
Amazon Cognito Sync

API Reference

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Amazon Cognito Sync: API Reference

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Welcome

Amazon Cognito Sync provides an AWS service and client library that enable cross-device syncing of application-related user data. High-level client libraries are available for both iOS and Android. You can use these libraries to persist data locally so that it's available even if the device is offline. Developer credentials don't need to be stored on the mobile device to access the service. You can use Amazon Cognito to obtain a normalized user ID and credentials. User data is persisted in a dataset that can store up to 1 MB of key-value pairs, and you can have up to 20 datasets per user identity.

With Amazon Cognito Sync, the data stored for each identity is accessible only to credentials assigned to that identity. In order to use the Cognito Sync service, you need to make API calls using credentials retrieved with [Amazon Cognito Identity service](#).

If you want to use Cognito Sync in an Android or iOS application, you will probably want to make API calls via the AWS Mobile SDK. To learn more, see the [Developer Guide for Android](#) and the [Developer Guide for iOS](#).

This document was last updated on November 13, 2014.

Actions

The following actions are supported:

- [DeleteDataset](#) (p. 3)
- [DescribeDataset](#) (p. 5)
- [DescribeIdentityPoolUsage](#) (p. 7)
- [DescribeIdentityUsage](#) (p. 10)
- [GetIdentityPoolConfiguration](#) (p. 13)
- [ListDatasets](#) (p. 16)
- [ListIdentityPoolUsage](#) (p. 20)
- [ListRecords](#) (p. 24)
- [RegisterDevice](#) (p. 29)
- [SetIdentityPoolConfiguration](#) (p. 32)
- [SubscribeToDataset](#) (p. 35)
- [UnsubscribeFromDataset](#) (p. 38)
- [UpdateRecords](#) (p. 41)

DeleteDataset

Deletes the specific dataset. The dataset will be deleted permanently, and the action can't be undone. Datasets that this dataset was merged with will no longer report the merge. Any subsequent operation on this dataset will result in a `ResourceNotFoundException`.

`DeleteDataset` can be called with temporary user credentials provided by Cognito Identity or with developer credentials.

Request Syntax

```
{
  "DatasetName": "string",
  "IdentityId": "string",
  "IdentityPoolId": "string"
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

DatasetName

A string of up to 128 characters. Allowed characters are a-z, A-Z, 0-9, '_' (underscore), '-' (dash), and '.' (dot).

Type: String

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

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

Required: Yes

IdentityId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: Yes

Response Syntax

```
{
  "Dataset": {
    "CreationDate": number,
    "DataStorage": number,
    "DatasetName": "string",
    "IdentityId": "string",
    "LastModifiedBy": "string",
    "LastModifiedDate": number,
    "NumRecords": 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.

Dataset

A collection of data for an identity pool. An identity pool can have multiple datasets. A dataset is per identity and can be general or associated with a particular entity in an application (like a saved game). Datasets are automatically created if they don't exist. Data is synced by dataset, and a dataset can hold up to 1MB of key-value pairs.

Type: [Dataset \(p. 44\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

DescribeDataset

Gets metadata about a dataset by identity and dataset name. With Amazon Cognito Sync, each identity has access only to its own data. Thus, the credentials used to make this API call need to have access to the identity data.

`DescribeDataset` can be called with temporary user credentials provided by Cognito Identity or with developer credentials. You should use Cognito Identity credentials to make this API call.

Request Syntax

```
{  
  "DatasetName": "string",  
  "IdentityId": "string",  
  "IdentityPoolId": "string"  
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

DatasetName

A string of up to 128 characters. Allowed characters are a-z, A-Z, 0-9, '_' (underscore), '-' (dash), and '.' (dot).

Type: String

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

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

Required: Yes

IdentityId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

Response Syntax

```
{
  "Dataset": {
    "CreationDate": number,
    "DataStorage": number,
    "DatasetName": "string",
    "IdentityId": "string",
    "LastModifiedBy": "string",
    "LastModifiedDate": number,
    "NumRecords": 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.

Dataset

Metadata for a collection of data for an identity. An identity can have multiple datasets. A dataset can be general or associated with a particular entity in an application (like a saved game). Datasets are automatically created if they don't exist. Data is synced by dataset, and a dataset can hold up to 1MB of key-value pairs.

Type: [Dataset \(p. 44\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

DescribeIdentityPoolUsage

Gets usage details (for example, data storage) about a particular identity pool.

`DescribeIdentityPoolUsage` can only be called with developer credentials. You cannot make this API call with the temporary user credentials provided by Cognito Identity.

Request Syntax

```
{
  "IdentityPoolId": "string"
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: Yes

Response Syntax

```
{
  "IdentityPoolUsage": {
    "DataStorage": number,
    "IdentityPoolId": "string",
    "LastModifiedDate": number,
    "SyncSessionsCount": 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.

IdentityPoolUsage

Information about the usage of the identity pool.

Type: [IdentityPoolUsage](#) (p. 45) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 52).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

Examples

DescribeIdentityPoolUsage

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: 8dc0e749-c8cd-48bd-8520-da6be00d528b
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.DescribeIdentityPoolUsage
HOST: cognito-sync.us-east-1.amazonaws.com:443
X-AMZ-DATE: 20141111T205737Z
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;host;x-amz-date;x-amz-target;x-amzn-requestid, Signature=<signature>

{
  "Operation": "com.amazonaws.cognito.sync.model#DescribeIdentityPoolUsage",
  "Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
  "Input":
  {
    "IdentityPoolId": "IDENTITY_POOL_ID"
  }
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: 8dc0e749-c8cd-48bd-8520-da6be00d528b
content-type: application/json
content-length: 271
date: Tue, 11 Nov 2014 20:57:37 GMT

{
  "Output":
  {
    "__type": "com.amazonaws.cognito.sync.model#DescribeIdentityPoolUsageResponse",
    "IdentityPoolUsage":
    {
      "DataStorage": 0,
      "IdentityPoolId": "IDENTITY_POOL_ID",
      "LastModifiedDate": 1.413231134115E9,
      "SyncSessionsCount": null
    }
  },
  "Version": "1.0"
}
```

DescribeIdentityUsage

Gets usage information for an identity, including number of datasets and data usage.

`DescribeIdentityUsage` can be called with temporary user credentials provided by Cognito Identity or with developer credentials.

Request Syntax

```
{
  "IdentityId": "string",
  "IdentityPoolId": "string"
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

IdentityId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: Yes

Response Syntax

```
{
  "IdentityUsage": {
    "DataStorage": number,
    "DatasetCount": number,
    "IdentityId": "string",
    "IdentityPoolId": "string",
  }
}
```

```
    "LastModifiedDate": 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.

IdentityUsage

Usage information for the identity.

Type: [IdentityUsage](#) (p. 46) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 52).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

Examples

DescribeIdentityUsage

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: 33f9b4e4-a177-4aad-a3bb-6edb7980b283
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.DescribeIdentityUsage
HOST: cognito-sync.us-east-1.amazonaws.com:443
X-AMZ-DATE: 20141111T215129Z
```

```
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;host;x-amz-date;x-amz-target;x-amzn-requestid, Signature=<signature>
```

```
{
  "Operation": "com.amazonaws.cognito.sync.model#DescribeIdentityUsage",
  "Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
  "Input": {
    "IdentityPoolId": "IDENTITY_POOL_ID",
    "IdentityId": "IDENTITY_ID"
  }
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: 33f9b4e4-a177-4aad-a3bb-6edb7980b283
content-type: application/json
content-length: 318
date: Tue, 11 Nov 2014 21:51:29 GMT

{
  "Output": {
    "__type": "com.amazonaws.cognito.sync.model#DescribeIdentityUsageResponse",
    "IdentityUsage": {
      "DataStorage": 16,
      "DatasetCount": 1,
      "IdentityId": "IDENTITY_ID",
      "IdentityPoolId": "IDENTITY_POOL_ID",
      "LastModifiedDate": 1.412974081336E9
    }
  },
  "Version": "1.0"
}
```


GetIdentityPoolConfiguration

Gets the configuration settings of an identity pool.

Request Syntax

```
{  
  "IdentityPoolId": "string"  
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. This is the ID of the pool for which to return a configuration.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

Response Syntax

```
{  
  "IdentityPoolId": "string",  
  "PushSync": {  
    "ApplicationArns": [  
      "string"  
    ],  
    "RoleArn": "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.

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

PushSync

Configuration options applied to the identity pool.

Type: [PushSync \(p. 47\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

Examples

GetIdentityPoolConfiguration

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: b1cfdd4b-f620-4fe4-be0f-02024a1d33da
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.GetIdentityPoolConfiguration
HOST: cognito-sync.us-east-1.amazonaws.com
X-AMZ-DATE: 20141004T195722Z
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;content-length;host;x-amz-date;x-amz-target, Signature=<signature>

{
  "Operation": "com.amazonaws.cognito.sync.model#GetIdentityPoolConfiguration",
  "Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
  "Input":
  {
```

```
    "IdentityPoolId": "ID_POOL_ID"  
  }  
}
```

Sample Response

```
1.1 200 OK  
x-amzn-requestid: b1cfdd4b-f620-4fe4-be0f-02024a1d33da  
date: Sat, 04 Oct 2014 19:57:22 GMT  
content-type: application/json  
content-length: 332  
  
{  
  "Output":  
  {  
    "__type": "com.amazonaws.cognito.sync.model#GetIdentityPoolConfigura  
tionResponse",  
    "IdentityPoolId": "ID_POOL_ID",  
    "PushSync":  
    {  
      "ApplicationArns": ["PLATFORMARN1", "PLATFORMARN2"],  
      "RoleArn": "ROLEARN"  
    }  
  },  
  "Version": "1.0"  
}
```

ListDatasets

Lists datasets for an identity. With Amazon Cognito Sync, each identity has access only to its own data. Thus, the credentials used to make this API call need to have access to the identity data.

ListDatasets can be called with temporary user credentials provided by Cognito Identity or with developer credentials. You should use the Cognito Identity credentials to make this API call.

Request Syntax

```
{
  "IdentityId": "string",
  "IdentityPoolId": "string",
  "MaxResults": "string",
  "NextToken": "string"
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

IdentityId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: No

MaxResults

The maximum number of results to be returned.

Type: String

Length constraints: Minimum length of 0. Maximum length of 19.

Pattern: \d+

Required: No

NextToken

A pagination token for obtaining the next page of results.

Type: String

Required: No

Response Syntax

```
{
  "Count": number,
  "Datasets": [
    {
      "CreationDate": number,
      "DataStorage": number,
      "DatasetName": "string",
      "IdentityId": "string",
      "LastModifiedBy": "string",
      "LastModifiedDate": number,
      "NumRecords": 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.

Count

Number of datasets returned.

Type: Number

Datasets

A set of datasets.

Type: array of [Dataset \(p. 44\)](#) objects

NextToken

A pagination token for obtaining the next page of results.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

Examples

ListDatasets

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: 15225768-209f-4078-aaed-7494ace9f2db
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.ListDatasets
HOST: cognito-sync.us-east-1.amazonaws.com:443
X-AMZ-DATE: 20141111T215640Z
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;host;x-amz-date;x-amz-target;x-amzn-requestid, Signature=<signature>

{
  "Operation": "com.amazonaws.cognito.sync.model#ListDatasets",
  "Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
  "Input":
  {
    "IdentityPoolId": "IDENTITY_POOL_ID",
    "IdentityId": "IDENTITY_ID",
    "MaxResults": "3"
  }
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: 15225768-209f-4078-aaed-7494ace9f2db, 15225768-209f-4078-aaed-7494ace9f2db
content-type: application/json
content-length: 355
date: Tue, 11 Nov 2014 21:56:40 GMT

{
  "Output":
  {
    "__type": "com.amazonaws.cognito.sync.model#ListDatasetsResponse",
    "Count": 1,
  }
}
```

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```
"Datasets": [  
  {  
    "CreationDate": 1.412974057151E9,  
    "DataStorage": 16,  
    "DatasetName": "my_list",  
    "IdentityId": "IDENTITY_ID",  
    "LastModifiedBy": "123456789012",  
    "LastModifiedDate": 1.412974057244E9,  
    "NumRecords": 1  
  }],  
  "NextToken": null  
},  
"Version": "1.0"  
}
```

ListIdentityPoolUsage

Gets a list of identity pools registered with Cognito.

ListIdentityPoolUsage can only be called with developer credentials. You cannot make this API call with the temporary user credentials provided by Cognito Identity.

Request Syntax

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

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

MaxResults

The maximum number of results to be returned.

Type: String

Length constraints: Minimum length of 0. Maximum length of 19.

Pattern: \d+

Required: No

NextToken

A pagination token for obtaining the next page of results.

Type: String

Required: No

Response Syntax

```
{  
  "Count": number,  
  "IdentityPoolUsages": [  
    {  
      "DataStorage": number,  
      "IdentityPoolId": "string",  
      "LastModifiedDate": number,  
      "SyncSessionsCount": number  
    }  
  ],  
  "MaxResults": 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.

Count

Total number of identities for the identity pool.

Type: Number

IdentityPoolUsages

Usage information for the identity pools.

Type: array of [IdentityPoolUsage \(p. 45\)](#) objects

MaxResults

The maximum number of results to be returned.

Type: Number

NextToken

A pagination token for obtaining the next page of results.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

Examples

ListIdentityPoolUsage

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: 9be7c425-ef05-48c0-aef3-9f0ff2fe17d3
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.ListIdentityPoolUsage
HOST: cognito-sync.us-east-1.amazonaws.com:443
X-AMZ-DATE: 20141111T211414Z
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;host;x-amz-date;x-amz-target;x-amzn-requestid, Signature=<signature>

{
  "Operation": "com.amazonaws.cognito.sync.model#ListIdentityPoolUsage",
  "Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
  "Input":
  {
    "MaxResults": "2"
  }
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: 9be7c425-ef05-48c0-aef3-9f0ff2fe17d3
content-type: application/json
content-length: 519
date: Tue, 11 Nov 2014 21:14:14 GMT

{
  "Output":
  {
    "__type": "com.amazonaws.cognito.sync.model#ListIdentityPoolUsageResponse",
    "Count": 2,
    "IdentityPoolUsages": [
      {
        "DataStorage": 0,
        "IdentityPoolId": "IDENTITY_POOL_ID",
        "LastModifiedDate": 1.413836234607E9,
        "SyncSessionsCount": null
      },
      {
        "DataStorage": 0,
        "IdentityPoolId": "IDENTITY_POOL_ID",
        "LastModifiedDate": 1.410892165601E9,
        "SyncSessionsCount": null
      }
    ],
    "MaxResults": 2,
    "NextToken": "dXMTzWFzdC0xOjBjMWJhMDUyLWUwOTgtNDFmYS1hNzZlLWVhYTJjMTI1Zjg2MQ=="
  },
  "Version": "1.0"
}
```

```
}
```

ListRecords

Gets paginated records, optionally changed after a particular sync count for a dataset and identity. With Amazon Cognito Sync, each identity has access only to its own data. Thus, the credentials used to make this API call need to have access to the identity data.

ListRecords can be called with temporary user credentials provided by Cognito Identity or with developer credentials. You should use Cognito Identity credentials to make this API call.

Request Syntax

```
{  
  "DatasetName": "string",  
  "IdentityId": "string",  
  "IdentityPoolId": "string",  
  "LastSyncCount": "string",  
  "MaxResults": "string",  
  "NextToken": "string",  
  "SyncSessionToken": "string"  
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

DatasetName

A string of up to 128 characters. Allowed characters are a-z, A-Z, 0-9, '_' (underscore), '-' (dash), and '.' (dot).

Type: String

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

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

Required: Yes

IdentityId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: Yes

LastSyncCount

The last server sync count for this record.

Type: String

Length constraints: Minimum length of 0. Maximum length of 19.

Pattern: `\d+`

Required: No

MaxResults

The maximum number of results to be returned.

Type: String

Length constraints: Minimum length of 0. Maximum length of 19.

Pattern: `\d+`

Required: No

NextToken

A pagination token for obtaining the next page of results.

Type: String

Required: No

SyncSessionToken

A token containing a session ID, identity ID, and expiration.

Type: String

Required: No

Response Syntax

```
{
  "Count": number,
  "DatasetDeletedAfterRequestedSyncCount": boolean,
  "DatasetExists": boolean,
  "DatasetSyncCount": number,
  "LastModifiedBy": "string",
  "MergedDatasetNames": [
    "string"
  ],
  "NextToken": "string",
  "Records": [
    {
      "DeviceLastModifiedDate": number,
      "Key": "string",
      "LastModifiedBy": "string",
      "LastModifiedDate": number,

```

```
        "SyncCount": number,  
        "Value": "string"  
    },  
    ],  
    "SyncSessionToken": "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.

Count

Total number of records.

Type: Number

DatasetDeletedAfterRequestedSyncCount

A boolean value specifying whether to delete the dataset locally.

Type: Boolean

DatasetExists

Indicates whether the dataset exists.

Type: Boolean

DatasetSyncCount

Server sync count for this dataset.

Type: Long

LastModifiedBy

The user/device that made the last change to this record.

Type: String

MergedDatasetNames

Names of merged datasets.

Type: array of Strings

NextToken

A pagination token for obtaining the next page of results.

Type: String

Records

A list of all records.

Type: array of [Record](#) (p. 47) objects

SyncSessionToken

A token containing a session ID, identity ID, and expiration.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 52).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

TooManyRequestsException

Thrown if the request is throttled.

HTTP Status Code: 429

Examples

ListRecords

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: b3d2e31e-d6b7-4612-8e84-c9ba288dab5d
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.ListRecords
HOST: cognito-sync.us-east-1.amazonaws.com:443
X-AMZ-DATE: 20141111T183230Z
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;host;x-amz-date;x-amz-target;x-amzn-requestid, Signature=<signature>

{
  "Operation": "com.amazonaws.cognito.sync.model#ListRecords",
  "Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
  "Input":
  {
    "IdentityPoolId": "IDENTITY_POOL_ID",
    "IdentityId": "IDENTITY_ID",
    "DatasetName": "newDataSet"
  }
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: b3d2e31e-d6b7-4612-8e84-c9ba288dab5d
content-type: application/json
content-length: 623
```

```
date: Tue, 11 Nov 2014 18:32:30 GMT

{
  "Output":
  {
    "__type": "com.amazonaws.cognito.sync.model#ListRecordsResponse",
    "Count": 0,
    "DatasetDeletedAfterRequestedSyncCount": false,
    "DatasetExists": false,
    "DatasetSyncCount": 0,
    "LastModifiedBy": null,
    "MergedDatasetNames": null,
    "NextToken": null,
    "Records": [],
    "SyncSessionToken": "SYNC_SESSION_TOKEN"
  },
  "Version": "1.0"
}
```


RegisterDevice

Registers a device to receive push sync notifications.

Request Syntax

```
{  
  "IdentityId": "string",  
  "IdentityPoolId": "string",  
  "Platform": "string",  
  "Token": "string"  
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

IdentityId

The unique ID for this identity.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. Here, the ID of the pool that the identity belongs to.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: Yes

Platform

The SNS platform type (e.g. GCM, SDM, APNS, APNS_SANDBOX).

Type: String

Valid Values: `APNS | APNS_SANDBOX | GCM | ADM`

Required: Yes

Token

The push token.

Type: String

Required: Yes

Response Syntax

```
{  
  "DeviceId": "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.

DeviceId

The unique ID generated for this device by Cognito.

Type: String

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

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidConfigurationException

HTTP Status Code: 400

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

Examples

RegisterDevice

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: 368f9200-3eca-449e-93b3-7b9c08d8e185
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.Register
Device
HOST: cognito-sync.us-east-1.amazonaws.com
X-AMZ-DATE: 20141004T194643Z
X-AMZ-SECURITY-TOKEN: <securitytoken>
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-
type;content-length;host;x-amz-date;x-amz-target, Signature=<signature>

{
  "Operation": "com.amazonaws.cognito.sync.model#RegisterDevice",
  "Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
  "Input":
  {
    "IdentityPoolId": "ID_POOL_ID",
    "IdentityId": "IDENTITY_ID",
    "Platform": "GCM",
    "Token": "PUSH_TOKEN"
  }
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: 368f9200-3eca-449e-93b3-7b9c08d8e185
date: Sat, 04 Oct 2014 19:46:44 GMT
content-type: application/json
content-length: 145

{
  "Output":
  {
    "__type": "com.amazonaws.cognito.sync.model#RegisterDeviceResponse",
    "DeviceId": "5cd28fbe-dd83-47ab-9f83-19093a5fb014"
  },
  "Version": "1.0"
}
```

SetIdentityPoolConfiguration

Sets the necessary configuration for push sync.

Request Syntax

```
{
  "IdentityPoolId": "string",
  "PushSync": {
    "ApplicationArns": [
      "string"
    ],
    "RoleArn": "string"
  }
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. This is the ID of the pool to modify.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

PushSync

Configuration options to be applied to the identity pool.

Type: [PushSync \(p. 47\)](#) object

Required: No

Response Syntax

```
{
  "IdentityPoolId": "string",
  "PushSync": {
    "ApplicationArns": [
      "string"
    ],
    "RoleArn": "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.

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

PushSync

Configuration options applied to the identity pool.

Type: [PushSync](#) (p. 47) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 52).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

Examples

SetIdentityPoolConfiguration

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: a46db021-f5dd-45d6-af5b-7069fa4a211b
```

```
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.SetIdentityPoolConfiguration
HOST: cognito-sync.us-east-1.amazonaws.com
X-AMZ-DATE: 20141004T200006Z
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;content-length;host;x-amz-date;x-amz-target, Signature=<signature>

{
  "Operation": "com.amazonaws.cognito.sync.model#SetIdentityPoolConfiguration",
  "Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
  "Input":
  {
    "IdentityPoolId": "ID_POOL_ID",
    "PushSync":
    {
      "ApplicationArns": ["PLATFORMARN1", "PLATFORMARN2"],
      "RoleArn": "ROLEARN"
    }
  }
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: a46db021-f5dd-45d6-af5b-7069fa4a211b
date: Sat, 04 Oct 2014 20:00:06 GMT
content-type: application/json
content-length: 332

{
  "Output":
  {
    "__type": "com.amazonaws.cognito.sync.model#SetIdentityPoolConfigurationResponse",
    "IdentityPoolId": "ID_POOL_ID",
    "PushSync":
    {
      "ApplicationArns": ["PLATFORMARN1", "PLATFORMARN2"],
      "RoleArn": "ROLEARN"
    }
  },
  "Version": "1.0"
}
```

SubscribeToDataset

Subscribes to receive notifications when a dataset is modified by another device.

Request Syntax

```
{  
  "DatasetName": "string",  
  "DeviceId": "string",  
  "IdentityId": "string",  
  "IdentityPoolId": "string"  
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

DatasetName

The name of the dataset to subscribe to.

Type: String

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

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

Required: Yes

DeviceId

The unique ID generated for this device by Cognito.

Type: String

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

Required: Yes

IdentityId

Unique ID for this identity.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+ : [0-9a-f-]+

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. The ID of the pool to which the identity belongs.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

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 Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidConfigurationException

HTTP Status Code: 400

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

Examples

SubscribeToDataset

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZN-REQUESTID: 8b9932b7-201d-4418-a960-0a470e11de9f
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.SubscribeToDataset
HOST: cognito-sync.us-east-1.amazonaws.com
X-AMZ-DATE: 20141004T195350Z
X-AMZ-SECURITY-TOKEN: <securitytoken>
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;content-length;host;x-amz-date;x-amz-target, Signature=<signature>

{
  "Operation": "com.amazonaws.cognito.sync.model#SubscribeToDataset",
```



```
"Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
"Input":
{
  "IdentityPoolId": "ID_POOL_ID",
  "IdentityId": "IDENTITY_ID",
  "DatasetName": "Rufus",
  "DeviceId": "5cd28fbe-dd83-47ab-9f83-19093a5fb014"
}
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: 8b9932b7-201d-4418-a960-0a470e11de9f
date: Sat, 04 Oct 2014 19:53:50 GMT
content-type: application/json
content-length: 99

{
  "Output":
  {
    "__type": "com.amazonaws.cognito.sync.model#SubscribeToDatasetResponse"
  },
  "Version": "1.0"
}
```

UnsubscribeFromDataset

Unsubscribes from receiving notifications when a dataset is modified by another device.

Request Syntax

```
{  
  "DatasetName": "string",  
  "DeviceId": "string",  
  "IdentityId": "string",  
  "IdentityPoolId": "string"  
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

DatasetName

The name of the dataset from which to unsubscribe.

Type: String

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

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

Required: Yes

DeviceId

The unique ID generated for this device by Cognito.

Type: String

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

Required: Yes

IdentityId

Unique ID for this identity.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. The ID of the pool to which this identity belongs.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

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 Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidConfigurationException

HTTP Status Code: 400

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

Examples

UnsubscribeFromDataset

The following examples have been edited for readability.

Sample Request

```
POST / HTTP/1.1
CONTENT-TYPE: application/json
X-AMZ-REQUESTSUPERTTRACE: true
X-AMZN-REQUESTID: 676896d6-14ca-45b1-8029-6d36b10a077e
X-AMZ-TARGET: com.amazonaws.cognito.sync.model.AWSCognitoSyncService.UnsubscribeFromDataset
HOST: cognito-sync.us-east-1.amazonaws.com
X-AMZ-DATE: 20141004T195446Z
X-AMZ-SECURITY-TOKEN: <securitytoken>
AUTHORIZATION: AWS4-HMAC-SHA256 Credential=<credential>, SignedHeaders=content-type;content-length;host;x-amz-date;x-amz-target, Signature=<signature>

{
```

```
"Operation": "com.amazonaws.cognito.sync.model#UnsubscribeFromDataset",
"Service": "com.amazonaws.cognito.sync.model#AWSCognitoSyncService",
"Input":
{
  "IdentityPoolId": "ID_POOL_ID",
  "IdentityId": "IDENTITY_ID",
  "DatasetName": "Rufus",
  "DeviceId": "5cd28fbe-dd83-47ab-9f83-19093a5fb014"
}
}
```

Sample Response

```
1.1 200 OK
x-amzn-requestid: 676896d6-14ca-45b1-8029-6d36b10a077e
date: Sat, 04 Oct 2014 19:54:46 GMT
content-type: application/json
content-length: 103

{
  "Output":
  {
    "__type": "com.amazonaws.cognito.sync.model#UnsubscribeFromDatasetRe
sponse"
  },
  "Version": "1.0"
}
```

UpdateRecords

Posts updates to records and adds and deletes records for a dataset and user.

UpdateRecords can only be called with temporary user credentials provided by Cognito Identity. You cannot make this API call with developer credentials.

Request Syntax

```
{
  "ClientContext": "string",
  "DatasetName": "string",
  "DeviceId": "string",
  "IdentityId": "string",
  "IdentityPoolId": "string",
  "RecordPatches": [
    {
      "DeviceLastModifiedDate": number,
      "Key": "string",
      "Op": "string",
      "SyncCount": number,
      "Value": "string"
    }
  ],
  "SyncSessionToken": "string"
}
```

Request Parameters

For information about the common parameters that all actions use, see [Common Parameters \(p. 50\)](#).

The request requires the following data in JSON format.

ClientContext

Intended to supply a device ID that will populate the lastModifiedBy

field referenced in other methods. The ClientContext

field is not yet implemented.

Type: String

Required: No

DatasetName

A string of up to 128 characters. Allowed characters are a-z, A-Z, 0-9, '_' (underscore), '-' (dash), and '.' (dot).

Type: String

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

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

Required: Yes

DeviceId

The unique ID generated for this device by Cognito.

Type: String

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

Required: No

IdentityId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: Yes

RecordPatches

A list of patch operations.

Type: array of [RecordPatch](#) (p. 48) objects

Required: No

SyncSessionToken

The SyncSessionToken returned by a previous call to ListRecords for this dataset and identity.

Type: String

Required: Yes

Response Syntax

```
{
  "Records": [
    {
      "DeviceLastModifiedDate": number,
      "Key": "string",
      "LastModifiedBy": "string",
      "LastModifiedDate": number,
      "SyncCount": number,
      "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.

Records

A list of records that have been updated.

Type: array of [Record \(p. 47\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

InternalErrorException

Indicates an internal service error.

HTTP Status Code: 500

InvalidParameterException

Thrown when a request parameter does not comply with the associated constraints.

HTTP Status Code: 400

LimitExceededException

Thrown when the limit on the number of objects or operations has been exceeded.

HTTP Status Code: 400

NotAuthorizedException

Thrown when a user is not authorized to access the requested resource.

HTTP Status Code: 403

ResourceConflictException

Thrown if an update can't be applied because the resource was changed by another call and this would result in a conflict.

HTTP Status Code: 409

ResourceNotFoundException

Thrown if the resource doesn't exist.

HTTP Status Code: 404

TooManyRequestsException

Thrown if the request is throttled.

HTTP Status Code: 429

Data Types

The Amazon Cognito Sync API contains several data types that various actions use. This section describes each data type in detail.

Note

The order of each element in the response is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [Dataset](#) (p. 44)
- [IdentityPoolUsage](#) (p. 45)
- [IdentityUsage](#) (p. 46)
- [PushSync](#) (p. 47)
- [Record](#) (p. 47)
- [RecordPatch](#) (p. 48)

Dataset

Description

A collection of data for an identity pool. An identity pool can have multiple datasets. A dataset is per identity and can be general or associated with a particular entity in an application (like a saved game). Datasets are automatically created if they don't exist. Data is synced by dataset, and a dataset can hold up to 1MB of key-value pairs.

Contents

CreationDate

Date on which the dataset was created.

Type: DateTime

Required: No

DataStorage

Total size in bytes of the records in this dataset.

Type: Long

Required: No

DatasetName

A string of up to 128 characters. Allowed characters are a-z, A-Z, 0-9, '_' (underscore), '-' (dash), and '.' (dot).

Type: String

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

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

Required: No

IdentityId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: No

LastModifiedBy

The device that made the last change to this dataset.

Type: String

Required: No

LastModifiedDate

Date when the dataset was last modified.

Type: DateTime

Required: No

NumRecords

Number of records in this dataset.

Type: Long

Required: No

IdentityPoolUsage

Description

Usage information for the identity pool.

Contents

DataStorage

Data storage information for the identity pool.

Type: Long

Required: No

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+ : [0-9a-f-]+

Required: No

LastModifiedDate

Date on which the identity pool was last modified.

Type: DateTime

Required: No

SyncSessionsCount

Number of sync sessions for the identity pool.

Type: Long

Required: No

IdentityUsage

Description

Usage information for the identity.

Contents

DataStorage

Total data storage for this identity.

Type: Long

Required: No

DatasetCount

Number of datasets for the identity.

Type: Number

Required: No

IdentityId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+ : [0-9a-f-]+

Required: No

IdentityPoolId

A name-spaced GUID (for example, us-east-1:23EC4050-6AEA-7089-A2DD-08002EXAMPLE) created by Amazon Cognito. GUID generation is unique within a region.

Type: String

Length constraints: Minimum length of 1. Maximum length of 50.

Pattern: [\w-]+:[0-9a-f-]+

Required: No

LastModifiedDate

Date on which the identity was last modified.

Type: DateTime

Required: No

PushSync

Description

Configuration options to be applied to the identity pool.

Contents

ApplicationArns

List of SNS platform application ARNs that could be used by clients.

Type: array of Strings

Required: No

RoleArn

A role configured to allow Cognito to call SNS on behalf of the developer.

Type: String

Length constraints: Minimum length of 20. Maximum length of 2048.

Pattern: arn:aws:iam::\d+:role/.*

Required: No

Record

Description

The basic data structure of a dataset.

Contents

DeviceLastModifiedDate

The last modified date of the client device.

Type: DateTime

Required: No

Key

The key for the record.

Type: String

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

Required: No

LastModifiedBy

The user/device that made the last change to this record.

Type: String

Required: No

LastModifiedDate

The date on which the record was last modified.

Type: DateTime

Required: No

SyncCount

The server sync count for this record.

Type: Long

Required: No

Value

The value for the record.

Type: String

Length constraints: Minimum length of 0. Maximum length of 1048575.

Required: No

RecordPatch

Description

An update operation for a record.

Contents

DeviceLastModifiedDate

The last modified date of the client device.

Type: DateTime

Required: No

Key

The key associated with the record patch.

Type: String

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

Required: Yes

Op

An operation, either replace or remove.

Type: String

Valid Values: `replace` | `remove`

Required: Yes

SyncCount

Last known server sync count for this record. Set to 0 if unknown.

Type: Long

Required: Yes

Value

The value associated with the record patch.

Type: String

Length constraints: Minimum length of 0. Maximum length of 1048575.

Required: No

Common Parameters

The following table lists the parameters that all actions use for signing Signature Version 4 requests. Any action-specific parameters are listed in the topic for that action. To view sample requests, see [Examples of Signed Signature Version 4 Requests](#) or [Signature Version 4 Test Suite](#) 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 (YYYYMM-DD'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 [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. For a list of services that support AWS Security Token Service, go to [Using Temporary Security Credentials to Access AWS](#) in *Using Temporary Security Credentials*.

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 common errors that all actions return. Any action-specific errors are listed in the topic for the action.

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

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

Throttling

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