
Amazon Location Service Trackers

API Reference

API Version 2020-11-19



Amazon Location Service Trackers: API Reference

Copyright © Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

Amazon's trademarks and trade dress may not be used in connection with any product or service that is not Amazon's, in any manner that is likely to cause confusion among customers, or in any manner that disparages or discredits Amazon. All other trademarks not owned by Amazon are the property of their respective owners, who may or may not be affiliated with, connected to, or sponsored by Amazon.

Table of Contents

Welcome	1
Actions	2
AssociateTrackerConsumer	3
Request Syntax	3
URI Request Parameters	3
Request Body	3
Response Syntax	4
Response Elements	4
Errors	4
See Also	4
BatchDeleteDevicePositionHistory	6
Request Syntax	6
URI Request Parameters	6
Request Body	6
Response Syntax	6
Response Elements	7
Errors	7
See Also	7
BatchGetDevicePosition	9
Request Syntax	9
URI Request Parameters	9
Request Body	9
Response Syntax	9
Response Elements	10
Errors	10
See Also	11
BatchUpdateDevicePosition	12
Request Syntax	12
URI Request Parameters	12
Request Body	13
Response Syntax	13
Response Elements	13
Errors	13
See Also	14
CreateTracker	15
Request Syntax	15
URI Request Parameters	15
Request Body	15
Response Syntax	17
Response Elements	17
Errors	18
See Also	18
DeleteTracker	20
Request Syntax	20
URI Request Parameters	20
Request Body	20
Response Syntax	20
Response Elements	20
Errors	20
See Also	21
DescribeTracker	22
Request Syntax	22
URI Request Parameters	22
Request Body	22

Response Syntax	22
Response Elements	22
Errors	24
See Also	24
DisassociateTrackerConsumer	26
Request Syntax	26
URI Request Parameters	26
Request Body	26
Response Syntax	26
Response Elements	26
Errors	27
See Also	27
GetDevicePosition	28
Request Syntax	28
URI Request Parameters	28
Request Body	28
Response Syntax	28
Response Elements	29
Errors	29
See Also	30
GetDevicePositionHistory	31
Request Syntax	31
URI Request Parameters	31
Request Body	31
Response Syntax	32
Response Elements	33
Errors	33
See Also	33
ListDevicePositions	35
Request Syntax	35
URI Request Parameters	35
Request Body	35
Response Syntax	36
Response Elements	36
Errors	36
See Also	37
ListTrackerConsumers	38
Request Syntax	38
URI Request Parameters	38
Request Body	38
Response Syntax	39
Response Elements	39
Errors	39
See Also	40
ListTrackers	41
Request Syntax	41
URI Request Parameters	41
Request Body	41
Response Syntax	41
Response Elements	42
Errors	42
See Also	43
UpdateTracker	44
Request Syntax	44
URI Request Parameters	44
Request Body	44
Response Syntax	45

Response Elements	45
Errors	46
See Also	46
Data Types	48
BatchDeleteDevicePositionHistoryError	49
Contents	49
See Also	49
BatchGetDevicePositionError	50
Contents	50
See Also	50
BatchItemError	51
Contents	51
See Also	51
BatchUpdateDevicePositionError	52
Contents	52
See Also	52
DevicePosition	53
Contents	53
See Also	54
DevicePositionUpdate	55
Contents	55
See Also	56
ListDevicePositionsResponseEntry	57
Contents	57
See Also	57
ListTrackersResponseEntry	59
Contents	59
See Also	60
PositionalAccuracy	61
Contents	61
See Also	61
ValidationExceptionField	62
Contents	62
See Also	62
Common Parameters	63
Common Errors	65

Welcome

Welcome to the *Amazon Location Service Trackers API Reference*.

Amazon Location Trackers lets you send device location updates so that you can retrieve current and historical locations for devices running your tracking-enabled application.

Using Amazon Location Trackers, you can also link with Amazon Location Geofences to automatically evaluate location updates from your devices against your geofences to generate geofence events. With geofence events, you can use Amazon EventBridge to set up routing rules to determine where to send your data to build application architectures that react to location data in real-time.

For additional information on how to use tracker resources, see the [Amazon Location Service Developer Guide](#). It provides definitions, tutorials, code examples, and instructions about how to integrate Amazon Location features into web or mobile apps.

This document was last published on June 30, 2022.

Actions

The following actions are supported:

- [AssociateTrackerConsumer](#) (p. 3)
- [BatchDeleteDevicePositionHistory](#) (p. 6)
- [BatchGetDevicePosition](#) (p. 9)
- [BatchUpdateDevicePosition](#) (p. 12)
- [CreateTracker](#) (p. 15)
- [DeleteTracker](#) (p. 20)
- [DescribeTracker](#) (p. 22)
- [DisassociateTrackerConsumer](#) (p. 26)
- [GetDevicePosition](#) (p. 28)
- [GetDevicePositionHistory](#) (p. 31)
- [ListDevicePositions](#) (p. 35)
- [ListTrackerConsumers](#) (p. 38)
- [ListTrackers](#) (p. 41)
- [UpdateTracker](#) (p. 44)

AssociateTrackerConsumer

Creates an association between a geofence collection and a tracker resource. This allows the tracker resource to communicate location data to the linked geofence collection.

You can associate up to five geofence collections to each tracker resource.

Note

Currently not supported — Cross-account configurations, such as creating associations between a tracker resource in one account and a geofence collection in another account.

Request Syntax

```
POST /tracking/v0/trackers/TrackerName/consumers HTTP/1.1
Content-type: application/json

{
  "ConsumerArn": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 3)

The name of the tracker resource to be associated with a geofence collection.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

ConsumerArn (p. 3)

The Amazon Resource Name (ARN) for the geofence collection to be associated to tracker resource. Used when you need to specify a resource across all AWS.

- Format example: `arn:aws:geo:region:account-id:geofence-collection/ExampleGeofenceCollectionConsumer`

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1600.

Pattern: `^arn(:[a-z0-9]+(.[-][a-z0-9]+)*){2}(:([a-z0-9]+(.[-][a-z0-9]+)*)?)?{2}:([^\./].*)?$`

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

ConflictException

The request was unsuccessful because of a conflict.

HTTP Status Code: 409

InternalServerError

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ServiceQuotaExceededException

The operation was denied because the request would exceed the maximum [quota](#) set for Amazon Location Service.

HTTP Status Code: 402

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

BatchDeleteDevicePositionHistory

Deletes the position history of one or more devices from a tracker resource.

Request Syntax

```
POST /tracking/v0/trackers/TrackerName/delete-positions HTTP/1.1
Content-type: application/json

{
  "DeviceIds": [ "string" ]
}
```

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 6)

The name of the tracker resource to delete the device position history from.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

DeviceIds (p. 6)

Devices whose position history you want to delete.

- For example, for two devices: "DeviceIds" : [DeviceId1,DeviceId2]

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 100 items.

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

Pattern: `^[-._\p{L}\p{N}]+$`

Required: Yes

Response Syntax

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

{
  "Errors": [
    {

```

```
    "DeviceId": "string",  
    "Error": {  
      "Code": "string",  
      "Message": "string"  
    }  
  }  
]  
}
```

Response Elements

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

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

Errors (p. 6)

Contains error details for each device history that failed to delete.

Type: Array of [BatchDeleteDevicePositionHistoryError \(p. 49\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerError

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

BatchGetDevicePosition

Lists the latest device positions for requested devices.

Request Syntax

```
POST /tracking/v0/trackers/TrackerName/get-positions HTTP/1.1
Content-type: application/json

{
  "DeviceIds": [ "string" ]
}
```

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 9)

The tracker resource retrieving the device position.

Length Constraints: Minimum length of 1.

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

DeviceIds (p. 9)

Devices whose position you want to retrieve.

- For example, for two devices: `device-ids=DeviceId1&device-ids=DeviceId2`

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 100.

Pattern: `^[-._\p{L}\p{N}]+$`

Required: Yes

Response Syntax

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

{
  "DevicePositions": [
    {
```

```
    "Accuracy": {
      "Horizontal": number
    },
    "DeviceId": "string",
    "Position": [ number ],
    "PositionProperties": {
      "string": "string"
    },
    "ReceivedTime": number,
    "SampleTime": number
  }
],
"Errors": [
  {
    "DeviceId": "string",
    "Error": {
      "Code": "string",
      "Message": "string"
    }
  }
]
}
```

Response Elements

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

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

DevicePositions (p. 9)

Contains device position details such as the device ID, position, and timestamps for when the position was received and sampled.

Type: Array of [DevicePosition \(p. 53\)](#) objects

Errors (p. 9)

Contains error details for each device that failed to send its position to the tracker resource.

Type: Array of [BatchGetDevicePositionError \(p. 50\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerError

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

BatchUpdateDevicePosition

Uploads position update data for one or more devices to a tracker resource. Amazon Location uses the data when it reports the last known device position and position history. Amazon Location retains location data for 30 days.

Note

Position updates are handled based on the `PositionFiltering` property of the tracker. When `PositionFiltering` is set to `TimeBased`, updates are evaluated against linked geofence collections, and location data is stored at a maximum of one position per 30 second interval. If your update frequency is more often than every 30 seconds, only one update per 30 seconds is stored for each unique device ID.

When `PositionFiltering` is set to `DistanceBased` filtering, location data is stored and evaluated against linked geofence collections only if the device has moved more than 30 m (98.4 ft).

When `PositionFiltering` is set to `AccuracyBased` filtering, location data is stored and evaluated against linked geofence collections only if the device has moved more than the measured accuracy. For example, if two consecutive updates from a device have a horizontal accuracy of 5 m and 10 m, the second update is neither stored or evaluated if the device has moved less than 15 m. If `PositionFiltering` is set to `AccuracyBased` filtering, Amazon Location uses the default value `{ "Horizontal": 0 }` when accuracy is not provided on a `DevicePositionUpdate`.

Request Syntax

```
POST /tracking/v0/trackers/TrackerName/positions HTTP/1.1  
Content-type: application/json
```

```
{  
  "Updates": [  
    {  
      "Accuracy": {  
        "Horizontal": number  
      },  
      "DeviceId": "string",  
      "Position": [ number ],  
      "PositionProperties": {  
        "string" : "string"  
      },  
      "SampleTime": number  
    }  
  ]  
}
```

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 12)

The name of the tracker resource to update.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Updates (p. 12)

Contains the position update details for each device.

Type: Array of [DevicePositionUpdate \(p. 55\)](#) objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: Yes

Response Syntax

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

{
  "Errors": [
    {
      "DeviceId": "string",
      "Error": {
        "Code": "string",
        "Message": "string"
      },
      "SampleTime": 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.

Errors (p. 13)

Contains error details for each device that failed to update its position.

Type: Array of [BatchUpdateDevicePositionError \(p. 52\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

CreateTracker

Creates a tracker resource in your AWS account, which lets you retrieve current and historical location of devices.

Request Syntax

```
POST /tracking/v0/trackers HTTP/1.1
Content-type: application/json

{
  "Description": "string",
  "KmsKeyId": "string",
  "PositionFiltering": "string",
  "PricingPlan": "string",
  "PricingPlanDataSource": "string",
  "Tags": {
    "string" : "string"
  },
  "TrackerName": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

Description (p. 15)

An optional description for the tracker resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

Required: No

KmsKeyId (p. 15)

A key identifier for an [AWS KMS customer managed key](#). Enter a key ID, key ARN, alias name, or alias ARN.

Type: String

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

Required: No

PositionFiltering (p. 15)

Specifies the position filtering for the tracker resource.

Valid values:

- **TimeBased** - Location updates are evaluated against linked geofence collections, but not every location update is stored. If your update frequency is more often than 30 seconds, only one update per 30 seconds is stored for each unique device ID.

- `DistanceBased` - If the device has moved less than 30 m (98.4 ft), location updates are ignored. Location updates within this area are neither evaluated against linked geofence collections, nor stored. This helps control costs by reducing the number of geofence evaluations and historical device positions to paginate through. Distance-based filtering can also reduce the effects of GPS noise when displaying device trajectories on a map.
- `AccuracyBased` - If the device has moved less than the measured accuracy, location updates are ignored. For example, if two consecutive updates from a device have a horizontal accuracy of 5 m and 10 m, the second update is ignored if the device has moved less than 15 m. Ignored location updates are neither evaluated against linked geofence collections, nor stored. This can reduce the effects of GPS noise when displaying device trajectories on a map, and can help control your costs by reducing the number of geofence evaluations.

This field is optional. If not specified, the default value is `TimeBased`.

Type: String

Valid Values: `TimeBased` | `DistanceBased` | `AccuracyBased`

Required: No

PricingPlan (p. 15)

This parameter has been deprecated.

No longer used. If included, the only allowed value is `RequestBasedUsage`.

Type: String

Valid Values: `RequestBasedUsage` | `MobileAssetTracking` | `MobileAssetManagement`

Required: No

PricingPlanDataSource (p. 15)

This parameter has been deprecated.

This parameter is no longer used.

Type: String

Required: No

Tags (p. 15)

Applies one or more tags to the tracker resource. A tag is a key-value pair helps manage, identify, search, and filter your resources by labelling them.

Format: `"key" : "value"`

Restrictions:

- Maximum 50 tags per resource
- Each resource tag must be unique with a maximum of one value.
- Maximum key length: 128 Unicode characters in UTF-8
- Maximum value length: 256 Unicode characters in UTF-8
- Can use alphanumeric characters (A–Z, a–z, 0–9), and the following characters: `+ - = . _ : / @`.
- Cannot use `"aws:"` as a prefix for a key.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

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

Key Pattern: `^[a-zA-Z+-. _:/]+$`

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

Value Pattern: `^[A-Za-z0-9 _=@: .+ -/]*$`

Required: No

TrackerName (p. 15)

The name for the tracker resource.

Requirements:

- Contain only alphanumeric characters (A-Z, a-z, 0-9), hyphens (-), periods (.), and underscores (_).
- Must be a unique tracker resource name.
- No spaces allowed. For example, `ExampleTracker`.

Type: String

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

Pattern: `^[-._\w]+$`

Required: Yes

Response Syntax

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

{
  "CreateTime": number,
  "TrackerArn": "string",
  "TrackerName": "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.

CreateTime (p. 17)

The timestamp for when the tracker resource was created in [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`.

Type: Timestamp

TrackerArn (p. 17)

The Amazon Resource Name (ARN) for the tracker resource. Used when you need to specify a resource across all AWS.

- Format example: `arn:aws:geo:region:account-id:tracker/ExampleTracker`

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1600.

Pattern: `^arn(:[a-z0-9]+(.[-][a-z0-9]+)*){2}(:([a-z0-9]+(.[-][a-z0-9]+)*)?)?){2}:[^/].*?#$`

TrackerName (p. 17)

The name of the tracker resource.

Type: String

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

Pattern: `^[-._\w]+$`

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

ConflictException

The request was unsuccessful because of a conflict.

HTTP Status Code: 409

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)

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

DeleteTracker

Deletes a tracker resource from your AWS account.

Note

This operation deletes the resource permanently. If the tracker resource is in use, you may encounter an error. Make sure that the target resource isn't a dependency for your applications.

Request Syntax

```
DELETE /tracking/v0/trackers/TrackerName HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 20)

The name of the tracker resource to be deleted.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

DescribeTracker

Retrieves the tracker resource details.

Request Syntax

```
GET /tracking/v0/trackers/TrackerName HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 22)

The name of the tracker resource.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "CreateTime": number,
  "Description": "string",
  "KmsKeyId": "string",
  "PositionFiltering": "string",
  "PricingPlan": "string",
  "PricingPlanDataSource": "string",
  "Tags": {
    "string" : "string"
  },
  "TrackerArn": "string",
  "TrackerName": "string",
  "UpdateTime": 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.

CreateTime (p. 22)

The timestamp for when the tracker resource was created in [ISO 8601](#) format: YYYY-MM-DDThh:mm:ss.sssZ.

Type: Timestamp

Description (p. 22)

The optional description for the tracker resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

KmsKeyId (p. 22)

A key identifier for an [AWS KMS customer managed key](#) assigned to the Amazon Location resource.

Type: String

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

PositionFiltering (p. 22)

The position filtering method of the tracker resource.

Type: String

Valid Values: `TimeBased` | `DistanceBased` | `AccuracyBased`

PricingPlan (p. 22)

This parameter has been deprecated.

Always returns `RequestBasedUsage`.

Type: String

Valid Values: `RequestBasedUsage` | `MobileAssetTracking` | `MobileAssetManagement`

PricingPlanDataSource (p. 22)

This parameter has been deprecated.

No longer used. Always returns an empty string.

Type: String

Tags (p. 22)

The tags associated with the tracker resource.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

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

Key Pattern: `^[a-zA-Z+-. _:/]+$`

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

Value Pattern: `^[A-Za-z0-9 _=@: . + - /]*$`

TrackerArn (p. 22)

The Amazon Resource Name (ARN) for the tracker resource. Used when you need to specify a resource across all AWS.

- Format example: `arn:aws:geo:region:account-id:tracker/ExampleTracker`

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1600.

Pattern: `^arn(:[a-z0-9]+(.[-][a-z0-9]+)*){2}(:([a-z0-9]+(.[-][a-z0-9]+)*)?)?){2}:([/].*)?$`

TrackerName (p. 22)

The name of the tracker resource.

Type: String

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

Pattern: `^[-.\w]+$`

UpdateTime (p. 22)

The timestamp for when the tracker resource was last updated in [ISO 8601](#) format: YYYY-MM-DDThh:mm:ss.sssZ.

Type: Timestamp

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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](#)

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

DisassociateTrackerConsumer

Removes the association between a tracker resource and a geofence collection.

Note

Once you unlink a tracker resource from a geofence collection, the tracker positions will no longer be automatically evaluated against geofences.

Request Syntax

```
DELETE /tracking/v0/trackers/TrackerName/consumers/ConsumerArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ConsumerArn (p. 26)

The Amazon Resource Name (ARN) for the geofence collection to be disassociated from the tracker resource. Used when you need to specify a resource across all AWS.

- Format example: `arn:aws:geo:region:account-id:geofence-collection/ExampleGeofenceCollectionConsumer`

Length Constraints: Minimum length of 0. Maximum length of 1600.

Pattern: `^arn(:[a-z0-9]+(.[-][a-z0-9]+)*){2}(:([a-z0-9]+(.[-][a-z0-9]+)*)?)?{2}:([^\./]*)?#$`

Required: Yes

TrackerName (p. 26)

The name of the tracker resource to be dissociated from the consumer.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

GetDevicePosition

Retrieves a device's most recent position according to its sample time.

Note

Device positions are deleted after 30 days.

Request Syntax

```
GET /tracking/v0/trackers/TrackerName/devices/DeviceId/positions/latest HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

DeviceId (p. 28)

The device whose position you want to retrieve.

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

Pattern: `^[-._\p{L}\p{N}]+$`

Required: Yes

TrackerName (p. 28)

The tracker resource receiving the position update.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "Accuracy": {
    "Horizontal": number
  },
  "DeviceId": "string",
  "Position": [ number ],
  "PositionProperties": {
    "string" : "string"
  },
  "ReceivedTime": number,
  "SampleTime": 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.

Accuracy (p. 28)

The accuracy of the device position.

Type: [PositionalAccuracy \(p. 61\)](#) object

DeviceId (p. 28)

The device whose position you retrieved.

Type: String

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

Pattern: `^[-._\p{L}\p{N}]+`

Position (p. 28)

The last known device position.

Type: Array of doubles

Array Members: Fixed number of 2 items.

PositionProperties (p. 28)

The properties associated with the position.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 3 items.

Key Length Constraints: Minimum length of 1. Maximum length of 20.

Value Length Constraints: Minimum length of 1. Maximum length of 40.

ReceivedTime (p. 28)

The timestamp for when the tracker resource received the device position in [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`.

Type: Timestamp

SampleTime (p. 28)

The timestamp at which the device's position was determined. Uses [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`.

Type: Timestamp

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

GetDevicePositionHistory

Retrieves the device position history from a tracker resource within a specified range of time.

Note

Device positions are deleted after 30 days.

Request Syntax

```
POST /tracking/v0/trackers/TrackerName/devices/DeviceId/list-positions HTTP/1.1  
Content-type: application/json
```

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

URI Request Parameters

The request uses the following URI parameters.

DeviceId (p. 31)

The device whose position history you want to retrieve.

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

Pattern: `^[-._\p{L}\p{N}]+$`

Required: Yes

TrackerName (p. 31)

The tracker resource receiving the request for the device position history.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

EndTimeExclusive (p. 31)

Specify the end time for the position history in [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`. By default, the value will be the time that the request is made.

Requirement:

- The time specified for `EndTimeExclusive` must be after the time for `StartTimeInclusive`.

Type: Timestamp

Required: No

MaxResults (p. 31)

An optional limit for the number of device positions returned in a single call.

Default value: 100

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextToken (p. 31)

The pagination token specifying which page of results to return in the response. If no token is provided, the default page is the first page.

Default value: null

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Required: No

StartTimeInclusive (p. 31)

Specify the start time for the position history in [ISO 8601](#) format: YYYY-MM-DDThh:mm:ss.sssZ. By default, the value will be 24 hours prior to the time that the request is made.

Requirement:

- The time specified for `StartTimeInclusive` must be before `EndTimeExclusive`.

Type: Timestamp

Required: No

Response Syntax

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

{
  "DevicePositions": [
    {
      "Accuracy": {
        "Horizontal": number
      },
      "DeviceId": "string",
      "Position": [ number ],
      "PositionProperties": {
        "string": "string"
      },
      "ReceivedTime": number,
      "SampleTime": 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.

DevicePositions (p. 32)

Contains the position history details for the requested device.

Type: Array of [DevicePosition](#) (p. 53) objects

NextToken (p. 32)

A pagination token indicating there are additional pages available. You can use the token in a following request to fetch the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 65).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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](#)

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

ListDevicePositions

A batch request to retrieve all device positions.

Request Syntax

```
POST /tracking/v0/trackers/TrackerName/list-positions HTTP/1.1  
Content-type: application/json
```

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

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 35)

The tracker resource containing the requested devices.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

MaxResults (p. 35)

An optional limit for the number of entries returned in a single call.

Default value: 100

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextToken (p. 35)

The pagination token specifying which page of results to return in the response. If no token is provided, the default page is the first page.

Default value: `null`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Required: No

Response Syntax

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

{
  "Entries": [
    {
      "Accuracy": {
        "Horizontal": number
      },
      "DeviceId": "string",
      "Position": [ number ],
      "PositionProperties": {
        "string" : "string"
      },
      "SampleTime": 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.

Entries (p. 36)

Contains details about each device's last known position. These details includes the device ID, the time when the position was sampled on the device, the time that the service received the update, and the most recent coordinates.

Type: Array of [ListDevicePositionsResponseEntry \(p. 57\)](#) objects

NextToken (p. 36)

A pagination token indicating there are additional pages available. You can use the token in a following request to fetch the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

ListTrackerConsumers

Lists geofence collections currently associated to the given tracker resource.

Request Syntax

```
POST /tracking/v0/trackers/TrackerName/list-consumers HTTP/1.1
Content-type: application/json

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

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 38)

The tracker resource whose associated geofence collections you want to list.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

MaxResults (p. 38)

An optional limit for the number of resources returned in a single call.

Default value: 100

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextToken (p. 38)

The pagination token specifying which page of results to return in the response. If no token is provided, the default page is the first page.

Default value: `null`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Required: No

Response Syntax

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

{
  "ConsumerArns": [ "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.

ConsumerArns (p. 39)

Contains the list of geofence collection ARNs associated to the tracker resource.

Type: Array of strings

Length Constraints: Minimum length of 0. Maximum length of 1600.

Pattern: `^arn(:[a-z0-9]+(.[a-z0-9]+)*){2}(:([a-z0-9]+(.[a-z0-9]+)*)?)?{2}:([/].*)?#$`

NextToken (p. 39)

A pagination token indicating there are additional pages available. You can use the token in a following request to fetch the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

ListTrackers

Lists tracker resources in your AWS account.

Request Syntax

```
POST /tracking/v0/list-trackers HTTP/1.1  
Content-type: application/json
```

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

MaxResults (p. 41)

An optional limit for the number of resources returned in a single call.

Default value: 100

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextToken (p. 41)

The pagination token specifying which page of results to return in the response. If no token is provided, the default page is the first page.

Default value: null

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Required: No

Response Syntax

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

```
{  
  "Entries": [  
    {
```

```
    "CreateTime": number,  
    "Description": "string",  
    "PricingPlan": "string",  
    "PricingPlanDataSource": "string",  
    "TrackerName": "string",  
    "UpdateTime": 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.

Entries (p. 41)

Contains tracker resources in your AWS account. Details include tracker name, description and timestamps for when the tracker was created and last updated.

Type: Array of [ListTrackersResponseEntry \(p. 59\)](#) objects

NextToken (p. 41)

A pagination token indicating there are additional pages available. You can use the token in a following request to fetch the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

UpdateTracker

Updates the specified properties of a given tracker resource.

Request Syntax

```
PATCH /tracking/v0/trackers/TrackerName HTTP/1.1
Content-type: application/json

{
  "Description": "string",
  "PositionFiltering": "string",
  "PricingPlan": "string",
  "PricingPlanDataSource": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

TrackerName (p. 44)

The name of the tracker resource to update.

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

Pattern: `^[-._\w]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Description (p. 44)

Updates the description for the tracker resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

Required: No

PositionFiltering (p. 44)

Updates the position filtering for the tracker resource.

Valid values:

- `TimeBased` - Location updates are evaluated against linked geofence collections, but not every location update is stored. If your update frequency is more often than 30 seconds, only one update per 30 seconds is stored for each unique device ID.
- `DistanceBased` - If the device has moved less than 30 m (98.4 ft), location updates are ignored. Location updates within this distance are neither evaluated against linked geofence collections, nor stored. This helps control costs by reducing the number of geofence evaluations and historical

device positions to paginate through. Distance-based filtering can also reduce the effects of GPS noise when displaying device trajectories on a map.

- **AccuracyBased** - If the device has moved less than the measured accuracy, location updates are ignored. For example, if two consecutive updates from a device have a horizontal accuracy of 5 m and 10 m, the second update is ignored if the device has moved less than 15 m. Ignored location updates are neither evaluated against linked geofence collections, nor stored. This helps reduce the effects of GPS noise when displaying device trajectories on a map, and can help control costs by reducing the number of geofence evaluations.

Type: String

Valid Values: `TimeBased` | `DistanceBased` | `AccuracyBased`

Required: No

[PricingPlan \(p. 44\)](#)

This parameter has been deprecated.

No longer used. If included, the only allowed value is `RequestBasedUsage`.

Type: String

Valid Values: `RequestBasedUsage` | `MobileAssetTracking` | `MobileAssetManagement`

Required: No

[PricingPlanDataSource \(p. 44\)](#)

This parameter has been deprecated.

This parameter is no longer used.

Type: String

Required: No

Response Syntax

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

{
  "TrackerArn": "string",
  "TrackerName": "string",
  "UpdateTime": 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.

[TrackerArn \(p. 45\)](#)

The Amazon Resource Name (ARN) of the updated tracker resource. Used to specify a resource across AWS.

- Format example: `arn:aws:geo:region:account-id:tracker/ExampleTracker`

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1600.

Pattern: `^arn(:[a-z0-9]+(.[-][a-z0-9]+)*){2}(:([a-z0-9]+(.[-][a-z0-9]+)*)?)\{2\}:([^\./].*)?*$`

TrackerName (p. 45)

The name of the updated tracker resource.

Type: String

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

Pattern: `^[-._w]+$`

UpdateTime (p. 45)

The timestamp for when the tracker resource was last updated in [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`.

Type: Timestamp

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 65\)](#).

AccessDeniedException

The request was denied because of insufficient access or permissions. Check with an administrator to verify your permissions.

HTTP Status Code: 403

InternalServerErrorException

The request has failed to process because of an unknown server error, exception, or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource that you've entered was not found in your AWS account.

HTTP Status Code: 404

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 429

ValidationException

The input failed to meet the constraints specified by the AWS service.

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

Data Types

The Amazon Location Service Trackers 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:

- [BatchDeleteDevicePositionHistoryError](#) (p. 49)
- [BatchGetDevicePositionError](#) (p. 50)
- [BatchItemError](#) (p. 51)
- [BatchUpdateDevicePositionError](#) (p. 52)
- [DevicePosition](#) (p. 53)
- [DevicePositionUpdate](#) (p. 55)
- [ListDevicePositionsResponseEntry](#) (p. 57)
- [ListTrackersResponseEntry](#) (p. 59)
- [PositionalAccuracy](#) (p. 61)
- [ValidationExceptionField](#) (p. 62)

BatchDeleteDevicePositionHistoryError

Contains the tracker resource details.

Contents

DeviceId

The ID of the device for this position.

Type: String

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

Pattern: `^[-._\p{L}\p{N}]+$`

Required: Yes

Error

Contains the batch request error details associated with the request.

Type: [BatchItemError \(p. 51\)](#) 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 Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

BatchGetDevicePositionError

Contains error details for each device that didn't return a position.

Contents

DeviceId

The ID of the device that didn't return a position.

Type: String

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

Pattern: `^[-._\p{L}\p{N}]+$`

Required: Yes

Error

Contains details related to the error code.

Type: [BatchItemError \(p. 51\)](#) 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 Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

BatchItemError

Contains the batch request error details associated with the request.

Contents

Code

The error code associated with the batch request error.

Type: String

Valid Values: `AccessDeniedError` | `ConflictError` | `InternalServerError` | `ResourceNotFoundError` | `ThrottlingError` | `ValidationError`

Required: No

Message

A message with the reason for the batch request error.

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

BatchUpdateDevicePositionError

Contains error details for each device that failed to update its position.

Contents

DeviceId

The device associated with the failed location update.

Type: String

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

Pattern: `^[-._\p{L}\p{N}]+ $`

Required: Yes

Error

Contains details related to the error code such as the error code and error message.

Type: [BatchItemError \(p. 51\)](#) object

Required: Yes

SampleTime

The timestamp at which the device position was determined. Uses [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`.

Type: Timestamp

Required: Yes

See Also

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

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

DevicePosition

Contains the device position details.

Contents

Accuracy

The accuracy of the device position.

Type: [PositionalAccuracy](#) (p. 61) object

Required: No

Deviceld

The device whose position you retrieved.

Type: String

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

Pattern: `^[-._\p{L}\p{N}]+$`

Required: No

Position

The last known device position.

Type: Array of doubles

Array Members: Fixed number of 2 items.

Required: Yes

PositionProperties

The properties associated with the position.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 3 items.

Key Length Constraints: Minimum length of 1. Maximum length of 20.

Value Length Constraints: Minimum length of 1. Maximum length of 40.

Required: No

ReceivedTime

The timestamp for when the tracker resource received the device position in [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`.

Type: Timestamp

Required: Yes

SampleTime

The timestamp at which the device's position was determined. Uses [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`.

Type: Timestamp

Required: Yes

See Also

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

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

DevicePositionUpdate

Contains the position update details for a device.

Contents

Accuracy

The accuracy of the device position.

Type: [PositionalAccuracy](#) (p. 61) object

Required: No

Deviceld

The device associated to the position update.

Type: String

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

Pattern: `^[-._\p{L}\p{N}]+$`

Required: Yes

Position

The latest device position defined in [WGS 84](#) format: [X or longitude, Y or latitude].

Type: Array of doubles

Array Members: Fixed number of 2 items.

Required: Yes

PositionProperties

Associates one or more properties with the position update. A property is a key-value pair stored with the position update and added to any geofence event the update may trigger.

Format: `"key" : "value"`

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 3 items.

Key Length Constraints: Minimum length of 1. Maximum length of 20.

Value Length Constraints: Minimum length of 1. Maximum length of 40.

Required: No

SampleTime

The timestamp at which the device's position was determined. Uses [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`

Type: Timestamp

Required: Yes

See Also

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

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

ListDevicePositionsResponseEntry

Contains the tracker resource details.

Contents

Accuracy

The accuracy of the device position.

Type: [PositionalAccuracy \(p. 61\)](#) object

Required: No

DeviceId

The ID of the device for this position.

Type: String

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

Pattern: `^[-._\p{L}\p{N}]+$`

Required: Yes

Position

The last known device position. Empty if no positions currently stored.

Type: Array of doubles

Array Members: Fixed number of 2 items.

Required: Yes

PositionProperties

The properties associated with the position.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 3 items.

Key Length Constraints: Minimum length of 1. Maximum length of 20.

Value Length Constraints: Minimum length of 1. Maximum length of 40.

Required: No

SampleTime

The timestamp at which the device position was determined. Uses [ISO 8601](#) format: `YYYY-MM-DDThh:mm:ss.sssZ`.

Type: Timestamp

Required: Yes

See Also

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

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

ListTrackersResponseEntry

Contains the tracker resource details.

Contents

CreateTime

The timestamp for when the tracker resource was created in [ISO 8601](#) format: YYYY-MM-DDThh:mm:ss.sssZ.

Type: Timestamp

Required: Yes

Description

The description for the tracker resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

Required: Yes

PricingPlan

This member has been deprecated.

Always returns RequestBasedUsage.

Type: String

Valid Values: RequestBasedUsage | MobileAssetTracking | MobileAssetManagement

Required: No

PricingPlanDataSource

This member has been deprecated.

No longer used. Always returns an empty string.

Type: String

Required: No

TrackerName

The name of the tracker resource.

Type: String

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

Pattern: ^[-._\w]+\$

Required: Yes

UpdateTime

The timestamp at which the device's position was determined. Uses [ISO 8601](#) format: YYYY-MM-DDThh:mm:ss.sssZ.

Type: Timestamp

Required: Yes

See Also

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

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

PositionalAccuracy

Defines the level of certainty of the position.

Contents

Horizontal

Estimated maximum distance, in meters, between the measured position and the true position of a device, along the Earth's surface.

Type: Double

Valid Range: Minimum value of 0. Maximum value of 10000.

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

ValidationExceptionField

The input failed to meet the constraints specified by the AWS service in a specified field.

Contents

message

A message with the reason for the validation exception error.

Type: String

Required: Yes

name

The field name where the invalid entry was detected.

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 Go](#)
- [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 [Signature Version 4 Signing Process](#) in the *Amazon Web Services General Reference*.

Action

The action to be performed.

Type: string

Required: Yes

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: `access_key/YYYYMMDD/region/service/aws4_request`.

For more information, see [Task 2: Create a String to Sign for Signature Version 4](#) in the *Amazon Web Services General Reference*.

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'THHMMSS'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 [Handling Dates in Signature Version 4](#) in the *Amazon Web Services General Reference*.

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 Security Token Service, go to [AWS Services That Work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from the AWS Security Token Service, 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 [Task 1: Create a Canonical Request For Signature Version 4](#) in the *Amazon Web Services General Reference*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

Common Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

InvalidClientTokenId

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

ServiceUnavailable

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400