



API Reference

# AWS Directory Service Data



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# AWS Directory Service Data: API Reference

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# Welcome

AWS Directory Service Data is an extension of AWS Directory Service. This API reference provides detailed information about Directory Service Data operations and object types.

With Directory Service Data, you can create, read, update, and delete users, groups, and memberships from your AWS Managed Microsoft AD without additional costs and without deploying dedicated management instances. You can also perform built-in object management tasks across directories without direct network connectivity, which simplifies provisioning and access management to achieve fully automated deployments. Directory Service Data supports user and group write operations, such as `CreateUser` and `CreateGroup`, within the organizational unit (OU) of your AWS Managed Microsoft AD. Directory Service Data supports read operations, such as `ListUsers` and `ListGroups`, on all users, groups, and group memberships within your AWS Managed Microsoft AD and across trusted realms. Directory Service Data supports adding and removing group members in your OU and the AWS Delegated Groups OU, so you can grant and deny access to specific roles and permissions. For more information, see [Manage users and groups](#) in the *AWS Directory Service Administration Guide*.

## Note

Directory management operations and configuration changes made against the AWS Directory Service API will also reflect in Directory Service Data API with eventual consistency. You can expect a short delay between management changes, such as adding a new directory trust and calling the Directory Service Data API for the newly created trusted realm.

Directory Service Data connects to your AWS Managed Microsoft AD domain controllers and performs operations on underlying directory objects. When you create your AWS Managed Microsoft AD, you choose subnets for domain controllers that Directory Service creates on your behalf. If a domain controller is unavailable, Directory Service Data uses an available domain controller. As a result, you might notice eventual consistency while objects replicate from one domain controller to another domain controller. For more information, see [What gets created](#) in the *AWS Directory Service Administration Guide*. Directory limits vary by AWS Managed Microsoft AD edition:

- **Standard edition** – Supports 8 transactions per second (TPS) for read operations and 4 TPS for write operations per directory. There's a concurrency limit of 10 concurrent requests.
- **Enterprise edition** – Supports 16 transactions per second (TPS) for read operations and 8 TPS for write operations per directory. There's a concurrency limit of 10 concurrent requests.
- **AWS Account** - Supports a total of 100 TPS for Directory Service Data operations across all directories.

Directory Service Data only supports the AWS Managed Microsoft AD directory type and is only available in the primary AWS Region. For more information, see [AWS Managed Microsoft AD](#) and [Primary vs additional Regions](#) in the *AWS Directory Service Administration Guide*.

This document was last published on April 18, 2026.

# Actions

The following actions are supported:

- [AddGroupMember](#)
- [CreateGroup](#)
- [CreateUser](#)
- [DeleteGroup](#)
- [DeleteUser](#)
- [DescribeGroup](#)
- [DescribeUser](#)
- [DisableUser](#)
- [ListGroupMembers](#)
- [ListGroups](#)
- [ListGroupsForMember](#)
- [ListUsers](#)
- [RemoveGroupMember](#)
- [SearchGroups](#)
- [SearchUsers](#)
- [UpdateGroup](#)
- [UpdateUser](#)

# AddGroupMember

Adds an existing user, group, or computer as a group member.

## Request Syntax

```
POST /GroupMemberships/AddGroupMember?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

```
{
  "ClientToken": "string",
  "GroupName": "string",
  "MemberName": "string",
  "MemberRealm": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ClientToken

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

**Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

**GroupName**

The name of the group.

Type: String

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

Pattern: `[\^:;|=+\"*?<>/\ \, \[ \] @]+`

Required: Yes

**MemberName**

The SAMAccountName of the user, group, or computer to add as a group member.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[\^:;|=+\"*?<>/\ \, \[ \] @]+`

Required: Yes

**MemberRealm**

The domain name that's associated with the group member. This parameter is required only when adding a member outside of your AWS Managed Microsoft AD domain to a group inside

of your AWS Managed Microsoft AD domain. This parameter defaults to the AWS Managed Microsoft AD domain.

**Note**

This parameter is case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

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

## Errors

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

### AccessDeniedException

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### Reason

Reason the request was unauthorized.

HTTP Status Code: 403

### **ConflictException**

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

### **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

#### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

### **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource couldn't be found.

HTTP Status Code: 404

### **ThrottlingException**

The limit on the number of requests per second has been exceeded.

#### **RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of AddGroupMember.

### Sample Request

```
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "GroupName": "GRP_MKTG",
  "MemberName": "Pat Candella",
  "MemberRealm": "europe.example.com"
}
```

### Sample Response

```
HTTP/1.1 200
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

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

# CreateGroup

Creates a new group.

## Request Syntax

```
POST /Groups/CreateGroup?DirectoryId=DirectoryId HTTP/1.1
```

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

```
{
  "ClientToken": "string",
  "GroupScope": "string",
  "GroupType": "string",
  "OtherAttributes": {
    "string" : { ... }
  },
  "SAMAccountName": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body


The request accepts the following data in JSON format.

### ClientToken

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

 **Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

### GroupScope

The scope of the AD group. For details, see [Active Directory security group scope](#).

Type: String

Valid Values: `DomainLocal` | `Global` | `Universal` | `BuiltinLocal`

Required: No

### GroupType

The AD group type. For details, see [Active Directory security group type](#).

Type: String

Valid Values: `Distribution` | `Security`

Required: No

### OtherAttributes

An expression that defines one or more attributes with the data type and value of each attribute.

Type: String to [AttributeValue](#) object map

Map Entries: Maximum number of 25 items.

Key Length Constraints: Minimum length of 1. Maximum length of 63.

Key Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: No

### [SAMAccountName](#)

The name of the group.

Type: String

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

Pattern: `[^:;|=+\"*?<>/\\, \\[\\]@]+`

Required: Yes

## Response Syntax

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

{
  "DirectoryId": "string",
  "SAMAccountName": "string",
  "SID": "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.

### [DirectoryId](#)

The identifier (ID) of the directory that's associated with the group.

Type: String

Pattern: d-[0-9a-f]{10}

### SAMAccountName

The name of the group.

Type: String

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

Pattern: [^:;|=+\"?\*?<>/\\, \\[\\]@]+

### SID

The unique security identifier (SID) of the group.

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 Error Types](#).

### **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### **Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

### **ConflictException**

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across

different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

### **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

#### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

### **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

### **ThrottlingException**

The limit on the number of requests per second has been exceeded.

#### **RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

### **ValidationException**

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

#### **Reason**

Reason the request failed validation.

HTTP Status Code: 400

## **Examples**

### **Example**

This example illustrates one usage of `CreateGroup`.

## Sample Request

```
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "GroupScope": "DomainLocal",
  "GroupType": "Distribution",
  "OtherAttributes": {
    "displayName": {"S": "Acctng-mailing-list"},
    "description": {"S": "Accounting dept mailing list"}
  },
  "SAMAccountName": "AcctngMail"
}
```

## Sample Response

```
{
  "DirectoryId": "d-926example",
  "SAMAccountName": "AcctMail",
  "SID": "S-1-5-33-123"
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# CreateUser

Creates a new user.

## Request Syntax

```
POST /Users/CreateUser?DirectoryId=DirectoryId HTTP/1.1  
Content-type: application/json
```

```
{  
  "ClientToken": "string",  
  "EmailAddress": "string",  
  "GivenName": "string",  
  "OtherAttributes": {  
    "string" : { ... }  
  },  
  "SAMAccountName": "string",  
  "Surname": "string"  
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the user.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ClientToken

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

 **Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

### EmailAddress

The email address of the user.

Type: String

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

Required: No

### GivenName

The first name of the user.

Type: String

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

Required: No

### OtherAttributes

An expression that defines one or more attribute names with the data type and value of each attribute. A key is an attribute name, and the value is a list of maps. For a list of supported attributes, see [Directory Service Data Attributes](#).

**Note**

Attribute names are case insensitive.

Type: String to [AttributeValue](#) object map

Map Entries: Maximum number of 25 items.

Key Length Constraints: Minimum length of 1. Maximum length of 63.

Key Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: No

**SAMAccountName**

The name of the user.

Type: String

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

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

Required: Yes

**Surname**

The last name of the user.

Type: String

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

Required: No

**Response Syntax**

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

```
{
  "DirectoryId": "string",
  "SAMAccountName": "string",
  "SID": "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.

### DirectoryId

The identifier (ID) of the directory where the address block is added.

Type: String

Pattern: d-[0-9a-f]{10}

### SAMAccountName

The name of the user.

Type: String

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

Pattern: [\w\-. ]+

### SID

The unique security identifier (SID) of the user.

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 Error Types](#).

## AccessDeniedException

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

### Reason

Reason the request was unauthorized.

HTTP Status Code: 403

## ConflictException

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

## DirectoryUnavailableException

The request could not be completed due to a problem in the configuration or current state of the specified directory.

### Reason

Reason the request failed for the specified directory.

HTTP Status Code: 400

## InternalServerError

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

## ThrottlingException

The limit on the number of requests per second has been exceeded.

## RetryAfterSeconds

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of CreateUser.

### Sample Request

```
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "DirectoryId": "d-926example",
  "EmailAddress": "pcandella@example.com",
  "GivenName": "Pat Candella",
  "OtherAttributes": {
    "department": {"S": "HR"},
    "homePhone": {"S": "212-555-0100"}
  },
  "SAMAccountName": "pcandella",
  "Surname": "Candella"
}
```

### Sample Response

```
{
  "DirectoryId": "d-926example",
  "SAMAccountName": "pcandella",
}
```

```
"SID": "S-1-5-99-789"  
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DeleteGroup

Deletes a group.

## Request Syntax

```
POST /Groups/DeleteGroup?DirectoryId=DirectoryId HTTP/1.1  
Content-type: application/json
```

```
{  
  "ClientToken": "string",  
  "SAMAccountName": "string"  
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ClientToken

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

**Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

**SAMAccountName**

The name of the group.

Type: String

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

Pattern: `[\^:;|=+\"*?<>/\\,\\[\]@]+`

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 Error Types](#).

## AccessDeniedException

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

### Reason

Reason the request was unauthorized.

HTTP Status Code: 403

## ConflictException

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

## DirectoryUnavailableException

The request could not be completed due to a problem in the configuration or current state of the specified directory.

### Reason

Reason the request failed for the specified directory.

HTTP Status Code: 400

## InternalServerError

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

## ResourceNotFoundException

The resource couldn't be found.

HTTP Status Code: 404

### ThrottlingException

The limit on the number of requests per second has been exceeded.

#### RetryAfterSeconds

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

### ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

#### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of DeleteGroup.

#### Sample Request

```
POST /Groups/DeleteGroup?DirectoryId=112233abcd HTTP/1.1
Content-type: application/json
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "SAMAccountName": "marketing"
}
```

#### Sample Response

```
HTTP/1.1 200
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DeleteUser

Deletes a user.

## Request Syntax

```
POST /Users/DeleteUser?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json

{
  "ClientToken": "string",
  "SAMAccountName": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the user.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ClientToken

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

**Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

**SAMAccountName**

The name of the user.

Type: String

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

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

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 Error Types](#).

## AccessDeniedException

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

### Reason

Reason the request was unauthorized.

HTTP Status Code: 403

## ConflictException

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

## DirectoryUnavailableException

The request could not be completed due to a problem in the configuration or current state of the specified directory.

### Reason

Reason the request failed for the specified directory.

HTTP Status Code: 400

## InternalServerError

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

## ResourceNotFoundException

The resource couldn't be found.

HTTP Status Code: 404

## ThrottlingException

The limit on the number of requests per second has been exceeded.

### RetryAfterSeconds

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of DeleteUser.

### Sample Request

```
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "DirectoryId": "d-926example",
  "SAMAccountName": "pcandella"
}
```

### Sample Response

```
HTTP/1.1 200
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DescribeGroup

Returns information about a specific group.

## Request Syntax

```
POST /Groups/DescribeGroup?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

```
{
  "OtherAttributes": [ "string" ],
  "Realm": "string",
  "SAMAccountName": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The Identifier (ID) of the directory associated with the group.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### OtherAttributes

One or more attributes to be returned for the group. For a list of supported attributes, see [Directory Service Data Attributes](#).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: No

## Realm

The domain name that's associated with the group.

### Note

This parameter is optional, so you can return groups outside of your AWS Managed Microsoft AD domain. When no value is defined, only your AWS Managed Microsoft AD groups are returned.

This value is case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## SAMAccountName

The name of the group.

Type: String

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

Pattern: `^[^:;|=+\"*?<>/\\,\\[\\]@]+`

Required: Yes

## Response Syntax

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

{
  "DirectoryId": "string",
```

```
"DistinguishedName": "string",
"GroupScope": "string",
"GroupType": "string",
"OtherAttributes": {
  "string" : { ... }
},
"Realm": "string",
"SAMAccountName": "string",
"SID": "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.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Type: String

Pattern: d-[0-9a-f]{10}

### DistinguishedName

The [distinguished name](#) of the object.

Type: String

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

### GroupScope

The scope of the AD group. For details, see [Active Directory security groups](#).

Type: String

Valid Values: DomainLocal | Global | Universal | BuiltinLocal

### GroupType

The AD group type. For details, see [Active Directory security group type](#).

Type: String

Valid Values: Distribution | Security

### OtherAttributes

The attribute values that are returned for the attribute names that are included in the request.

Type: String to [AttributeValue](#) object map

Map Entries: Maximum number of 25 items.

Key Length Constraints: Minimum length of 1. Maximum length of 63.

Key Pattern: `[A-Za-z*][A-Za-z-*]*`

### Realm

The domain name that's associated with the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

### SAMAccountName

The name of the group.

Type: String

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

Pattern: `[\^ : ; | = + " * ? < > / \ \ , \ [ \ ] @ ] +`

### SID

The unique security identifier (SID) of the group.

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 Error Types](#).

## **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

### **Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

## **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

## **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

## **ResourceNotFoundException**

The resource couldn't be found.

HTTP Status Code: 404

## **ThrottlingException**

The limit on the number of requests per second has been exceeded.

### **RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of DescribeGroup.

### Sample Request

```
{
  "OtherAttributes": [
    "displayName",
    "description",
    "objectGUID"
  ],
  "Realm": "example.domain.com",
  "SAMAccountName": "DevOpsMail"
}
```

### Sample Response

```
{
  "DirectoryId": "d-926example",
  "DistinguishedName": "DevOpsmail",
  "GroupScope": "Global",
  "GroupType": "Distribution",
  "OtherAttributes": {
    "displayName": {"S": "DevOps mailing list"},
    "description": {"S": "A group for DevOps email."},
    "objectGUID": {"S": "123456789"}
  },
  "SAMAccountName": "DevOpsMail",
}
```

```
"SID": "S-1-5-55-678"  
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DescribeUser

Returns information about a specific user.

## Request Syntax

```
POST /Users/DescribeUser?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

```
{
  "OtherAttributes": [ "string" ],
  "Realm": "string",
  "SAMAccountName": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the user.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### OtherAttributes

One or more attribute names to be returned for the user. A key is an attribute name, and the value is a list of maps. For a list of supported attributes, see [Directory Service Data Attributes](#).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: No

## Realm

The domain name that's associated with the user.

### Note

This parameter is optional, so you can return users outside your AWS Managed Microsoft AD domain. When no value is defined, only your AWS Managed Microsoft AD users are returned.

This value is case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## SAMAccountName

The name of the user.

Type: String

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

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

Required: Yes

## Response Syntax

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

{
```

```
"DirectoryId": "string",
"DistinguishedName": "string",
"EmailAddress": "string",
"Enabled": boolean,
"GivenName": "string",
"OtherAttributes": {
  "string" : { ... }
},
"Realm": "string",
"SAMAccountName": "string",
"SID": "string",
"Surname": "string",
"UserPrincipalName": "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.

### DirectoryId

The identifier (ID) of the directory that's associated with the user.

Type: String

Pattern: d-[0-9a-f]{10}

### DistinguishedName

The [distinguished name](#) of the object.

Type: String

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

### EmailAddress

The email address of the user.

Type: String

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

## Enabled

Indicates whether the user account is active.

Type: Boolean

## GivenName

The first name of the user.

Type: String

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

## OtherAttributes

The attribute values that are returned for the attribute names that are included in the request.

### Note

Attribute names are case insensitive.

Type: String to [AttributeValue](#) object map

Map Entries: Maximum number of 25 items.

Key Length Constraints: Minimum length of 1. Maximum length of 63.

Key Pattern: `[A-Za-z*][A-Za-z-*]*`

## Realm

The domain name that's associated with the user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

## SAMAccountName

The name of the user.

Type: String

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

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

## SID

The unique security identifier (SID) of the user.

Type: String

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

## Surname

The last name of the user.

Type: String

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

## UserPrincipalName

The UPN that is an Internet-style login name for a user and is based on the Internet standard [RFC 822](#). The UPN is shorter than the distinguished name and easier to remember.

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 Error Types](#).

### **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

**Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

**DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

**Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

**InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

**ResourceNotFoundException**

The resource couldn't be found.

HTTP Status Code: 404

**ThrottlingException**

The limit on the number of requests per second has been exceeded.

**RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

**ValidationException**

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

**Reason**

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of DescribeUser.

### Sample Request

```
{
  "OtherAttributes": [
    "department",
    "manager",
    "ipPhone"
  ],
  "Realm": "examplecorp.com",
  "SAMAccountName": "twhitlock"
}
```

### Sample Response

```
{
  "DirectoryId": "d-926example",
  "DistinguishedName": "Terry Whitlock",
  "EmailAddress": "terry.whitlock@examplecorp.com",
  "Enabled": true,
  "GivenName": "Terry Whitlock",
  "OtherAttributes": {
    "Department": {"S": "communications"},
    "Manager": {"S": "OU=Users,DC=mmajors"},
    "IpPhone": {"S": "111.111.111.111"}
  },
  "SAMAccountName": "twhitlock",
  "SID": "S-1-5-11-112",
  "Surname": "Whitlock",
  "UserPrincipalName": "terry.whitlock"
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DisableUser

Deactivates an active user account. For information about how to enable an inactive user account, see [ResetUserPassword](#) in the *AWS Directory Service API Reference*.

## Request Syntax

```
POST /Users/DisableUser?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

```
{
  "ClientToken": "string",
  "SAMAccountName": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### [DirectoryId](#)

The identifier (ID) of the directory that's associated with the user.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### [ClientToken](#)

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

**Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

**SAMAccountName**

The name of the user.

Type: String

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

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

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 Error Types](#).

## AccessDeniedException

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

### Reason

Reason the request was unauthorized.

HTTP Status Code: 403

## ConflictException

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

## DirectoryUnavailableException

The request could not be completed due to a problem in the configuration or current state of the specified directory.

### Reason

Reason the request failed for the specified directory.

HTTP Status Code: 400

## InternalServerError

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

## ResourceNotFoundException

The resource couldn't be found.

HTTP Status Code: 404

## ThrottlingException

The limit on the number of requests per second has been exceeded.

### RetryAfterSeconds

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of DisableUser.

### Sample Request

```
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "DirectoryId": "d-926example",
  "SAMAccountName": "twhitlock"
}
```

### Sample Response

```
HTTP/1.1 200
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListGroupMembers

Returns member information for the specified group.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `ListGroupMembers.NextToken` member contains a token that you pass in the next call to `ListGroupMembers`. This retrieves the next set of items.

You can also specify a maximum number of return results with the `MaxResults` parameter.

## Request Syntax

```
POST /GroupMemberships/ListGroupMembers?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

```
{
  "MaxResults": number,
  "MemberRealm": "string",
  "NextToken": "string",
  "Realm": "string",
  "SAMAccountName": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Pattern: `d-[0-9a-f]{10}`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### MaxResults

The maximum number of results to be returned per request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

### MemberRealm

The domain name that's associated with the group member. This parameter defaults to the AWS Managed Microsoft AD domain.

#### Note

This parameter is optional and case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

Required: No

### Realm

The domain name that's associated with the group.

#### Note

This parameter is optional, so you can return members from a group outside of your AWS Managed Microsoft AD domain. When no value is defined, only members of your AWS Managed Microsoft AD groups are returned.

This value is case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

### SAMAccountName

The name of the group.

Type: String

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

Pattern: [^:;|=+\"\*?<>/\\, \[\\]@]+

Required: Yes

## Response Syntax

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

{
  "DirectoryId": "string",
  "MemberRealm": "string",
  "Members": [
    {
      "MemberType": "string",
      "SAMAccountName": "string",
      "SID": "string"
    }
  ],
  "NextToken": "string",
  "Realm": "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.

### DirectoryId

Identifier (ID) of the directory associated with the group.

Type: String

Pattern: d-[0-9a-f]{10}

### MemberRealm

The domain name that's associated with the member.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

### Members

The member information that the request returns.

Type: Array of [Member](#) objects

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

### Realm

The domain name that's associated with the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

## Errors

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

### **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### **Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

### **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

#### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

### **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource couldn't be found.

HTTP Status Code: 404

### **ThrottlingException**

The limit on the number of requests per second has been exceeded.

## RetryAfterSeconds

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of ListGroupMembers.

### Sample Request

```
{
  "SAMAccountName": "Marketing",
  "MaxResults": 123,
  "MemberRealm": "example.local",
  "NextToken": "123456",
  "Realm": "examplecorp.com"
}
```

### Sample Response

```
{
  "DirectoryId": "d-926example",
  "Members": [
    {
      "SID": "S-1-5-11-111",
      "SAMAccountName": "twhitlock"
    },
    {
```

```
    "SID": "S-1-5-11-112",
    "SAMAccountName": "pcandella"
  },
  {
    "SID": "S-1-5-11-113",
    "SAMAccountName": "jstiles"
  }
],
"NextToken": "223456"
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListGroups

Returns group information for the specified directory.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `ListGroups.NextToken` member contains a token that you pass in the next call to `ListGroups`. This retrieves the next set of items.

You can also specify a maximum number of return results with the `MaxResults` parameter.

## Request Syntax

```
POST /Groups/ListGroups?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

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

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Pattern: `d-[0-9a-f]{10}`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### MaxResults

The maximum number of results to be returned per request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

Required: No

### Realm

The domain name associated with the directory.

#### **Note**

This parameter is optional, so you can return groups outside of your AWS Managed Microsoft AD domain. When no value is defined, only your AWS Managed Microsoft AD groups are returned.

This value is case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## Response Syntax

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

{
```

```
"DirectoryId": "string",
"Groups": [
  {
    "GroupScope": "string",
    "GroupType": "string",
    "SAMAccountName": "string",
    "SID": "string"
  }
],
"NextToken": "string",
"Realm": "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.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Type: String

Pattern: d-[0-9a-f]{10}

### Groups

The group information that the request returns.

Type: Array of [GroupSummary](#) objects

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

### Realm

The domain name associated with the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

## Errors

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

### AccessDeniedException

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### Reason

Reason the request was unauthorized.

HTTP Status Code: 403

### DirectoryUnavailableException

The request could not be completed due to a problem in the configuration or current state of the specified directory.

#### Reason

Reason the request failed for the specified directory.

HTTP Status Code: 400

### InternalServerError

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

### ThrottlingException

The limit on the number of requests per second has been exceeded.

## RetryAfterSeconds

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of ListGroups.

### Sample Request

```
{
  "MaxResults": 123,
  "NextToken": "123456",
  "Realm": "examplecorp.com"
}
```

### Sample Response

```
{
  "DirectoryId": "d-926example",
  "Groups": [
    {
      "GroupScope": "BuiltinLocal",
      "GroupType": "Security",
      "SAMAccountName": "Administrators",
      "SID": "S-1-5-32-544"
    },
    {
```

```
    "GroupScope": "BuiltinLocal",
    "GroupType": "Security",
    "SAMAccountName": "Users",
    "SID": "S-1-5-32-545"
  }
],
"NextToken": "223456"
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListGroupsForMember

Returns group information for the specified member.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `ListGroupsForMember.NextToken` member contains a token that you pass in the next call to `ListGroupsForMember`. This retrieves the next set of items.

You can also specify a maximum number of return results with the `MaxResults` parameter.

## Request Syntax

```
POST /GroupMemberships/ListGroupsForMember?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

```
{
  "MaxResults": number,
  "MemberRealm": "string",
  "NextToken": "string",
  "Realm": "string",
  "SAMAccountName": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the member.

Pattern: `d-[0-9a-f]{10}`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

## MaxResults

The maximum number of results to be returned per request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

## MemberRealm

The domain name that's associated with the group member.

### Note

This parameter is optional, so you can limit your results to the group members in a specific domain.

This parameter is case insensitive and defaults to Realm

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

Required: No

## Realm

The domain name that's associated with the group.

**Note**

This parameter is optional, so you can return groups outside of your AWS Managed Microsoft AD domain. When no value is defined, only your AWS Managed Microsoft AD groups are returned.

This value is case insensitive and defaults to your AWS Managed Microsoft AD domain.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

**SAMAccountName**

The SAMAccountName of the user, group, or computer that's a member of the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: [^: ; | = + " \* ? < > / \ \ , \ [ \ ] @ ] +

Required: Yes

**Response Syntax**

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

{
  "DirectoryId": "string",
  "Groups": [
    {
      "GroupScope": "string",
      "GroupType": "string",
      "SAMAccountName": "string",
      "SID": "string"
    }
  ]
}
```

```
    }  
  ],  
  "MemberRealm": "string",  
  "NextToken": "string",  
  "Realm": "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.

### DirectoryId

The identifier (ID) of the directory that's associated with the member.

Type: String

Pattern: d-[0-9a-f]{10}

### Groups

The group information that the request returns.

Type: Array of [GroupSummary](#) objects

### MemberRealm

The domain that's associated with the member.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

## Realm

The domain that's associated with the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

## Errors

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

### **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### **Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

### **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

#### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

### **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

### **ResourceNotFoundException**

The resource couldn't be found.

HTTP Status Code: 404

### **ThrottlingException**

The limit on the number of requests per second has been exceeded.

#### **RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

### **ValidationException**

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

#### **Reason**

Reason the request failed validation.

HTTP Status Code: 400

## **Examples**

### **Example**

This example illustrates one usage of `ListGroupsForMember`.

#### **Sample Request**

```
{
  "MaxResults": 123,
  "SAMAccountName": "twhitlock",
  "MemberRealm": "example.local",
  "NextToken": "123456",
  "Realm": "examplecorp.com"
}
```

## Sample Response

```
{
  "DirectoryId": "d-926example",
  "Groups": [
    {
      "GroupScope": "BuiltinLocal",
      "GroupType": "Security",
      "SAMAccountName": "Administrators",
      "SID": "S-1-5-32-544"
    },
    {
      "GroupScope": "BuiltinLocal",
      "GroupType": "Security",
      "SAMAccountName": "Users",
      "SID": "S-1-5-32-545"
    }
  ],
  "NextToken": "223456"
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListUsers

Returns user information for the specified directory.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `ListUsers.NextToken` member contains a token that you pass in the next call to `ListUsers`. This retrieves the next set of items.

You can also specify a maximum number of return results with the `MaxResults` parameter.

## Request Syntax

```
POST /Users/ListUsers?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

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

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the user.

Pattern: `d-[0-9a-f]{10}`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### MaxResults

The maximum number of results to be returned per request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

Required: No

### Realm

The domain name that's associated with the user.

#### **Note**

This parameter is optional, so you can return users outside of your AWS Managed Microsoft AD domain. When no value is defined, only your AWS Managed Microsoft AD users are returned.

This value is case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## Response Syntax

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

{
```

```
"DirectoryId": "string",
"NextToken": "string",
"Realm": "string",
"Users": [
  {
    "Enabled": boolean,
    "GivenName": "string",
    "SAMAccountName": "string",
    "SID": "string",
    "Surname": "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.

### DirectoryId

The identifier (ID) of the directory that's associated with the user.

Type: String

Pattern: d-[0-9a-f]{10}

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

### Realm

The domain that's associated with the user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

## Users

The user information that the request returns.

Type: Array of [UserSummary](#) objects

## Errors

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

### **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### **Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

### **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

#### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

### **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

### **ThrottlingException**

The limit on the number of requests per second has been exceeded.

## RetryAfterSeconds

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of ListUsers.

### Sample Request

```
{
  "MaxResults": 123,
  "NextToken": "123456",
  "Realm": "examplecorp.com"
}
```

### Sample Response

```
{
  "DirectoryId": "d-926example",
  "NextToken": "223456",
  "Users": [
    {
      "SID": "S-1-5-11-111",
      "SAMAccountName": "twhitlock"
    },
    {
      "SID": "S-1-5-11-112",

```

```
    "SAMAccountName": "pcandella"  
  },  
  {  
    "SID": "S-1-5-11-113",  
    "SAMAccountName": "jstiles"  
  }  
]  
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# RemoveGroupMember

Removes a member from a group.

## Request Syntax

```
POST /GroupMemberships/RemoveGroupMember?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

```
{
  "ClientToken": "string",
  "GroupName": "string",
  "MemberName": "string",
  "MemberRealm": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the member.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ClientToken

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

**Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

**GroupName**

The name of the group.

Type: String

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

Pattern: `[\^:;|=+\"*?<>/\ \, \[ \] @]+`

Required: Yes

**MemberName**

The SAMAccountName of the user, group, or computer to remove from the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[\^:;|=+\"*?<>/\ \, \[ \] @]+`

Required: Yes

**MemberRealm**

The domain name that's associated with the group member. This parameter defaults to the AWS Managed Microsoft AD domain.

**Note**

This parameter is optional and case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

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

## Errors

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

### AccessDeniedException

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### Reason

Reason the request was unauthorized.

HTTP Status Code: 403

## **ConflictException**

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

## **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

## **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

## **ResourceNotFoundException**

The resource couldn't be found.

HTTP Status Code: 404

## **ThrottlingException**

The limit on the number of requests per second has been exceeded.

### **RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of `RemoveGroupMember`.

### Sample Request

```
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "GroupName": "DevOps",
  "MemberName": "Pat Candella",
  "MemberRealm": "example.local"
}
```

### Sample Response

```
HTTP/1.1 200
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

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

# SearchGroups

Searches the specified directory for a group. You can find groups that match the `SearchString` parameter with the value of their attributes included in the `SearchString` parameter.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `SearchGroups.NextToken` member contains a token that you pass in the next call to `SearchGroups`. This retrieves the next set of items.

You can also specify a maximum number of return results with the `MaxResults` parameter.

## Request Syntax

```
POST /Groups/SearchGroups?DirectoryId=DirectoryId HTTP/1.1
```

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

```
{
  "MaxResults": number,
  "NextToken": "string",
  "Realm": "string",
  "SearchAttributes": [ "string" ],
  "SearchString": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Pattern: `d-[0-9a-f]{10}`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

## MaxResults

The maximum number of results to be returned per request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

## NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

Required: No

## Realm

The domain name that's associated with the group.

### Note

This parameter is optional, so you can return groups outside of your AWS Managed Microsoft AD domain. When no value is defined, only your AWS Managed Microsoft AD groups are returned.

This value is case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## SearchAttributes

One or more data attributes that are used to search for a group. For a list of supported attributes, see [Directory Service Data Attributes](#).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: Yes

## SearchString

The attribute value that you want to search for.

### Note

Wildcard ( `*` ) searches aren't supported. For a list of supported attributes, see [Directory Service Data Attributes](#).

Type: String

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

Required: Yes

## Response Syntax

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

{
  "DirectoryId": "string",
  "Groups": [
    {
      "DistinguishedName": "string",
      "GroupScope": "string",
      "GroupType": "string",
      "OtherAttributes": {
        "string" : { ... }
      },
      "SAMAccountName": "string",
```

```
    "SID": "string"
  }
],
"NextToken": "string",
"Realm": "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.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Type: String

Pattern: d-[0-9a-f]{10}

### Groups

The group information that the request returns.

Type: Array of [Group](#) objects

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

### Realm

The domain that's associated with the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

## Errors

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

### **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### **Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

### **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

#### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

### **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

### **ThrottlingException**

The limit on the number of requests per second has been exceeded.

#### **RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of SearchGroups.

### Sample Request

```
{
  "MaxResults": 123,
  "NextToken": "123456",
  "Realm": "examplecorp.com",
  "SearchAttributes":
  [
    "GroupScope"
  ],
  "SearchString": "Security"
}
```

### Sample Response

```
{
  "DirectoryId": "d-926example",
  "Groups":
  [
    {
      "GroupScope": "BuiltinLocal",
      "GroupType": "Security",
      "SAMAccountName": "Administrators",
      "SID": "S-1-5-32-544"
    },
  ],
}
```

```
{
  "GroupScope": "BuiltinLocal",
  "GroupType": "Security",
  "SAMAccountName": "Users",
  "SID": "S-1-5-32-545"
},
"NextToken": "223456"
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# SearchUsers

Searches the specified directory for a user. You can find users that match the `SearchString` parameter with the value of their attributes included in the `SearchString` parameter.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `SearchUsers.NextToken` member contains a token that you pass in the next call to `SearchUsers`. This retrieves the next set of items.

You can also specify a maximum number of return results with the `MaxResults` parameter.

## Request Syntax

```
POST /Users/SearchUsers?DirectoryId=DirectoryId HTTP/1.1
```

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

```
{
  "MaxResults": number,
  "NextToken": "string",
  "Realm": "string",
  "SearchAttributes": [ "string" ],
  "SearchString": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the user.

Pattern: `d-[0-9a-f]{10}`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

## MaxResults

The maximum number of results to be returned per request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

## NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

Required: No

## Realm

The domain name that's associated with the user.

### Note

This parameter is optional, so you can return users outside of your AWS Managed Microsoft AD domain. When no value is defined, only your AWS Managed Microsoft AD users are returned.

This value is case insensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

Required: No

## SearchAttributes

One or more data attributes that are used to search for a user. For a list of supported attributes, see [Directory Service Data Attributes](#).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: Yes

## SearchString

The attribute value that you want to search for.

### Note

Wildcard ( `*` ) searches aren't supported. For a list of supported attributes, see [Directory Service Data Attributes](#).

Type: String

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

Required: Yes

## Response Syntax

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

{
  "DirectoryId": "string",
  "NextToken": "string",
  "Realm": "string",
  "Users": [
    {
      "DistinguishedName": "string",
      "EmailAddress": "string",
      "Enabled": boolean,
      "GivenName": "string",
      "OtherAttributes": {
```

```
        "string" : { ... }
    },
    "SAMAccountName": "string",
    "SID": "string",
    "Surname": "string",
    "UserPrincipalName": "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.

### DirectoryId

The identifier (ID) of the directory where the address block is added.

Type: String

Pattern: d-[0-9a-f]{10}

### NextToken

An encoded paging token for paginated calls that can be passed back to retrieve the next page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 6144.

### Realm

The domain that's associated with the user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

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

### Users

The user information that the request returns.

Type: Array of [User](#) objects

## Errors

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

### **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### **Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

### **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

#### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

### **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

### **ThrottlingException**

The limit on the number of requests per second has been exceeded.

#### **RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

## ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of SearchUsers.

### Sample Request

```
{
  "MaxResults": 123,
  "NextToken": "123456",
  "Realm": "examplecorp.com",
  "SearchAttributes":
  [
    "department"
  ],
  "SearchString": "DevOps"
}
```

### Sample Response

```
{
  "DirectoryId": "d-926example",
  "NextToken": "223456",
  "Users":
  [
    {
      "SID": "S-1-5-11-111",
      "SAMAccountName": "twhitlock",
      "EmailAddress": "twhitlock@example.local.com",
    }
  ]
}
```

```
    "UserPrincipalName": "twhitlock@examplecorp.com"
  },
  {
    "SID": "S-1-5-11-112",
    "SAMAccountName": "pcandella",
    "EmailAddress": "pcandella@example.local.com",
    "UserPrincipalName": "pcandella@examplecorp.com"
  },
  {
    "SID": "S-1-5-11-113",
    "SAMAccountName": "jstiles",
    "EmailAddress": "jstiles@example.local.com",
    "UserPrincipalName": "jstiles@examplecorp.com"
  }
]
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# UpdateGroup

Updates group information.

## Request Syntax

```
POST /Groups/UpdateGroup?DirectoryId=DirectoryId HTTP/1.1  
Content-type: application/json
```

```
{  
  "ClientToken": "string",  
  "GroupScope": "string",  
  "GroupType": "string",  
  "OtherAttributes": {  
    "string" : { ... }  
  },  
  "SAMAccountName": "string",  
  "UpdateType": "string"  
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the group.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body


The request accepts the following data in JSON format.

### ClientToken

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

 **Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

### GroupScope

The scope of the AD group. For details, see [Active Directory security groups](#).

Type: String

Valid Values: `DomainLocal` | `Global` | `Universal` | `BuiltinLocal`

Required: No

### GroupType

The AD group type. For details, see [Active Directory security group type](#).

Type: String

Valid Values: `Distribution` | `Security`

Required: No

### OtherAttributes

An expression that defines one or more attributes with the data type and the value of each attribute.

Type: String to [AttributeValue](#) object map

Map Entries: Maximum number of 25 items.

Key Length Constraints: Minimum length of 1. Maximum length of 63.

Key Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: No

### [SAMAccountName](#)

The name of the group.

Type: String

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

Pattern: `[^:;|=+\"*?<>/\ \, \[ \]@]+`

Required: Yes

### [UpdateType](#)

The type of update to be performed. If no value exists for the attribute, use ADD. Otherwise, use REPLACE to change an attribute value or REMOVE to clear the attribute value.

Type: String

Valid Values: ADD | REPLACE | REMOVE

Required: No

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

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

## Errors

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

## **AccessDeniedException**

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

### **Reason**

Reason the request was unauthorized.

HTTP Status Code: 403

## **ConflictException**

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

## **DirectoryUnavailableException**

The request could not be completed due to a problem in the configuration or current state of the specified directory.

### **Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

## **InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

## **ResourceNotFoundException**

The resource couldn't be found.

HTTP Status Code: 404

### ThrottlingException

The limit on the number of requests per second has been exceeded.

#### RetryAfterSeconds

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

### ValidationException

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

#### Reason

Reason the request failed validation.

HTTP Status Code: 400

## Examples

### Example

This example illustrates one usage of UpdateGroup.

#### Sample Request

```
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "GroupScope": "Global",
  "GroupType": "Security",
  "OtherAttributes":
  {
    "PreferredLanguage":{"S":"English"},
    "Co":{"S":"US"}
  },
  "SAMAccountName": "GuestsLocal",
  "UpdateType": "REPLACE"
}
```

## Sample Response

```
{
  "DirectoryId": "112233abcd",
  "SAMAccountName": "GuestsLocal",
  "SID": "S-1-5-44-567"
}
```

## See Also

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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# UpdateUser

Updates user information.

## Request Syntax

```
POST /Users/UpdateUser?DirectoryId=DirectoryId HTTP/1.1
Content-type: application/json
```

```
{
  "ClientToken": "string",
  "EmailAddress": "string",
  "GivenName": "string",
  "OtherAttributes": {
    "string" : { ... }
  },
  "SAMAccountName": "string",
  "Surname": "string",
  "UpdateType": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DirectoryId

The identifier (ID) of the directory that's associated with the user.

Pattern: d-[0-9a-f]{10}

Required: Yes

## Request Body


The request accepts the following data in JSON format.

### ClientToken

A unique and case-sensitive identifier that you provide to make sure the idempotency of the request, so multiple identical calls have the same effect as one single call.

A client token is valid for 8 hours after the first request that uses it completes. After 8 hours, any request with the same client token is treated as a new request. If the request succeeds, any future uses of that token will be idempotent for another 8 hours.

If you submit a request with the same client token but change one of the other parameters within the 8-hour idempotency window, Directory Service Data returns an `ConflictException`.

 **Note**

This parameter is optional when using the AWS CLI or SDK.

Type: String

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

Pattern: `[\x00-\x7F]+`

Required: No

### EmailAddress

The email address of the user.

Type: String

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

Required: No

### GivenName

The first name of the user.

Type: String

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

Required: No

### OtherAttributes

An expression that defines one or more attribute names with the data type and value of each attribute. A key is an attribute name, and the value is a list of maps. For a list of supported attributes, see [Directory Service Data Attributes](#).

**Note**

Attribute names are case insensitive.

Type: String to [AttributeValue](#) object map

Map Entries: Maximum number of 25 items.

Key Length Constraints: Minimum length of 1. Maximum length of 63.

Key Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: No

**SAMAccountName**

The name of the user.

Type: String

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

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

Required: Yes

**Surname**

The last name of the user.

Type: String

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

Required: No

**UpdateType**

The type of update to be performed. If no value exists for the attribute, use ADD. Otherwise, use REPLACE to change an attribute value or REMOVE to clear the attribute value.

Type: String

Valid Values: ADD | REPLACE | REMOVE

Required: No

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

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

## Errors

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

### AccessDeniedException

You don't have permission to perform the request or access the directory. It can also occur when the `DirectoryId` doesn't exist or the user, member, or group might be outside of your organizational unit (OU).

Make sure that you have the authentication and authorization to perform the action. Review the directory information in the request, and make sure that the object isn't outside of your OU.

#### Reason

Reason the request was unauthorized.

HTTP Status Code: 403

### ConflictException

This error will occur when you try to create a resource that conflicts with an existing object. It can also occur when adding a member to a group that the member is already in.

This error can be caused by a request sent within the 8-hour idempotency window with the same client token but different input parameters. Client tokens should not be re-used across different requests. After 8 hours, any request with the same client token is treated as a new request.

HTTP Status Code: 409

### DirectoryUnavailableException

The request could not be completed due to a problem in the configuration or current state of the specified directory.

**Reason**

Reason the request failed for the specified directory.

HTTP Status Code: 400

**InternalServerErrorException**

The operation didn't succeed because an internal error occurred. Try again later.

HTTP Status Code: 500

**ResourceNotFoundException**

The resource couldn't be found.

HTTP Status Code: 404

**ThrottlingException**

The limit on the number of requests per second has been exceeded.

**RetryAfterSeconds**

The recommended amount of seconds to retry after a throttling exception.

HTTP Status Code: 429

**ValidationException**

The request isn't valid. Review the details in the error message to update the invalid parameters or values in your request.

**Reason**

Reason the request failed validation.

HTTP Status Code: 400

**Examples****Example**

This example illustrates one usage of UpdateUser.

## Sample Request

```
{
  "ClientToken": "550e8400-e29b-41d4-a716-446655440000",
  "EmailAddress": "twhitlock@examplecorp.com",
  "GivenName": "Terry",
  "OtherAttributes":
  {
    "telephoneNumber":{"S":"212-555-1111"},
    "homePhone":{"S":"333-333-3333"},
    "physicalDeliveryOfficeName":{"S":"Example Company"},
    "streetAddress":{"S":"123 Any Street"},
    "postalCode":{"S":"54321"},
    "st":{"S":"WA"},
    "co": {"S": "US"}
  },
  "SAMAccountName": "terrywhitlock",
  "Surname": "Whitlock",
  "UpdateType": "ADD"
}
```

## Sample Response

```
{
  "DirectoryId": "d-926example",
  "SAMAccountName": "terrywhitlock",
  "SID": "1111-2222-3333"
}
```

## See Also


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

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

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

# Data Types

The AWS Directory Service Data 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:

- [AttributeValue](#)
- [Group](#)
- [GroupSummary](#)
- [Member](#)
- [User](#)
- [UserSummary](#)

# AttributeValue

The data type for an attribute. Each attribute value is described as a name-value pair. The name is the AD schema name, and the value is the data itself. For a list of supported attributes, see [Directory Service Data Attributes](#).

## Contents

### Important

This data type is a UNION, so only one of the following members can be specified when used or returned.

## BOOL

Indicates that the attribute type value is a boolean. For example:

```
"BOOL": true
```

Type: Boolean

Required: No

## N

Indicates that the attribute type value is a number. For example:

```
"N": "16"
```

Type: Long

Required: No

## S

Indicates that the attribute type value is a string. For example:

```
"S": "S Group"
```

Type: String

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

Required: No

## SS

Indicates that the attribute type value is a string set. For example:

```
"SS": ["sample_service_class/host.sample.com:1234/  
sample_service_name_1", "sample_service_class/host.sample.com:1234/  
sample_service_name_2"]
```

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 25 items.

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

Required: No

## See Also

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

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

# Group

A group object that contains identifying information and attributes for a specified group.

## Contents

### **SAMAccountName**

The name of the group.

Type: String

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

Pattern: `[^:;|=+\"*?<>/\\,\\[\\]@]+`

Required: Yes

### **DistinguishedName**

The [distinguished name](#) of the object.

Type: String

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

Required: No

### **GroupScope**

The scope of the AD group. For details, see [Active Directory security groups](#)

Type: String

Valid Values: DomainLocal | Global | Universal | BuiltinLocal

Required: No

### **GroupType**

The AD group type. For details, see [Active Directory security group type](#).

Type: String

Valid Values: Distribution | Security

Required: No

## OtherAttributes

An expression of one or more attributes, data types, and the values of a group.

Type: String to [AttributeValue](#) object map

Map Entries: Maximum number of 25 items.

Key Length Constraints: Minimum length of 1. Maximum length of 63.

Key Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: No

## SID

The unique security identifier (SID) of the group.

Type: String

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

Required: No

## See Also

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

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

# GroupSummary

A structure containing a subset of fields of a group object from a directory.

## Contents

### GroupScope

The scope of the AD group. For details, see [Active Directory security groups](#).

Type: String

Valid Values: DomainLocal | Global | Universal | BuiltinLocal

Required: Yes

### GroupType

The AD group type. For details, see [Active Directory security group type](#).

Type: String

Valid Values: Distribution | Security

Required: Yes

### SAMAccountName

The name of the group.

Type: String

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

Pattern: [^:;|=+\"\*?<>/\\,\\[\\]@]+

Required: Yes

### SID

The unique security identifier (SID) of the group.

Type: String

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

Required: Yes

## See Also

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

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

# Member

A member object that contains identifying information for a specified member.

## Contents

### MemberType

The AD type of the member object.

Type: String

Valid Values: USER | GROUP | COMPUTER

Required: Yes

### SAMAccountName

The name of the group member.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[^:;|=+\"*?<>/\\,\\[\\]@]+`

Required: Yes

### SID

The unique security identifier (SID) of the group member.

Type: String

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

Required: Yes

## See Also

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

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

# User

A user object that contains identifying information and attributes for a specified user.

## Contents

### **SAMAccountName**

The name of the user.

Type: String

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

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

Required: Yes

### **DistinguishedName**

The [distinguished name](#) of the object.

Type: String

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

Required: No

### **EmailAddress**

The email address of the user.

Type: String

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

Required: No

### **Enabled**

Indicates whether the user account is active.

Type: Boolean

Required: No

### **GivenName**

The first name of the user.

Type: String

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

Required: No

### **OtherAttributes**

An expression that includes one or more attributes, data types, and values of a user.

Type: String to [AttributeValue](#) object map

Map Entries: Maximum number of 25 items.

Key Length Constraints: Minimum length of 1. Maximum length of 63.

Key Pattern: `[A-Za-z*][A-Za-z-*]*`

Required: No

### **SID**

The unique security identifier (SID) of the user.

Type: String

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

Required: No

### **Surname**

The last name of the user.

Type: String

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

Required: No

## UserPrincipalName

The UPN that is an internet-style login name for a user and based on the internet standard [RFC 822](#). The UPN is shorter than the distinguished name and easier to remember.

Type: String

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

Required: No

## See Also

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

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

# UserSummary

A structure containing a subset of the fields of a user object from a directory.

## Contents

### Enabled

Indicates whether the user account is active.

Type: Boolean

Required: Yes

### SAMAccountName

The name of the user.

Type: String

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

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

Required: Yes

### SID

The unique security identifier (SID) of the user.

Type: String

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

Required: Yes

### GivenName

The first name of the user.

Type: String

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

Required: No

## Surname

The last name of the user.

Type: String

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

Required: No

## See Also

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

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

# Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signing AWS API requests](#) in the *IAM User Guide*.

## X-Amz-Algorithm

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

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

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

## X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4\_request"). The value is expressed in the following format: *access\_key/YYYYMMDD/region/service/aws4\_request*.

For more information, see [Create a signed AWS API request](#) in the *IAM User Guide*.

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

Type: string

Required: Conditional

## X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [Elements of an AWS API request signature](#) in the *IAM User Guide*.

Type: string

Required: Conditional

### **X-Amz-Security-Token**

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

### **X-Amz-Signature**

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

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

Type: string

Required: Conditional

### **X-Amz-SignedHeaders**

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see [Create a signed AWS API request](#) in the *IAM User Guide*.

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

Type: string

**Required: Conditional**

# Common Error Types

This section lists common error types that this AWS service may return. Not all services return all error types listed here. For errors specific to an API action for this service, see the topic for that API action.

## **AccessDeniedException**

You don't have permission to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 403

## **ExpiredTokenException**

The security token included in the request has expired. Request a new security token and try again.

HTTP Status Code: 403

## **IncompleteSignature**

The request signature doesn't conform to AWS standards. Verify that you're using valid AWS credentials and that your request is properly formatted. If you're using an SDK, ensure it's up to date.

HTTP Status Code: 403

## **InternalFailure**

The request can't be processed right now because of an internal server issue. Try again later. If the problem persists, contact AWS Support.

HTTP Status Code: 500

## **MalformedHttpRequestException**

The request body can't be processed. This typically happens when the request body can't be decompressed using the specified content encoding algorithm. Verify that the content encoding header matches the compression format used.

HTTP Status Code: 400

**NotAuthorized**

You don't have permissions to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 401

**OptInRequired**

Your AWS account needs a subscription for this service. Verify that you've enabled the service in your account.

HTTP Status Code: 403

**RequestAbortedException**

The request was aborted before a response could be returned. This typically happens when the client closes the connection.

HTTP Status Code: 400

**RequestEntityTooLargeException**

The request entity is too large. Reduce the size of the request body and try again.

HTTP Status Code: 413

**RequestTimeoutException**

The request timed out. The server didn't receive the complete request within the expected time frame. Try again.

HTTP Status Code: 408

**ServiceUnavailable**

The service is temporarily unavailable. Try again later.

HTTP Status Code: 503

**ThrottlingException**

Your request rate is too high. The AWS SDKs automatically retry requests that receive this exception. Reduce the frequency of requests.

HTTP Status Code: 400

## **UnknownOperationException**

The action or operation isn't recognized. Verify that the action name is spelled correctly and that it's supported by the API version you're using.

HTTP Status Code: 404

## **UnrecognizedClientException**

The X.509 certificate or AWS access key ID you provided doesn't exist in our records. Verify that you're using valid credentials and that they haven't expired.

HTTP Status Code: 403

## **ValidationError**

The input doesn't meet the required format or constraints. Check that all required parameters are included and that values are valid.

HTTP Status Code: 400