only be provided to fetch Insights metrics data generated on trails logging data events. This parameter is not required for Insights metric data generated on trails logging management events.

Type: String

Required: No

Response Syntax

```
{
   "ErrorCode": "string",
   "EventName": "string",
   "EventSource": "string",
   "InsightType": "string",
   "NextToken": "string",
   "Timestamps": [ number ],
   "TrailARN": "string",
   "Values": [ 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.

ErrorCode

Only returned if `InsightType` parameter was set to `ApiErrorRateInsight`.

If returning metrics for the `ApiErrorRateInsight` Insights type, this is the error to retrieve data for. For example, `AccessDenied`.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `^[\w\d\s_.,\-:\[\]]+$`

EventName

The name of the event, typically the AWS API on which unusual levels of activity were recorded.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `^[A-Za-z0-9_]+$`

EventSource

The AWS service to which the request was made, such as `iam.amazonaws.com` or `s3.amazonaws.com`.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `^[a-z0-9_-]+\.amazonaws\.com$`

InsightType

The type of CloudTrail Insights event, which is either `ApiCallRateInsight` or `ApiErrorRateInsight`. The `ApiCallRateInsight` Insights type analyzes write-only management API calls that are aggregated per minute against a baseline API call volume. The `ApiErrorRateInsight` Insights type analyzes management API calls that result in error codes.

Type: String

Valid Values: `ApiCallRateInsight | ApiErrorRateInsight`

NextToken

Only returned if the full results could not be returned in a single query. You can set the `NextToken` parameter in the next request to this value to continue retrieval.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 5000.

Timestamps

List of timestamps at intervals corresponding to the specified time period.

Type: Array of timestamps

TrailARN

Specifies the ARN of the trail. This is only returned when Insights is enabled on a trail logging data events.

Type: String

Values

List of values representing the API call rate or error rate at each timestamp. The number of values is equal to the number of timestamps.

Type: Array of doubles

Errors

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

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)

- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example shows how to retrieve API call rate metric data for the CloudTrail `CreateTrail` API.

```
{
    "EventSource": "cloudtrail.amazonaws.com",
    "EventName": "CreateTrail",
    "InsightType": "ApiCallRateInsight"
}
```

Example

The following example shows how to retrieve API error rate metric data for receiving the error `TrailNotFoundException` when calling the CloudTrail `UpdateTrail` API.

```
{
    "EventSource": "cloudtrail.amazonaws.com",
    "EventName": "UpdateTrail",
```

```
    "InsightType": "ApiErrorRateInsight",
    "ErrorCode": "TrailNotFoundException"
}
```

Example

The following example shows how to retrieve API call rate metric data for Amazon S3 `PutObject` data event API.

```
{
    "EventSource": "s3.amazonaws.com",
    "EventName": "PutObject",
    "InsightType": "ApiCallRateInsight",
    "TrailName": "arn:aws:cloudtrail:us-east-1:888888888888:trail/test-trail-name"
}
```

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 (Boto3)
- AWS SDK for Ruby V3

ListPublicKeys

Returns all public keys whose private keys were used to sign the digest files within the specified time range. The public key is needed to validate digest files that were signed with its corresponding private key.

> **Note**
>
> CloudTrail uses different private and public key pairs per Region. Each digest file is signed with a private key unique to its Region. When you validate a digest file from a specific Region, you must look in the same Region for its corresponding public key.

Request Syntax

```
{
   "EndTime": number,
   "NextToken": "string",
   "StartTime": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EndTime

Optionally specifies, in UTC, the end of the time range to look up public keys for CloudTrail digest files. If not specified, the current time is used.

Type: Timestamp

Required: No

NextToken

Reserved for future use.

Type: String

Required: No

StartTime

Optionally specifies, in UTC, the start of the time range to look up public keys for CloudTrail digest files. If not specified, the current time is used, and the current public key is returned.

Type: Timestamp

Required: No

Response Syntax

```
{
   "NextToken": "string",
   "PublicKeyList": [
      {
         "Fingerprint": "string",
         "ValidityEndTime": number,
         "ValidityStartTime": number,
         "Value": blob
      }
   ]
}
```

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.

NextToken

Reserved for future use.

Type: String

PublicKeyList

Contains an array of PublicKey objects.

> **Note**
>
> The returned public keys may have validity time ranges that overlap.

Type: Array of PublicKey objects

Errors

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

InvalidTimeRangeException

Occurs if the timestamp values are not valid. Either the start time occurs after the end time, or the time range is outside the range of possible values.

HTTP Status Code: 400

InvalidTokenException

Reserved for future use.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListQueries

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Returns a list of queries and query statuses for the past seven days. You must specify an ARN value for `EventDataStore`. Optionally, to shorten the list of results, you can specify a time range, formatted as timestamps, by adding `StartTime` and `EndTime` parameters, and a `QueryStatus` value. Valid values for `QueryStatus` include `QUEUED`, `RUNNING`, `FINISHED`, `FAILED`, `TIMED_OUT`, or `CANCELLED`.

Request Syntax

```
{
   "EndTime": number,
   "EventDataStore": "string",
   "MaxResults": number,
   "NextToken": "string",
   "QueryStatus": "string",
   "StartTime": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EndTime

Use with `StartTime` to bound a `ListQueries` request, and limit its results to only those queries run within a specified time period.

Type: Timestamp

Required: No

EventDataStore

The ARN (or the ID suffix of the ARN) of an event data store on which queries were run.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

MaxResults

The maximum number of queries to show on a page.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

NextToken

A token you can use to get the next page of results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

QueryStatus

The status of queries that you want to return in results. Valid values for `QueryStatus` include `QUEUED`, `RUNNING`, `FINISHED`, `FAILED`, `TIMED_OUT`, or `CANCELLED`.

Type: String

Valid Values: `QUEUED | RUNNING | FINISHED | FAILED | CANCELLED | TIMED_OUT`

Required: No

StartTime

Use with `EndTime` to bound a `ListQueries` request, and limit its results to only those queries run within a specified time period.

Type: Timestamp

Required: No

Response Syntax

```
{
   "NextToken": "string",
   "Queries": [
      {
         "CreationTime": number,
         "QueryId": "string",
         "QueryStatus": "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.

NextToken

A token you can use to get the next page of results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Queries

Lists matching query results, and shows query ID, status, and creation time of each query.

Type: Array of Query objects

Errors

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

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InvalidDateRangeException

A date range for the query was specified that is not valid. Be sure that the start time is chronologically before the end time. For more information about writing a query, see Create or edit a query in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

InvalidMaxResultsException

This exception is thrown if the limit specified is not valid.

HTTP Status Code: 400

InvalidNextTokenException

A token that is not valid, or a token that was previously used in a request with different parameters. This exception is thrown if the token is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidQueryStatusException

The query status is not valid for the operation.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListTags

Lists the tags for the specified trails, event data stores, dashboards, or channels in the current Region.

Request Syntax

```
{
   "NextToken": "string",
   "ResourceIdList": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

NextToken

Reserved for future use.

Type: String

Required: No

ResourceIdList

Specifies a list of trail, event data store, dashboard, or channel ARNs whose tags will be listed. The list has a limit of 20 ARNs.

Example trail ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Example event data store ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

Example dashboard ARN format: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

Example channel ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

Type: Array of strings

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "ResourceTagList": [
      {
         "ResourceId": "string",
         "TagsList": [
            {
               "Key": "string",
               "Value": "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.

NextToken

Reserved for future use.

Type: String

ResourceTagList

A list of resource tags.

Type: Array of ResourceTag objects

Errors

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

ChannelARNInvalidException

This exception is thrown when the specified value of `ChannelARN` is not valid.

HTTP Status Code: 400

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InvalidTokenException

Reserved for future use.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

ResourceTypeNotSupportedException

This exception is thrown when the specified resource type is not supported by CloudTrail.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

ListTrails

Lists trails that are in the current account.

Request Syntax

```
{
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

NextToken

The token to use to get the next page of results after a previous API call. This token must be passed in with the same parameters that were specified in the original call. For example, if the original call specified an AttributeKey of 'Username' with a value of 'root', the call with NextToken should include those same parameters.

Type: String

Required: No

Response Syntax

```
{
   "NextToken": "string",
   "Trails": [
      {
         "HomeRegion": "string",
         "Name": "string",
         "TrailARN": "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.

NextToken

The token to use to get the next page of results after a previous API call. If the token does not appear, there are no more results to return. The token must be passed in with the same parameters as the previous call. For example, if the original call specified an AttributeKey of 'Username' with a value of 'root', the call with NextToken should include those same parameters.

Type: String

Trails

Returns the name, ARN, and home Region of trails in the current account.

Type: Array of TrailInfo objects

Errors

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

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

LookupEvents

Looks up management events or CloudTrail Insights events that are captured by CloudTrail. You can look up events that occurred in a Region within the last 90 days.

> **Note**
>
> `LookupEvents` returns recent Insights events for trails that enable Insights. To view Insights events for an event data store, you can run queries on your Insights event data store, and you can also view the Lake dashboard for Insights.

Lookup supports the following attributes for management events:

- AWS access key
- Event ID
- Event name
- Event source
- Read only
- Resource name
- Resource type
- User name

Lookup supports the following attributes for Insights events:

- Event ID
- Event name
- Event source

All attributes are optional. The default number of results returned is 50, with a maximum of 50 possible. The response includes a token that you can use to get the next page of results.

> **Important**
>
> The rate of lookup requests is limited to two per second, per account, per Region. If this limit is exceeded, a throttling error occurs.

Request Syntax

```
{
   "EndTime": number,
   "EventCategory": "string",
   "LookupAttributes": [
      {
         "AttributeKey": "string",
         "AttributeValue": "string"
      }
   ],
   "MaxResults": number,
   "NextToken": "string",
   "StartTime": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EndTime

Specifies that only events that occur before or at the specified time are returned. If the specified end time is before the specified start time, an error is returned.

Type: Timestamp

Required: No

EventCategory

Specifies the event category. If you do not specify an event category, events of the category are not returned in the response. For example, if you do not specify `insight` as the value of `EventCategory`, no Insights events are returned.

Type: String

Valid Values: `insight`

Required: No

LookupAttributes

Contains a list of lookup attributes. Currently the list can contain only one item.

Type: Array of LookupAttribute objects

Required: No

MaxResults

The number of events to return. Possible values are 1 through 50. The default is 50.

Type: Integer

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

Required: No

NextToken

The token to use to get the next page of results after a previous API call. This token must be passed in with the same parameters that were specified in the original call. For example, if the original call specified an AttributeKey of 'Username' with a value of 'root', the call with NextToken should include those same parameters.

Type: String

Required: No

StartTime

Specifies that only events that occur after or at the specified time are returned. If the specified start time is after the specified end time, an error is returned.

Type: Timestamp

Required: No

Response Syntax

```
{
   "Events": [
      {
         "AccessKeyId": "string",
         "CloudTrailEvent": "string",
         "EventId": "string",
         "EventName": "string",
         "EventSource": "string",
         "EventTime": number,
         "ReadOnly": "string",
         "Resources": [
            {
               "ResourceName": "string",
               "ResourceType": "string"
            }
         ],
         "Username": "string"
      }
   ],
   "NextToken": "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

A list of events returned based on the lookup attributes specified and the CloudTrail event. The events list is sorted by time. The most recent event is listed first.

Type: Array of Event objects

NextToken

The token to use to get the next page of results after a previous API call. If the token does not appear, there are no more results to return. The token must be passed in with the same parameters as the previous call. For example, if the original call specified an AttributeKey

of 'Username' with a value of 'root', the call with NextToken should include those same parameters.

Type: String

Errors

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

InvalidEventCategoryException

Occurs if an event category that is not valid is specified as a value of `EventCategory`.

HTTP Status Code: 400

InvalidLookupAttributesException

Occurs when a lookup attribute is specified that is not valid.

HTTP Status Code: 400

InvalidMaxResultsException

This exception is thrown if the limit specified is not valid.

HTTP Status Code: 400

InvalidNextTokenException

A token that is not valid, or a token that was previously used in a request with different parameters. This exception is thrown if the token is not valid.

HTTP Status Code: 400

InvalidTimeRangeException

Occurs if the timestamp values are not valid. Either the start time occurs after the end time, or the time range is outside the range of possible values.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

PutEventConfiguration

Updates the event configuration settings for the specified event data store or trail. This operation supports updating the maximum event size, adding or modifying context key selectors for event data store, and configuring aggregation settings for the trail.

Request Syntax

```
{
   "AggregationConfigurations": [
      {
         "EventCategory": "string",
         "Templates": [ "string" ]
      }
   ],
   "ContextKeySelectors": [
      {
         "Equals": [ "string" ],
         "Type": "string"
      }
   ],
   "EventDataStore": "string",
   "MaxEventSize": "string",
   "TrailName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

AggregationConfigurations

The list of aggregation configurations that you want to configure for the trail.

Type: Array of AggregationConfiguration objects

Array Members: Maximum number of 1 item.

Required: No

ContextKeySelectors

A list of context key selectors that will be included to provide enriched event data.

Type: Array of ContextKeySelector objects

Array Members: Maximum number of 2 items.

Required: No

EventDataStore

The Amazon Resource Name (ARN) or ID suffix of the ARN of the event data store for which event configuration settings are updated.

Type: String

Required: No

MaxEventSize

The maximum allowed size for events to be stored in the specified event data store. If you are using context key selectors, MaxEventSize must be set to Large.

Type: String

Valid Values: `Standard | Large`

Required: No

TrailName

The name of the trail for which you want to update event configuration settings.

Type: String

Required: No

Response Syntax

```
{
   "AggregationConfigurations": [
      {
         "EventCategory": "string",
```

```
            "Templates": [ "string" ]
        }
    ],
    "ContextKeySelectors": [
        {
            "Equals": [ "string" ],
            "Type": "string"
        }
    ],
    "EventDataStoreArn": "string",
    "MaxEventSize": "string",
    "TrailARN": "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.

AggregationConfigurations

A list of aggregation configurations that are configured for the trail.

Type: Array of AggregationConfiguration objects

Array Members: Maximum number of 1 item.

ContextKeySelectors

The list of context key selectors that are configured for the event data store.

Type: Array of ContextKeySelector objects

Array Members: Maximum number of 2 items.

EventDataStoreArn

The Amazon Resource Name (ARN) or ID suffix of the ARN of the event data store for which the event configuration settings were updated.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

MaxEventSize

The maximum allowed size for events stored in the specified event data store.

Type: String

Valid Values: `Standard | Large`

TrailARN

The Amazon Resource Name (ARN) of the trail that has aggregation enabled.

Type: String

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InsufficientIAMAccessPermissionException

The task can't be completed because you are signed in with an account that lacks permissions to view or create a service-linked role. Sign in with an account that has the required permissions and then try again.

HTTP Status Code: 400

InvalidEventDataStoreCategoryException

This exception is thrown when event categories of specified event data stores are not valid.

HTTP Status Code: 400

InvalidEventDataStoreStatusException

The event data store is not in a status that supports the operation.

HTTP Status Code: 400

InvalidHomeRegionException

This exception is thrown when an operation is called on a trail from a Region other than the Region in which the trail was created.

HTTP Status Code: 400

InvalidParameterCombinationException

This exception is thrown when the combination of parameters provided is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization

in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

PutEventSelectors

Configures event selectors (also referred to as *basic event selectors*) or advanced event selectors for your trail. You can use either `AdvancedEventSelectors` or `EventSelectors`, but not both. If you apply `AdvancedEventSelectors` to a trail, any existing `EventSelectors` are overwritten.

You can use `AdvancedEventSelectors` to log management events, data events for all resource types, and network activity events.

You can use `EventSelectors` to log management events and data events for the following resource types:

- `AWS::DynamoDB::Table`
- `AWS::Lambda::Function`
- `AWS::S3::Object`

You can't use `EventSelectors` to log network activity events.

If you want your trail to log Insights events, be sure the event selector or advanced event selector enables logging of the Insights event types you want configured for your trail. For more information about logging Insights events, see Working with CloudTrail Insights in the *CloudTrail User Guide*. By default, trails created without specific event selectors are configured to log all read and write management events, and no data events or network activity events.

When an event occurs in your account, CloudTrail evaluates the event selectors or advanced event selectors in all trails. For each trail, if the event matches any event selector, the trail processes and logs the event. If the event doesn't match any event selector, the trail doesn't log the event.

Example

1. You create an event selector for a trail and specify that you want to log write-only events.
2. The EC2 `GetConsoleOutput` and `RunInstances` API operations occur in your account.
3. CloudTrail evaluates whether the events match your event selectors.
4. The `RunInstances` is a write-only event and it matches your event selector. The trail logs the event.
5. The `GetConsoleOutput` is a read-only event that doesn't match your event selector. The trail doesn't log the event.

The `PutEventSelectors` operation must be called from the Region in which the trail was created; otherwise, an `InvalidHomeRegionException` exception is thrown.

You can configure up to five event selectors for each trail.

You can add advanced event selectors, and conditions for your advanced event selectors, up to a maximum of 500 values for all conditions and selectors on a trail. For more information, see Logging management events, Logging data events, Logging network activity events, and Quotas in AWS CloudTrail in the *AWS CloudTrail User Guide*.

Request Syntax

```
{
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
         ],
         "Name": "string"
      }
   ],
   "EventSelectors": [
      {
         "DataResources": [
            {
               "Type": "string",
               "Values": [ "string" ]
            }
         ],
         "ExcludeManagementEventSources": [ "string" ],
         "IncludeManagementEvents": boolean,
         "ReadWriteType": "string"
      }
   ],
   "TrailName": "string"
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

AdvancedEventSelectors

Specifies the settings for advanced event selectors. You can use advanced event selectors to log management events, data events for all resource types, and network activity events.

You can add advanced event selectors, and conditions for your advanced event selectors, up to a maximum of 500 values for all conditions and selectors on a trail. You can use either `AdvancedEventSelectors` or `EventSelectors`, but not both. If you apply `AdvancedEventSelectors` to a trail, any existing `EventSelectors` are overwritten. For more information about advanced event selectors, see Logging data events and Logging network activity events in the *AWS CloudTrail User Guide*.

Type: Array of AdvancedEventSelector objects

Required: No

EventSelectors

Specifies the settings for your event selectors. You can use event selectors to log management events and data events for the following resource types:

- `AWS::DynamoDB::Table`
- `AWS::Lambda::Function`
- `AWS::S3::Object`

You can't use event selectors to log network activity events.

You can configure up to five event selectors for a trail. You can use either `EventSelectors` or `AdvancedEventSelectors` in a `PutEventSelectors` request, but not both. If you apply `EventSelectors` to a trail, any existing `AdvancedEventSelectors` are overwritten.

Type: Array of EventSelector objects

Required: No

TrailName

Specifies the name of the trail or trail ARN. If you specify a trail name, the string must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

If you specify a trail ARN, it must be in the following format.

`arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Type: String

Required: Yes

Response Syntax

```
{
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
         ],
         "Name": "string"
      }
   ],
   "EventSelectors": [
      {
```

```
        "DataResources": [
           {
              "Type": "string",
              "Values": [ "string" ]
           }
        ],
        "ExcludeManagementEventSources": [ "string" ],
        "IncludeManagementEvents": boolean,
        "ReadWriteType": "string"
     }
   ],
   "TrailARN": "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.

AdvancedEventSelectors

Specifies the advanced event selectors configured for your trail.

Type: Array of AdvancedEventSelector objects

EventSelectors

Specifies the event selectors configured for your trail.

Type: Array of EventSelector objects

TrailARN

Specifies the ARN of the trail that was updated with event selectors. The following is the format of a trail ARN.

`arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Type: String

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidEventSelectorsException

This exception is thrown when the `PutEventSelectors` operation is called with a number of event selectors, advanced event selectors, or data resources that is not valid. The combination of event selectors or advanced event selectors and data resources is not valid. A trail can have up to 5 event selectors. If a trail uses advanced event selectors, a maximum of 500 total values for all conditions in all advanced event selectors is allowed. A trail is limited to 250 data

resources. These data resources can be distributed across event selectors, but the overall total cannot exceed 250.

You can:

- Specify a valid number of event selectors (1 to 5) for a trail.
- Specify a valid number of data resources (1 to 250) for an event selector. The limit of number of resources on an individual event selector is configurable up to 250. However, this upper limit is allowed only if the total number of data resources does not exceed 250 across all event selectors for a trail.
- Specify up to 500 values for all conditions in all advanced event selectors for a trail.
- Specify a valid value for a parameter. For example, specifying the `ReadWriteType` parameter with a value of `read-only` is not valid.

HTTP Status Code: 400

InvalidHomeRegionException

This exception is thrown when an operation is called on a trail from a Region other than the Region in which the trail was created.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example shows how to use advanced event selectors to log all management events (both readOnly and writeOnly), include `PutObject` and `DeleteObject` data events for the S3 objects in two S3 bucket prefixes, and log network activity events for AWS KMS. As shown here, you can use advanced event selectors to select not only the S3 prefix names by ARN, but the names of the specific events that you want to log.

```
{
```

```
   "AdvancedEventSelectors": [
      {
         "Name": "Log all management events",
         "FieldSelectors": [
            { "Field": "eventCategory", "Equals": ["Management"] }
          ]
      },
      {
         "Name": "Log PutObject and DeleteObject data events for two S3 prefixes",
         "FieldSelectors": [
            { "Field": "eventCategory", "Equals": ["Data"] },
            { "Field": "resources.type", "Equals": ["AWS::S3::Object"] },
            { "Field": "eventName", "Equals": ["PutObject","DeleteObject"] },
            { "Field": "resources.ARN", "StartsWith": ["arn:aws:s3:::amzn-s3-demo-
bucket/prefix","arn:aws:s3:::amzn-s3-demo-bucket2/prefix2"] }
         ]

      },
      {
         "Name": "Log network activity events for AWS KMS",
         "FieldSelectors": [
            {"Field": "eventCategory", "Equals": ["NetworkActivity"]},
            {"Field": "eventSource", "Equals": ["kms.amazonaws.com"]}
         ]
      }
   ],
   "TrailName": "myTrail"
}
```

Example

The following example shows how to use advanced event selectors to log all data events for Amazon SNS topics and platform endpoints, and to log only `SendMessage` data events for Amazon SQS.

```
{
   "AdvancedEventSelectors": [
      {
         "Name": "Log all data events for Amazon SNS topics",
         "FieldSelectors": [
            { "Field": "eventCategory", "Equals": ["Data"] },
            { "Field": "resources.type", "Equals": ["AWS::SNS::Topic"] }
         ]
```

```
      },
      {
         "Name": "Log all data events for Amazon SNS platform endpoints",
         "FieldSelectors": [
            { "Field": "eventCategory", "Equals": ["Data"] },
            { "Field": "resources.type", "Equals": ["AWS::SNS::PlatformEndpoint"] }
         ]
      },
      {
         "Name": "Log SendMessage data events for SQS",
         "FieldSelectors": [
            { "Field": "eventCategory", "Equals": ["Data"] },
            { "Field": "resources.type", "Equals": ["AWS::SQS::Queue"] },
            { "Field": "eventName", "Equals": ["SendMessage"] }
         ]
      }
   ],
   "TrailName": "myTrail"
}
```

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 (Boto3)
- AWS SDK for Ruby V3

PutInsightSelectors

Lets you enable Insights event logging on specific event categories by specifying the Insights selectors that you want to enable on an existing trail or event data store. You also use `PutInsightSelectors` to turn off Insights event logging, by passing an empty list of Insights types. The valid Insights event types are `ApiErrorRateInsight` and `ApiCallRateInsight`, and valid EventCategories are `Management` and `Data`.

> **Note**
>
> Insights on data events are not supported on event data stores. For event data stores, you can only enable Insights on management events.

To enable Insights on an event data store, you must specify the ARNs (or ID suffix of the ARNs) for the source event data store (`EventDataStore`) and the destination event data store (`InsightsDestination`). The source event data store logs management events and enables Insights. The destination event data store logs Insights events based upon the management event activity of the source event data store. The source and destination event data stores must belong to the same AWS account.

To log Insights events for a trail, you must specify the name (`TrailName`) of the CloudTrail trail for which you want to change or add Insights selectors.

- For Management events Insights: To log CloudTrail Insights on the API call rate, the trail or event data store must log `write` management events. To log CloudTrail Insights on the API error rate, the trail or event data store must log `read` or `write` management events.
- For Data events Insights: To log CloudTrail Insights on the API call rate or API error rate, the trail must log `read` or `write` data events. Data events Insights are not supported on event data store.

To log CloudTrail Insights events on API call volume, the trail or event data store must log `write` management events. To log CloudTrail Insights events on API error rate, the trail or event data store must log `read` or `write` management events. You can call `GetEventSelectors` on a trail to check whether the trail logs management events. You can call `GetEventDataStore` on an event data store to check whether the event data store logs management events.

For more information, see Working with CloudTrail Insights in the *AWS CloudTrail User Guide*.

Request Syntax

```
{
   "EventDataStore": "string",
   "InsightsDestination": "string",
   "InsightSelectors": [
      {
         "EventCategories": [ "string" ],
         "InsightType": "string"
      }
   ],
   "TrailName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The ARN (or ID suffix of the ARN) of the source event data store for which you want to change or add Insights selectors. To enable Insights on an event data store, you must provide both the `EventDataStore` and `InsightsDestination` parameters.

You cannot use this parameter with the `TrailName` parameter.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

InsightsDestination

The ARN (or ID suffix of the ARN) of the destination event data store that logs Insights events. To enable Insights on an event data store, you must provide both the `EventDataStore` and `InsightsDestination` parameters.

You cannot use this parameter with the `TrailName` parameter.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

InsightSelectors

Contains the Insights types you want to log on a specific category of events on a trail or event data store. `ApiCallRateInsight` and `ApiErrorRateInsight` are valid Insight types.The EventCategory field can specify `Management` or `Data` events or both. For event data store, you can log Insights for management events only.

The `ApiCallRateInsight` Insights type analyzes write-only management API calls or read and write data API calls that are aggregated per minute against a baseline API call volume.

The `ApiErrorRateInsight` Insights type analyzes management and data API calls that result in error codes. The error is shown if the API call is unsuccessful.

Type: Array of InsightSelector objects

Required: Yes

TrailName

The name of the CloudTrail trail for which you want to change or add Insights selectors.

You cannot use this parameter with the `EventDataStore` and `InsightsDestination` parameters.

Type: String

Required: No

Response Syntax

```
{
   "EventDataStoreArn": "string",
   "InsightsDestination": "string",
   "InsightSelectors": [
```

```
        {
            "EventCategories": [ "string" ],
            "InsightType": "string"
        }
    ],
    "TrailARN": "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.

EventDataStoreArn

The Amazon Resource Name (ARN) of the source event data store for which you want to change or add Insights selectors.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

InsightsDestination

The ARN of the destination event data store that logs Insights events.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

InsightSelectors

Contains the Insights types you want to log on a specific category of events in a trail or event data store. `ApiCallRateInsight` and `ApiErrorRateInsight` are valid Insight types.The EventCategory field can specify `Management` or `Data` events or both. For event data store, you can only log Insights for management events only.

Type: Array of InsightSelector objects

TrailARN

The Amazon Resource Name (ARN) of a trail for which you want to change or add Insights selectors.

Type: String

Errors

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

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InsufficientS3BucketPolicyException

This exception is thrown when the policy on the S3 bucket is not sufficient.

HTTP Status Code: 400

InvalidHomeRegionException

This exception is thrown when an operation is called on a trail from a Region other than the Region in which the trail was created.

HTTP Status Code: 400

InvalidInsightSelectorsException

For `PutInsightSelectors`, this exception is thrown when the formatting or syntax of the `InsightSelectors` JSON statement is not valid, or the specified `InsightType` in the `InsightSelectors` statement is not valid. Valid values for `InsightType` are `ApiCallRateInsight` and `ApiErrorRateInsight`. To enable Insights on an event data store, the destination event data store specified by the `InsightsDestination` parameter must log Insights events and the source event data store specified by the `EventDataStore` parameter must log management events.

For `UpdateEventDataStore`, this exception is thrown if Insights are enabled on the event data store and the updated advanced event selectors are not compatible with the configured `InsightSelectors`. If the `InsightSelectors` includes an `InsightType` of `ApiCallRateInsight`, the source event data store must log `write` management events. If the `InsightSelectors` includes an `InsightType` of `ApiErrorRateInsight`, the source event data store must log management events.

HTTP Status Code: 400

InvalidParameterCombinationException

This exception is thrown when the combination of parameters provided is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

KmsException

This exception is thrown when there is an issue with the specified AWS KMS key and the trail or event data store can't be updated.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

S3BucketDoesNotExistException

This exception is thrown when the specified S3 bucket does not exist.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example shows how to use Insight selectors to enable CloudTrail Insights on a trail named *SampleTrail*.

```
{
   "InsightSelectors": '[{"InsightType": "ApiCallRateInsight"},{"InsightType":
 "ApiErrorRateInsight"}]',
   "TrailARN": "arn:aws:cloudtrail:us-east-2:123456789012:trail/SampleTrail"
}
```

Example

The following example shows how to disable CloudTrail Insights on a trail named SampleTrail. Disable Insights event collection by passing an empty string of insight types (`[ ]`).

```
{
   "InsightSelectors": [ ],
   "TrailARN": "arn:aws:cloudtrail:us-east-2:123456789012:trail/SampleTrail"
}
```

Example

The following example shows how to use Insight selectors to enable CloudTrail Insights on an event data store.

```
{
   "EventDataStore": "arn:aws:cloudtrail:us-east-1:123456789012:eventdatastore/EXAMPLE-
f852-4e8f-8bd1-bcf6cEXAMPLE",
   "InsightsDestination": "arn:aws:cloudtrail:us-east-1:123456789012:eventdatastore/
EXAMPLE-d483-5c7d-4ac2-adb5dEXAMPLE",
   "InsightSelectors": [
      {
         "InsightType": "ApiCallRateInsight"
      },
      {
         "InsightType": "ApiErrorRateInsight"
      }
   ]
}
```

Example

The following example shows how to disable CloudTrail Insights on an event data store.

```
{
   "EventDataStore": "arn:aws:cloudtrail:us-east-1:123456789012:eventdatastore/EXAMPLE-
f852-4e8f-8bd1-bcf6cEXAMPLE",
   "InsightSelectors": [ ]
}
```

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 (Boto3)
- AWS SDK for Ruby V3

PutResourcePolicy

Attaches a resource-based permission policy to a CloudTrail event data store, dashboard, or channel. For more information about resource-based policies, see CloudTrail resource-based policy examples in the *CloudTrail User Guide*.

Request Syntax

```
{
   "ResourceArn": "string",
   "ResourcePolicy": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the CloudTrail event data store, dashboard, or channel attached to the resource-based policy.

Example event data store ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

Example dashboard ARN format: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

Example channel ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

ResourcePolicy

A JSON-formatted string for an AWS resource-based policy.

For example resource-based policies, see CloudTrail resource-based policy examples in the *CloudTrail User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Required: Yes

Response Syntax

```
{
   "DelegatedAdminResourcePolicy": "string",
   "ResourceArn": "string",
   "ResourcePolicy": "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.

DelegatedAdminResourcePolicy

The default resource-based policy that is automatically generated for the delegated administrator of an AWS Organizations organization. This policy will be evaluated in tandem with any policy you submit for the resource. For more information about this policy, see Default resource policy for delegated administrators.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

ResourceArn

The Amazon Resource Name (ARN) of the CloudTrail event data store, dashboard, or channel attached to the resource-based policy.

Example event data store ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

Example dashboard ARN format: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

Example channel ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

ResourcePolicy

The JSON-formatted string of the AWS resource-based policy attached to the CloudTrail event data store, dashboard, or channel.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Errors

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

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ResourceARNNotValidException

This exception is thrown when the provided resource does not exist, or the ARN format of the resource is not valid.

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

ResourcePolicyNotValidException

This exception is thrown when the resouce-based policy has syntax errors, or contains a principal that is not valid.

HTTP Status Code: 400

ResourceTypeNotSupportedException

This exception is thrown when the specified resource type is not supported by CloudTrail.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

RegisterOrganizationDelegatedAdmin

Registers an organization's member account as the CloudTrail delegated administrator.

Request Syntax

```
{
   "MemberAccountId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MemberAccountId

An organization member account ID that you want to designate as a delegated administrator.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: \d+

Required: Yes

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.

AccountNotFoundException

This exception is thrown when the specified account is not found or not part of an organization.

HTTP Status Code: 400

AccountRegisteredException

This exception is thrown when the account is already registered as the CloudTrail delegated administrator.

HTTP Status Code: 400

CannotDelegateManagementAccountException

This exception is thrown when the management account of an organization is registered as the CloudTrail delegated administrator.

HTTP Status Code: 400

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

DelegatedAdminAccountLimitExceededException

This exception is thrown when the maximum number of CloudTrail delegated administrators is reached.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InsufficientIAMAccessPermissionException

The task can't be completed because you are signed in with an account that lacks permissions to view or create a service-linked role. Sign in with an account that has the required permissions and then try again.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NotOrganizationManagementAccountException

This exception is thrown when the account making the request is not the organization's management account.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

RemoveTags

Removes the specified tags from a trail, event data store, dashboard, or channel.

Request Syntax

```
{
   "ResourceId": "string",
   "TagsList": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceId

Specifies the ARN of the trail, event data store, dashboard, or channel from which tags should be removed.

Example trail ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Example event data store ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

Example dashboard ARN format: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

Example channel ARN format: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

Type: String

Required: Yes

TagsList

Specifies a list of tags to be removed.

Type: Array of Tag objects

Array Members: Maximum number of 200 items.

Required: Yes

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.

ChannelARNInvalidException

This exception is thrown when the specified value of `ChannelARN` is not valid.

HTTP Status Code: 400

ChannelNotFoundException

This exception is thrown when CloudTrail cannot find the specified channel.

HTTP Status Code: 400

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InvalidTagParameterException

This exception is thrown when the specified tag key or values are not valid. It can also occur if there are duplicate tags or too many tags on the resource.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)

- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

ResourceTypeNotSupportedException

This exception is thrown when the specified resource type is not supported by CloudTrail.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

RestoreEventDataStore

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Restores a deleted event data store specified by `EventDataStore`, which accepts an event data store ARN. You can only restore a deleted event data store within the seven-day wait period after deletion. Restoring an event data store can take several minutes, depending on the size of the event data store.

Request Syntax

```
{
   "EventDataStore": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The ARN (or the ID suffix of the ARN) of the event data store that you want to restore.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

Response Syntax

```
{
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
         ],
         "Name": "string"
      }
   ],
   "BillingMode": "string",
   "CreatedTimestamp": number,
   "EventDataStoreArn": "string",
   "KmsKeyId": "string",
   "MultiRegionEnabled": boolean,
   "Name": "string",
   "OrganizationEnabled": boolean,
   "RetentionPeriod": number,
   "Status": "string",
   "TerminationProtectionEnabled": boolean,
   "UpdatedTimestamp": 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.

AdvancedEventSelectors

The advanced event selectors that were used to select events.

Type: Array of AdvancedEventSelector objects

BillingMode

The billing mode for the event data store.

Type: String

Valid Values: `EXTENDABLE_RETENTION_PRICING | FIXED_RETENTION_PRICING`

CreatedTimestamp

The timestamp of an event data store's creation.

Type: Timestamp

EventDataStoreArn

The event data store ARN.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

KmsKeyId

Specifies the AWS KMS key ID that encrypts the events delivered by CloudTrail. The value is a fully specified ARN to a AWS KMS key in the following format.

```
arn:aws:kms:us-
east-2:123456789012:key/12345678-1234-1234-1234-123456789012
```

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350.

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

MultiRegionEnabled

Indicates whether the event data store is collecting events from all Regions, or only from the Region in which the event data store was created.

Type: Boolean

Name

The name of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

OrganizationEnabled

Indicates whether an event data store is collecting logged events for an organization in AWS Organizations.

Type: Boolean

RetentionPeriod

The retention period, in days.

Type: Integer

Valid Range: Minimum value of 7. Maximum value of 3653.

Status

The status of the event data store.

Type: String

Valid Values: `CREATED | ENABLED | PENDING_DELETION | STARTING_INGESTION | STOPPING_INGESTION | STOPPED_INGESTION`

TerminationProtectionEnabled

Indicates that termination protection is enabled and the event data store cannot be automatically deleted.

Type: Boolean

UpdatedTimestamp

The timestamp that shows when an event data store was updated, if applicable. `UpdatedTimestamp` is always either the same or newer than the time shown in `CreatedTimestamp`.

Type: Timestamp

Errors

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

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreMaxLimitExceededException

Your account has used the maximum number of event data stores.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidEventDataStoreStatusException

The event data store is not in a status that supports the operation.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

SearchSampleQueries

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Searches sample queries and returns a list of sample queries that are sorted by relevance. To search for sample queries, provide a natural language `SearchPhrase` in English.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string",
   "SearchPhrase": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxResults

The maximum number of results to return on a single page. The default value is 10.

Type: Integer

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

Required: No

NextToken

A token you can use to get the next page of results. The length constraint is in characters, not words.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

SearchPhrase

The natural language phrase to use for the semantic search. The phrase must be in English. The length constraint is in characters, not words.

Type: String

Length Constraints: Minimum length of 2. Maximum length of 1000.

Pattern: `^[ -~\n]*$`

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "SearchResults": [
      {
         "Description": "string",
         "Name": "string",
         "Relevance": number,
         "SQL": "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.

NextToken

A token you can use to get the next page of results.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

SearchResults

A list of objects containing the search results ordered from most relevant to least relevant.

Type: Array of SearchSampleQueriesSearchResult objects

Errors

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

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

StartDashboardRefresh

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Starts a refresh of the specified dashboard.

Each time a dashboard is refreshed, CloudTrail runs queries to populate the dashboard's widgets. CloudTrail must be granted permissions to run the `StartQuery` operation on your behalf. To provide permissions, run the `PutResourcePolicy` operation to attach a resource-based policy to each event data store. For more information, see Example: Allow CloudTrail to run queries to populate a dashboard in the *AWS CloudTrail User Guide*.

Request Syntax

```
{
   "DashboardId": "string",
   "QueryParameterValues": {
      "string" : "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DashboardId

The name or ARN of the dashboard.

Type: String

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

Required: Yes

QueryParameterValues

The query parameter values for the dashboard

For custom dashboards, the following query parameters are valid: `$StartTime$`, `$EndTime$`, and `$Period$`.

For managed dashboards, the following query parameters are valid: `$StartTime$`, `$EndTime$`, `$Period$`, and `$EventDataStoreId$`. The `$EventDataStoreId$` query parameter is required.

Type: String to string map

Key Length Constraints: Minimum length of 3. Maximum length of 128.

Key Pattern: `^[a-zA-Z0-9._/\-:$]+$`

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

Value Pattern: `^[a-zA-Z0-9._/\-:]+$`

Required: No

Response Syntax

```
{
   "RefreshId": "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.

RefreshId

The refresh ID for the dashboard.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 20.

Pattern: \d+

Errors

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

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

ServiceQuotaExceededException

This exception is thrown when the quota is exceeded. For information about CloudTrail quotas, see Service quotas in the *AWS General Reference*.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example refreshes a managed dashboard. Because managed dashboards are configured by CloudTrail, the refresh request needs to include the ID of the event data store that the queries will run on.

```
{
  "DashboardId": "AWSCloudTrail-Overview",
  "QueryParameterValues": {
      "$StartTime$": "2024-11-13T08:00:00.00Z",
      "$EndTime$": "2024-11-13T12:00:00.00Z",
      "$Period$": "minute",
      "$EventDataStoreId$": "<eds-id>"
  }
}
```

Example

The following example refreshes a custom dashboard named `AccountActivityDashboard`.

```
{
  "DashboardId": "AccountActivityDashboard",
  "QueryParameterValues": {
      "$StartTime$": "2024-11-13T08:00:00.00Z",
      "$EndTime$": "2024-11-13T12:00:00.00Z",
      "$Period$": "minute"
  }
}
```

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 (Boto3)
- AWS SDK for Ruby V3

StartEventDataStoreIngestion

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Starts the ingestion of live events on an event data store specified as either an ARN or the ID portion of the ARN. To start ingestion, the event data store `Status` must be `STOPPED_INGESTION` and the `eventCategory` must be `Management`, `Data`, `NetworkActivity`, or `ConfigurationItem`.

Request Syntax

```
{
   "EventDataStore": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The ARN (or ID suffix of the ARN) of the event data store for which you want to start ingestion.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

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.

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidEventDataStoreCategoryException

This exception is thrown when event categories of specified event data stores are not valid.

HTTP Status Code: 400

InvalidEventDataStoreStatusException

The event data store is not in a status that supports the operation.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

StartImport

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Starts an import of logged trail events from a source S3 bucket to a destination event data store. By default, CloudTrail only imports events contained in the S3 bucket's `CloudTrail` prefix and the prefixes inside the `CloudTrail` prefix, and does not check prefixes for other AWS services. If you want to import CloudTrail events contained in another prefix, you must include the prefix in the `S3LocationUri`. For more considerations about importing trail events, see Considerations for copying trail events in the *CloudTrail User Guide*.

When you start a new import, the `Destinations` and `ImportSource` parameters are required. Before starting a new import, disable any access control lists (ACLs) attached to the source S3 bucket. For more information about disabling ACLs, see Controlling ownership of objects and disabling ACLs for your bucket.

When you retry an import, the `ImportID` parameter is required.

> **Note**
>
> If the destination event data store is for an organization, you must use the management account to import trail events. You cannot use the delegated administrator account for the organization.

Request Syntax

```
{
   "Destinations": [ "string" ],
   "EndEventTime": number,
   "ImportId": "string",
   "ImportSource": {
```

```
        "S3": {
           "S3BucketAccessRoleArn": "string",
           "S3BucketRegion": "string",
           "S3LocationUri": "string"
        }
    },
    "StartEventTime": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Destinations

The ARN of the destination event data store. Use this parameter for a new import.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

EndEventTime

Use with `StartEventTime` to bound a `StartImport` request, and limit imported trail events to only those events logged within a specified time period. When you specify a time range, CloudTrail checks the prefix and log file names to verify the names contain a date between the specified `StartEventTime` and `EndEventTime` before attempting to import events.

Type: Timestamp

Required: No

ImportId

The ID of the import. Use this parameter when you are retrying an import.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: No

ImportSource

The source S3 bucket for the import. Use this parameter for a new import.

Type: ImportSource object

Required: No

StartEventTime

Use with `EndEventTime` to bound a `StartImport` request, and limit imported trail events to only those events logged within a specified time period. When you specify a time range, CloudTrail checks the prefix and log file names to verify the names contain a date between the specified `StartEventTime` and `EndEventTime` before attempting to import events.

Type: Timestamp

Required: No

Response Syntax

```
{
   "CreatedTimestamp": number,
   "Destinations": [ "string" ],
   "EndEventTime": number,
   "ImportId": "string",
   "ImportSource": {
      "S3": {
         "S3BucketAccessRoleArn": "string",
         "S3BucketRegion": "string",
         "S3LocationUri": "string"
      }
   },
   "ImportStatus": "string",
   "StartEventTime": number,
   "UpdatedTimestamp": 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.

CreatedTimestamp

The timestamp for the import's creation.

Type: Timestamp

Destinations

The ARN of the destination event data store.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 3. Maximum length of 256.

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

EndEventTime

Used with `StartEventTime` to bound a `StartImport` request, and limit imported trail events to only those events logged within a specified time period.

Type: Timestamp

ImportId

The ID of the import.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

ImportSource

The source S3 bucket for the import.

Type: ImportSource object

ImportStatus

Shows the status of the import after a `StartImport` request. An import finishes with a status of `COMPLETED` if there were no failures, or `FAILED` if there were failures.

Type: String

Valid Values: `INITIALIZING | IN_PROGRESS | FAILED | STOPPED | COMPLETED`

StartEventTime

Used with `EndEventTime` to bound a `StartImport` request, and limit imported trail events to only those events logged within a specified time period.

Type: Timestamp

UpdatedTimestamp

The timestamp of the import's last update, if applicable.

Type: Timestamp

Errors

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

AccountHasOngoingImportException

This exception is thrown when you start a new import and a previous import is still in progress.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

ImportNotFoundException

The specified import was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InvalidEventDataStoreCategoryException

This exception is thrown when event categories of specified event data stores are not valid.

HTTP Status Code: 400

InvalidEventDataStoreStatusException

The event data store is not in a status that supports the operation.

HTTP Status Code: 400

InvalidImportSourceException

This exception is thrown when the provided source S3 bucket is not valid for import.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

StartLogging

Starts the recording of AWS API calls and log file delivery for a trail. For a trail that is enabled in all Regions, this operation must be called from the Region in which the trail was created. This operation cannot be called on the shadow trails (replicated trails in other Regions) of a trail that is enabled in all Regions.

Request Syntax

```
{
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Name

Specifies the name or the CloudTrail ARN of the trail for which CloudTrail logs AWS API calls. The following is the format of a trail ARN.

`arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Type: String

Required: Yes

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.

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidHomeRegionException

This exception is thrown when an operation is called on a trail from a Region other than the Region in which the trail was created.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)

- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

StartQuery

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Starts a CloudTrail Lake query. Use the `QueryStatement` parameter to provide your SQL query, enclosed in single quotation marks. Use the optional `DeliveryS3Uri` parameter to deliver the query results to an S3 bucket.

`StartQuery` requires you specify either the `QueryStatement` parameter, or a `QueryAlias` and any `QueryParameters`. In the current release, the `QueryAlias` and `QueryParameters` parameters are used only for the queries that populate the CloudTrail Lake dashboards.

Request Syntax

```
{
   "DeliveryS3Uri": "string",
   "EventDataStoreOwnerAccountId": "string",
   "QueryAlias": "string",
   "QueryParameters": [ "string" ],
   "QueryStatement": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DeliveryS3Uri

The URI for the S3 bucket where CloudTrail delivers the query results.

Type: String

Length Constraints: Maximum length of 1024.

Pattern: `s3://[a-z0-9][\.\-a-z0-9]{1,61}[a-z0-9](/.*)?`

Required: No

EventDataStoreOwnerAccountId

The account ID of the event data store owner.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: `\d+`

Required: No

QueryAlias

The alias that identifies a query template.

Type: String

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

Pattern: `^[a-zA-Z][a-zA-Z0-9._\-]*$`

Required: No

QueryParameters

The query parameters for the specified `QueryAlias`.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

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

Pattern: `.*`

Required: No

QueryStatement

The SQL code of your query.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10000.

Pattern: `(?s).*`

Required: No

Response Syntax

```
{
   "EventDataStoreOwnerAccountId": "string",
   "QueryId": "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.

EventDataStoreOwnerAccountId

The account ID of the event data store owner.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 16.

Pattern: `\d+`

QueryId

The ID of the started query.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Errors

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

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InsufficientS3BucketPolicyException

This exception is thrown when the policy on the S3 bucket is not sufficient.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidQueryStatementException

The query that was submitted has validation errors, or uses incorrect syntax or unsupported keywords. For more information about writing a query, see Create or edit a query in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

InvalidS3BucketNameException

This exception is thrown when the provided S3 bucket name is not valid.

HTTP Status Code: 400

InvalidS3PrefixException

This exception is thrown when the provided S3 prefix is not valid.

HTTP Status Code: 400

MaxConcurrentQueriesException

You are already running the maximum number of concurrent queries. The maximum number of concurrent queries is 10. Wait a minute for some queries to finish, and then run the query again.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

S3BucketDoesNotExistException

This exception is thrown when the specified S3 bucket does not exist.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example uses the `QueryStatement` parameter with the optional `DeliveryS3Uri` parameter to deliver the query results to an S3 bucket.

```
{
   "DeliveryS3Uri": "s3://aws-cloudtrail-lake-query-results-123456789012-us-east-1",
   "QueryStatement": "SELECT eventID, eventTime FROM EXAMPLE-f852-4e8f-8bd1-
bcf6cEXAMPLE LIMIT 10"
}
```

Example

The following example uses the `QueryAlias` and `QueryParameters` parameters.

```
{
   "QueryAlias": "query-alias",
   "QueryParameters": [ "EXAMPLE-
b8e1-4e93-848f-573b9bfEXAMPLE","2023-05-26T17:47:22.541Z","2023-05-27T17:47:22.541Z" ]
}
```

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 (Boto3)
- AWS SDK for Ruby V3

StopEventDataStoreIngestion

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Stops the ingestion of live events on an event data store specified as either an ARN or the ID portion of the ARN. To stop ingestion, the event data store `Status` must be `ENABLED` and the `eventCategory` must be `Management`, `Data`, `NetworkActivity`, or `ConfigurationItem`.

Request Syntax

```
{
   "EventDataStore": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

EventDataStore

The ARN (or ID suffix of the ARN) of the event data store for which you want to stop ingestion.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

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.

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidEventDataStoreCategoryException

This exception is thrown when event categories of specified event data stores are not valid.

HTTP Status Code: 400

InvalidEventDataStoreStatusException

The event data store is not in a status that supports the operation.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

StopImport

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Stops a specified import.

Request Syntax

```
{
   "ImportId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ImportId

The ID of the import.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: Yes

Response Syntax

```
{
```

```
    "CreatedTimestamp": number,
    "Destinations": [ "string" ],
    "EndEventTime": number,
    "ImportId": "string",
    "ImportSource": {
       "S3": {
          "S3BucketAccessRoleArn": "string",
          "S3BucketRegion": "string",
          "S3LocationUri": "string"
       }
    },
    "ImportStatistics": {
       "EventsCompleted": number,
       "FailedEntries": number,
       "FilesCompleted": number,
       "PrefixesCompleted": number,
       "PrefixesFound": number
    },
    "ImportStatus": "string",
    "StartEventTime": number,
    "UpdatedTimestamp": 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.

CreatedTimestamp

The timestamp of the import's creation.

Type: Timestamp

Destinations

The ARN of the destination event data store.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 3. Maximum length of 256.

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

EndEventTime

Used with `StartEventTime` to bound a `StartImport` request, and limit imported trail events to only those events logged within a specified time period.

Type: Timestamp

ImportId

The ID for the import.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

ImportSource

The source S3 bucket for the import.

Type: ImportSource object

ImportStatistics

Returns information on the stopped import.

Type: ImportStatistics object

ImportStatus

The status of the import.

Type: String

Valid Values: `INITIALIZING | IN_PROGRESS | FAILED | STOPPED | COMPLETED`

StartEventTime

Used with `EndEventTime` to bound a `StartImport` request, and limit imported trail events to only those events logged within a specified time period.

Type: Timestamp

UpdatedTimestamp

The timestamp of the import's last update.

Type: Timestamp

Errors

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

ImportNotFoundException

The specified import was not found.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

StopLogging

Suspends the recording of AWS API calls and log file delivery for the specified trail. Under most circumstances, there is no need to use this action. You can update a trail without stopping it first. This action is the only way to stop recording. For a trail enabled in all Regions, this operation must be called from the Region in which the trail was created, or an `InvalidHomeRegionException` will occur. This operation cannot be called on the shadow trails (replicated trails in other Regions) of a trail enabled in all Regions.

Request Syntax

```
{
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Name

Specifies the name or the CloudTrail ARN of the trail for which CloudTrail will stop logging AWS API calls. The following is the format of a trail ARN.

`arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Type: String

Required: Yes

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.

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InvalidHomeRegionException

This exception is thrown when an operation is called on a trail from a Region other than the Region in which the trail was created.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

UpdateChannel

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Updates a channel specified by a required channel ARN or UUID.

Request Syntax

```
{
   "Channel": "string",
   "Destinations": [
      {
         "Location": "string",
         "Type": "string"
      }
   ],
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Channel

The ARN or ID (the ARN suffix) of the channel that you want to update.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

Destinations

The ARNs of event data stores that you want to log events arriving through the channel.

Type: Array of Destination objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Required: No

Name

Changes the name of the channel.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Required: No

Response Syntax

```
{
   "ChannelArn": "string",
   "Destinations": [
      {
         "Location": "string",
         "Type": "string"
      }
   ],
   "Name": "string",
   "Source": "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.

ChannelArn

The ARN of the channel that was updated.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Destinations

The event data stores that log events arriving through the channel.

Type: Array of Destination objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Name

The name of the channel that was updated.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Source

The event source of the channel that was updated.

Type: String

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

Pattern: `.*`

Errors

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

ChannelAlreadyExistsException

This exception is thrown when the provided channel already exists.

HTTP Status Code: 400

ChannelARNInvalidException

This exception is thrown when the specified value of `ChannelARN` is not valid.

HTTP Status Code: 400

ChannelNotFoundException

This exception is thrown when CloudTrail cannot find the specified channel.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InvalidEventDataStoreCategoryException

This exception is thrown when event categories of specified event data stores are not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

UpdateDashboard

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Updates the specified dashboard.

To set a refresh schedule, CloudTrail must be granted permissions to run the `StartDashboardRefresh` operation to refresh the dashboard on your behalf. To provide permissions, run the `PutResourcePolicy` operation to attach a resource-based policy to the dashboard. For more information, see Resource-based policy example for a dashboard in the *AWS CloudTrail User Guide*.

CloudTrail runs queries to populate the dashboard's widgets during a manual or scheduled refresh. CloudTrail must be granted permissions to run the `StartQuery` operation on your behalf. To provide permissions, run the `PutResourcePolicy` operation to attach a resource-based policy to each event data store. For more information, see Example: Allow CloudTrail to run queries to populate a dashboard in the *AWS CloudTrail User Guide*.

Request Syntax

```
{
   "DashboardId": "string",
   "RefreshSchedule": {
      "Frequency": {
         "Unit": "string",
         "Value": number
      },
      "Status": "string",
      "TimeOfDay": "string"
   },
   "TerminationProtectionEnabled": boolean,
   "Widgets": [
      {
         "QueryParameters": [ "string" ],
```

```
            "QueryStatement": "string",
            "ViewProperties": {
               "string" : "string"
            }
         }
      ]
   }
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DashboardId

The name or ARN of the dashboard.

Type: String

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

Required: Yes

RefreshSchedule

The refresh schedule configuration for the dashboard.

Type: RefreshSchedule object

Required: No

TerminationProtectionEnabled

Specifies whether termination protection is enabled for the dashboard. If termination protection is enabled, you cannot delete the dashboard until termination protection is disabled.

Type: Boolean

Required: No

Widgets

An array of widgets for the dashboard. A custom dashboard can have a maximum of 10 widgets.

To add new widgets, pass in an array that includes the existing widgets along with any new widgets. Run the `GetDashboard` operation to get the list of widgets for the dashboard.

To remove widgets, pass in an array that includes the existing widgets minus the widgets you want removed.

Type: Array of RequestWidget objects

Required: No

Response Syntax

```
{
   "CreatedTimestamp": number,
   "DashboardArn": "string",
   "Name": "string",
   "RefreshSchedule": {
      "Frequency": {
         "Unit": "string",
         "Value": number
      },
      "Status": "string",
      "TimeOfDay": "string"
   },
   "TerminationProtectionEnabled": boolean,
   "Type": "string",
   "UpdatedTimestamp": number,
   "Widgets": [
      {
         "QueryAlias": "string",
         "QueryParameters": [ "string" ],
         "QueryStatement": "string",
         "ViewProperties": {
            "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.

CreatedTimestamp

The timestamp that shows when the dashboard was created.

Type: Timestamp

DashboardArn

The ARN for the dashboard.

Type: String

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

Name

The name for the dashboard.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

RefreshSchedule

The refresh schedule for the dashboard, if configured.

Type: RefreshSchedule object

TerminationProtectionEnabled

Indicates whether termination protection is enabled for the dashboard.

Type: Boolean

Type

The type of dashboard.

Type: String

Valid Values: `MANAGED | CUSTOM`

UpdatedTimestamp

The timestamp that shows when the dashboard was updated.

Type: Timestamp

Widgets

An array of widgets for the dashboard.

Type: Array of Widget objects

Errors

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

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InvalidQueryStatementException

The query that was submitted has validation errors, or uses incorrect syntax or unsupported keywords. For more information about writing a query, see Create or edit a query in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the specified resource is not found.

HTTP Status Code: 400

ServiceQuotaExceededException

This exception is thrown when the quota is exceeded. For information about CloudTrail quotas, see Service quotas in the *AWS General Reference*.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

Examples

Example

The following example adds a new widget named `TopServices` to the custom dashboard named `AccountActivityDashboard`. The widgets array includes the two widgets that were already created for the dashboard and the new widget.

```
{
  "DashboardId": "AccountActivityDashboard",
  "Widgets": [
    {
      "ViewProperties": {
        "Height": "2",
        "Width": "4",
        "Title": "TopErrors",
        "View": "Table"
```

```
      },
      "QueryStatement": "SELECT errorCode, COUNT(*) AS eventCount FROM eds WHERE
 eventTime > '?' AND eventTime < '?' AND (errorCode is not null) GROUP BY errorCode
 ORDER BY eventCount DESC LIMIT 100",
      "QueryParameters": ["$StartTime$", "$EndTime$"]
    },
    {
      "ViewProperties": {
        "Height": "2",
        "Width": "4",
        "Title": "MostActiveRegions",
        "View": "PieChart",
        "LabelColumn": "awsRegion",
        "ValueColumn": "eventCount",
        "FilterColumn": "awsRegion"
      },
      "QueryStatement": "SELECT awsRegion, COUNT(*) AS eventCount FROM eds where
 eventTime > '?' and eventTime < '?' GROUP BY awsRegion ORDER BY eventCount LIMIT 100",
      "QueryParameters": ["$StartTime$", "$EndTime$"]
    },
    {
      "ViewProperties": {
        "Height": "2",
        "Width": "4",
        "Title": "TopServices",
        "View": "BarChart",
        "LabelColumn": "service",
        "ValueColumn": "eventCount",
        "FilterColumn": "service",
        "Orientation": "Vertical"
      },
      "QueryStatement": "SELECT replace(eventSource, '.amazonaws.com') AS service,
 COUNT(*) as eventCount FROM eds WHERE eventTime > '?' AND eventTime < '?' GROUP BY
 eventSource ORDER BY eventCount DESC LIMIT 100",
      "QueryParameters": ["$StartTime$", "$EndTime$"]
    }
  ]
}
```

Example

The following example disables termination protection for a custom dashboard named `AccountActivityDashboard` to allow the dashboard to be deleted. It also turns off the refresh schedule.

```
{
   "DashboardId": "AccountActivityDashboard",
   "RefreshSchedule": {
      "Status": "DISABLED"
   },
   "TerminationProtectionEnabled": false
}
```

Example

The following example updates the refresh schedule for a custom dashboard named `AccountActivityDashboard`.

```
{
  "DashboardId": "AccountActivityDashboard",
  "RefreshSchedule": {
    "Frequency": {
      "Unit": "HOURS",
      "Value": 6
    },
    "Status": "ENABLED"
  }
}
```

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 (Boto3)
- AWS SDK for Ruby V3

UpdateEventDataStore

> **Important**
>
> CloudTrail Lake will no longer be open to new customers starting May 31, 2026. If you would like to use CloudTrail Lake, sign up prior to that date. Existing customers can continue to use the service as normal. For more information, see CloudTrail Lake availability change.

Updates an event data store. The required `EventDataStore` value is an ARN or the ID portion of the ARN. Other parameters are optional, but at least one optional parameter must be specified, or CloudTrail throws an error. `RetentionPeriod` is in days, and valid values are integers between 7 and 3653 if the `BillingMode` is set to `EXTENDABLE_RETENTION_PRICING`, or between 7 and 2557 if `BillingMode` is set to `FIXED_RETENTION_PRICING`. By default, `TerminationProtection` is enabled.

For event data stores for CloudTrail events, `AdvancedEventSelectors` includes or excludes management, data, or network activity events in your event data store. For more information about `AdvancedEventSelectors`, see AdvancedEventSelectors.

For event data stores for CloudTrail Insights events, AWS Config configuration items, Audit Manager evidence, or non-AWS events, `AdvancedEventSelectors` includes events of that type in your event data store.

Request Syntax

```
{
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
```

```
        ],
        "Name": "string"
      }
    ],
    "BillingMode": "string",
    "EventDataStore": "string",
    "KmsKeyId": "string",
    "MultiRegionEnabled": boolean,
    "Name": "string",
    "OrganizationEnabled": boolean,
    "RetentionPeriod": number,
    "TerminationProtectionEnabled": boolean
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

AdvancedEventSelectors

The advanced event selectors used to select events for the event data store. You can configure up to five advanced event selectors for each event data store.

Type: Array of AdvancedEventSelector objects

Required: No

BillingMode

> **Note**
>
> You can't change the billing mode from `EXTENDABLE_RETENTION_PRICING` to `FIXED_RETENTION_PRICING`. If `BillingMode` is set to `EXTENDABLE_RETENTION_PRICING` and you want to use `FIXED_RETENTION_PRICING` instead, you'll need to stop ingestion on the event data store and create a new event data store that uses `FIXED_RETENTION_PRICING`.

The billing mode for the event data store determines the cost for ingesting events and the default and maximum retention period for the event data store.

The following are the possible values:

- `EXTENDABLE_RETENTION_PRICING` - This billing mode is generally recommended if you want a flexible retention period of up to 3653 days (about 10 years). The default retention period for this billing mode is 366 days.
- `FIXED_RETENTION_PRICING` - This billing mode is recommended if you expect to ingest more than 25 TB of event data per month and need a retention period of up to 2557 days (about 7 years). The default retention period for this billing mode is 2557 days.

For more information about CloudTrail pricing, see AWS CloudTrail Pricing and Managing CloudTrail Lake costs.

Type: String

Valid Values: `EXTENDABLE_RETENTION_PRICING | FIXED_RETENTION_PRICING`

Required: No

EventDataStore

The ARN (or the ID suffix of the ARN) of the event data store that you want to update.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: Yes

KmsKeyId

Specifies the AWS KMS key ID to use to encrypt the events delivered by CloudTrail. The value can be an alias name prefixed by `alias/`, a fully specified ARN to an alias, a fully specified ARN to a key, or a globally unique identifier.

> **Important**
>
> Disabling or deleting the KMS key, or removing CloudTrail permissions on the key, prevents CloudTrail from logging events to the event data store, and prevents users from querying the data in the event data store that was encrypted with the key. After you associate an event data store with a KMS key, the KMS key cannot be removed or

changed. Before you disable or delete a KMS key that you are using with an event data store, delete or back up your event data store.

CloudTrail also supports AWS KMS multi-Region keys. For more information about multi-Region keys, see Using multi-Region keys in the *AWS Key Management Service Developer Guide*.

Examples:

- `alias/MyAliasName`
- `arn:aws:kms:us-east-2:123456789012:alias/MyAliasName`
- `arn:aws:kms:us-east-2:123456789012:key/12345678-1234-1234-1234-123456789012`
- `12345678-1234-1234-1234-123456789012`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350.

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

Required: No

MultiRegionEnabled

Specifies whether an event data store collects events from all Regions, or only from the Region in which it was created.

Type: Boolean

Required: No

Name

The event data store name.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Required: No

OrganizationEnabled

Specifies whether an event data store collects events logged for an organization in AWS Organizations.

> **Note**
>
> Only the management account for the organization can convert an organization event data store to a non-organization event data store, or convert a non-organization event data store to an organization event data store.

Type: Boolean

Required: No

RetentionPeriod

The retention period of the event data store, in days. If `BillingMode` is set to `EXTENDABLE_RETENTION_PRICING`, you can set a retention period of up to 3653 days, the equivalent of 10 years. If `BillingMode` is set to `FIXED_RETENTION_PRICING`, you can set a retention period of up to 2557 days, the equivalent of seven years.

CloudTrail Lake determines whether to retain an event by checking if the `eventTime` of the event is within the specified retention period. For example, if you set a retention period of 90 days, CloudTrail will remove events when the `eventTime` is older than 90 days.

> **Note**
>
> If you decrease the retention period of an event data store, CloudTrail will remove any events with an `eventTime` older than the new retention period. For example, if the previous retention period was 365 days and you decrease it to 100 days, CloudTrail will remove events with an `eventTime` older than 100 days.

Type: Integer

Valid Range: Minimum value of 7. Maximum value of 3653.

Required: No

TerminationProtectionEnabled

Indicates that termination protection is enabled and the event data store cannot be automatically deleted.

Type: Boolean

Required: No

Response Syntax

```
{
   "AdvancedEventSelectors": [
      {
         "FieldSelectors": [
            {
               "EndsWith": [ "string" ],
               "Equals": [ "string" ],
               "Field": "string",
               "NotEndsWith": [ "string" ],
               "NotEquals": [ "string" ],
               "NotStartsWith": [ "string" ],
               "StartsWith": [ "string" ]
            }
         ],
         "Name": "string"
      }
   ],
   "BillingMode": "string",
   "CreatedTimestamp": number,
   "EventDataStoreArn": "string",
   "FederationRoleArn": "string",
   "FederationStatus": "string",
   "KmsKeyId": "string",
   "MultiRegionEnabled": boolean,
   "Name": "string",
   "OrganizationEnabled": boolean,
   "RetentionPeriod": number,
   "Status": "string",
   "TerminationProtectionEnabled": boolean,
   "UpdatedTimestamp": 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.

AdvancedEventSelectors

The advanced event selectors that are applied to the event data store.

Type: Array of AdvancedEventSelector objects

BillingMode

The billing mode for the event data store.

Type: String

Valid Values: `EXTENDABLE_RETENTION_PRICING | FIXED_RETENTION_PRICING`

CreatedTimestamp

The timestamp that shows when an event data store was first created.

Type: Timestamp

EventDataStoreArn

The ARN of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

FederationRoleArn

If Lake query federation is enabled, provides the ARN of the federation role used to access the resources for the federated event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 125.

Pattern: `^[a-zA-Z0-9._/\-:@=\+,\.]+$`

FederationStatus

Indicates the Lake query federation status. The status is `ENABLED` if Lake query federation is enabled, or `DISABLED` if Lake query federation is disabled. You cannot delete an event data store if the `FederationStatus` is `ENABLED`.

Type: String

Valid Values: `ENABLING | ENABLED | DISABLING | DISABLED`

KmsKeyId

Specifies the AWS KMS key ID that encrypts the events delivered by CloudTrail. The value is a fully specified ARN to a AWS KMS key in the following format.

```
arn:aws:kms:us-
east-2:123456789012:key/12345678-1234-1234-1234-123456789012
```

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350.

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

MultiRegionEnabled

Indicates whether the event data store includes events from all Regions, or only from the Region in which it was created.

Type: Boolean

Name

The name of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

OrganizationEnabled

Indicates whether an event data store is collecting logged events for an organization in AWS Organizations.

Type: Boolean

RetentionPeriod

The retention period, in days.

Type: Integer

Valid Range: Minimum value of 7. Maximum value of 3653.

Status

The status of an event data store.

Type: String

Valid Values: `CREATED | ENABLED | PENDING_DELETION | STARTING_INGESTION | STOPPING_INGESTION | STOPPED_INGESTION`

TerminationProtectionEnabled

Indicates whether termination protection is enabled for the event data store.

Type: Boolean

UpdatedTimestamp

The timestamp that shows when the event data store was last updated. `UpdatedTimestamp` is always either the same or newer than the time shown in `CreatedTimestamp`.

Type: Timestamp

Errors

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

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

EventDataStoreAlreadyExistsException

An event data store with that name already exists.

HTTP Status Code: 400

EventDataStoreARNInvalidException

The specified event data store ARN is not valid or does not map to an event data store in your account.

HTTP Status Code: 400

EventDataStoreHasOngoingImportException

This exception is thrown when you try to update or delete an event data store that currently has an import in progress.

HTTP Status Code: 400

EventDataStoreNotFoundException

The specified event data store was not found.

HTTP Status Code: 400

InactiveEventDataStoreException

The event data store is inactive.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InvalidEventSelectorsException

This exception is thrown when the `PutEventSelectors` operation is called with a number of event selectors, advanced event selectors, or data resources that is not valid. The combination of event selectors or advanced event selectors and data resources is not valid. A trail can have up to 5 event selectors. If a trail uses advanced event selectors, a maximum of 500 total values for all conditions in all advanced event selectors is allowed. A trail is limited to 250 data resources. These data resources can be distributed across event selectors, but the overall total cannot exceed 250.

You can:

- Specify a valid number of event selectors (1 to 5) for a trail.
- Specify a valid number of data resources (1 to 250) for an event selector. The limit of number of resources on an individual event selector is configurable up to 250. However, this upper limit is allowed only if the total number of data resources does not exceed 250 across all event selectors for a trail.
- Specify up to 500 values for all conditions in all advanced event selectors for a trail.
- Specify a valid value for a parameter. For example, specifying the `ReadWriteType` parameter with a value of `read-only` is not valid.

HTTP Status Code: 400

InvalidInsightSelectorsException

For `PutInsightSelectors`, this exception is thrown when the formatting or syntax of the `InsightSelectors` JSON statement is not valid, or the specified `InsightType` in the `InsightSelectors` statement is not valid. Valid values for `InsightType` are

`ApiCallRateInsight` and `ApiErrorRateInsight`. To enable Insights on an event data store, the destination event data store specified by the `InsightsDestination` parameter must log Insights events and the source event data store specified by the `EventDataStore` parameter must log management events.

For `UpdateEventDataStore`, this exception is thrown if Insights are enabled on the event data store and the updated advanced event selectors are not compatible with the configured `InsightSelectors`. If the `InsightSelectors` includes an `InsightType` of `ApiCallRateInsight`, the source event data store must log `write` management events. If the `InsightSelectors` includes an `InsightType` of `ApiErrorRateInsight`, the source event data store must log management events.

HTTP Status Code: 400

InvalidKmsKeyIdException

This exception is thrown when the AWS KMS key ARN is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

KmsException

This exception is thrown when there is an issue with the specified AWS KMS key and the trail or event data store can't be updated.

HTTP Status Code: 400

KmsKeyNotFoundException

This exception is thrown when the AWS KMS key does not exist, when the S3 bucket and the AWS KMS key are not in the same Region, or when the AWS KMS key associated with the Amazon SNS topic either does not exist or is not in the same Region.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

UpdateTrail

Updates trail settings that control what events you are logging, and how to handle log files. Changes to a trail do not require stopping the CloudTrail service. Use this action to designate an existing bucket for log delivery. If the existing bucket has previously been a target for CloudTrail log files, an IAM policy exists for the bucket. `UpdateTrail` must be called from the Region in which the trail was created; otherwise, an `InvalidHomeRegionException` is thrown.

Request Syntax

```
{
   "CloudWatchLogsLogGroupArn": "string",
   "CloudWatchLogsRoleArn": "string",
   "EnableLogFileValidation": boolean,
   "IncludeGlobalServiceEvents": boolean,
   "IsMultiRegionTrail": boolean,
   "IsOrganizationTrail": boolean,
   "KmsKeyId": "string",
   "Name": "string",
   "RecursiveLogging": boolean,
   "S3BucketName": "string",
   "S3KeyPrefix": "string",
   "SnsTopicName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

CloudWatchLogsLogGroupArn

Specifies a log group name using an Amazon Resource Name (ARN), a unique identifier that represents the log group to which CloudTrail logs are delivered. You must use a log group that exists in your account.

Not required unless you specify `CloudWatchLogsRoleArn`.

Type: String

Required: No

CloudWatchLogsRoleArn

Specifies the role for the CloudWatch Logs endpoint to assume to write to a user's log group. You must use a role that exists in your account.

Type: String

Required: No

EnableLogFileValidation

Specifies whether log file validation is enabled. The default is false.

> **Note**
>
> When you disable log file integrity validation, the chain of digest files is broken after one hour. CloudTrail does not create digest files for log files that were delivered during a period in which log file integrity validation was disabled. For example, if you enable log file integrity validation at noon on January 1, disable it at noon on January 2, and re-enable it at noon on January 10, digest files will not be created for the log files delivered from noon on January 2 to noon on January 10. The same applies whenever you stop CloudTrail logging or delete a trail.

Type: Boolean

Required: No

IncludeGlobalServiceEvents

Specifies whether the trail is publishing events from global services such as IAM to the log files. Setting this value to `true` only delivers global service events to the trail if the trail is multi-Region or if the trail's home Region is the partition leader Region (for example, us-east-1).

Type: Boolean

Required: No

IsMultiRegionTrail

Specifies whether the trail applies only to the current Region or to all Regions. The default is false. If the trail exists only in the current Region and this value is set to true, shadow trails

(replications of the trail) will be created in the other Regions. If the trail exists in all Regions and this value is set to false, the trail will remain in the Region where it was created, and its shadow trails in other Regions will be deleted. As a best practice, consider using trails that log events in all Regions.

Type: Boolean

Required: No

IsOrganizationTrail

Specifies whether the trail is applied to all accounts in an organization in AWS Organizations, or only for the current AWS account. The default is false, and cannot be true unless the call is made on behalf of an AWS account that is the management account for an organization in AWS Organizations. If the trail is not an organization trail and this is set to `true`, the trail will be created in all AWS accounts that belong to the organization. If the trail is an organization trail and this is set to `false`, the trail will remain in the current AWS account but be deleted from all member accounts in the organization.

> **Note**
>
> Only the management account for the organization can convert an organization trail to a non-organization trail, or convert a non-organization trail to an organization trail.

Type: Boolean

Required: No

KmsKeyId

Specifies the AWS KMS key ID to use to encrypt the logs and digest files delivered by CloudTrail. The value can be an alias name prefixed by "alias/", a fully specified ARN to an alias, a fully specified ARN to a key, or a globally unique identifier.

CloudTrail also supports AWS KMS multi-Region keys. For more information about multi-Region keys, see Using multi-Region keys in the *AWS Key Management Service Developer Guide*.

Examples:

- alias/MyAliasName
- arn:aws:kms:us-east-2:123456789012:alias/MyAliasName

- arn:aws:kms:us-east-2:123456789012:key/12345678-1234-1234-1234-123456789012
- 12345678-1234-1234-1234-123456789012

Type: String

Required: No

Name

Specifies the name of the trail or trail ARN. If `Name` is a trail name, the string must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.
- Not be in IP address format (for example, 192.168.5.4)

If `Name` is a trail ARN, it must be in the following format.

```
arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail
```

Type: String

Required: Yes

RecursiveLogging

Specifies whether recursive logging is enabled for the trail. If you set `RecursiveLogging` to `false`, CloudTrail suppresses events generated by CloudTrail when it delivers log files to your trail's destinations, including Amazon S3 and CloudWatch Logs. The default value is `true`.

Type: Boolean

Required: No

S3BucketName

Specifies the name of the Amazon S3 bucket designated for publishing log files. See Amazon S3 Bucket naming rules.

Type: String

Required: No

S3KeyPrefix

Specifies the Amazon S3 key prefix that comes after the name of the bucket you have designated for log file delivery. For more information, see Finding Your CloudTrail Log Files. The maximum length is 200 characters.

Type: String

Required: No

SnsTopicName

Specifies the name or ARN of the Amazon SNS topic defined for notification of log file delivery. The maximum length is 256 characters.

Type: String

Required: No

Response Syntax

```
{
   "CloudWatchLogsLogGroupArn": "string",
   "CloudWatchLogsRoleArn": "string",
   "IncludeGlobalServiceEvents": boolean,
   "IsMultiRegionTrail": boolean,
   "IsOrganizationTrail": boolean,
   "KmsKeyId": "string",
   "LogFileValidationEnabled": boolean,
   "Name": "string",
   "RecursiveLogging": boolean,
   "S3BucketName": "string",
   "S3KeyPrefix": "string",
   "SnsTopicARN": "string",
   "SnsTopicName": "string",
   "TrailARN": "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.

CloudWatchLogsLogGroupArn

Specifies the Amazon Resource Name (ARN) of the log group to which CloudTrail logs are delivered.

Type: String

CloudWatchLogsRoleArn

Specifies the role for the CloudWatch Logs endpoint to assume to write to a user's log group.

Type: String

IncludeGlobalServiceEvents

Specifies whether the trail is publishing events from global services such as IAM to the log files. Setting this value to `true` only delivers global service events to the trail if the trail is multi-Region or if the trail's home Region is the partition leader Region (for example, us-east-1).

Type: Boolean

IsMultiRegionTrail

Specifies whether the trail exists in one Region or in all Regions.

Type: Boolean

IsOrganizationTrail

Specifies whether the trail is an organization trail.

Type: Boolean

KmsKeyId

Specifies the AWS KMS key ID that encrypts the logs and digest files delivered by CloudTrail. The value is a fully specified ARN to a AWS KMS key in the following format.

```
arn:aws:kms:us-
east-2:123456789012:key/12345678-1234-1234-1234-123456789012
```

Type: String

LogFileValidationEnabled

Specifies whether log file integrity validation is enabled.

Type: Boolean

Name

Specifies the name of the trail.

Type: String

RecursiveLogging

Specifies whether recursive logging is enabled for the trail.

Type: Boolean

S3BucketName

Specifies the name of the Amazon S3 bucket designated for publishing log files.

Type: String

S3KeyPrefix

Specifies the Amazon S3 key prefix that comes after the name of the bucket you have designated for log file delivery. For more information, see Finding Your IAM Log Files.

Type: String

SnsTopicARN

Specifies the ARN of the Amazon SNS topic that CloudTrail uses to send notifications when log files are delivered. The following is the format of a topic ARN.

```
arn:aws:sns:us-east-2:123456789012:MyTopic
```

Type: String

SnsTopicName

This parameter has been deprecated.

This field is no longer in use. Use `SnsTopicARN`.

Type: String

TrailARN

Specifies the ARN of the trail that was updated. The following is the format of a trail ARN.

`arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

Type: String

Errors

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

CloudTrailAccessNotEnabledException

This exception is thrown when trusted access has not been enabled between AWS CloudTrail and AWS Organizations. For more information, see How to enable or disable trusted access in the *AWS Organizations User Guide* and Prepare For Creating a Trail For Your Organization in the *AWS CloudTrail User Guide*.

HTTP Status Code: 400

CloudTrailARNInvalidException

This exception is thrown when an operation is called with an ARN that is not valid.

The following is the format of a trail ARN: `arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail`

The following is the format of an event data store ARN: `arn:aws:cloudtrail:us-east-2:123456789012:eventdatastore/EXAMPLE-f852-4e8f-8bd1-bcf6cEXAMPLE`

The following is the format of a dashboard ARN: `arn:aws:cloudtrail:us-east-1:123456789012:dashboard/exampleDash`

The following is the format of a channel ARN: `arn:aws:cloudtrail:us-east-2:123456789012:channel/01234567890`

HTTP Status Code: 400

CloudTrailInvalidClientTokenIdException

This exception is thrown when a call results in the `InvalidClientTokenId` error code. This can occur when you are creating or updating a trail to send notifications to an Amazon SNS topic that is in a suspended AWS account.

HTTP Status Code: 400

CloudWatchLogsDeliveryUnavailableException

Cannot set a CloudWatch Logs delivery for this Region.

HTTP Status Code: 400

ConflictException

This exception is thrown when the specified resource is not ready for an operation. This can occur when you try to run an operation on a resource before CloudTrail has time to fully load the resource, or because another operation is modifying the resource. If this exception occurs, wait a few minutes, and then try the operation again.

HTTP Status Code: 400

InsufficientDependencyServiceAccessPermissionException

This exception is thrown when the IAM identity that is used to create the organization resource lacks one or more required permissions for creating an organization resource in a required service.

HTTP Status Code: 400

InsufficientEncryptionPolicyException

For the `CreateTrail` `PutInsightSelectors`, `UpdateTrail`, `StartQuery`, and `StartImport` operations, this exception is thrown when the policy on the S3 bucket or AWS KMS key does not have sufficient permissions for the operation.

For all other operations, this exception is thrown when the policy for the AWS KMS key does not have sufficient permissions for the operation.

HTTP Status Code: 400

InsufficientS3BucketPolicyException

This exception is thrown when the policy on the S3 bucket is not sufficient.

HTTP Status Code: 400

InsufficientSnsTopicPolicyException

This exception is thrown when the policy on the Amazon SNS topic is not sufficient.

HTTP Status Code: 400

InvalidCloudWatchLogsLogGroupArnException

This exception is thrown when the provided CloudWatch Logs log group is not valid.

HTTP Status Code: 400

InvalidCloudWatchLogsRoleArnException

This exception is thrown when the provided role is not valid.

HTTP Status Code: 400

InvalidEventSelectorsException

This exception is thrown when the `PutEventSelectors` operation is called with a number of event selectors, advanced event selectors, or data resources that is not valid. The combination of event selectors or advanced event selectors and data resources is not valid. A trail can have up to 5 event selectors. If a trail uses advanced event selectors, a maximum of 500 total values for all conditions in all advanced event selectors is allowed. A trail is limited to 250 data resources. These data resources can be distributed across event selectors, but the overall total cannot exceed 250.

You can:

- Specify a valid number of event selectors (1 to 5) for a trail.
- Specify a valid number of data resources (1 to 250) for an event selector. The limit of number of resources on an individual event selector is configurable up to 250. However, this upper limit is allowed only if the total number of data resources does not exceed 250 across all event selectors for a trail.
- Specify up to 500 values for all conditions in all advanced event selectors for a trail.
- Specify a valid value for a parameter. For example, specifying the `ReadWriteType` parameter with a value of `read-only` is not valid.

HTTP Status Code: 400

InvalidHomeRegionException

This exception is thrown when an operation is called on a trail from a Region other than the Region in which the trail was created.

HTTP Status Code: 400

InvalidKmsKeyIdException

This exception is thrown when the AWS KMS key ARN is not valid.

HTTP Status Code: 400

InvalidParameterCombinationException

This exception is thrown when the combination of parameters provided is not valid.

HTTP Status Code: 400

InvalidParameterException

The request includes a parameter that is not valid.

HTTP Status Code: 400

InvalidS3BucketNameException

This exception is thrown when the provided S3 bucket name is not valid.

HTTP Status Code: 400

InvalidS3PrefixException

This exception is thrown when the provided S3 prefix is not valid.

HTTP Status Code: 400

InvalidSnsTopicNameException

This exception is thrown when the provided SNS topic name is not valid.

HTTP Status Code: 400

InvalidTrailNameException

This exception is thrown when the provided trail name is not valid. Trail names must meet the following requirements:

- Contain only ASCII letters (a-z, A-Z), numbers (0-9), periods (.), underscores (_), or dashes (-)
- Start with a letter or number, and end with a letter or number
- Be between 3 and 128 characters
- Have no adjacent periods, underscores or dashes. Names like `my-_namespace` and `my--namespace` are not valid.

- Not be in IP address format (for example, 192.168.5.4)

HTTP Status Code: 400

KmsException

This exception is thrown when there is an issue with the specified AWS KMS key and the trail or event data store can't be updated.

HTTP Status Code: 400

KmsKeyDisabledException

This error has been deprecated.

This exception is no longer in use.

HTTP Status Code: 400

KmsKeyNotFoundException

This exception is thrown when the AWS KMS key does not exist, when the S3 bucket and the AWS KMS key are not in the same Region, or when the AWS KMS key associated with the Amazon SNS topic either does not exist or is not in the same Region.

HTTP Status Code: 400

NoManagementAccountSLRExistsException

This exception is thrown when the management account does not have a service-linked role.

HTTP Status Code: 400

NotOrganizationMasterAccountException

This exception is thrown when the AWS account making the request to create or update an organization trail or event data store is not the management account for an organization in AWS Organizations. For more information, see Prepare For Creating a Trail For Your Organization or Organization event data stores.

HTTP Status Code: 400

OperationNotPermittedException

This exception is thrown when the requested operation is not permitted.

HTTP Status Code: 400

OrganizationNotInAllFeaturesModeException

This exception is thrown when AWS Organizations is not configured to support all features. All features must be enabled in Organizations to support creating an organization trail or event data store.

HTTP Status Code: 400

OrganizationsNotInUseException

This exception is thrown when the request is made from an AWS account that is not a member of an organization. To make this request, sign in using the credentials of an account that belongs to an organization.

HTTP Status Code: 400

S3BucketDoesNotExistException

This exception is thrown when the specified S3 bucket does not exist.

HTTP Status Code: 400

ThrottlingException

This exception is thrown when the request rate exceeds the limit.

HTTP Status Code: 400

TrailNotFoundException

This exception is thrown when the trail with the given name is not found.

HTTP Status Code: 400

TrailNotProvidedException

This exception is no longer in use.

HTTP Status Code: 400

UnsupportedOperationException

This exception is thrown when the requested operation is not supported.

HTTP Status Code: 400

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 (Boto3)
- AWS SDK for Ruby V3

Data Types

The AWS CloudTrail 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:

- AdvancedEventSelector
- AdvancedFieldSelector
- AggregationConfiguration
- Channel
- ContextKeySelector
- DashboardDetail
- DataResource
- Destination
- Event
- EventDataStore
- EventSelector
- ImportFailureListItem
- ImportsListItem
- ImportSource
- ImportStatistics
- IngestionStatus
- InsightSelector
- LookupAttribute
- PartitionKey
- PublicKey

- Query
- QueryStatistics
- QueryStatisticsForDescribeQuery
- RefreshSchedule
- RefreshScheduleFrequency
- RequestWidget
- Resource
- ResourceTag
- S3ImportSource
- SearchSampleQueriesSearchResult
- SourceConfig
- Tag
- Trail
- TrailInfo
- Widget

AdvancedEventSelector

Advanced event selectors let you create fine-grained selectors for AWS CloudTrail management, data, and network activity events. They help you control costs by logging only those events that are important to you. For more information about configuring advanced event selectors, see the Logging data events, Logging network activity events, and Logging management events topics in the *AWS CloudTrail User Guide*.

You cannot apply both event selectors and advanced event selectors to a trail.

Supported CloudTrail event record fields for management events

- `eventCategory` (required)
- `eventSource`
- `readOnly`

The following additional fields are available for event data stores:

- `eventName`
- `eventType`
- `sessionCredentialFromConsole`
- `userIdentity.arn`

Supported CloudTrail event record fields for data events

- `eventCategory` (required)
- `eventName`
- `eventSource`
- `eventType`
- `resources.ARN`
- `resources.type` (required)
- `readOnly`
- `sessionCredentialFromConsole`
- `userIdentity.arn`

Supported CloudTrail event record fields for network activity events

- `eventCategory` (required)
- `eventSource` (required)
- `eventName`
- `errorCode` - The only valid value for `errorCode` is `VpceAccessDenied`.
- `vpcEndpointId`

The following additional field is available for trails:

- `userIdentity.arn`

> **Note**
>
> For event data stores for CloudTrail Insights events, AWS Config configuration items, Audit Manager evidence, or events outside of AWS, the only supported field is `eventCategory`.

Contents

FieldSelectors

Contains all selector statements in an advanced event selector.

Type: Array of AdvancedFieldSelector objects

Array Members: Minimum number of 1 item.

Required: Yes

Name

An optional, descriptive name for an advanced event selector, such as "Log data events for only two S3 buckets".

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

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

AdvancedFieldSelector

A single selector statement in an advanced event selector.

Contents

Field

A field in a CloudTrail event record on which to filter events to be logged. For event data stores for CloudTrail Insights events, AWS Config configuration items, Audit Manager evidence, or events outside of AWS, the field is used only for selecting events as filtering is not supported.

For CloudTrail management events, supported fields include `eventCategory` (required), `eventSource`, and `readOnly`. The following additional fields are available for event data stores: `eventName`, `eventType`, `sessionCredentialFromConsole`, and `userIdentity.arn`.

For CloudTrail data events, supported fields include `eventCategory` (required), `eventName`, `eventSource`, `eventType`, `resources.type` (required), `readOnly`, `resources.ARN`, `sessionCredentialFromConsole`, and `userIdentity.arn`.

For CloudTrail network activity events, supported fields include `eventCategory` (required), `eventSource` (required), `eventName`, `errorCode`, and `vpcEndpointId`. The following additional field is available for trails: `userIdentity.arn`.

For event data stores for CloudTrail Insights events, AWS Config configuration items, Audit Manager evidence, or events outside of AWS, the only supported field is `eventCategory`.

> **Note**
>
> Selectors don't support the use of wildcards like `*` . To match multiple values with a single condition, you may use `StartsWith`, `EndsWith`, `NotStartsWith`, or `NotEndsWith` to explicitly match the beginning or end of the event field.

- **`readOnly`** - This is an optional field that is only used for management events and data events. This field can be set to `Equals` with a value of `true` or `false`. If you do not add this field, CloudTrail logs both `read` and `write` events. A value of `true` logs only `read` events. A value of `false` logs only `write` events.

- **`eventSource`** - This field is only used for management events, data events, and network activity events.

  For management events for trails, this is an optional field that can be set to `NotEquals kms.amazonaws.com` to exclude KMS management events, or `NotEquals rdsdata.amazonaws.com` to exclude RDS management events.

  For data events for trails, this is an optional field that you can use to include or exclude any event source and can use any operator.

  For management and data events for event data stores, this is an optional field that you can use to include or exclude any event source and can use any operator.

  For network activity events, this is a required field that only uses the `Equals` operator. Set this field to the event source for which you want to log network activity events. If you want to log network activity events for multiple event sources, you must create a separate field selector for each event source. For a list of services supporting network activity events, see Logging network activity events in the *AWS CloudTrail User Guide*.
- **`eventName`** - This is an optional field that is only used for data events, management events (for event data stores only), and network activity events. You can use any operator with `eventName`. You can use it to filter in or filter out specific events. You can have multiple values for this field, separated by commas.
- **`eventCategory`** - This field is required and must be set to `Equals`.
  - For CloudTrail management events, the value must be `Management`.
  - For CloudTrail data events, the value must be `Data`.
  - For CloudTrail network activity events, the value must be `NetworkActivity`.

  The following are used only for event data stores:
  - For CloudTrail Insights events, the value must be `Insight`.
  - For AWS Config configuration items, the value must be `ConfigurationItem`.
  - For Audit Manager evidence, the value must be `Evidence`.
  - For events outside of AWS, the value must be `ActivityAuditLog`.
- **`eventType`** - For event data stores, this is an optional field available for event data stores to filter management and data events on the event type. For trails, this is an optional field to filter data events on the event type. For information about available event types, see CloudTrail record contents in the *AWS CloudTrail user guide*.

- **`errorCode`** - This field is only used to filter CloudTrail network activity events and is optional. This is the error code to filter on. Currently, the only valid `errorCode` is `VpceAccessDenied`. `errorCode` can only use the `Equals` operator.
- **`sessionCredentialFromConsole`** - For event data stores, this is an optional field used to filter management and data events based on whether the events originated from an AWS Management Console session. For trails, this is an optional field used to filter data events. `sessionCredentialFromConsole` can only use the `Equals` and `NotEquals` operators.
- **`resources.type`** - This field is required for CloudTrail data events. `resources.type` can only use the `Equals` operator.

  For a list of available resource types for data events, see Data events in the *AWS CloudTrail User Guide*.

  You can have only one `resources.type` field per selector. To log events on more than one resource type, add another selector.
- **`resources.ARN`** - The `resources.ARN` is an optional field for data events. You can use any operator with `resources.ARN`, but if you use `Equals` or `NotEquals`, the value must exactly match the ARN of a valid resource of the type you've specified in the template as the value of resources.type. To log all data events for all objects in a specific S3 bucket, use the `StartsWith` operator, and include only the bucket ARN as the matching value.

  For more information about the ARN formats of data event resources, see Actions, resources, and condition keys for AWS services in the *Service Authorization Reference*.

  > **Note**
  >
  > You can't use the `resources.ARN` field to filter resource types that do not have ARNs.
- **`userIdentity.arn`** - For event data stores, this is an optional field used to filter management and data events for actions taken by specific IAM identities. For trails, this is an optional field used to filter data events and network activity events. You can use any operator with `userIdentity.arn`. For more information on the userIdentity element, see CloudTrail userIdentity element in the *AWS CloudTrail User Guide*.
- **`vpcEndpointId`** - This field is only used to filter CloudTrail network activity events and is optional. This field identifies the VPC endpoint that the request passed through. You can use any operator with `vpcEndpointId`.

Type: String

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

Pattern: `[\w|\d|\.|_]+`

Required: Yes

EndsWith

An operator that includes events that match the last few characters of the event record field specified as the value of `Field`.

Type: Array of strings

Array Members: Minimum number of 1 item.

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

Pattern: `.+`

Required: No

Equals

An operator that includes events that match the exact value of the event record field specified as the value of `Field`. This is the only valid operator that you can use with the `readOnly`, `eventCategory`, and `resources.type` fields.

Type: Array of strings

Array Members: Minimum number of 1 item.

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

Pattern: `.+`

Required: No

NotEndsWith

An operator that excludes events that match the last few characters of the event record field specified as the value of `Field`.

Type: Array of strings

Array Members: Minimum number of 1 item.

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

Pattern: `.+`

Required: No

NotEquals

An operator that excludes events that match the exact value of the event record field specified as the value of `Field`.

Type: Array of strings

Array Members: Minimum number of 1 item.

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

Pattern: `.+`

Required: No

NotStartsWith

An operator that excludes events that match the first few characters of the event record field specified as the value of `Field`.

Type: Array of strings

Array Members: Minimum number of 1 item.

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

Pattern: `.+`

Required: No

StartsWith

An operator that includes events that match the first few characters of the event record field specified as the value of `Field`.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. 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

AggregationConfiguration

An object that contains configuration settings for aggregating events.

Contents

EventCategory

Specifies the event category for which aggregation should be performed.

Type: String

Valid Values: `Data`

Required: Yes

Templates

A list of aggregation templates that can be used to configure event aggregation.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Valid Values: `API_ACTIVITY | RESOURCE_ACCESS | USER_ACTIONS`

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

Channel

Contains information about a returned CloudTrail channel.

Contents

ChannelArn

The Amazon Resource Name (ARN) of a channel.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

Name

The name of the CloudTrail channel. For service-linked channels, the name is `aws-service-channel/service-name/custom-suffix` where `service-name` represents the name of the AWS service that created the channel and `custom-suffix` represents the suffix created by the AWS service.

Type: String

Length Constraints: Minimum length of 3. 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

ContextKeySelector

An object that contains information types to be included in CloudTrail enriched events.

Contents

Equals

A list of keys defined by Type to be included in CloudTrail enriched events.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

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

Required: Yes

Type

Specifies the type of the event record field in ContextKeySelector. Valid values include RequestContext, TagContext.

Type: String

Valid Values: `TagContext | RequestContext`

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

DashboardDetail

Provides information about a CloudTrail Lake dashboard.

Contents

DashboardArn

The ARN for the dashboard.

Type: String

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

Required: No

Type

The type of dashboard.

Type: String

Valid Values: `MANAGED | CUSTOM`

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

DataResource

You can configure the `DataResource` in an `EventSelector` to log data events for the following three resource types:

- `AWS::DynamoDB::Table`
- `AWS::Lambda::Function`
- `AWS::S3::Object`

To log data events for all other resource types including objects stored in directory buckets, you must use AdvancedEventSelectors. You must also use `AdvancedEventSelectors` if you want to filter on the `eventName` field.

Configure the `DataResource` to specify the resource type and resource ARNs for which you want to log data events.

> **Note**
>
> The total number of allowed data resources is 250. This number can be distributed between 1 and 5 event selectors, but the total cannot exceed 250 across all selectors for the trail.

The following example demonstrates how logging works when you configure logging of all data events for a general purpose bucket named `amzn-s3-demo-bucket1`. In this example, the CloudTrail user specified an empty prefix, and the option to log both `Read` and `Write` data events.

1. A user uploads an image file to `amzn-s3-demo-bucket1`.
2. The `PutObject` API operation is an Amazon S3 object-level API. It is recorded as a data event in CloudTrail. Because the CloudTrail user specified an S3 bucket with an empty prefix, events that occur on any object in that bucket are logged. The trail processes and logs the event.
3. A user uploads an object to an Amazon S3 bucket named `arn:aws:s3:::amzn-s3-demo-bucket1`.
4. The `PutObject` API operation occurred for an object in an S3 bucket that the CloudTrail user didn't specify for the trail. The trail doesn’t log the event.

The following example demonstrates how logging works when you configure logging of AWS Lambda data events for a Lambda function named *MyLambdaFunction*, but not for all Lambda functions.

1. A user runs a script that includes a call to the *MyLambdaFunction* function and the *MyOtherLambdaFunction* function.
2. The `Invoke` API operation on *MyLambdaFunction* is an Lambda API. It is recorded as a data event in CloudTrail. Because the CloudTrail user specified logging data events for *MyLambdaFunction*, any invocations of that function are logged. The trail processes and logs the event.
3. The `Invoke` API operation on *MyOtherLambdaFunction* is an Lambda API. Because the CloudTrail user did not specify logging data events for all Lambda functions, the `Invoke` operation for *MyOtherLambdaFunction* does not match the function specified for the trail. The trail doesn't log the event.

Contents

Type

The resource type in which you want to log data events. You can specify the following *basic* event selector resource types:

- `AWS::DynamoDB::Table`
- `AWS::Lambda::Function`
- `AWS::S3::Object`

Additional resource types are available through *advanced* event selectors. For more information, see AdvancedEventSelector.

Type: String

Required: No

Values

An array of Amazon Resource Name (ARN) strings or partial ARN strings for the specified resource type.

- To log data events for all objects in all S3 buckets in your AWS account, specify the prefix as `arn:aws:s3`.

> **Note**
>
> This also enables logging of data event activity performed by any user or role in your AWS account, even if that activity is performed on a bucket that belongs to another AWS account.

- To log data events for all objects in an S3 bucket, specify the bucket and an empty object prefix such as `arn:aws:s3:::amzn-s3-demo-bucket1/`. The trail logs data events for all objects in this S3 bucket.
- To log data events for specific objects, specify the S3 bucket and object prefix such as `arn:aws:s3:::amzn-s3-demo-bucket1/example-images`. The trail logs data events for objects in this S3 bucket that match the prefix.
- To log data events for all Lambda functions in your AWS account, specify the prefix as `arn:aws:lambda`.

> **Note**
>
> This also enables logging of `Invoke` activity performed by any user or role in your AWS account, even if that activity is performed on a function that belongs to another AWS account.

- To log data events for a specific Lambda function, specify the function ARN.

> **Note**
>
> Lambda function ARNs are exact. For example, if you specify a function ARN *arn:aws:lambda:us-west-2:111111111111:function:helloworld*, data events will only be logged for *arn:aws:lambda:us-west-2:111111111111:function:helloworld*. They will not be logged for *arn:aws:lambda:us-west-2:111111111111:function:helloworld2*.

- To log data events for all DynamoDB tables in your AWS account, specify the prefix as `arn:aws:dynamodb`.

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

Destination

Contains information about the destination receiving events.

Contents

Location

For channels used for a CloudTrail Lake integration, the location is the ARN of an event data store that receives events from a channel. For service-linked channels, the location is the name of the AWS service.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 1024.

Pattern: `^[a-zA-Z0-9._/\-:*]+$`

Required: Yes

Type

The type of destination for events arriving from a channel. For channels used for a CloudTrail Lake integration, the value is `EVENT_DATA_STORE`. For service-linked channels, the value is `AWS_SERVICE`.

Type: String

Valid Values: `EVENT_DATA_STORE | AWS_SERVICE`

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

Event

Contains information about an event that was returned by a lookup request. The result includes a representation of a CloudTrail event.

Contents

AccessKeyId

The AWS access key ID that was used to sign the request. If the request was made with temporary security credentials, this is the access key ID of the temporary credentials.

Type: String

Required: No

CloudTrailEvent

A JSON string that contains a representation of the event returned.

Type: String

Required: No

EventId

The CloudTrail ID of the event returned.

Type: String

Required: No

EventName

The name of the event returned.

Type: String

Required: No

EventSource

The AWS service to which the request was made.

Type: String

Required: No

EventTime

The date and time of the event returned.

Type: Timestamp

Required: No

ReadOnly

Information about whether the event is a write event or a read event.

Type: String

Required: No

Resources

A list of resources referenced by the event returned.

Type: Array of Resource objects

Required: No

Username

A user name or role name of the requester that called the API in the event returned.

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

EventDataStore

A storage lake of event data against which you can run complex SQL-based queries. An event data store can include events that you have logged on your account. To select events for an event data store, use advanced event selectors.

Contents

AdvancedEventSelectors

This member has been deprecated.

The advanced event selectors that were used to select events for the data store.

Type: Array of AdvancedEventSelector objects

Required: No

CreatedTimestamp

This member has been deprecated.

The timestamp of the event data store's creation.

Type: Timestamp

Required: No

EventDataStoreArn

The ARN of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

MultiRegionEnabled

This member has been deprecated.

Indicates whether the event data store includes events from all Regions, or only from the Region in which it was created.

Type: Boolean

Required: No

Name

The name of the event data store.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 128.

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

Required: No

OrganizationEnabled

This member has been deprecated.

Indicates that an event data store is collecting logged events for an organization.

Type: Boolean

Required: No

RetentionPeriod

This member has been deprecated.

The retention period, in days.

Type: Integer

Valid Range: Minimum value of 7. Maximum value of 3653.

Required: No

Status

This member has been deprecated.

The status of an event data store.

Type: String

Valid Values: `CREATED | ENABLED | PENDING_DELETION | STARTING_INGESTION | STOPPING_INGESTION | STOPPED_INGESTION`

Required: No

TerminationProtectionEnabled

This member has been deprecated.

Indicates whether the event data store is protected from termination.

Type: Boolean

Required: No

UpdatedTimestamp

This member has been deprecated.

The timestamp showing when an event data store was updated, if applicable. `UpdatedTimestamp` is always either the same or newer than the time shown in `CreatedTimestamp`.

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

EventSelector

Use event selectors to further specify the management and data event settings for your trail. By default, trails created without specific event selectors will be configured to log all read and write management events, and no data events. When an event occurs in your account, CloudTrail evaluates the event selector for all trails. For each trail, if the event matches any event selector, the trail processes and logs the event. If the event doesn't match any event selector, the trail doesn't log the event.

You can configure up to five event selectors for a trail.

You cannot apply both event selectors and advanced event selectors to a trail.

Contents

DataResources

CloudTrail supports data event logging for Amazon S3 objects in standard S3 buckets, AWS Lambda functions, and Amazon DynamoDB tables with basic event selectors. You can specify up to 250 resources for an individual event selector, but the total number of data resources cannot exceed 250 across all event selectors in a trail. This limit does not apply if you configure resource logging for all data events.

For more information, see Data Events and Limits in AWS CloudTrail in the *AWS CloudTrail User Guide*.

> **Note**
>
> To log data events for all other resource types including objects stored in directory buckets, you must use AdvancedEventSelectors. You must also use `AdvancedEventSelectors` if you want to filter on the `eventName` field.

Type: Array of DataResource objects

Required: No

ExcludeManagementEventSources

An optional list of service event sources from which you do not want management events to be logged on your trail. In this release, the list can be empty (disables the

filter), or it can filter out AWS Key Management Service or Amazon RDS Data API events by containing `kms.amazonaws.com` or `rdsdata.amazonaws.com`. By default, `ExcludeManagementEventSources` is empty, and AWS KMS and Amazon RDS Data API events are logged to your trail. You can exclude management event sources only in Regions that support the event source.

Type: Array of strings

Required: No

IncludeManagementEvents

Specify if you want your event selector to include management events for your trail.

For more information, see Management Events in the *AWS CloudTrail User Guide*.

By default, the value is `true`.

The first copy of management events is free. You are charged for additional copies of management events that you are logging on any subsequent trail in the same Region. For more information about CloudTrail pricing, see AWS CloudTrail Pricing.

Type: Boolean

Required: No

ReadWriteType

Specify if you want your trail to log read-only events, write-only events, or all. For example, the EC2 `GetConsoleOutput` is a read-only API operation and `RunInstances` is a write-only API operation.

By default, the value is `All`.

Type: String

Valid Values: `ReadOnly | WriteOnly | All`

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

ImportFailureListItem

Provides information about an import failure.

Contents

ErrorMessage

Provides the reason the import failed.

Type: String

Required: No

ErrorType

The type of import error.

Type: String

Required: No

LastUpdatedTime

When the import was last updated.

Type: Timestamp

Required: No

Location

The location of the failure in the S3 bucket.

Type: String

Required: No

Status

The status of the import.

Type: String

Valid Values: `FAILED | RETRY | SUCCEEDED`

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

ImportsListItem

Contains information about an import that was returned by a lookup request.

Contents

CreatedTimestamp

The timestamp of the import's creation.

Type: Timestamp

Required: No

Destinations

The ARN of the destination event data store.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 3. Maximum length of 256.

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

Required: No

ImportId

The ID of the import.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: No

ImportStatus

The status of the import.

Type: String

Valid Values: `INITIALIZING | IN_PROGRESS | FAILED | STOPPED | COMPLETED`

Required: No

UpdatedTimestamp

The timestamp of the import's last update.

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

ImportSource

The import source.

Contents

S3

The source S3 bucket.

Type: S3ImportSource 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

ImportStatistics

Provides statistics for the specified `ImportID`. CloudTrail does not update import statistics in real-time. Returned values for parameters such as `EventsCompleted` may be lower than the actual value, because CloudTrail updates statistics incrementally over the course of the import.

Contents

EventsCompleted

The number of trail events imported into the event data store.

Type: Long

Required: No

FailedEntries

The number of failed entries.

Type: Long

Required: No

FilesCompleted

The number of log files that completed import.

Type: Long

Required: No

PrefixesCompleted

The number of S3 prefixes that completed import.

Type: Long

Required: No

PrefixesFound

The number of S3 prefixes found for the import.

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

IngestionStatus

A table showing information about the most recent successful and failed attempts to ingest events.

Contents

LatestIngestionAttemptEventID

The event ID of the most recent attempt to ingest events.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: No

LatestIngestionAttemptTime

The time stamp of the most recent attempt to ingest events on the channel.

Type: Timestamp

Required: No

LatestIngestionErrorCode

The error code for the most recent failure to ingest events.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1000.

Pattern: `.*`

Required: No

LatestIngestionSuccessEventID

The event ID of the most recent successful ingestion of events.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: No

LatestIngestionSuccessTime

The time stamp of the most recent successful ingestion of events for the channel.

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

InsightSelector

A JSON string that contains a list of Insights types that are logged on a trail or event data store.

Contents

EventCategories

Select the event category on which Insights should be enabled.

- If EventCategories is not provided, the specified Insights types are enabled on management API calls by default.
- If EventCategories is provided, the given event categories will overwrite the existing ones. For example, if a trail already has Insights enabled on management events, and then a PutInsightSelectors request is made with only data events specified in EventCategories, Insights on management events will be disabled.

Type: Array of strings

Valid Values: `Management | Data`

Required: No

InsightType

The type of Insights events to log on a trail or event data store. `ApiCallRateInsight` and `ApiErrorRateInsight` are valid Insight types.

The `ApiCallRateInsight` Insights type analyzes write-only management API calls or read and write data API calls that are aggregated per minute against a baseline API call volume.

The `ApiErrorRateInsight` Insights type analyzes management and data API calls that result in error codes. The error is shown if the API call is unsuccessful.

Type: String

Valid Values: `ApiCallRateInsight | ApiErrorRateInsight`

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

LookupAttribute

Specifies an attribute and value that filter the events returned.

Contents

AttributeKey

Specifies an attribute on which to filter the events returned.

Type: String

Valid Values: `EventId | EventName | ReadOnly | Username | ResourceType | ResourceName | EventSource | AccessKeyId`

Required: Yes

AttributeValue

Specifies a value for the specified `AttributeKey`.

The maximum length for the `AttributeValue` is 2000 characters. The following characters ('_', ' ', ' , ', '\\n') count as two characters towards the 2000 character limit.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

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

PartitionKey

Contains information about a partition key for an event data store.

Contents

Name

The name of the partition key.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

Type

The data type of the partition key. For example, `bigint` or `string`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

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

PublicKey

Contains information about a returned public key.

Contents

Fingerprint

The fingerprint of the public key.

Type: String

Required: No

ValidityEndTime

The ending time of validity of the public key.

Type: Timestamp

Required: No

ValidityStartTime

The starting time of validity of the public key.

Type: Timestamp

Required: No

Value

The DER encoded public key value in PKCS#1 format.

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

Query

A SQL string of criteria about events that you want to collect in an event data store.

Contents

CreationTime

The creation time of a query.

Type: Timestamp

Required: No

QueryId

The ID of a query.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-f0-9\-]+$`

Required: No

QueryStatus

The status of the query. This can be `QUEUED`, `RUNNING`, `FINISHED`, `FAILED`, `TIMED_OUT`, or `CANCELLED`.

Type: String

Valid Values: `QUEUED | RUNNING | FINISHED | FAILED | CANCELLED | TIMED_OUT`

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

QueryStatistics

Metadata about a query, such as the number of results.

Contents

BytesScanned

The total bytes that the query scanned in the event data store. This value matches the number of bytes for which your account is billed for the query, unless the query is still running.

Type: Long

Required: No

ResultsCount

The number of results returned.

Type: Integer

Required: No

TotalResultsCount

The total number of results returned by a query.

Type: Integer

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

QueryStatisticsForDescribeQuery

Gets metadata about a query, including the number of events that were matched, the total number of events scanned, the query run time in milliseconds, and the query's creation time.

Contents

BytesScanned

The total bytes that the query scanned in the event data store. This value matches the number of bytes for which your account is billed for the query, unless the query is still running.

Type: Long

Required: No

CreationTime

The creation time of the query.

Type: Timestamp

Required: No

EventsMatched

The number of events that matched a query.

Type: Long

Required: No

EventsScanned

The number of events that the query scanned in the event data store.

Type: Long

Required: No

ExecutionTimeInMillis

The query's run time, in milliseconds.

Type: Integer

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

RefreshSchedule

The schedule for a dashboard refresh.

Contents

Frequency

The frequency at which you want the dashboard refreshed.

Type: RefreshScheduleFrequency object

Required: No

Status

Specifies whether the refresh schedule is enabled. Set the value to `ENABLED` to enable the refresh schedule, or to `DISABLED` to turn off the refresh schedule.

Type: String

Valid Values: `ENABLED | DISABLED`

Required: No

TimeOfDay

The time of day in UTC to run the schedule; for hourly only refer to minutes; default is 00:00.

Type: String

Pattern: `^[0-9]{2}:[0-9]{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

RefreshScheduleFrequency

Specifies the frequency for a dashboard refresh schedule.

For a custom dashboard, you can schedule a refresh for every 1, 6, 12, or 24 hours, or every day.

Contents

Unit

The unit to use for the refresh.

For custom dashboards, the unit can be `HOURS` or `DAYS`.

For the Highlights dashboard, the `Unit` must be `HOURS`.

Type: String

Valid Values: `HOURS` | `DAYS`

Required: No

Value

The value for the refresh schedule.

For custom dashboards, the following values are valid when the unit is `HOURS`: 1, 6, 12, 24

For custom dashboards, the only valid value when the unit is `DAYS` is 1.

For the Highlights dashboard, the `Value` must be 6.

Type: Integer

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

RequestWidget

Contains information about a widget on a CloudTrail Lake dashboard.

Contents

QueryStatement

The query statement for the widget. For custom dashboard widgets, you can query across multiple event data stores as long as all event data stores exist in your account.

> **Note**
>
> When a query uses ? with `eventTime`, ? must be surrounded by single quotes as follows: `'?'`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10000.

Pattern: `(?s).*`

Required: Yes

ViewProperties

The view properties for the widget. For more information about view properties, see View properties for widgets in the *AWS CloudTrail User Guide*.

Type: String to string map

Key Length Constraints: Minimum length of 3. Maximum length of 128.

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

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

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

Required: Yes

QueryParameters

The optional query parameters. The following query parameters are valid: `$StartTime$`, `$EndTime$`, and `$Period$`.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

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

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

Resource

Specifies the type and name of a resource referenced by an event.

Contents

ResourceName

The name of the resource referenced by the event returned. These are user-created names whose values will depend on the environment. For example, the resource name might be "auto-scaling-test-group" for an Auto Scaling Group or "i-1234567" for an EC2 Instance.

Type: String

Required: No

ResourceType

The type of a resource referenced by the event returned. When the resource type cannot be determined, null is returned. Some examples of resource types are: **Instance** for EC2, **Trail** for CloudTrail, **DBInstance** for Amazon RDS, and **AccessKey** for IAM. To learn more about how to look up and filter events by the resource types supported for a service, see Filtering CloudTrail Events.

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

ResourceTag

A resource tag.

Contents

ResourceId

Specifies the ARN of the resource.

Type: String

Required: No

TagsList

A list of tags.

Type: Array of Tag objects

Array Members: Maximum number of 200 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

S3ImportSource

The settings for the source S3 bucket.

Contents

S3BucketAccessRoleArn

The IAM ARN role used to access the source S3 bucket.

Type: String

Required: Yes

S3BucketRegion

The Region associated with the source S3 bucket.

Type: String

Required: Yes

S3LocationUri

The URI for the source S3 bucket.

Type: String

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

SearchSampleQueriesSearchResult

A search result returned by the `SearchSampleQueries` operation.

Contents

Description

A longer description of a sample query.

Type: String

Required: No

Name

The name of a sample query.

Type: String

Required: No

Relevance

A value between 0 and 1 indicating the similarity between the search phrase and result.

Type: Float

Required: No

SQL

The SQL code of the sample query.

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

SourceConfig

Contains configuration information about the channel.

Contents

AdvancedEventSelectors

The advanced event selectors that are configured for the channel.

Type: Array of AdvancedEventSelector objects

Required: No

ApplyToAllRegions

Specifies whether the channel applies to a single Region or to all Regions.

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

Tag

A custom key-value pair associated with a resource such as a CloudTrail trail, event data store, dashboard, or channel.

Contents

Key

The key in a key-value pair. The key must be must be no longer than 128 Unicode characters. The key must be unique for the resource to which it applies.

Type: String

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

Required: Yes

Value

The value in a key-value pair of a tag. The value must be no longer than 256 Unicode characters.

Type: String

Length Constraints: Minimum length of 1. 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

Trail

The settings for a trail.

Contents

CloudWatchLogsLogGroupArn

Specifies an Amazon Resource Name (ARN), a unique identifier that represents the log group to which CloudTrail logs will be delivered.

Type: String

Required: No

CloudWatchLogsRoleArn

Specifies the role for the CloudWatch Logs endpoint to assume to write to a user's log group.

Type: String

Required: No

HasCustomEventSelectors

Specifies if the trail has custom event selectors.

Type: Boolean

Required: No

HasInsightSelectors

Specifies whether a trail has insight types specified in an `InsightSelector` list.

Type: Boolean

Required: No

HomeRegion

The Region in which the trail was created.

Type: String

Required: No

IncludeGlobalServiceEvents

Set to **True** to include AWS API calls from AWS global services such as IAM. Otherwise, **False**. Setting this value to `true` only delivers global service events to the trail if the trail is multi-Region or if the trail's home Region is the partition leader Region (for example, us-east-1).

Type: Boolean

Required: No

IsMultiRegionTrail

Specifies whether the trail exists only in one Region or exists in all Regions.

Type: Boolean

Required: No

IsOrganizationTrail

Specifies whether the trail is an organization trail.

Type: Boolean

Required: No

KmsKeyId

Specifies the AWS KMS key ID that encrypts the logs and digest files delivered by CloudTrail. The value is a fully specified ARN to a AWS KMS key in the following format.

```
arn:aws:kms:us-
east-2:123456789012:key/12345678-1234-1234-1234-123456789012
```

Type: String

Required: No

LogFileValidationEnabled

Specifies whether log file validation is enabled.

Type: Boolean

Required: No

Name

Name of the trail set by calling CreateTrail. The maximum length is 128 characters.

Type: String

Required: No

RecursiveLogging

Specifies whether recursive logging is enabled for the trail. If you set `RecursiveLogging` to `false`, CloudTrail suppresses events generated by CloudTrail when it delivers log files to your trail's destinations, including Amazon S3 and CloudWatch Logs. The default value is `true`.

Type: Boolean

Required: No

S3BucketName

Name of the Amazon S3 bucket into which CloudTrail delivers your trail files. See Amazon S3 Bucket naming rules.

Type: String

Required: No

S3KeyPrefix

Specifies the Amazon S3 key prefix that comes after the name of the bucket you have designated for log file delivery. For more information, see Finding Your CloudTrail Log Files. The maximum length is 200 characters.

Type: String

Required: No

SnsTopicARN

Specifies the ARN of the Amazon SNS topic that CloudTrail uses to send notifications when log files are delivered. The following is the format of a topic ARN.

```
arn:aws:sns:us-east-2:123456789012:MyTopic
```

Type: String

Required: No

SnsTopicName

This member has been deprecated.

This field is no longer in use. Use `SnsTopicARN`.

Type: String

Required: No

TrailARN

Specifies the ARN of the trail. The following is the format of a trail ARN.

```
arn:aws:cloudtrail:us-east-2:123456789012:trail/MyTrail
```

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

TrailInfo

Information about a CloudTrail trail, including the trail's name, home Region, and Amazon Resource Name (ARN).

Contents

HomeRegion

The AWS Region in which a trail was created.

Type: String

Required: No

Name

The name of a trail.

Type: String

Required: No

TrailARN

The ARN of a trail.

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

Widget

A widget on a CloudTrail Lake dashboard.

Contents

QueryAlias

The query alias used to identify the query for the widget.

Type: String

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

Pattern: `^[a-zA-Z][a-zA-Z0-9._\-]*$`

Required: No

QueryParameters

The query parameters for the widget.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

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

Pattern: `.*`

Required: No

QueryStatement

The SQL query statement for the widget.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10000.

Pattern: `(?s).*`

Required: No

ViewProperties

The view properties for the widget. For more information about view properties, see View properties for widgets in the *AWS CloudTrail User Guide*..

Type: String to string map

Key Length Constraints: Minimum length of 3. Maximum length of 128.

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

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

Value 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

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