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API Reference

Amazon Cognito User Pools

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Amazon Cognito User Pools: API Reference

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Welcome

With the Amazon Cognito user pools API, you can configure user pools and authenticate users. To authenticate users from third-party identity providers (IdPs) in this API, you can link IdP users to native user profiles. Learn more about the authentication and authorization of federated users at Adding user pool sign-in through a third party and in the User pool federation endpoints and managed login reference.

This API reference provides detailed information about API operations and object types in Amazon Cognito.

Along with resource management operations, the Amazon Cognito user pools API includes classes of operations and authorization models for client-side and server-side authentication of users. You can interact with operations in the Amazon Cognito user pools API as any of the following subjects.

1. An administrator who wants to configure user pools, app clients, users, groups, or other user pool functions.
2. A server-side app, like a web application, that wants to use its Amazon privileges to manage, authenticate, or authorize a user.
3. A client-side app, like a mobile app, that wants to make unauthenticated requests to manage, authenticate, or authorize a user.

For more information, see Understanding API, OIDC, and managed login pages authentication in the *Amazon Cognito Developer Guide*.

With your Amazon SDK, you can build the logic to support operational flows in every use case for this API. You can also make direct REST API requests to Amazon Cognito user pools service endpoints. The following links can get you started with the `CognitoIdentityProvider` client in supported Amazon SDKs.

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go
- Amazon SDK for Java V2
- Amazon SDK for JavaScript

- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3
- Amazon SDK for Kotlin

To get started with an Amazon SDK, see Tools to Build on Amazon. For example actions and scenarios, see Code examples for Amazon Cognito Identity Provider using Amazon SDKs.

This document was last published on May 16, 2025.

Actions

The following actions are supported:

- AddCustomAttributes
- AdminAddUserToGroup
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- AdminDisableProviderForUser
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- AssociateSoftwareToken
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- CreateGroup
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- CreateManagedLoginBranding
- CreateResourceServer
- CreateUserImportJob
- CreateUserPool
- CreateUserPoolClient
- CreateUserPoolDomain
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- DeleteIdentityProvider
- DeleteManagedLoginBranding
- DeleteResourceServer
- DeleteUser
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- DeleteUserPoolClient
- DeleteUserPoolDomain
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- DescribeResourceServer
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- DescribeUserPool
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- ListTagsForResource
- ListUserImportJobs
- ListUserPoolClients
- ListUserPools
- ListUsers
- ListUsersInGroup
- ListWebAuthnCredentials

- ResendConfirmationCode
- RespondToAuthChallenge
- RevokeToken
- SetLogDeliveryConfiguration
- SetRiskConfiguration
- SetUICustomization
- SetUserMFAPreference
- SetUserPoolMfaConfig
- SetUserSettings
- SignUp
- StartUserImportJob
- StartWebAuthnRegistration
- StopUserImportJob
- TagResource
- UntagResource
- UpdateAuthEventFeedback
- UpdateDeviceStatus
- UpdateGroup
- UpdateIdentityProvider
- UpdateManagedLoginBranding
- UpdateResourceServer
- UpdateUserAttributes
- UpdateUserPool
- UpdateUserPoolClient
- UpdateUserPoolDomain
- VerifySoftwareToken
- VerifyUserAttribute

AddCustomAttributes

Adds additional user attributes to the user pool schema. Custom attributes can be mutable or immutable and have a `custom:` or `dev:` prefix. For more information, see Custom attributes.

You can also create custom attributes in the CreateUserPool of `CreateUserPool` and `UpdateUserPool`. You can't delete custom attributes after you create them.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "CustomAttributes": [
      {
         "AttributeDataType": "string",
         "DeveloperOnlyAttribute": boolean,
         "Mutable": boolean,
         "Name": "string",
         "NumberAttributeConstraints": {
            "MaxValue": "string",
            "MinValue": "string"
         },
         "Required": boolean,
         "StringAttributeConstraints": {
            "MaxLength": "string",
            "MinLength": "string"
         }
      }
```

```
    ],
    "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

CustomAttributes

An array of custom attribute names and other properties. Sets the following characteristics:

AttributeDataType

The expected data type. Can be a string, a number, a date and time, or a boolean.

Mutable

If true, you can grant app clients write access to the attribute value. If false, the attribute value can only be set up on sign-up or administrator creation of users.

Name

The attribute name. For an attribute like `custom:myAttribute`, enter `myAttribute` for this field.

Required

When true, users who sign up or are created must set a value for the attribute.

NumberAttributeConstraints

The minimum and maximum length of accepted values for a `Number`-type attribute.

StringAttributeConstraints

The minimum and maximum length of accepted values for a `String`-type attribute.

DeveloperOnlyAttribute

This legacy option creates an attribute with a `dev:` prefix. You can only set the value of a developer-only attribute with administrative IAM credentials.

Type: Array of SchemaAttributeType objects

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

Required: Yes

UserPoolId

The ID of the user pool where you want to add custom attributes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserImportInProgressException

This exception is thrown when you're trying to modify a user pool while a user import job is in progress for that pool.

HTTP Status Code: 400

Examples

Example

This example request adds the mutable custom attribute `custom:deliverables`, a string with a maximum length of 255 characters, to the user pool schema.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AddCustomAttributes
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "CustomAttributes": [
        {
            "AttributeDataType": "String",
            "DeveloperOnlyAttribute": false,
            "Mutable": true,
            "Name": "deliverables",
            "Required": false,
            "StringAttributeConstraints": {
```

```
                "MaxLength": "255",
                "MinLength": "1"
            }
        }
    ],
    "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminAddUserToGroup

Adds a user to a group. A user who is in a group can present a preferred-role claim to an identity pool, and populates a `cognito:groups` claim to their access and identity tokens.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "GroupName": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

GroupName

The name of the group that you want to add your user to.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool that contains the group that you want to add the user to.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

This example request adds the user "testuser" to the group "testgroup."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminAddUserToGroup
```

```
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "GroupName": "testgroup",
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminConfirmSignUp

Confirms user sign-up as an administrator.

Unlike ConfirmSignUp, your IAM credentials authorize this operation to confirm user accounts. No confirmation code is required.

This request sets a user account active in a user pool that requires confirmation of new user accounts before they can sign in. You can configure your user pool to not send confirmation codes to new users and instead confirm them with this API operation on the back end.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

To configure your user pool to require administrative confirmation of users, set `AllowAdminCreateUserOnly` to `true` in a `CreateUserPool` or `UpdateUserPool` request.

Request Syntax

```
{
   "ClientMetadata": {
      "string" : "string"
   },
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

If your user pool configuration includes triggers, the AdminConfirmSignUp API action invokes the Amazon Lambda function that is specified for the *post confirmation* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. In this payload, the `clientMetadata` attribute provides the data that you assigned to the ClientMetadata parameter in your AdminConfirmSignUp request. In your function code in Lambda, you can process the ClientMetadata value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to confirm a user's sign-up request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyFailedAttemptsException

This exception is thrown when the user has made too many failed attempts for a given action, such as sign-in.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example operation confirms sign-up for the user "testuser." Note that because this is an administrative API operation, no confirmation code is required.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminConfirmSignUp
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
```

```
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminCreateUser

Creates a new user in the specified user pool.

If `MessageAction` isn't set, the default is to send a welcome message via email or phone (SMS).

This message is based on a template that you configured in your call to create or update a user pool. This template includes your custom sign-up instructions and placeholders for user name and temporary password.

Alternatively, you can call `AdminCreateUser` with `SUPPRESS` for the `MessageAction` parameter, and Amazon Cognito won't send any email.

In either case, if the user has a password, they will be in the `FORCE_CHANGE_PASSWORD` state until they sign in and set their password. Your invitation message template must have the `{####}` password placeholder if your users have passwords. If your template doesn't have this placeholder, Amazon Cognito doesn't deliver the invitation message. In this case, you must update your message template and resend the password with a new `AdminCreateUser` request with a `MessageAction` value of `RESEND`.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "ClientMetadata": {
      "string" : "string"
   },
   "DesiredDeliveryMediums": [ "string" ],
   "ForceAliasCreation": boolean,
   "MessageAction": "string",
   "TemporaryPassword": "string",
   "UserAttributes": [
      {
         "Name": "string",
         "Value": "string"
      }
   ],
   "Username": "string",
   "UserPoolId": "string",
   "ValidationData": [
      {
         "Name": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the AdminCreateUser API action, Amazon Cognito invokes the function that is assigned to the *pre sign-up* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. This payload contains a `ClientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your AdminCreateUser request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

DesiredDeliveryMediums

Specify `EMAIL` if email will be used to send the welcome message. Specify `SMS` if the phone number will be used. The default value is `SMS`. You can specify more than one value.

Type: Array of strings

Valid Values: `SMS` | `EMAIL`

Required: No

ForceAliasCreation

This parameter is used only if the `phone_number_verified` or `email_verified` attribute is set to `True`. Otherwise, it is ignored.

If this parameter is set to `True` and the phone number or email address specified in the `UserAttributes` parameter already exists as an alias with a different user, this request migrates the alias from the previous user to the newly-created user. The previous user will no longer be able to log in using that alias.

If this parameter is set to `False`, the API throws an `AliasExistsException` error if the alias already exists. The default value is `False`.

Type: Boolean

Required: No

MessageAction

Set to `RESEND` to resend the invitation message to a user that already exists, and to reset the temporary-password duration with a new temporary password. Set to `SUPPRESS` to suppress sending the message. You can specify only one value.

Type: String

Valid Values: `RESEND` | `SUPPRESS`

Required: No

TemporaryPassword

The user's temporary password. This password must conform to the password policy that you specified when you created the user pool.

The exception to the requirement for a password is when your user pool supports passwordless sign-in with email or SMS OTPs. To create a user with no password, omit this parameter or submit a blank value. You can only create a passwordless user when passwordless sign-in is available.

For enabling passwordless factors, see CreateUserPool:Policies and UpdateUserPool:Policies.

The temporary password is valid only once. To complete the Admin Create User flow, the user must enter the temporary password in the sign-in page, along with a new password to be used in all future sign-ins.

If you don't specify a value, Amazon Cognito generates one for you unless you have passwordless options active for your user pool.

The temporary password can only be used until the user account expiration limit that you set for your user pool. To reset the account after that time limit, you must call `AdminCreateUser` again and specify `RESEND` for the `MessageAction` parameter.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\S]+`

Required: No

UserAttributes

An array of name-value pairs that contain user attributes and attribute values to be set for the user to be created. You can create a user without specifying any attributes other than `Username`. However, any attributes that you specify as required (when creating a user pool or in the **Attributes** tab of the console) either you should supply (in your call to `AdminCreateUser`) or the user should supply (when they sign up in response to your welcome message).

For custom attributes, you must prepend the `custom:` prefix to the attribute name.

To send a message inviting the user to sign up, you must specify the user's email address or phone number. You can do this in your call to AdminCreateUser or in the **Users** tab of the Amazon Cognito console for managing your user pools.

You must also provide an email address or phone number when you expect the user to do passwordless sign-in with an email or SMS OTP. These attributes must be provided when passwordless options are the only available, or when you don't submit a `TemporaryPassword`.

In your AdminCreateUser request, you can set the email_verified and phone_number_verified attributes to true. The following conditions apply:

email

The email address where you want the user to receive their confirmation code and username. You must provide a value for email when you want to set email_verified to true, or if you set EMAIL in the DesiredDeliveryMediums parameter.

phone_number

The phone number where you want the user to receive their confirmation code and username. You must provide a value for phone_number when you want to set phone_number_verified to true, or if you set SMS in the DesiredDeliveryMediums parameter.

You can also set attributes verified with AdminUpdateUserAttributes.

Type: Array of AttributeType objects

Required: No

Username

The value that you want to set as the username sign-in attribute. The following conditions apply to the username parameter.

- The username can't be a duplicate of another username in the same user pool.
- You can't change the value of a username after you create it.
- You can only provide a value if usernames are a valid sign-in attribute for your user pool. If your user pool only supports phone numbers or email addresses as sign-in attributes, Amazon Cognito automatically generates a username value. For more information, see Customizing sign-in attributes.

Type: String

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

Pattern: [\p{L}\p{M}\p{S}\p{N}\p{P}]+

Required: Yes

UserPoolId

The ID of the user pool where you want to create a user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

ValidationData

Temporary user attributes that contribute to the outcomes of your pre sign-up Lambda trigger. This set of key-value pairs are for custom validation of information that you collect from your users but don't need to retain.

Your Lambda function can analyze this additional data and act on it. Your function can automatically confirm and verify select users or perform external API operations like logging user attributes and validation data to Amazon CloudWatch Logs.

For more information about the pre sign-up Lambda trigger, see Pre sign-up Lambda trigger.

Type: Array of AttributeType objects

Required: No

Response Syntax

```
{
   "User": {
      "Attributes": [
         {
            "Name": "string",
            "Value": "string"
         }
      ],
      "Enabled": boolean,
      "MFAOptions": [
         {
            "AttributeName": "string",
            "DeliveryMedium": "string"
```

```
            }
        ],
        "UserCreateDate": number,
        "UserLastModifiedDate": number,
        "Username": "string",
        "UserStatus": "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.

User

The new user's profile details.

Type: UserType object

Errors

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

CodeDeliveryFailureException

This exception is thrown when a verification code fails to deliver successfully.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidPasswordException

This exception is thrown when Amazon Cognito encounters an invalid password.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PreconditionNotMetException

This exception is thrown when a precondition is not met.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UnsupportedUserStateException

The request failed because the user is in an unsupported state.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UsernameExistsException

This exception is thrown when Amazon Cognito encounters a user name that already exists in the user pool.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

An AdminCreateUser request for for a test user named John.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminCreateUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "UserPoolId": "us-east-1_EXAMPLE",
    "Username": "testuser",
    "DesiredDeliveryMediums": [
        "SMS"
    ],
    "MessageAction": "SUPPRESS",
    "TemporaryPassword": "This-is-my-test-99!",
    "UserAttributes": [
        {
            "Name": "name",
            "Value": "John"
        },
        {
            "Name": "phone_number",
            "Value": "+12065551212"
        },
        {
            "Name": "email",
            "Value": "testuser@example.com"
        }
    ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
```

```
Connection: keep-alive

{
      "User": {
        "Attributes": [
          {
            "Name": "sub",
            "Value": "d16b4aa8-8633-4abd-93b3-5062a8e1b5f8"
          },
          {
            "Name": "name",
            "Value": "John"
          },
          {
            "Name": "phone_number",
            "Value": "+12065551212"
          },
          {
            "Name": "email",
            "Value": "testuser@example.com"
          }
        ],
        "Enabled": true,
        "UserCreateDate": 1689980857.949,
        "UserLastModifiedDate": 1689980857.949,
        "UserStatus": "FORCE_CHANGE_PASSWORD",
        "Username": "testuser"
      }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3

- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminDeleteUser

Deletes a user profile in your user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to delete the user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example operation deletes the user "testuser" from the user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminDeleteUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
```

```
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminDeleteUserAttributes

Deletes attribute values from a user. This operation doesn't affect tokens for existing user sessions. The next ID token that the user receives will no longer have the deleted attributes.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "UserAttributeNames": [ "string" ],
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

UserAttributeNames

An array of strings representing the user attribute names you want to delete.

For custom attributes, you must prepend the `custom:` prefix to the attribute name.

Type: Array of strings

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to delete user attributes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example API request deletes the attribute `custom:deliverables` from the user "testuser."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
```

```
X-Amz-Target: AWSCognitoIdentityProviderService.AdminDeleteUserAttributes
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "UserAttributeNames": [
    "custom:deliverables"
  ],
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python

- Amazon SDK for Ruby V3

AdminDisableProviderForUser

Prevents the user from signing in with the specified external (SAML or social) identity provider (IdP). If the user that you want to deactivate is a Amazon Cognito user pools native username + password user, they can't use their password to sign in. If the user to deactivate is a linked external IdP user, any link between that user and an existing user is removed. When the external user signs in again, and the user is no longer attached to the previously linked `DestinationUser`, the user must create a new user account.

For information about linking users, see AdminLinkProviderForUser.

The value of `ProviderName` must match the name of a user pool IdP.

To deactivate a local user, set `ProviderName` to `Cognito` and the `ProviderAttributeName` to `Cognito_Subject`. The `ProviderAttributeValue` must be user's local username.

The `ProviderAttributeName` must always be `Cognito_Subject` for social IdPs. The `ProviderAttributeValue` must always be the exact subject that was used when the user was originally linked as a source user.

For de-linking a SAML identity, there are two scenarios. If the linked identity has not yet been used to sign in, the `ProviderAttributeName` and `ProviderAttributeValue` must be the same values that were used for the `SourceUser` when the identities were originally linked using `AdminLinkProviderForUser` call. This is also true if the linking was done with `ProviderAttributeName` set to `Cognito_Subject`. If the user has already signed in, the `ProviderAttributeName` must be `Cognito_Subject` and `ProviderAttributeValue` must be the `NameID` from their SAML assertion.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "User": {
      "ProviderAttributeName": "string",
      "ProviderAttributeValue": "string",
      "ProviderName": "string"
   },
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

User

The user profile that you want to delete a linked identity from.

Type: ProviderUserIdentifierType object

Required: Yes

UserPoolId

The ID of the user pool where you want to delete the user's linked identities.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

Response Elements

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

Errors

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

AliasExistsException

This exception is thrown when a user tries to confirm the account with an email address or phone number that has already been supplied as an alias for a different user profile. This exception indicates that an account with this email address or phone already exists in a user pool that you've configured to use email address or phone number as a sign-in alias.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminDisableUser

Deactivates a user profile and revokes all access tokens for the user. A deactivated user can't sign in, but still appears in the responses to `ListUsers` API requests.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to disable the user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example API request deactivates the user "testuser."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminDisableUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminEnableUser

Activates sign-in for a user profile that previously had sign-in access disabled.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to activate sign-in for the user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example API request activates the user "testuser."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminEnableUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
```

```
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminForgetDevice

Forgets, or deletes, a remembered device from a user's profile. After you forget the device, the user can no longer complete device authentication with that device and when applicable, must submit MFA codes again. For more information, see Working with devices.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "DeviceKey": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

DeviceKey

The key ID of the device that you want to delete.

You can get device keys in the response to an AdminListDevices request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where the device owner is a user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example API request deletes a remembered device for the user "testuser."

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminForgetDevice
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222",
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python

- Amazon SDK for Ruby V3

AdminGetDevice

Given the device key, returns details for a user's device. For more information, see Working with devices.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "DeviceKey": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

DeviceKey

The key of the device that you want to delete.

You can get device IDs in the response to an AdminListDevices request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where the device owner is a user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Device": {
      "DeviceAttributes": [
         {
            "Name": "string",
            "Value": "string"
         }
```

```
        ],
        "DeviceCreateDate": number,
        "DeviceKey": "string",
        "DeviceLastAuthenticatedDate": number,
        "DeviceLastModifiedDate": number
    }
}
```

Response Elements

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

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

Device

Details of the requested device. Includes device information, last-accessed and created dates, and the device key.

Type: DeviceType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example API request retrieves information about a device that belongs to the user "testuser."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminGetDevice
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222",
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
 "Device": {
  "DeviceAttributes": [
   {
    "Name": "device_status",
    "Value": "valid"
   },
   {
    "Name": "device_name",
    "Value": "Dart-device"
   },
   {
    "Name": "dev:device_arn",
    "Value": "arn:aws:cognito-idp:us-west-2:123456789012:owner/testuser.us-
west-2_EXAMPLE/device/us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222"
   },
   {
    "Name": "dev:device_owner",
    "Value": "testuser.us-west-2_EXAMPLE"
   },
   {
    "Name": "last_ip_used",
    "Value": "192.0.2.1"
   },
   {
    "Name": "dev:device_remembered_status",
    "Value": "remembered"
   },
   {
    "Name": "dev:device_sdk",
    "Value": "aws-sdk-unknown-unknown"
   }
  ],
  "DeviceCreateDate": 1715100742.022,
  "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222",
```

```
  "DeviceLastAuthenticatedDate": 1715100742.0,
  "DeviceLastModifiedDate": 1715100742.022
 }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminGetUser

Given a username, returns details about a user profile in a user pool. You can specify alias attributes in the `Username` request parameter.

This operation contributes to your monthly active user (MAU) count for the purpose of billing.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to get information about the user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Enabled": boolean,
   "MFAOptions": [
      {
         "AttributeName": "string",
         "DeliveryMedium": "string"
      }
   ],
   "PreferredMfaSetting": "string",
   "UserAttributes": [
      {
         "Name": "string",
         "Value": "string"
      }
   ],
   "UserCreateDate": number,
   "UserLastModifiedDate": number,
   "UserMFASettingList": [ "string" ],
   "Username": "string",
   "UserStatus": "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.

Enabled

Indicates whether the user is activated for sign-in.

The AdminDisableUser and AdminEnableUser API operations deactivate and activate user sign-in, respectively.

Type: Boolean

MFAOptions

This response parameter is no longer supported. It provides information only about SMS MFA configurations. It doesn't provide information about time-based one-time password (TOTP) software token MFA configurations. To look up information about either type of MFA configuration, use UserMFASettingList instead.

Type: Array of MFAOptionType objects

PreferredMfaSetting

The user's preferred MFA. Users can prefer SMS message, email message, or TOTP MFA.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

UserAttributes

An array of name-value pairs of user attributes and their values, for example `"email": "testuser@example.com"`.

Type: Array of AttributeType objects

UserCreateDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

UserLastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

UserMFASettingList

The MFA options that are activated for the user. The possible values in this list are `SMS_MFA`, `EMAIL_OTP`, and `SOFTWARE_TOKEN_MFA`.

You can change the MFA preference for users who have more than one available MFA factor with AdminSetUserMFAPreference or SetUserMFAPreference.

Type: Array of strings

Length Constraints: Minimum length of 0. Maximum length of 131072.

Username

The username of the user that you requested.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

UserStatus

The user's status. Can be one of the following:

- UNCONFIRMED - User has been created but not confirmed.
- CONFIRMED - User has been confirmed.
- UNKNOWN - User status isn't known.
- RESET_REQUIRED - User is confirmed, but the user must request a code and reset their password before they can sign in.
- FORCE_CHANGE_PASSWORD - The user is confirmed and the user can sign in using a temporary password, but on first sign-in, the user must change their password to a new value before doing anything else.

- EXTERNAL_PROVIDER - The user signed in with a third-party identity provider.

Type: String

Valid Values: `UNCONFIRMED | CONFIRMED | ARCHIVED | COMPROMISED | UNKNOWN | RESET_REQUIRED | FORCE_CHANGE_PASSWORD | EXTERNAL_PROVIDER`

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example API request gets user details for the user "testuser."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminGetUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "Enabled": true,
    "UserAttributes": [
        {
            "Name": "sub",
            "Value": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
        },
        {
            "Name": "identities",
```

```
            "Value": "[{\"userId\":\"a1b2c3d4-5678-90ab-cdef-EXAMPLE22222\",
\"providerName\":\"SignInWithApple\",\"providerType\":\"SignInWithApple\",\"issuer
\":null,\"primary\":false,\"dateCreated\":1701125599632}]"
        },
        {
            "Name": "email_verified",
            "Value": "true"
        },
        {
            "Name": "custom:deliverables",
            "Value": "project-111222"
        },
        {
            "Name": "name",
            "Value": "John"
        },
        {
            "Name": "phone_number_verified",
            "Value": "true"
        },
        {
            "Name": "phone_number",
            "Value": "+12065551212"
        },
        {
            "Name": "preferred_username",
            "Value": "John Doe"
        },
        {
            "Name": "locale",
            "Value": "EMEA"
        },
        {
            "Name": "email",
            "Value": "testuser@example.com"
        }
    ],
    "UserCreateDate": 1.682955829578E9,
    "UserLastModifiedDate": 1.722380161794E9,
    "UserStatus": "CONFIRMED",
    "Username": "testuser"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminInitiateAuth

Starts sign-in for applications with a server-side component, for example a traditional web application. This operation specifies the authentication flow that you'd like to begin. The authentication flow that you specify must be supported in your app client configuration. For more information about authentication flows, see Authentication flows.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
   },
   "AuthFlow": "string",
   "AuthParameters": {
      "string" : "string"
   },
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "ContextData": {
      "EncodedData": "string",
      "HttpHeaders": [
         {
            "headerName": "string",
            "headerValue": "string"
         }
      ],
      "IpAddress": "string",
      "ServerName": "string",
      "ServerPath": "string"
   },
   "Session": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

AuthFlow

The authentication flow that you want to initiate. Each `AuthFlow` has linked `AuthParameters` that you must submit. The following are some example flows.

Include the required AdminInitiateAuth:AuthParameters for the flow that you choose.

USER_AUTH

The entry point for choice-based authentication with passwords, one-time passwords, and WebAuthn authenticators. Request a preferred authentication type or review available authentication types. From the offered authentication types, select one in a challenge response and then authenticate with that method in an additional challenge response. To activate this setting, your user pool must be in the Essentials tier or higher.

USER_SRP_AUTH

Username-password authentication with the Secure Remote Password (SRP) protocol. For more information, see Use SRP password verification in custom authentication flow.

REFRESH_TOKEN_AUTH and REFRESH_TOKEN

Receive new ID and access tokens when you pass a `REFRESH_TOKEN` parameter with a valid refresh token as the value. For more information, see Using the refresh token.

CUSTOM_AUTH

Custom authentication with Lambda triggers. For more information, see Custom authentication challenge Lambda triggers.

ADMIN_USER_PASSWORD_AUTH

Server-side username-password authentication with the password sent directly in the request. For more information about client-side and server-side authentication, see SDK authorization models.

`USER_PASSWORD_AUTH` is a flow type of InitiateAuth and isn't valid for AdminInitiateAuth.

Type: String

Valid Values: `USER_SRP_AUTH | REFRESH_TOKEN_AUTH | REFRESH_TOKEN | CUSTOM_AUTH | ADMIN_NO_SRP_AUTH | USER_PASSWORD_AUTH | ADMIN_USER_PASSWORD_AUTH | USER_AUTH`

Required: Yes

AuthParameters

The authentication parameters. These are inputs corresponding to the `AuthFlow` that you're invoking. The required values depend on the value of `AuthFlow` for example:

- For `USER_AUTH`: `USERNAME` (required), `PREFERRED_CHALLENGE`. If you don't provide a value for `PREFERRED_CHALLENGE`, Amazon Cognito responds with the `AvailableChallenges` parameter that specifies the available sign-in methods.
- For `USER_SRP_AUTH`: `USERNAME` (required), `SRP_A` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- For `ADMIN_USER_PASSWORD_AUTH`: `USERNAME` (required), `PASSWORD` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- For `REFRESH_TOKEN_AUTH/REFRESH_TOKEN`: `REFRESH_TOKEN` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- For `CUSTOM_AUTH`: `USERNAME` (required), `SECRET_HASH` (if app client is configured with client secret), `DEVICE_KEY`. To start the authentication flow with password verification, include `ChallengeName: SRP_A` and `SRP_A: (The SRP_A Value)`.

For more information about `SECRET_HASH`, see Computing secret hash values. For information about `DEVICE_KEY`, see Working with user devices in your user pool.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ClientId

The ID of the app client where the user wants to sign in.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for certain custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the AdminInitiateAuth API action, Amazon Cognito invokes the Lambda functions that are specified for various triggers. The ClientMetadata value is passed as input to the functions for only the following triggers:

- Pre signup
- Pre authentication
- User migration

When Amazon Cognito invokes the functions for these triggers, it passes a JSON payload, which the function receives as input. This payload contains a `validationData` attribute, which provides the data that you assigned to the ClientMetadata parameter in your AdminInitiateAuth request. In your function code in Amazon Lambda, you can process the `validationData` value to enhance your workflow for your specific needs.

When you use the AdminInitiateAuth API action, Amazon Cognito also invokes the functions for the following triggers, but it doesn't provide the ClientMetadata value as input:

- Post authentication
- Custom message
- Pre token generation
- Create auth challenge
- Define auth challenge
- Custom email sender
- Custom SMS sender

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user

pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.

- Validate the `ClientMetadata` value.
- Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: ContextDataType object

Required: No

Session

The optional session ID from a `ConfirmSignUp` API request. You can sign in a user directly from the sign-up process with an `AuthFlow` of `USER_AUTH` and `AuthParameters` of `EMAIL_OTP` or `SMS_OTP`, depending on how your user pool sent the confirmation-code message.

Type: String

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

Required: No

UserPoolId

The ID of the user pool where the user wants to sign in.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "AuthenticationResult": {
      "AccessToken": "string",
      "ExpiresIn": number,
      "IdToken": "string",
      "NewDeviceMetadata": {
         "DeviceGroupKey": "string",
         "DeviceKey": "string"
      },
      "RefreshToken": "string",
      "TokenType": "string"
   },
   "AvailableChallenges": [ "string" ],
   "ChallengeName": "string",
   "ChallengeParameters": {
      "string" : "string"
   },
   "Session": "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.

AuthenticationResult

The outcome of successful authentication. This is only returned if the user pool has no additional challenges to return. If Amazon Cognito returns another challenge, the response includes `ChallengeName`, `ChallengeParameters`, and `Session` so that your user can answer the challenge.

Type: AuthenticationResultType object

AvailableChallenges

This response parameter lists the available authentication challenges that users can select from in choice-based authentication. For example, they might be able to choose between passkey authentication, a one-time password from an SMS message, and a traditional password.

Type: Array of strings

Valid Values: `SMS_MFA | EMAIL_OTP | SOFTWARE_TOKEN_MFA | SELECT_MFA_TYPE | MFA_SETUP | PASSWORD_VERIFIER | CUSTOM_CHALLENGE | SELECT_CHALLENGE | DEVICE_SRP_AUTH | DEVICE_PASSWORD_VERIFIER | ADMIN_NO_SRP_AUTH | NEW_PASSWORD_REQUIRED | SMS_OTP | PASSWORD | WEB_AUTHN | PASSWORD_SRP`

ChallengeName

The name of the challenge that you're responding to with this call. This is returned in the `AdminInitiateAuth` response if you must pass another challenge.

Possible challenges include the following:

> **Note**
>
> All of the following challenges require `USERNAME` and, when the app client has a client secret, `SECRET_HASH` in the parameters.

- `WEB_AUTHN`: Respond to the challenge with the results of a successful authentication with a WebAuthn authenticator, or passkey. Examples of WebAuthn authenticators include biometric devices and security keys.
- `PASSWORD`: Respond with `USER_PASSWORD_AUTH` parameters: `USERNAME` (required), `PASSWORD` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- `PASSWORD_SRP`: Respond with `USER_SRP_AUTH` parameters: `USERNAME` (required), `SRP_A` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- `SELECT_CHALLENGE`: Respond to the challenge with `USERNAME` and an `ANSWER` that matches one of the challenge types in the `AvailableChallenges` response parameter.
- `SMS_MFA`: Respond with an `SMS_MFA_CODE` that your user pool delivered in an SMS message.

- `EMAIL_OTP`: Respond with an `EMAIL_OTP_CODE` that your user pool delivered in an email message.
- `PASSWORD_VERIFIER`: Respond with `PASSWORD_CLAIM_SIGNATURE`, `PASSWORD_CLAIM_SECRET_BLOCK`, and `TIMESTAMP` after client-side SRP calculations.
- `CUSTOM_CHALLENGE`: This is returned if your custom authentication flow determines that the user should pass another challenge before tokens are issued. The parameters of the challenge are determined by your Lambda function.
- `DEVICE_SRP_AUTH`: Respond with the initial parameters of device SRP authentication. For more information, see Signing in with a device.
- `DEVICE_PASSWORD_VERIFIER`: Respond with `PASSWORD_CLAIM_SIGNATURE`, `PASSWORD_CLAIM_SECRET_BLOCK`, and `TIMESTAMP` after client-side SRP calculations. For more information, see Signing in with a device.
- `NEW_PASSWORD_REQUIRED`: For users who are required to change their passwords after successful first login. Respond to this challenge with `NEW_PASSWORD` and any required attributes that Amazon Cognito returned in the `requiredAttributes` parameter. You can also set values for attributes that aren't required by your user pool and that your app client can write.

  Amazon Cognito only returns this challenge for users who have temporary passwords. When you create passwordless users, you must provide values for all required attributes.

  > **Note**
  >
  > In a `NEW_PASSWORD_REQUIRED` challenge response, you can't modify a required attribute that already has a value. In `AdminRespondToAuthChallenge` or `RespondToAuthChallenge`, set a value for any keys that Amazon Cognito returned in the `requiredAttributes` parameter, then use the `AdminUpdateUserAttributes` or `UpdateUserAttributes` API operation to modify the value of any additional attributes.

- `MFA_SETUP`: For users who are required to setup an MFA factor before they can sign in. The MFA types activated for the user pool will be listed in the challenge parameters `MFAS_CAN_SETUP` value.

  To set up time-based one-time password (TOTP) MFA, use the session returned in this challenge from `InitiateAuth` or `AdminInitiateAuth` as an input to

AssociateSoftwareToken. Then, use the session returned by VerifySoftwareToken as an input to RespondToAuthChallenge or AdminRespondToAuthChallenge with challenge name MFA_SETUP to complete sign-in.

To set up SMS or email MFA, collect a phone_number or email attribute for the user. Then restart the authentication flow with an InitiateAuth or AdminInitiateAuth request.

Type: String

Valid Values: SMS_MFA | EMAIL_OTP | SOFTWARE_TOKEN_MFA | SELECT_MFA_TYPE | MFA_SETUP | PASSWORD_VERIFIER | CUSTOM_CHALLENGE | SELECT_CHALLENGE | DEVICE_SRP_AUTH | DEVICE_PASSWORD_VERIFIER | ADMIN_NO_SRP_AUTH | NEW_PASSWORD_REQUIRED | SMS_OTP | PASSWORD | WEB_AUTHN | PASSWORD_SRP

ChallengeParameters

The parameters of an authentication challenge. Amazon Cognito returns challenge parameters as a guide to the responses your user or application must provide for the returned ChallengeName. Calculate responses to the challenge parameters and pass them in the ChallengeParameters of AdminRespondToAuthChallenge.

All challenges require USERNAME and, when the app client has a client secret, SECRET_HASH.

In SRP challenges, Amazon Cognito returns the username attribute in USER_ID_FOR_SRP instead of any email address, preferred username, or phone number alias that you might have specified in your AdminInitiateAuth request. You must use the username and not an alias in the ChallengeResponses of your challenge response.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Session

The session that must be passed to challenge-response requests. If an AdminInitiateAuth or AdminRespondToAuthChallenge API request results in another authentication challenge, Amazon Cognito returns a session ID and the parameters of the next challenge. Pass this session ID in the Session parameter of AdminRespondToAuthChallenge.

Type: String

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the

external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

MFAMethodNotFoundException

This exception is thrown when Amazon Cognito can't find a multi-factor authentication (MFA) method.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UnsupportedOperationException

Exception that is thrown when you attempt to perform an operation that isn't enabled for the user pool client.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request signs in the user "testuser" to an app client with a client secret. It includes context data for advanced security features and ClientMetadata for Lambda triggers. The device key and device group key in the response indicate that this user pool supports the device-remembering feature.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminInitiateAuth
User-Agent: <UserAgentString>
```

```
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "AuthFlow": "ADMIN_USER_PASSWORD_AUTH",
    "ClientId": "1example23456789",
    "UserPoolId": "us-west-2_EXAMPLE",
    "AuthParameters": {
        "USERNAME": "testuser",
        "PASSWORD": "TestUserPassword1=",
        "SECRET_HASH": "cKtx2L2fvV1FeAbk3iUPgCyXY+5B0ItO0ItxhFaLkeA="
    },
    "ContextData": {
      "EncodedData": "VGhpc0lzTXlFbmNvZGVkRGF0YQ",
      "HttpHeaders": [
         {
            "headerName": "Referer",
            "headerValue": "https://home.example.com"
         }
      ],
      "IpAddress": "192.0.2.100",
      "ServerName": "auth.example.com",
      "ServerPath": "/web/private/program.html"
    },
    "ClientMetadata": {
        "MyTestKey": "MyTestValue"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "AuthenticationResult": {
  "AccessToken": "eyJraACCESSEXAMPLE...",
  "ExpiresIn": 3600,
  "IdToken": "eyJraIDEXAMPLE...",
  "NewDeviceMetadata": {
```

```
    "DeviceGroupKey": "-v7w9UcY6",
    "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222"
   },
   "RefreshToken": "eyJjREFRESHEXAMPLE...",
   "TokenType": "Bearer"
  },
  "ChallengeParameters": {}
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminLinkProviderForUser

Links an existing user account in a user pool, or `DestinationUser`, to an identity from an external IdP, or `SourceUser`, based on a specified attribute name and value from the external IdP.

This operation connects a local user profile with a user identity who hasn't yet signed in from their third-party IdP. When the user signs in with their IdP, they get access-control configuration from the local user profile. Linked local users can also sign in with SDK-based API operations like `InitiateAuth` after they sign in at least once through their IdP. For more information, see Linking federated users.

Note

The maximum number of federated identities linked to a user is five.

Important

Because this API allows a user with an external federated identity to sign in as a local user, it is critical that it only be used with external IdPs and linked attributes that you trust.

See also AdminDisableProviderForUser.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "DestinationUser": {
      "ProviderAttributeName": "string",
      "ProviderAttributeValue": "string",
      "ProviderName": "string"
   },
   "SourceUser": {
      "ProviderAttributeName": "string",
      "ProviderAttributeValue": "string",
      "ProviderName": "string"
   },
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

DestinationUser

The existing user in the user pool that you want to assign to the external IdP user account. This user can be a local (Username + Password) Amazon Cognito user pools user or a federated user (for example, a SAML or Facebook user). If the user doesn't exist, Amazon Cognito generates an exception. Amazon Cognito returns this user when the new user (with the linked IdP attribute) signs in.

For a native username + password user, the `ProviderAttributeValue` for the `DestinationUser` should be the username in the user pool. For a federated user, it should be the provider-specific `user_id`.

The `ProviderAttributeName` of the `DestinationUser` is ignored.

The `ProviderName` should be set to `Cognito` for users in Cognito user pools.

> **Important**
>
> All attributes in the DestinationUser profile must be mutable. If you have assigned the user any immutable custom attributes, the operation won't succeed.

Type: ProviderUserIdentifierType object

Required: Yes

SourceUser

An external IdP account for a user who doesn't exist yet in the user pool. This user must be a federated user (for example, a SAML or Facebook user), not another native user.

If the `SourceUser` is using a federated social IdP, such as Facebook, Google, or Login with Amazon, you must set the `ProviderAttributeName` to `Cognito_Subject`. For social IdPs, the `ProviderName` will be `Facebook`, `Google`, or `LoginWithAmazon`, and Amazon Cognito will automatically parse the Facebook, Google, and Login with Amazon tokens for `id`, `sub`, and `user_id`, respectively. The `ProviderAttributeValue` for the user must be the same value as the `id`, `sub`, or `user_id` value found in the social IdP token.

For OIDC, the `ProviderAttributeName` can be any mapped value from a claim in the ID token, or that your app retrieves from the `userInfo` endpoint. For SAML, the `ProviderAttributeName` can be any mapped value from a claim in the SAML assertion.

The following additional considerations apply to `SourceUser` for OIDC and SAML providers.

- You must map the claim to a user pool attribute in your IdP configuration, and set the user pool attribute name as the value of `ProviderAttributeName` in your `AdminLinkProviderForUser` request. For example, `email`.
- When you set `ProviderAttributeName` to `Cognito_Subject`, Amazon Cognito will automatically parse the default unique identifier found in the subject from the IdP token.

Type: ProviderUserIdentifierType object

Required: Yes

UserPoolId

The ID of the user pool where you want to link a federated identity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

Response Elements

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

Errors

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

AliasExistsException

This exception is thrown when a user tries to confirm the account with an email address or phone number that has already been supplied as an alias for a different user profile. This exception indicates that an account with this email address or phone already exists in a user pool that you've configured to use email address or phone number as a sign-in alias.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example links a Facebook user to the user pool user "adminlink-testuser." The user's unique identifier with Facebook is represented in the value of `ProviderAttributeValue`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminLinkProviderForUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "DestinationUser": {
    "ProviderAttributeValue": "adminlink-testuser",
    "ProviderName": "Cognito"
  },
  "SourceUser": {
```

```
    "ProviderAttributeName": "Cognito_Subject",
    "ProviderAttributeValue": "123456789012345",
    "ProviderName": "Facebook"
  },
  "UserPoolId": "us-west-2_EXAMPLE"}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

Example

The following example links a Google user to the user pool user "adminlink-testuser." The user's unique identifier with Google is represented in the value of `ProviderAttributeValue`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminLinkProviderForUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "DestinationUser": {
    "ProviderAttributeValue": "adminlink-testuser",
    "ProviderName": "Cognito"
  },
  "SourceUser": {
    "ProviderAttributeName": "Cognito_Subject",
    "ProviderAttributeValue": "5432109876543210",
    "ProviderName": "Google"
  },
```

```
  "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

Example

The following example links a Login With Amazon user to the user pool user "adminlink-testuser." The user's unique identifier with Amazon is represented in the value of `ProviderAttributeValue`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminLinkProviderForUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "DestinationUser": {
    "ProviderAttributeValue": "adminlink-testuser",
    "ProviderName": "Cognito"
  },
  "SourceUser": {
    "ProviderAttributeName": "Cognito_Subject",
    "ProviderAttributeValue": "amzn1.account.AFALI...",
    "ProviderName": "LoginWithAmazon"
  },
  "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

Example

The following example links a Sign In With Apple user to the user pool user "adminlink-testuser." The user's unique identifier with Apple is represented in the value of `ProviderAttributeValue`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminLinkProviderForUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
 "DestinationUser": {
  "ProviderAttributeValue": "adminlink-testuser",
  "ProviderName": "Cognito"
 },
 "SourceUser": {
  "ProviderAttributeName": "Cognito_Subject",
  "ProviderAttributeValue": "000111.11111111111111111111111111111111111111.1111",
  "ProviderName": "SignInWithApple"
 },
 "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

Example

The following example links a user from OIDC provider "MyOIDCProvider" to the user pool user "adminlink-testuser." This request links the local user to an IdP user that has a `preferred_username` attribute of `testuser@example.com`. For this user to sync, your application must request scopes that return the `preferred_username` attribute from the IdP.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminLinkProviderForUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
 "DestinationUser": {
  "ProviderAttributeValue": "adminlink-testuser",
  "ProviderName": "Cognito"
 },
 "SourceUser": {
  "ProviderAttributeName": "preferred_username",
  "ProviderAttributeValue": "testuser@example.com",
  "ProviderName": "MyOIDCProvider"
 },
 "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
```

```
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

Example

The following example links a user from SAML 2.0 provider "MySAMLProvider" to the user pool user "adminlink-testuser." This request links the local user to an IdP user that has a `email` attribute of `testuser@example.com`. For this user to sync, your application must receive an `email` claim in the SAML assertion.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminLinkProviderForUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
 "DestinationUser": {
  "ProviderAttributeValue": "adminlink-testuser",
  "ProviderName": "Cognito"
 },
 "SourceUser": {
  "ProviderAttributeName": "email",
  "ProviderAttributeValue": "testuser@example.com",
  "ProviderName": "MySAMLProvider"
 },
 "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
```

```
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminListDevices

Lists a user's registered devices. Remembered devices are used in authentication services where you offer a "Remember me" option for users who you want to permit to sign in without MFA from a trusted device. Users can bypass MFA while your application performs device SRP authentication on the back end. For more information, see Working with devices.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Limit": number,
   "PaginationToken": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Limit

The maximum number of devices that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

PaginationToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where the device owner is a user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Devices": [
      {
         "DeviceAttributes": [
            {
               "Name": "string",
               "Value": "string"
            }
         ],
         "DeviceCreateDate": number,
         "DeviceKey": "string",
         "DeviceLastAuthenticatedDate": number,
         "DeviceLastModifiedDate": number
      }
   ],
   "PaginationToken": "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.

Devices

An array of devices and their information. Each entry that's returned includes device information, last-accessed and created dates, and the device key.

Type: Array of DeviceType objects

PaginationToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example API request retrieves information about the first two devices that belong to the user "testuser."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminListDevices
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser" ,
  "Limit": 2
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "Devices": [
  {
   "DeviceAttributes": [
    {
     "Name": "device_status",
     "Value": "valid"
    },
    {
     "Name": "device_name",
     "Value": "Dart-device"
    },
    {
     "Name": "dev:device_arn",
     "Value": "arn:aws:cognito-idp:us-west-2:123456789012:owner/testuser.us-
west-2_EXAMPLE/device/us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222"
    },
```

```
    {
     "Name": "dev:device_owner",
     "Value": "testuser.us-west-2_EXAMPLE"
    },
    {
     "Name": "last_ip_used",
     "Value": "192.0.2.1"
    },
    {
     "Name": "dev:device_remembered_status",
     "Value": "remembered"
    },
    {
     "Name": "dev:device_sdk",
     "Value": "aws-sdk-unknown-unknown"
    }
   ],
   "DeviceCreateDate": 1715100742.022,
   "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222",
   "DeviceLastAuthenticatedDate": 1715100742.0,
   "DeviceLastModifiedDate": 1715100742.022
  },
  {
   "DeviceAttributes": [
    {
     "Name": "device_status",
     "Value": "valid"
    },
    {
     "Name": "device_name",
     "Value": "Mobile-device"
    },
    {
     "Name": "dev:device_arn",
     "Value": "arn:aws:cognito-idp:us-west-2:123456789012:owner/testuser.us-
west-2_EXAMPLE/device/a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
    },
    {
     "Name": "dev:device_owner",
     "Value": "testuser.us-west-2_EXAMPLE"
    },
    {
     "Name": "last_ip_used",
     "Value": "192.0.2.99"
```

```
    },
    {
     "Name": "dev:device_remembered_status",
     "Value": "remembered"
    },
    {
     "Name": "dev:device_sdk",
     "Value": "aws-sdk-unknown-unknown"
    }
   ],
   "DeviceCreateDate": 1715100742.022,
   "DeviceKey": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
   "DeviceLastAuthenticatedDate": 1715100742.0,
   "DeviceLastModifiedDate": 1715100742.022
  }
 ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminListGroupsForUser

Lists the groups that a user belongs to. User pool groups are identifiers that you can reference from the contents of ID and access tokens, and set preferred IAM roles for identity-pool authentication. For more information, see Adding groups to a user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Limit": number,
   "NextToken": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Limit

The maximum number of groups that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to view a user's groups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Groups": [
      {
         "CreationDate": number,
         "Description": "string",
         "GroupName": "string",
         "LastModifiedDate": number,
         "Precedence": number,
         "RoleArn": "string",
         "UserPoolId": "string"
      }
   ],
   "NextToken": "string"
}
```

Response Elements

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

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

Groups

An array of groups and information about them.

Type: Array of GroupType objects

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request returns the first two groups for the user "testuser." Note that one group has no description and another has no IAM role or precedence assigned. This operation only returns group properties that are configured.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminListGroupsForUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser",
  "Limit": 2
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "Groups": [
  {
   "CreationDate": 1712262633.88,
   "Description": "My first example group",
   "GroupName": "MyExampleGroup1",
   "LastModifiedDate": 1712262633.88,
   "UserPoolId": "us-west-2_EXAMPLE"
  },
  {
   "CreationDate": 1611685503.954,
   "GroupName": "MyExampleGroup2",
   "LastModifiedDate": 1697211218.305,
   "Precedence": 7,
   "RoleArn": "arn:aws:iam::123456789012:role/example-cognito-role",
   "UserPoolId": "us-west-2_EXAMPLE"
  }
 ]
```

```
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminListUserAuthEvents

Requests a history of user activity and any risks detected as part of Amazon Cognito threat protection. For more information, see Viewing user event history.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

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

Request Parameters

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

The request accepts the following data in JSON format.

MaxResults

The maximum number of authentication events to return. Returns 60 events if you set `MaxResults` to 0, or if you don't include a `MaxResults` parameter.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The Id of the user pool that contains the user profile with the logged events.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "AuthEvents": [
      {
         "ChallengeResponses": [
            {
               "ChallengeName": "string",
               "ChallengeResponse": "string"
            }
         ],
         "CreationDate": number,
         "EventContextData": {
            "City": "string",
            "Country": "string",
            "DeviceName": "string",
            "IpAddress": "string",
            "Timezone": "string"
         },
         "EventFeedback": {
            "FeedbackDate": number,
            "FeedbackValue": "string",
            "Provider": "string"
         },
         "EventId": "string",
         "EventResponse": "string",
         "EventRisk": {
            "CompromisedCredentialsDetected": boolean,
            "RiskDecision": "string",
            "RiskLevel": "string"
         },
         "EventType": "string"
      }
   ],
   "NextToken": "string"
}
```

Response Elements

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

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

AuthEvents

The response object. It includes the `EventID`, `EventType`, `CreationDate`, `EventRisk`, and `EventResponse`.

Type: Array of AuthEventType objects

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

UserPoolAddOnNotEnabledException

This exception is thrown when user pool add-ons aren't enabled.

HTTP Status Code: 400

Examples

Example

The following example returns the two most recent advanced security features events for the user "testuser."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminListUserAuthEvents
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser",
  "MaxResults": 2
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "AuthEvents": [
        {
            "ChallengeResponses": [
                {
                    "ChallengeName": "Password",
                    "ChallengeResponse": "Success"
                }
            ],
            "CreationDate": 1.7232229982E9,
            "EventContextData": {
                "City": "null",
                "Country": "United States",
                "IpAddress": "192.0.2.1"
            },
            "EventId": "7875548a-bd00-490a-93b8-fa36fe42a3e0",
            "EventResponse": "Pass",
            "EventRisk": {
                "CompromisedCredentialsDetected": false,
                "RiskDecision": "AccountTakeover",
                "RiskLevel": "Medium"
            },
            "EventType": "SignIn"
        },
        {
            "ChallengeResponses": [
                {
                    "ChallengeName": "Password",
                    "ChallengeResponse": "Success"
                }
            ],
            "CreationDate": 1.723136049929E9,
            "EventContextData": {
                "City": "Loughborough",
                "Country": "United Kingdom",
                "DeviceName": "Other, Other",
```

```
                "IpAddress": "192.0.2.99"
            },
            "EventId": "768d375c-ee6c-435e-a005-25c4981565c3",
            "EventResponse": "Pass",
            "EventRisk": {
                "CompromisedCredentialsDetected": false,
                "RiskDecision": "AccountTakeover",
                "RiskLevel": "Low"
            },
            "EventType": "SignIn"
        }
    ],
    "NextToken": "768d375c-ee6c-435e-a005-25c4981565c3#2024-08-08T16:54:09.929Z"
}
```


See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminRemoveUserFromGroup

Given a username and a group name, removes them from the group. User pool groups are identifiers that you can reference from the contents of ID and access tokens, and set preferred IAM roles for identity-pool authentication. For more information, see Adding groups to a user pool.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "GroupName": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

GroupName

The name of the group that you want to remove the user from, for example `MyTestGroup`.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool that contains the group and the user that you want to remove.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example removes the user "testuser" from the group "MyExampleGroup1."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminRemoveUserFromGroup
```

```
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "GroupName": "MyExampleGroup1",
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminResetUserPassword

Resets the specified user's password in a user pool. This operation doesn't change the user's password, but sends a password-reset code.

This operation is the administrative API equivalent to ForgotPassword.

This operation deactivates a user's password, requiring them to change it. If a user tries to sign in after the API request, Amazon Cognito responds with a `PasswordResetRequiredException` error. Your app must then complete the forgot-password flow by prompting the user for their code and a new password, then submitting those values in a ConfirmForgotPassword request. In addition, if the user pool has phone verification selected and a verified phone number exists for the user, or if email verification is selected and a verified email exists for the user, calling this API will also result in sending a message to the end user with the code to change their password.

To use this API operation, your user pool must have self-service account recovery configured.

Use AdminSetUserPassword if you manage passwords as an administrator.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to

authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "ClientMetadata": {
      "string" : "string"
   },
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. The `AdminResetUserPassword` API operation invokes the function that is assigned to the *custom message* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your AdminResetUserPassword request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to reset the user's password.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example resets the password for the user "testuser" and passes a `ClientMetadata` object to Lambda trigger events that can take a `ForgotPassword` trigger source.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminResetUserPassword
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser",
  "ClientMetadata": {
        "MyTestKey": "MyTestValue"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

```
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminRespondToAuthChallenge

Some API operations in a user pool generate a challenge, like a prompt for an MFA code, for device authentication that bypasses MFA, or for a custom authentication challenge. An `AdminRespondToAuthChallenge` API request provides the answer to that challenge, like a code or a secure remote password (SRP). The parameters of a response to an authentication challenge vary with the type of challenge.

For more information about custom authentication challenges, see Custom authentication challenge Lambda triggers.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests

- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
   },
   "ChallengeName": "string",
   "ChallengeResponses": {
      "string" : "string"
   },
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "ContextData": {
      "EncodedData": "string",
      "HttpHeaders": [
         {
            "headerName": "string",
            "headerValue": "string"
         }
      ],
      "IpAddress": "string",
      "ServerName": "string",
      "ServerPath": "string"
   },
   "Session": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

ChallengeName

The name of the challenge that you are responding to.

Possible challenges include the following:

> **Note**
>
> All of the following challenges require `USERNAME` and, when the app client has a client secret, `SECRET_HASH` in the parameters.

- `WEB_AUTHN`: Respond to the challenge with the results of a successful authentication with a WebAuthn authenticator, or passkey. Examples of WebAuthn authenticators include biometric devices and security keys.
- `PASSWORD`: Respond with `USER_PASSWORD_AUTH` parameters: `USERNAME` (required), `PASSWORD` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- `PASSWORD_SRP`: Respond with `USER_SRP_AUTH` parameters: `USERNAME` (required), `SRP_A` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- `SELECT_CHALLENGE`: Respond to the challenge with `USERNAME` and an `ANSWER` that matches one of the challenge types in the `AvailableChallenges` response parameter.
- `SMS_MFA`: Respond with an `SMS_MFA_CODE` that your user pool delivered in an SMS message.
- `EMAIL_OTP`: Respond with an `EMAIL_OTP_CODE` that your user pool delivered in an email message.
- `PASSWORD_VERIFIER`: Respond with `PASSWORD_CLAIM_SIGNATURE`, `PASSWORD_CLAIM_SECRET_BLOCK`, and `TIMESTAMP` after client-side SRP calculations.

- CUSTOM_CHALLENGE: This is returned if your custom authentication flow determines that the user should pass another challenge before tokens are issued. The parameters of the challenge are determined by your Lambda function.
- DEVICE_SRP_AUTH: Respond with the initial parameters of device SRP authentication. For more information, see Signing in with a device.
- DEVICE_PASSWORD_VERIFIER: Respond with PASSWORD_CLAIM_SIGNATURE, PASSWORD_CLAIM_SECRET_BLOCK, and TIMESTAMP after client-side SRP calculations. For more information, see Signing in with a device.
- NEW_PASSWORD_REQUIRED: For users who are required to change their passwords after successful first login. Respond to this challenge with NEW_PASSWORD and any required attributes that Amazon Cognito returned in the requiredAttributes parameter. You can also set values for attributes that aren't required by your user pool and that your app client can write.

  Amazon Cognito only returns this challenge for users who have temporary passwords. When you create passwordless users, you must provide values for all required attributes.

  > **Note**
  >
  > In a NEW_PASSWORD_REQUIRED challenge response, you can't modify a required attribute that already has a value. In AdminRespondToAuthChallenge or RespondToAuthChallenge, set a value for any keys that Amazon Cognito returned in the requiredAttributes parameter, then use the AdminUpdateUserAttributes or UpdateUserAttributes API operation to modify the value of any additional attributes.

- MFA_SETUP: For users who are required to setup an MFA factor before they can sign in. The MFA types activated for the user pool will be listed in the challenge parameters MFAS_CAN_SETUP value.

  To set up time-based one-time password (TOTP) MFA, use the session returned in this challenge from InitiateAuth or AdminInitiateAuth as an input to AssociateSoftwareToken. Then, use the session returned by VerifySoftwareToken as an input to RespondToAuthChallenge or AdminRespondToAuthChallenge with challenge name MFA_SETUP to complete sign-in.

To set up SMS or email MFA, collect a phone_number or email attribute for the user. Then restart the authentication flow with an InitiateAuth or AdminInitiateAuth request.

Type: String

Valid Values: SMS_MFA | EMAIL_OTP | SOFTWARE_TOKEN_MFA | SELECT_MFA_TYPE | MFA_SETUP | PASSWORD_VERIFIER | CUSTOM_CHALLENGE | SELECT_CHALLENGE | DEVICE_SRP_AUTH | DEVICE_PASSWORD_VERIFIER | ADMIN_NO_SRP_AUTH | NEW_PASSWORD_REQUIRED | SMS_OTP | PASSWORD | WEB_AUTHN | PASSWORD_SRP

Required: Yes

ChallengeResponses

The responses to the challenge that you received in the previous request. Each challenge has its own required response parameters. The following examples are partial JSON request bodies that highlight challenge-response parameters.

> **Important**
>
> You must provide a SECRET_HASH parameter in all challenge responses to an app client that has a client secret. Include a DEVICE_KEY for device authentication.

SELECT_CHALLENGE

```
"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses":
{ "USERNAME": "[username]", "ANSWER": "[Challenge name]"}
```

Available challenges are PASSWORD, PASSWORD_SRP, EMAIL_OTP, SMS_OTP, and WEB_AUTHN.

Complete authentication in the SELECT_CHALLENGE response for PASSWORD, PASSWORD_SRP, and WEB_AUTHN:

- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "WEB_AUTHN", "USERNAME": "[username]", "CREDENTIAL": "[AuthenticationResponseJSON]"}`

  See AuthenticationResponseJSON.

- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "PASSWORD", "USERNAME": "[username]", "PASSWORD": "[password]"}`
- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "PASSWORD_SRP", "USERNAME": "[username]", "SRP_A": "[SRP_A]"}`

For `SMS_OTP` and `EMAIL_OTP`, respond with the username and answer. Your user pool will send a code for the user to submit in the next challenge response.

- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "SMS_OTP", "USERNAME": "[username]"}`
- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "EMAIL_OTP", "USERNAME": "[username]"}`

SMS_OTP

```
"ChallengeName": "SMS_OTP", "ChallengeResponses": {"SMS_OTP_CODE":
"[code]", "USERNAME": "[username]"}
```

EMAIL_OTP

```
"ChallengeName": "EMAIL_OTP", "ChallengeResponses": {"EMAIL_OTP_CODE":
"[code]", "USERNAME": "[username]"}
```

SMS_MFA

```
"ChallengeName": "SMS_MFA", "ChallengeResponses": {"SMS_MFA_CODE":
"[code]", "USERNAME": "[username]"}
```

PASSWORD_VERIFIER

This challenge response is part of the SRP flow. Amazon Cognito requires that your application respond to this challenge within a few seconds. When the response time exceeds this period, your user pool returns a `NotAuthorizedException` error.

```
"ChallengeName": "PASSWORD_VERIFIER", "ChallengeResponses":
{"PASSWORD_CLAIM_SIGNATURE": "[claim_signature]",
"PASSWORD_CLAIM_SECRET_BLOCK": "[secret_block]", "TIMESTAMP":
[timestamp], "USERNAME": "[username]"}
```

Add `"DEVICE_KEY"` when you sign in with a remembered device.

CUSTOM_CHALLENGE

```
"ChallengeName": "CUSTOM_CHALLENGE", "ChallengeResponses":
{"USERNAME": "[username]", "ANSWER": "[challenge_answer]"}
```

Add "DEVICE_KEY" when you sign in with a remembered device.

NEW_PASSWORD_REQUIRED

```
"ChallengeName": "NEW_PASSWORD_REQUIRED", "ChallengeResponses":
{"NEW_PASSWORD": "[new_password]", "USERNAME": "[username]"}
```

To set any required attributes that InitiateAuth returned in an requiredAttributes parameter, add "userAttributes.[attribute_name]": "[attribute_value]". This parameter can also set values for writable attributes that aren't required by your user pool.

> **Note**
>
> In a NEW_PASSWORD_REQUIRED challenge response, you can't modify a required attribute that already has a value. In AdminRespondToAuthChallenge or RespondToAuthChallenge, set a value for any keys that Amazon Cognito returned in the requiredAttributes parameter, then use the AdminUpdateUserAttributes or UpdateUserAttributes API operation to modify the value of any additional attributes.

SOFTWARE_TOKEN_MFA

```
"ChallengeName": "SOFTWARE_TOKEN_MFA", "ChallengeResponses":
{"USERNAME": "[username]", "SOFTWARE_TOKEN_MFA_CODE":
[authenticator_code]}
```

DEVICE_SRP_AUTH

```
"ChallengeName": "DEVICE_SRP_AUTH", "ChallengeResponses": {"USERNAME":
"[username]", "DEVICE_KEY": "[device_key]", "SRP_A": "[srp_a]"}
```

DEVICE_PASSWORD_VERIFIER

```
"ChallengeName": "DEVICE_PASSWORD_VERIFIER", "ChallengeResponses":
{"DEVICE_KEY": "[device_key]", "PASSWORD_CLAIM_SIGNATURE":
```

```
"[claim_signature]", "PASSWORD_CLAIM_SECRET_BLOCK": "[secret_block]",
"TIMESTAMP": [timestamp], "USERNAME": "[username]"}
```

MFA_SETUP

```
"ChallengeName": "MFA_SETUP", "ChallengeResponses": {"USERNAME":
"[username]"}, "SESSION": "[Session ID from VerifySoftwareToken]"
```

SELECT_MFA_TYPE

```
"ChallengeName": "SELECT_MFA_TYPE", "ChallengeResponses": {"USERNAME":
"[username]", "ANSWER": "[SMS_MFA or SOFTWARE_TOKEN_MFA]"}
```

For more information about SECRET_HASH, see Computing secret hash values. For information about DEVICE_KEY, see Working with user devices in your user pool.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ClientId

The ID of the app client where you initiated sign-in.

Type: String

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

Pattern: [\w+]+

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the AdminRespondToAuthChallenge API action, Amazon Cognito invokes any functions that you have assigned to the following triggers:

- Pre sign-up
- custom message
- Post authentication
- User migration
- Pre token generation
- Define auth challenge
- Create auth challenge
- Verify auth challenge response

When Amazon Cognito invokes any of these functions, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute that provides the data that you assigned to the ClientMetadata parameter in your AdminRespondToAuthChallenge request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: ContextDataType object

Required: No

Session

The session identifier that maintains the state of authentication requests and challenge responses. If an `AdminInitiateAuth` or `AdminRespondToAuthChallenge` API request results in a determination that your application must pass another challenge, Amazon Cognito returns a session with other challenge parameters. Send this session identifier, unmodified, to the next `AdminRespondToAuthChallenge` request.

Type: String

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

Required: No

UserPoolId

The ID of the user pool where you want to respond to an authentication challenge.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
```

```
   "AuthenticationResult": {
      "AccessToken": "string",
      "ExpiresIn": number,
      "IdToken": "string",
      "NewDeviceMetadata": {
         "DeviceGroupKey": "string",
         "DeviceKey": "string"
      },
      "RefreshToken": "string",
      "TokenType": "string"
   },
   "ChallengeName": "string",
   "ChallengeParameters": {
      "string" : "string"
   },
   "Session": "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.

AuthenticationResult

The outcome of a successful authentication process. After your application has passed all challenges, Amazon Cognito returns an `AuthenticationResult` with the JSON web tokens (JWTs) that indicate successful sign-in.

Type: AuthenticationResultType object

ChallengeName

The name of the next challenge that you must respond to.

Possible challenges include the following:

> **Note**
>
> All of the following challenges require `USERNAME` and, when the app client has a client secret, `SECRET_HASH` in the parameters.

- WEB_AUTHN: Respond to the challenge with the results of a successful authentication with a WebAuthn authenticator, or passkey. Examples of WebAuthn authenticators include biometric devices and security keys.
- PASSWORD: Respond with USER_PASSWORD_AUTH parameters: USERNAME (required), PASSWORD (required), SECRET_HASH (required if the app client is configured with a client secret), DEVICE_KEY.
- PASSWORD_SRP: Respond with USER_SRP_AUTH parameters: USERNAME (required), SRP_A (required), SECRET_HASH (required if the app client is configured with a client secret), DEVICE_KEY.
- SELECT_CHALLENGE: Respond to the challenge with USERNAME and an ANSWER that matches one of the challenge types in the `AvailableChallenges` response parameter.
- SMS_MFA: Respond with an SMS_MFA_CODE that your user pool delivered in an SMS message.
- EMAIL_OTP: Respond with an EMAIL_OTP_CODE that your user pool delivered in an email message.
- PASSWORD_VERIFIER: Respond with PASSWORD_CLAIM_SIGNATURE, PASSWORD_CLAIM_SECRET_BLOCK, and TIMESTAMP after client-side SRP calculations.
- CUSTOM_CHALLENGE: This is returned if your custom authentication flow determines that the user should pass another challenge before tokens are issued. The parameters of the challenge are determined by your Lambda function.
- DEVICE_SRP_AUTH: Respond with the initial parameters of device SRP authentication. For more information, see Signing in with a device.
- DEVICE_PASSWORD_VERIFIER: Respond with PASSWORD_CLAIM_SIGNATURE, PASSWORD_CLAIM_SECRET_BLOCK, and TIMESTAMP after client-side SRP calculations. For more information, see Signing in with a device.
- NEW_PASSWORD_REQUIRED: For users who are required to change their passwords after successful first login. Respond to this challenge with NEW_PASSWORD and any required attributes that Amazon Cognito returned in the `requiredAttributes` parameter. You can also set values for attributes that aren't required by your user pool and that your app client can write.

  Amazon Cognito only returns this challenge for users who have temporary passwords. When you create passwordless users, you must provide values for all required attributes.

> **Note**
>
> In a NEW_PASSWORD_REQUIRED challenge response, you can't modify a required attribute that already has a value. In AdminRespondToAuthChallenge or RespondToAuthChallenge, set a value for any keys that Amazon Cognito returned in the requiredAttributes parameter, then use the AdminUpdateUserAttributes or UpdateUserAttributes API operation to modify the value of any additional attributes.

- MFA_SETUP: For users who are required to setup an MFA factor before they can sign in. The MFA types activated for the user pool will be listed in the challenge parameters MFAS_CAN_SETUP value.

  To set up time-based one-time password (TOTP) MFA, use the session returned in this challenge from InitiateAuth or AdminInitiateAuth as an input to AssociateSoftwareToken. Then, use the session returned by VerifySoftwareToken as an input to RespondToAuthChallenge or AdminRespondToAuthChallenge with challenge name MFA_SETUP to complete sign-in.

  To set up SMS or email MFA, collect a phone_number or email attribute for the user. Then restart the authentication flow with an InitiateAuth or AdminInitiateAuth request.

Type: String

Valid Values: SMS_MFA | EMAIL_OTP | SOFTWARE_TOKEN_MFA | SELECT_MFA_TYPE | MFA_SETUP | PASSWORD_VERIFIER | CUSTOM_CHALLENGE | SELECT_CHALLENGE | DEVICE_SRP_AUTH | DEVICE_PASSWORD_VERIFIER | ADMIN_NO_SRP_AUTH | NEW_PASSWORD_REQUIRED | SMS_OTP | PASSWORD | WEB_AUTHN | PASSWORD_SRP

ChallengeParameters

The parameters that define your response to the next challenge.

Take the values in ChallengeParameters and provide values for them in the ChallengeResponses of the next AdminRespondToAuthChallenge request.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Session

The session identifier that maintains the state of authentication requests and challenge responses. If an `AdminInitiateAuth` or `AdminRespondToAuthChallenge` API request results in a determination that your application must pass another challenge, Amazon Cognito returns a session with other challenge parameters. Send this session identifier, unmodified, to the next `AdminRespondToAuthChallenge` request.

Type: String

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

Errors

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

AliasExistsException

This exception is thrown when a user tries to confirm the account with an email address or phone number that has already been supplied as an alias for a different user profile. This exception indicates that an account with this email address or phone already exists in a user pool that you've configured to use email address or phone number as a sign-in alias.

HTTP Status Code: 400

CodeMismatchException

This exception is thrown if the provided code doesn't match what the server was expecting.

HTTP Status Code: 400

ExpiredCodeException

This exception is thrown if a code has expired.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidPasswordException

This exception is thrown when Amazon Cognito encounters an invalid password.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

MFAMethodNotFoundException

This exception is thrown when Amazon Cognito can't find a multi-factor authentication (MFA) method.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordHistoryPolicyViolationException

The message returned when a user's new password matches a previous password and doesn't comply with the password-history policy.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

SoftwareTokenMFANotFoundException

This exception is thrown when the software token time-based one-time password (TOTP) multi-factor authentication (MFA) isn't activated for the user pool.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example provides an authenticator-app password in response to a TOTP challenge.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminRespondToAuthChallenge
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
```

```
{
 "ChallengeName": "SOFTWARE_TOKEN_MFA",
 "ClientId": "1example23456789",
 "UserPoolId": "us-west-2_EXAMPLE",
 "ChallengeResponses": {
  "USERNAME": "testuser",
  "SOFTWARE_TOKEN_MFA_CODE": "123456",
  "SECRET_HASH": "cKtx2L2fvV1FeAbk3iUPgCyXY+5B0ItO0ItxhFaLkeA="
 },
 "Session": "EXAMPLE_SESSION_TOKEN_FROM_ADMININITIATEAUTH..."
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "AuthenticationResult": {
  "AccessToken": "eyJraACCESSEXAMPLE...",
  "ExpiresIn": 3600,
  "IdToken": "eyJraIDEXAMPLE...",
  "NewDeviceMetadata": {
   "DeviceGroupKey": "-v7w9UcY6",
   "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
  },
  "RefreshToken": "eyJjREFRESHEXAMPLE...",
  "TokenType": "Bearer"
 },
 "ChallengeParameters": {}
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET

- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminSetUserMFAPreference

Sets the user's multi-factor authentication (MFA) preference, including which MFA options are activated, and if any are preferred. Only one factor can be set as preferred. The preferred MFA factor will be used to authenticate a user if multiple factors are activated. If multiple options are activated and no preference is set, a challenge to choose an MFA option will be returned during sign-in.

This operation doesn't reset an existing TOTP MFA for a user. To register a new TOTP factor for a user, make an AssociateSoftwareToken request. For more information, see TOTP software token MFA.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "EmailMfaSettings": {
      "Enabled": boolean,
      "PreferredMfa": boolean
   },
   "SMSMfaSettings": {
      "Enabled": boolean,
      "PreferredMfa": boolean
   },
   "SoftwareTokenMfaSettings": {
      "Enabled": boolean,
      "PreferredMfa": boolean
   },
```

```
    "Username": "string",
    "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

EmailMfaSettings

User preferences for email message MFA. Activates or deactivates email MFA and sets it as the preferred MFA method when multiple methods are available. To activate this setting, your user pool must be in the Essentials tier or higher.

Type: EmailMfaSettingsType object

Required: No

SMSMfaSettings

User preferences for SMS message MFA. Activates or deactivates SMS MFA and sets it as the preferred MFA method when multiple methods are available.

Type: SMSMfaSettingsType object

Required: No

SoftwareTokenMfaSettings

User preferences for time-based one-time password (TOTP) MFA. Activates or deactivates TOTP MFA and sets it as the preferred MFA method when multiple methods are available. This operation can set TOTP as a user's preferred MFA method before they register a TOTP authenticator.

Type: SoftwareTokenMfaSettingsType object

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias

attribute in your user pool, this value must be the sub of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to set a user's MFA preferences.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request sets the user "testuser" to have both SMS and TOTP sign-in available, but to prefer SMS messages.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminSetUserMFAPreference
User-Agent: <UserAgentString>
```

```
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser",
  "SMSMfaSettings": {
    "Enabled": true,
    "PreferredMfa": true
  },
  "SoftwareTokenMfaSettings": {
    "Enabled": true,
    "PreferredMfa": false
  }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3

- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminSetUserPassword

Sets the specified user's password in a user pool. This operation administratively sets a temporary or permanent password for a user. With this operation, you can bypass self-service password changes and permit immediate sign-in with the password that you set. To do this, set `Permanent` to `true`.

You can also set a new temporary password in this request, send it to a user, and require them to choose a new password on their next sign-in. To do this, set `Permanent` to `false`.

If the password is temporary, the user's `Status` becomes `FORCE_CHANGE_PASSWORD`. When the user next tries to sign in, the `InitiateAuth` or `AdminInitiateAuth` response includes the `NEW_PASSWORD_REQUIRED` challenge. If the user doesn't sign in before the temporary password expires, they can no longer sign in and you must repeat this operation to set a temporary or permanent password for them.

After the user sets a new password, or if you set a permanent password, their status becomes `Confirmed`.

`AdminSetUserPassword` can set a password for the user profile that Amazon Cognito creates for third-party federated users. When you set a password, the federated user's status changes from `EXTERNAL_PROVIDER` to `CONFIRMED`. A user in this state can sign in as a federated user, and initiate authentication flows in the API like a linked native user. They can also modify their password and attributes in token-authenticated API requests like `ChangePassword` and `UpdateUserAttributes`. As a best security practice and to keep users in sync with your external IdP, don't set passwords on federated user profiles. To set up a federated user for native sign-in with a linked native user, refer to Linking federated users to an existing user profile.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests

- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Password": "string",
   "Permanent": boolean,
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Password

The new temporary or permanent password that you want to set for the user. You can't remove the password for a user who already has a password so that they can only sign in with passwordless methods. In this scenario, you must create a new user without a password.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\S]+`

Required: Yes

Permanent

Set to `true` to set a password that the user can immediately sign in with. Set to `false` to set a temporary password that the user must change on their next sign-in.

Type: Boolean

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to set the user's password.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidPasswordException

This exception is thrown when Amazon Cognito encounters an invalid password.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordHistoryPolicyViolationException

The message returned when a user's new password matches a previous password and doesn't comply with the password-history policy.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request sets the user "testuser" to have the password "MyExamplePassword1=", and to be able to sign in with that password without a reset.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminSetUserPassword
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "Password": "MyExamplePassword1=",
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser",
  "Permanent": true
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3

- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminSetUserSettings

This action is no longer supported. You can use it to configure only SMS MFA. You can't use it to configure time-based one-time password (TOTP) software token MFA.

To configure all types of MFA, use AdminSetUserMFAPreference instead.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "MFAOptions": [
      {
         "AttributeName": "string",
         "DeliveryMedium": "string"
      }
   ],
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

MFAOptions

You can use this parameter only to set an SMS configuration that uses SMS for delivery.

Type: Array of MFAOptionType objects

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool that contains the user whose options you're setting.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin

- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminUpdateAuthEventFeedback

Provides the feedback for an authentication event generated by threat protection features. Your response indicates that you think that the event either was from a valid user or was an unwanted authentication attempt. This feedback improves the risk evaluation decision for the user pool as part of Amazon Cognito threat protection. To activate this setting, your user pool must be on the Plus tier.

To train the threat-protection model to recognize trusted and untrusted sign-in characteristics, configure threat protection in audit-only mode and provide a mechanism for users or administrators to submit feedback. Your feedback can tell Amazon Cognito that a risk rating was assigned at a level you don't agree with.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "EventId": "string",
   "FeedbackValue": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

EventId

The ID of the threat protection authentication event that you want to update.

To query authentication events for a user, see AdminListUserAuthEvents.

Type: String

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

Pattern: `[\w+-]+`

Required: Yes

FeedbackValue

Your feedback to the authentication event. When you provide a `FeedbackValue` value of `valid`, you tell Amazon Cognito that you trust a user session where Amazon Cognito has evaluated some level of risk. When you provide a `FeedbackValue` value of `invalid`, you tell Amazon Cognito that you don't trust a user session, or you don't believe that Amazon Cognito evaluated a high-enough risk level.

Type: String

Valid Values: `Valid | Invalid`

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to submit authentication-event feedback.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

UserPoolAddOnNotEnabledException

This exception is thrown when user pool add-ons aren't enabled.

HTTP Status Code: 400

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminUpdateDeviceStatus

Updates the status of a user's device so that it is marked as remembered or not remembered for the purpose of device authentication. Device authentication is a "remember me" mechanism that silently completes sign-in from trusted devices with a device key instead of a user-provided MFA code. This operation changes the status of a device without deleting it, so you can enable it again later. For more information about device authentication, see Working with devices.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "DeviceKey": "string",
   "DeviceRememberedStatus": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

DeviceKey

The unique identifier, or device key, of the device that you want to update the status for.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: Yes

DeviceRememberedStatus

To enable device authentication with the specified device, set to `remembered`.To disable, set to `not_remembered`.

Type: String

Valid Values: `remembered | not_remembered`

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to change a user's device status.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request sets the device with key "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE11111" to be remembered for device authentication in future sign-in attempts.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminUpdateDeviceStatus
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser",
  "DeviceRememberedStatus": "remembered"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminUpdateUserAttributes

Updates the specified user's attributes. To delete an attribute from your user, submit the attribute in your API request with a blank value.

For custom attributes, you must add a `custom:` prefix to the attribute name, for example `custom:department`.

This operation can set a user's email address or phone number as verified and permit immediate sign-in in user pools that require verification of these attributes. To do this, set the `email_verified` or phone_number_verified attribute to `true`.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and

into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Request Syntax

```
{
   "ClientMetadata": {
      "string" : "string"
   },
   "UserAttributes": [
      {
         "Name": "string",
         "Value": "string"
      }
   ],
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the AdminUpdateUserAttributes API action, Amazon Cognito invokes the function that is assigned to the *custom message* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your AdminUpdateUserAttributes request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

UserAttributes

An array of name-value pairs representing user attributes.

For custom attributes, you must prepend the `custom:` prefix to the attribute name.

If your user pool requires verification before Amazon Cognito updates an attribute value that you specify in this request, Amazon Cognito doesn't immediately update the value of that attribute. After your user receives and responds to a verification message to verify the new value, Amazon Cognito updates the attribute value. Your user can sign in and receive messages with the original attribute value until they verify the new value.

To skip the verification message and update the value of an attribute that requires verification in the same API request, include the `email_verified` or `phone_number_verified` attribute, with a value of `true`. If you set the `email_verified` or `phone_number_verified` value for an `email` or `phone_number` attribute that requires verification to `true`, Amazon Cognito doesn't send a verification message to your user.

Type: Array of AttributeType objects

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to update user attributes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

AliasExistsException

This exception is thrown when a user tries to confirm the account with an email address or phone number that has already been supplied as an alias for a different user profile. This exception indicates that an account with this email address or phone already exists in a user pool that you've configured to use email address or phone number as a sign-in alias.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request sets the values of two attributes for "testuser."
The request also includes client metadata that the user pool passes on in a `CustomMessage_UpdateUserAttribute` Lambda trigger event.

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminUpdateUserAttributes
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "UserAttributes": [
      {
          "Name": "custom:deliverables",
          "Value": "project-111222"
      },
      {
          "Name": "name",
          "Value": "John"
      }
  ],
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser",
  "ClientMetadata": {
        "MyTestKey": "MyTestValue"
  }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

AdminUserGlobalSignOut

Invalidates the identity, access, and refresh tokens that Amazon Cognito issued to a user. Call this operation with your administrative credentials when your user signs out of your app. This results in the following behavior.

- Amazon Cognito no longer accepts *token-authorized* user operations that you authorize with a signed-out user's access tokens. For more information, see Using the Amazon Cognito user pools API and user pool endpoints.

  Amazon Cognito returns an `Access Token has been revoked` error when your app attempts to authorize a user pools API request with a revoked access token that contains the scope `aws.cognito.signin.user.admin`.
- Amazon Cognito no longer accepts a signed-out user's ID token in a GetId request to an identity pool with `ServerSideTokenCheck` enabled for its user pool IdP configuration in CognitoIdentityProvider.
- Amazon Cognito no longer accepts a signed-out user's refresh tokens in refresh requests.

Other requests might be valid until your user's token expires. This operation doesn't clear the managed login session cookie. To clear the session for a user who signed in with managed login or the classic hosted UI, direct their browser session to the logout endpoint.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to sign out a user.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request signs out the user "testuser."

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AdminUserGlobalSignOut
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "UserPoolId": "us-west-2_EXAMPLE",
  "Username": "testuser",
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3

- Amazon SDK for Python
- Amazon SDK for Ruby V3

AssociateSoftwareToken

Begins setup of time-based one-time password (TOTP) multi-factor authentication (MFA) for a user, with a unique private key that Amazon Cognito generates and returns in the API response. You can authorize an `AssociateSoftwareToken` request with either the user's access token, or a session string from a challenge response that you received from Amazon Cognito.

> **Note**
>
> Amazon Cognito disassociates an existing software token when you verify the new token in a VerifySoftwareToken API request. If you don't verify the software token and your user pool doesn't require MFA, the user can then authenticate with user name and password credentials alone. If your user pool requires TOTP MFA, Amazon Cognito generates an `MFA_SETUP` or `SOFTWARE_TOKEN_SETUP` challenge each time your user signs in. Complete setup with `AssociateSoftwareToken` and `VerifySoftwareToken`.
> After you set up software token MFA for your user, Amazon Cognito generates a `SOFTWARE_TOKEN_MFA` challenge when they authenticate. Respond to this challenge with your user's TOTP.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

Request Syntax

```
{
   "AccessToken": "string",
   "Session": "string"
```

```
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

You can provide either an access token or a session ID in the request.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: No

Session

The session identifier that maintains the state of authentication requests and challenge responses. In `AssociateSoftwareToken`, this is the session ID from a successful sign-in. You can provide either an access token or a session ID in the request.

Type: String

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

Required: No

Response Syntax

```
{
   "SecretCode": "string",
   "Session": "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.

SecretCode

A unique generated shared secret code that is used by the TOTP algorithm to generate a one-time code.

Type: String

Length Constraints: Minimum length of 16.

Pattern: `[A-Za-z0-9]+`

Session

The session identifier that maintains the state of authentication requests and challenge responses.

This session ID is valid for the next request in this flow, VerifySoftwareToken.

Type: String

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

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

SoftwareTokenMFANotFoundException

This exception is thrown when the software token time-based one-time password (TOTP) multi-factor authentication (MFA) isn't activated for the user pool.

HTTP Status Code: 400

Examples

Example

The following example request generates a TOTP private key for the user who the access key was issued to.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.AssociateSoftwareToken
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
```

```
Content-Length: <PayloadSizeBytes>
{
  "AccessToken": "eyJraACCESSEXAMPLE..."
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "SecretCode": "PRIVATECODEEXAMPLE..."
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ChangePassword

Changes the password for the currently signed-in user.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "PreviousPassword": "string",
   "ProposedPassword": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the user whose password you want to change.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

PreviousPassword

The user's previous password. Required if the user has a password. If the user has no password and only signs in with passwordless authentication options, you can omit this parameter.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\S]+`

Required: No

ProposedPassword

A new password that you prompted the user to enter in your application.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\S]+`

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidPasswordException

This exception is thrown when Amazon Cognito encounters an invalid password.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordHistoryPolicyViolationException

The message returned when a user's new password matches a previous password and doesn't comply with the password-history policy.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example changes the password of the user with the access key "eyJra456defEXAMPLE" and current password "MyCurrentPassword1!".

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ChangePassword
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "PreviousPassword": "MyCurrentPassword1!",
   "ProposedPassword": "MyNewPassword2!"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
```

```
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

CompleteWebAuthnRegistration

Completes registration of a passkey authenticator for the currently signed-in user.

Your application provides data from a successful registration request with the data from the output of a StartWebAuthnRegistration.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

Request Syntax

```
{
   "AccessToken": "string",
   "Credential": JSON value
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Credential

A RegistrationResponseJSON public-key credential response from the user's passkey provider.

Type: JSON value

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

WebAuthnChallengeNotFoundException

This exception is thrown when the challenge from `StartWebAuthn` registration has expired.

HTTP Status Code: 400

WebAuthnClientMismatchException

This exception is thrown when the access token is for a different client than the one in the original `StartWebAuthnRegistration` request.

HTTP Status Code: 400

WebAuthnCredentialNotSupportedException

This exception is thrown when a user presents passkey credentials from an unsupported device or provider.

HTTP Status Code: 400

WebAuthnNotEnabledException

This exception is thrown when the passkey feature isn't enabled for the user pool.

HTTP Status Code: 400

WebAuthnOriginNotAllowedException

This exception is thrown when the passkey credential's registration origin does not align with the user pool relying party id.

HTTP Status Code: 400

WebAuthnRelyingPartyMismatchException

This exception is thrown when the given passkey credential is associated with a different relying party ID than the user pool relying party ID.

HTTP Status Code: 400

Examples

Example

The following example completes passkey registration for the user with access token "eyJra456defEXAMPLE".

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CompleteWebAuthnRegistration
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "Credential": "[RegistrationResponseJSON]"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ConfirmDevice

Confirms a device that a user wants to remember. A remembered device is a "Remember me on this device" option for user pools that perform authentication with the device key of a trusted device in the back end, instead of a user-provided MFA code. For more information about device authentication, see Working with user devices in your user pool.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "DeviceKey": "string",
   "DeviceName": "string",
   "DeviceSecretVerifierConfig": {
      "PasswordVerifier": "string",
      "Salt": "string"
   }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

DeviceKey

The unique identifier, or device key, of the device that you want to update the status for.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: Yes

DeviceName

A friendly name for the device, for example `MyMobilePhone`.

Type: String

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

Required: No

DeviceSecretVerifierConfig

The configuration of the device secret verifier.

Type: DeviceSecretVerifierConfigType object

Required: No

Response Syntax

```
{
   "UserConfirmationNecessary": boolean
}
```

Response Elements

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

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

UserConfirmationNecessary

When `true`, your user must confirm that they want to remember the device. Prompt the user for an answer.

You must then make an UpdateDeviceStatus request that sets the device to `remembered` or `not_remembered`.

When `false`, immediately sets the device as remembered and eligible for device authentication.

You can configure your user pool to always remember devices, in which case this response is `false`, or to allow users to opt in, in which case this response is `true`. Configure this option under *Device tracking* in the *Sign-in* menu of your user pool.

You can also configure this option with the `DeviceConfiguration` parameter of a CreateUserPool or UpdateUserPool request.

Type: Boolean

Errors

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

DeviceKeyExistsException

This exception is thrown when a user attempts to confirm a device with a device key that already exists.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidPasswordException

This exception is thrown when Amazon Cognito encounters an invalid password.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UsernameExistsException

This exception is thrown when Amazon Cognito encounters a user name that already exists in the user pool.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request confirms a device for the user with the access token "eyJra456defEXAMPLE". In the user pool in this example, the user must confirm that they want to remember the device with a new UpdateDeviceStatus request that sets `DeviceRememberedStatus` to `true` for the device with key `a1b2c3d4-5678-90ab-cdef-EXAMPLE11111`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ConfirmDevice
```

```
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "DeviceKey": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
   "DeviceName": "MyMobileDevice",
   "DeviceSecretVerifierConfig": {
      "PasswordVerifier": "[calculated verifier string]",
      "Salt": "[salt]"
   }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
   "UserConfirmationNecessary": true
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3

- Amazon SDK for Python
- Amazon SDK for Ruby V3

ConfirmForgotPassword

This public API operation accepts a confirmation code that Amazon Cognito sent to a user and accepts a new password for that user.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
   },
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "ConfirmationCode": "string",
   "Password": "string",
   "SecretHash": "string",
   "UserContextData": {
      "EncodedData": "string",
      "IpAddress": "string"
   },
   "Username": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

ClientId

The ID of the app client where the user wants to reset their password. This parameter is an identifier of the client application that users are resetting their password from, but this operation resets users' irrespective of the app clients they sign in to.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the ConfirmForgotPassword API action, Amazon Cognito invokes the function that is assigned to the *post confirmation* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your ConfirmForgotPassword request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:

- Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
- Validate the `ClientMetadata` value.
- Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ConfirmationCode

The confirmation code that your user pool delivered when your user requested to reset their password.

Your user pool sends these codes in response to AdminResetUserPassword or ForgotPassword requests.

Type: String

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

Pattern: `[\S]+`

Required: Yes

Password

The new password that your user wants to set.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\S]+`

Required: Yes

SecretHash

A keyed-hash message authentication code (HMAC) calculated using the secret key of a user pool client and username plus the client ID in the message. For more information about `SecretHash`, see Computing secret hash values.

Type: String

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

Pattern: `[\w+=/]+`

Required: No

UserContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: UserContextDataType object

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Response Elements

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

Errors

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

CodeMismatchException

This exception is thrown if the provided code doesn't match what the server was expecting.

HTTP Status Code: 400

ExpiredCodeException

This exception is thrown if a code has expired.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidPasswordException

This exception is thrown when Amazon Cognito encounters an invalid password.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordHistoryPolicyViolationException

The message returned when a user's new password matches a previous password and doesn't comply with the password-history policy.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyFailedAttemptsException

This exception is thrown when the user has made too many failed attempts for a given action, such as sign-in.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request sets a new password for the user "testuser".

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ConfirmForgotPassword
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "ConfirmationCode": "123456",
   "Password": "MyNewPassword1!",
   "Username": "testuser"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ConfirmSignUp

Confirms the account of a new user. This public API operation submits a code that Amazon Cognito sent to your user when they signed up in your user pool. After your user enters their code, they confirm ownership of the email address or phone number that they provided, and their user account becomes active. Depending on your user pool configuration, your users will receive their confirmation code in an email or SMS message.

Local users who signed up in your user pool are the only type of user who can confirm sign-up with a code. Users who federate through an external identity provider (IdP) have already been confirmed by their IdP.

Administrator-created users, users created with the AdminCreateUser API operation, confirm their accounts when they respond to their invitation email message and choose a password. They do not receive a confirmation code. Instead, they receive a temporary password.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
   },
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "ConfirmationCode": "string",
   "ForceAliasCreation": boolean,
   "SecretHash": "string",
   "Session": "string",
```

```
    "UserContextData": {
       "EncodedData": "string",
       "IpAddress": "string"
    },
    "Username": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

ClientId

The ID of the app client associated with the user pool.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the ConfirmSignUp API action, Amazon Cognito invokes the function that

is assigned to the *post confirmation* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your ConfirmSignUp request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ConfirmationCode

The confirmation code that your user pool sent in response to the `SignUp` request.

Type: String

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

Pattern: `[\S]+`

Required: Yes

ForceAliasCreation

When `true`, forces user confirmation despite any existing aliases. Defaults to `false`. A value of `true` migrates the alias from an existing user to the new user if an existing user already has the phone number or email address as an alias.

Say, for example, that an existing user has an `email` attribute of `bob@example.com` and email is an alias in your user pool. If the new user also has an email of `bob@example.com` and your `ConfirmSignUp` response sets `ForceAliasCreation` to `true`, the new user can sign in with a username of `bob@example.com` and the existing user can no longer do so.

If `false` and an attribute belongs to an existing alias, this request returns an **AliasExistsException** error.

For more information about sign-in aliases, see Customizing sign-in attributes.

Type: Boolean

Required: No

SecretHash

A keyed-hash message authentication code (HMAC) calculated using the secret key of a user pool client and username plus the client ID in the message. For more information about `SecretHash`, see Computing secret hash values.

Type: String

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

Pattern: `[\w+=/]+`

Required: No

Session

The optional session ID from a `SignUp` API request. You can sign in a user directly from the sign-up process with the `USER_AUTH` authentication flow.

Type: String

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

Required: No

UserContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: UserContextDataType object

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Response Syntax

```
{
   "Session": "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.

Session

A session identifier that you can use to immediately sign in the confirmed user. You can automatically sign users in with the one-time password that they provided in a successful `ConfirmSignUp` request.

To do this, pass the `Session` parameter from this response in the `Session` parameter of an InitiateAuth or AdminInitiateAuth request.

Type: String

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

Errors

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

AliasExistsException

This exception is thrown when a user tries to confirm the account with an email address or phone number that has already been supplied as an alias for a different user profile. This exception indicates that an account with this email address or phone already exists in a user pool that you've configured to use email address or phone number as a sign-in alias.

HTTP Status Code: 400

CodeMismatchException

This exception is thrown if the provided code doesn't match what the server was expecting.

HTTP Status Code: 400

ExpiredCodeException

This exception is thrown if a code has expired.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyFailedAttemptsException

This exception is thrown when the user has made too many failed attempts for a given action, such as sign-in.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request confirms sign-up for the user "testuser" with the submitted confirmation code 123456. The response includes a session ID that your application can pass to InitiateAuth or AdminInitiateAuth for automatic email or SMS OTP sign-in with the already-submitted 123456 confirmation code.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ConfirmSignUp
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
```

```
    "ClientId": "1example23456789",
    "ConfirmationCode": "123456",
    "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
   "Session":"AYABeC1-
y8qooiuysEv0uM4wAqQAHQABAAdTZXJ2aWNlABBDb2duaXRvVXNlclBvb2xzAAEAB2F3cy1rbXMAS2Fybjphd3M6a21zOnV
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

CreateGroup

Creates a new group in the specified user pool. For more information about user pool groups, see Adding groups to a user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Description": "string",
   "GroupName": "string",
   "Precedence": number,
   "RoleArn": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Description

A description of the group that you're creating.

Type: String

Length Constraints: Maximum length of 2048.

Required: No

GroupName

A name for the group. This name must be unique in your user pool.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Precedence

A non-negative integer value that specifies the precedence of this group relative to the other groups that a user can belong to in the user pool. Zero is the highest precedence value. Groups with lower `Precedence` values take precedence over groups with higher or null `Precedence` values. If a user belongs to two or more groups, it is the group with the lowest precedence value whose role ARN is given in the user's tokens for the `cognito:roles` and `cognito:preferred_role` claims.

Two groups can have the same `Precedence` value. If this happens, neither group takes precedence over the other. If two groups with the same `Precedence` have the same role ARN, that role is used in the `cognito:preferred_role` claim in tokens for users in each group. If the two groups have different role ARNs, the `cognito:preferred_role` claim isn't set in users' tokens.

The default `Precedence` value is null. The maximum `Precedence` value is `2^31-1`.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

RoleArn

The Amazon Resource Name (ARN) for the IAM role that you want to associate with the group. A group role primarily declares a preferred role for the credentials that you get from an identity

pool. Amazon Cognito ID tokens have a `cognito:preferred_role` claim that presents the highest-precedence group that a user belongs to. Both ID and access tokens also contain a `cognito:groups` claim that list all the groups that a user is a member of.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

UserPoolId

The ID of the user pool where you want to create a user group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Group": {
      "CreationDate": number,
      "Description": "string",
      "GroupName": "string",
      "LastModifiedDate": number,
      "Precedence": number,
      "RoleArn": "string",
      "UserPoolId": "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.

Group

The response object for a created group.

Type: GroupType object

Errors

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

GroupExistsException

This exception is thrown when Amazon Cognito encounters a group that already exists in the user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example creates the group `ExampleGroup` with precedence 1.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateGroup
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "Description": "My Example Group",
   "GroupName": "ExampleGroup",
   "Precedence": 1,
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "Group": {
```

```
  "CreationDate": 1735240477.884,
  "Description": "My Example Group",
  "GroupName": "ExampleGroup",
  "LastModifiedDate": 1735240477.884,
  "Precedence": 1,
  "UserPoolId": "us-west-2_EXAMPLE"
 }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

CreateIdentityProvider

Adds a configuration and trust relationship between a third-party identity provider (IdP) and a user pool. Amazon Cognito accepts sign-in with third-party identity providers through managed login and OIDC relying-party libraries. For more information, see Third-party IdP sign-in.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "AttributeMapping": {
      "string" : "string"
   },
   "IdpIdentifiers": [ "string" ],
   "ProviderDetails": {
      "string" : "string"
   },
   "ProviderName": "string",
   "ProviderType": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AttributeMapping

A mapping of IdP attributes to standard and custom user pool attributes. Specify a user pool attribute as the key of the key-value pair, and the IdP attribute claim name as the value.

Type: String to string map

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

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

IdpIdentifiers

An array of IdP identifiers, for example `"IdPIdentifiers": [ "MyIdP", "MyIdP2" ]`. Identifiers are friendly names that you can pass in the `idp_identifier` query parameter of requests to the Authorize endpoint to silently redirect to sign-in with the associated IdP. Identifiers in a domain format also enable the use of email-address matching with SAML providers.

Type: Array of strings

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

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

Pattern: `[\w\s+=.@-]+`

Required: No

ProviderDetails

The scopes, URLs, and identifiers for your external identity provider. The following examples describe the provider detail keys for each IdP type. These values and their schema are subject to change. Social IdP `authorize_scopes` values must match the values listed here.

OpenID Connect (OIDC)

Amazon Cognito accepts the following elements when it can't discover endpoint URLs from `oidc_issuer`: `attributes_url`, `authorize_url`, `jwks_uri`, `token_url`.

Create or update request: `"ProviderDetails": { "attributes_request_method": "GET", "attributes_url": "https://auth.example.com/userInfo", "authorize_scopes": "openid profile email", "authorize_url": "https://`

```
auth.example.com/authorize", "client_id": "1example23456789",
"client_secret": "provider-app-client-secret", "jwks_uri": "https://
auth.example.com/.well-known/jwks.json", "oidc_issuer": "https://
auth.example.com", "token_url": "https://example.com/token" }
```

Describe response: `"ProviderDetails": { "attributes_request_method": "GET", "attributes_url": "https://auth.example.com/userInfo", "attributes_url_add_attributes": "false", "authorize_scopes": "openid profile email", "authorize_url": "https://auth.example.com/authorize", "client_id": "1example23456789", "client_secret": "provider-app-client-secret", "jwks_uri": "https://auth.example.com/.well-known/jwks.json", "oidc_issuer": "https://auth.example.com", "token_url": "https://example.com/token" }`

SAML

Create or update request with Metadata URL: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "MetadataURL": "https://auth.example.com/sso/saml/metadata", "RequestSigningAlgorithm": "rsa-sha256" }`

Create or update request with Metadata file: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "MetadataFile": "[metadata XML]", "RequestSigningAlgorithm": "rsa-sha256" }`

The value of `MetadataFile` must be the plaintext metadata document with all quote (") characters escaped by backslashes.

Describe response: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "ActiveEncryptionCertificate": "[certificate]", "MetadataURL": "https://auth.example.com/sso/saml/metadata", "RequestSigningAlgorithm": "rsa-sha256", "SLORedirectBindingURI": "https://auth.example.com/slo/saml", "SSORedirectBindingURI": "https://auth.example.com/sso/saml" }`

LoginWithAmazon

Create or update request: `"ProviderDetails": { "authorize_scopes": "profile postal_code", "client_id": "amzn1.application-oa2-`

client.1example23456789", "client_secret": "provider-app-client-secret"

Describe response: "ProviderDetails": { "attributes_url": "https://api.amazon.com/user/profile", "attributes_url_add_attributes": "false", "authorize_scopes": "profile postal_code", "authorize_url": "https://www.amazon.com/ap/oa", "client_id": "amzn1.application-oa2-client.1example23456789", "client_secret": "provider-app-client-secret", "token_request_method": "POST", "token_url": "https://api.amazon.com/auth/o2/token" }

Google

Create or update request: "ProviderDetails": { "authorize_scopes": "email profile openid", "client_id": "1example23456789.apps.googleusercontent.com", "client_secret": "provider-app-client-secret" }

Describe response: "ProviderDetails": { "attributes_url": "https://people.googleapis.com/v1/people/me?personFields=", "attributes_url_add_attributes": "true", "authorize_scopes": "email profile openid", "authorize_url": "https://accounts.google.com/o/oauth2/v2/auth", "client_id": "1example23456789.apps.googleusercontent.com", "client_secret": "provider-app-client-secret", "oidc_issuer": "https://accounts.google.com", "token_request_method": "POST", "token_url": "https://www.googleapis.com/oauth2/v4/token" }

SignInWithApple

Create or update request: "ProviderDetails": { "authorize_scopes": "email name", "client_id": "com.example.cognito", "private_key": "1EXAMPLE", "key_id": "2EXAMPLE", "team_id": "3EXAMPLE" }

Describe response: "ProviderDetails": { "attributes_url_add_attributes": "false", "authorize_scopes": "email name", "authorize_url": "https://appleid.apple.com/auth/authorize", "client_id": "com.example.cognito", "key_id": "1EXAMPLE", "oidc_issuer": "https://appleid.apple.com", "team_id": "2EXAMPLE", "token_request_method": "POST", "token_url": "https://appleid.apple.com/auth/token" }

Facebook

Create or update request: `"ProviderDetails": { "api_version": "v17.0", "authorize_scopes": "public_profile, email", "client_id": "1example23456789", "client_secret": "provider-app-client-secret" }`

Describe response: `"ProviderDetails": { "api_version": "v17.0", "attributes_url": "https://graph.facebook.com/v17.0/me?fields=", "attributes_url_add_attributes": "true", "authorize_scopes": "public_profile, email", "authorize_url": "https://www.facebook.com/v17.0/dialog/oauth", "client_id": "1example23456789", "client_secret": "provider-app-client-secret", "token_request_method": "GET", "token_url": "https://graph.facebook.com/v17.0/oauth/access_token" }`

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

ProviderName

The name that you want to assign to the IdP. You can pass the identity provider name in the `identity_provider` query parameter of requests to the Authorize endpoint to silently redirect to sign-in with the associated IdP.

Type: String

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

Pattern: `[^_\p{Z}][\p{L}\p{M}\p{S}\p{N}\p{P}][^_\p{Z}]+`

Required: Yes

ProviderType

The type of IdP that you want to add. Amazon Cognito supports OIDC, SAML 2.0, Login With Amazon, Sign In With Apple, Google, and Facebook IdPs.

Type: String

Valid Values: `SAML | Facebook | Google | LoginWithAmazon | SignInWithApple | OIDC`

Required: Yes

UserPoolId

The Id of the user pool where you want to create an IdP.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "IdentityProvider": {
      "AttributeMapping": {
         "string" : "string"
      },
      "CreationDate": number,
      "IdpIdentifiers": [ "string" ],
      "LastModifiedDate": number,
      "ProviderDetails": {
         "string" : "string"
      },
      "ProviderName": "string",
      "ProviderType": "string",
      "UserPoolId": "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.

IdentityProvider

The details of the new user pool IdP.

Type: IdentityProviderType object

Errors

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

DuplicateProviderException

This exception is thrown when the provider is already supported by the user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

This request adds a SAML IdP named `MySAMLIdP` to a user pool. The IdP is identified by a static `MetadataFile` in this request. Note the escape characters before the double-quotes in the metadata XML. You can also add a dynamic metadata source with `MetadataURL`. The SAML provider supports single logout (SLO) and provides the SLO endpoint in the metadata. Additionally, the SAML provider supports IdP-initiated SAML and encrypted responses.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateIdentityProvider
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
   "AttributeMapping": {
      "email" : "idp_email",
      "email_verified" : "idp_email_verified"
   },
   "IdpIdentifiers": [ "platform" ],
   "ProviderDetails": {
      "MetadataFile": "<md:EntityDescriptor xmlns:md=
\"urn:oasis:names:tc:SAML:2.0:metadata\" entityID=\"http://www.example.com/saml
\"><md:IDPSSODescriptor WantAuthnRequestsSigned=\"false\" protocolSupportEnumeration=
\"urn:oasis:names:tc:SAML:2.0:protocol\"><md:KeyDescriptor use=
\"signing\"><ds:KeyInfo xmlns:ds=\"http://www.w3.org/2000/09/xmldsig#
\"><ds:X509Data><ds:X509Certificate>CERTIFICATE_DATA</ds:X509Certificate></
```

```
ds:X509Data></ds:KeyInfo></md:KeyDescriptor><md:SingleLogoutService
 Binding=\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST\" Location=
\"https://example.com/slo/saml\"/><md:SingleLogoutService Binding=
\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect\" Location=\"https://example.com/
slo/saml\"/><md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified</
md:NameIDFormat><md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-
format:emailAddress</md:NameIDFormat><md:SingleSignOnService Binding=
\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST\" Location=\"https://example.com/sso/
saml\"/><md:SingleSignOnService Binding=\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-
Redirect\" Location=\"https://example.com/sso/saml\"/></md:IDPSSODescriptor></
md:EntityDescriptor>",
      "IDPSignout" : "true",
      "RequestSigningAlgorithm" : "rsa-sha256",
      "EncryptedResponses" : "true",
      "IDPInit" : "true"
   },
   "ProviderName": "MySAMLIdP",
   "ProviderType": "SAML",
   "UserPoolId": "us-east-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
 "IdentityProvider": {
  "AttributeMapping": {
     "email": "idp_email",
     "email_verified": "idp_email_verified"
  },
  "CreationDate": 1701128513.249,
  "IdpIdentifiers": [
     "example.com"
  ],
  "LastModifiedDate": 1701128513.249,
  "ProviderDetails": {
```

```
           "MetadataFile": "<md:EntityDescriptor xmlns:md=
\"urn:oasis:names:tc:SAML:2.0:metadata\" entityID=\"http://www.example.com/saml
\"><md:IDPSSODescriptor WantAuthnRequestsSigned=\"false\" protocolSupportEnumeration=
\"urn:oasis:names:tc:SAML:2.0:protocol\"><md:KeyDescriptor use=
\"signing\"><ds:KeyInfo xmlns:ds=\"http://www.w3.org/2000/09/xmldsig#
\"><ds:X509Data><ds:X509Certificate>CERTIFICATE_DATA</ds:X509Certificate></
ds:X509Data></ds:KeyInfo></md:KeyDescriptor><md:SingleLogoutService
 Binding=\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST\" Location=
\"https://example.com/slo/saml\"/><md:SingleLogoutService Binding=
\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect\" Location=\"https://example.com/
slo/saml\"/><md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified</
md:NameIDFormat><md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-
format:emailAddress</md:NameIDFormat><md:SingleSignOnService Binding=
\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST\" Location=\"https://example.com/sso/
saml\"/><md:SingleSignOnService Binding=\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-
Redirect\" Location=\"https://example.com/sso/saml\"/></md:IDPSSODescriptor></
md:EntityDescriptor>",
           "IDPSignout" : "true",
           "RequestSigningAlgorithm" : "rsa-sha256",
           "EncryptedResponses" : "true",
           "IDPInit" : "true"
  },
  "ProviderName": "MySAMLIdP",
  "ProviderType": "SAML",
  "UserPoolId": "us-east-1_EXAMPLE"
 }
}
```

Example

This request adds an OIDC IdP named `MyOIDCIdP` to a user pool. In this request, we have chosen not to discover the issuer endpoints with `oidc_issuer` but instead to enter them manually.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateIdentityProvider
User-Agent: <UserAgentString>
```

```
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
   "AttributeMapping": {
      "email" : "idp_email",
      "email_verified" : "idp_email_verified"
   },
   "IdpIdentifiers": [ "station" ],
   "ProviderDetails": {
        "attributes_request_method": "GET",
        "attributes_url": "https://example.com/userInfo",
        "attributes_url_add_attributes": "false",
        "authorize_scopes": "openid profile",
        "authorize_url": "https://example.com/authorize",
        "client_id": "idpexampleclient123",
        "client_secret": "idpexamplesecret456",
        "jwks_uri": "https://example.com/.well-known/jwks.json",
        "oidc_issuer": "https://example.com",
        "token_url": "https://example.com/token"
   },
   "ProviderName": "MyOIDCIdP",
   "ProviderType": "OIDC",
   "UserPoolId": "us-east-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
 "IdentityProvider": {
  "AttributeMapping": {
   "email": "idp_email",
   "email_verified": "idp_email_verified",
   "username": "sub"
```

```
  },
  "CreationDate": 1701129701.653,
  "IdpIdentifiers": [
   "station"
  ],
  "LastModifiedDate": 1701129701.653,
  "ProviderDetails": {
   "attributes_request_method": "GET",
   "attributes_url": "https://example.com/userInfo",
   "attributes_url_add_attributes": "false",
   "authorize_scopes": "openid profile",
   "authorize_url": "https://example.com/authorize",
   "client_id": "idpexampleclient123",
   "client_secret": "idpexamplesecret456",
   "jwks_uri": "https://example.com/.well-known/jwks.json",
   "oidc_issuer": "https://example.com",
   "token_url": "https://example.com/token"
  },
  "ProviderName": "MyOIDCIdP",
  "ProviderType": "OIDC",
  "UserPoolId": "us-east-1_EXAMPLE"
 }
}
```


See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python

- Amazon SDK for Ruby V3

CreateManagedLoginBranding

Creates a new set of branding settings for a user pool style and associates it with an app client. This operation is the programmatic option for the creation of a new style in the branding editor.

Provides values for UI customization in a `Settings` JSON object and image files in an `Assets` array. To send the JSON object `Document` type parameter in `Settings`, you might need to update to the most recent version of your Amazon SDK. To create a new style with default settings, set `UseCognitoProvidedValues` to `true` and don't provide values for any other options.

This operation has a 2-megabyte request-size limit and include the CSS settings and image assets for your app client. Your branding settings might exceed 2MB in size. Amazon Cognito doesn't require that you pass all parameters in one request and preserves existing style settings that you don't specify. If your request is larger than 2MB, separate it into multiple requests, each with a size smaller than the limit.

As a best practice, modify the output of DescribeManagedLoginBrandingByClient into the request parameters for this operation. To get all settings, set `ReturnMergedResources` to `true`. For more information, see API and SDK operations for managed login branding.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Assets": [
      {
         "Bytes": blob,
```

```
            "Category": "string",
            "ColorMode": "string",
            "Extension": "string",
            "ResourceId": "string"
        }
    ],
    "ClientId": "string",
    "Settings": JSON value,
    "UseCognitoProvidedValues": boolean,
    "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Assets

An array of image files that you want to apply to functions like backgrounds, logos, and icons. Each object must also indicate whether it is for dark mode, light mode, or browser-adaptive mode.

Type: Array of AssetType objects

Array Members: Minimum number of 0 items. Maximum number of 40 items.

Required: No

ClientId

The app client that you want to create the branding style for. Each style is linked to an app client until you delete it.

To change the style for an app client, delete the existing style with DeleteManagedLoginBranding and create a new one.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

Settings

A JSON file, encoded as a `Document` type, with the the settings that you want to apply to your style.

Type: JSON value

Required: No

UseCognitoProvidedValues

When true, applies the default branding style options. These default options are managed by Amazon Cognito. You can modify them later in the branding editor.

When you specify `true` for this option, you must also omit values for `Settings` and `Assets` in the request.

Type: Boolean

Required: No

UserPoolId

The ID of the user pool where you want to create a new branding style.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "ManagedLoginBranding": {
      "Assets": [
         {
            "Bytes": blob,
```

```
            "Category": "string",
            "ColorMode": "string",
            "Extension": "string",
            "ResourceId": "string"
         }
      ],
      "CreationDate": number,
      "LastModifiedDate": number,
      "ManagedLoginBrandingId": "string",
      "Settings": JSON value,
      "UseCognitoProvidedValues": boolean,
      "UserPoolId": "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.

ManagedLoginBranding

The details of the branding style that you created.

Type: ManagedLoginBrandingType object

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

ManagedLoginBrandingExistsException

This exception is thrown when you attempt to apply a managed login branding style to an app client that already has an assigned style.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example creates a new managed login branding style for the app client with ID `1example23456789`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.ca-central-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateManagedLoginBranding
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>


{
    "Assets": [
        {
            "Bytes":
 "PHN2ZyB3aWR0aD0iMjAwMDAiIGhlaWdodD0iNDAwIiB2aWV3Qm94PSIwIDAgMjAwMDAgNDAwIiBmaWxsPSJub25lIiB4b
+CjxyZWN0IHdpZHRoPSIyMDAwMCIgaGVpZ2h0PSI0MDAiIGZpbGw9InVybCgjcGFpbnQwX2xpbmVhcl8xNzI1OV8yMzY2Nz
+CjxsaW5lYXJHcmFkaWVudCBpZD0icGFpbnQwX2xpbmVhcl8xNzI1OV8yMzY2NzQiIHgxPSItODk0LjI0OSIgeTE9IjE5OS
+Cjwvc3ZnPgo=",
            "Category": "PAGE_FOOTER_BACKGROUND",
            "ColorMode": "DARK",
            "Extension": "SVG"
        }
    ],
    "ClientId": "1example23456789",
    "Settings": {
        "categories": {
            "auth": {
                "authMethodOrder": [
                    [
                        {
                            "display": "BUTTON",
                            "type": "FEDERATED"
                        },
                        {
                            "display": "INPUT",
                            "type": "USERNAME_PASSWORD"
                        }
                    ]
                ],
                "federation": {
                    "interfaceStyle": "BUTTON_LIST",
```

```
                "order": [
                ]
            }
        },
        "form": {
            "displayGraphics": true,
            "instructions": {
                "enabled": false
            },
            "languageSelector": {
                "enabled": false
            },
            "location": {
                "horizontal": "CENTER",
                "vertical": "CENTER"
            },
            "sessionTimerDisplay": "NONE"
        },
        "global": {
            "colorSchemeMode": "LIGHT",
            "pageFooter": {
                "enabled": false
            },
            "pageHeader": {
                "enabled": false
            },
            "spacingDensity": "REGULAR"
        },
        "signUp": {
            "acceptanceElements": [
                {
                    "enforcement": "NONE",
                    "textKey": "en"
                }
            ]
        }
    },
    "componentClasses": {
        "buttons": {
            "borderRadius": 8.0
        },
        "divider": {
            "darkMode": {
                "borderColor": "232b37ff"
```

```
            },
            "lightMode": {
                "borderColor": "ebebf0ff"
            }
        },
        "dropDown": {
            "borderRadius": 8.0,
            "darkMode": {
                "defaults": {
                    "itemBackgroundColor": "192534ff"
                },
                "hover": {
                    "itemBackgroundColor": "081120ff",
                    "itemBorderColor": "5f6b7aff",
                    "itemTextColor": "e9ebedff"
                },
                "match": {
                    "itemBackgroundColor": "d1d5dbff",
                    "itemTextColor": "89bdeeff"
                }
            },
            "lightMode": {
                "defaults": {
                    "itemBackgroundColor": "ffffffff"
                },
                "hover": {
                    "itemBackgroundColor": "f4f4f4ff",
                    "itemBorderColor": "7d8998ff",
                    "itemTextColor": "000716ff"
                },
                "match": {
                    "itemBackgroundColor": "414d5cff",
                    "itemTextColor": "0972d3ff"
                }
            }
        },
        "focusState": {
            "darkMode": {
                "borderColor": "539fe5ff"
            },
            "lightMode": {
                "borderColor": "0972d3ff"
            }
        },
```

```
            "idpButtons": {
                "icons": {
                    "enabled": true
                }
            },
            "input": {
                "borderRadius": 8.0,
                "darkMode": {
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "5f6b7aff"
                    },
                    "placeholderColor": "8d99a8ff"
                },
                "lightMode": {
                    "defaults": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "7d8998ff"
                    },
                    "placeholderColor": "5f6b7aff"
                }
            },
            "inputDescription": {
                "darkMode": {
                    "textColor": "8d99a8ff"
                },
                "lightMode": {
                    "textColor": "5f6b7aff"
                }
            },
            "inputLabel": {
                "darkMode": {
                    "textColor": "d1d5dbff"
                },
                "lightMode": {
                    "textColor": "000716ff"
                }
            },
            "link": {
                "darkMode": {
                    "defaults": {
                        "textColor": "539fe5ff"
                    },
                    "hover": {
```

```
                    "textColor": "89bdeeff"
                }
            },
            "lightMode": {
                "defaults": {
                    "textColor": "0972d3ff"
                },
                "hover": {
                    "textColor": "033160ff"
                }
            }
        },
        "optionControls": {
            "darkMode": {
                "defaults": {
                    "backgroundColor": "0f1b2aff",
                    "borderColor": "7d8998ff"
                },
                "selected": {
                    "backgroundColor": "539fe5ff",
                    "foregroundColor": "000716ff"
                }
            },
            "lightMode": {
                "defaults": {
                    "backgroundColor": "ffffffff",
                    "borderColor": "7d8998ff"
                },
                "selected": {
                    "backgroundColor": "0972d3ff",
                    "foregroundColor": "ffffffff"
                }
            }
        },
        "statusIndicator": {
            "darkMode": {
                "error": {
                    "backgroundColor": "1a0000ff",
                    "borderColor": "eb6f6fff",
                    "indicatorColor": "eb6f6fff"
                },
                "pending": {
                    "indicatorColor": "AAAAAAAA"
                },
```

```
                    "success": {
                        "backgroundColor": "001a02ff",
                        "borderColor": "29ad32ff",
                        "indicatorColor": "29ad32ff"
                    },
                    "warning": {
                        "backgroundColor": "1d1906ff",
                        "borderColor": "e0ca57ff",
                        "indicatorColor": "e0ca57ff"
                    }
                },
                "lightMode": {
                    "error": {
                        "backgroundColor": "fff7f7ff",
                        "borderColor": "d91515ff",
                        "indicatorColor": "d91515ff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
                    "success": {
                        "backgroundColor": "f2fcf3ff",
                        "borderColor": "037f0cff",
                        "indicatorColor": "037f0cff"
                    },
                    "warning": {
                        "backgroundColor": "fffce9ff",
                        "borderColor": "8d6605ff",
                        "indicatorColor": "8d6605ff"
                    }
                }
            }
        },
        "components": {
            "alert": {
                "borderRadius": 12.0,
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff"
                    }
                },
                "lightMode": {
                    "error": {
```

```
                    "backgroundColor": "fff7f7ff",
                    "borderColor": "d91515ff"
                }
            }
        },
        "favicon": {
            "enabledTypes": [
                "ICO",
                "SVG"
            ]
        },
        "form": {
            "backgroundImage": {
                "enabled": false
            },
            "borderRadius": 8.0,
            "darkMode": {
                "backgroundColor": "0f1b2aff",
                "borderColor": "424650ff"
            },
            "lightMode": {
                "backgroundColor": "ffffffff",
                "borderColor": "c6c6cdff"
            },
            "logo": {
                "enabled": false,
                "formInclusion": "IN",
                "location": "CENTER",
                "position": "TOP"
            }
        },
        "idpButton": {
            "custom": {
            },
            "standard": {
                "darkMode": {
                    "active": {
                        "backgroundColor": "354150ff",
                        "borderColor": "89bdeeff",
                        "textColor": "89bdeeff"
                    },
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "c6c6cdff",
```

```
                        "textColor": "c6c6cdff"
                    },
                    "hover": {
                        "backgroundColor": "192534ff",
                        "borderColor": "89bdeeff",
                        "textColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "active": {
                        "backgroundColor": "d3e7f9ff",
                        "borderColor": "033160ff",
                        "textColor": "033160ff"
                    },
                    "defaults": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "424650ff",
                        "textColor": "424650ff"
                    },
                    "hover": {
                        "backgroundColor": "f2f8fdff",
                        "borderColor": "033160ff",
                        "textColor": "033160ff"
                    }
                }
            }
        },
        "pageBackground": {
            "darkMode": {
                "color": "0f1b2aff"
            },
            "image": {
                "enabled": true
            },
            "lightMode": {
                "color": "ffffffff"
            }
        },
        "pageFooter": {
            "backgroundImage": {
                "enabled": false
            },
            "darkMode": {
                "background": {
```

```
                    "color": "0f141aff"
                },
                "borderColor": "424650ff"
            },
            "lightMode": {
                "background": {
                    "color": "fafafaff"
                },
                "borderColor": "d5dbdbff"
            },
            "logo": {
                "enabled": false,
                "location": "START"
            }
        },
        "pageHeader": {
            "backgroundImage": {
                "enabled": false
            },
            "darkMode": {
                "background": {
                    "color": "0f141aff"
                },
                "borderColor": "424650ff"
            },
            "lightMode": {
                "background": {
                    "color": "fafafaff"
                },
                "borderColor": "d5dbdbff"
            },
            "logo": {
                "enabled": false,
                "location": "START"
            }
        },
        "pageText": {
            "darkMode": {
                "bodyColor": "b6bec9ff",
                "descriptionColor": "b6bec9ff",
                "headingColor": "d1d5dbff"
            },
            "lightMode": {
                "bodyColor": "414d5cff",
```

```
                "descriptionColor": "414d5cff",
                "headingColor": "000716ff"
            }
        },
        "phoneNumberSelector": {
            "displayType": "TEXT"
        },
        "primaryButton": {
            "darkMode": {
                "active": {
                    "backgroundColor": "539fe5ff",
                    "textColor": "000716ff"
                },
                "defaults": {
                    "backgroundColor": "539fe5ff",
                    "textColor": "000716ff"
                },
                "disabled": {
                    "backgroundColor": "ffffffff",
                    "borderColor": "ffffffff"
                },
                "hover": {
                    "backgroundColor": "89bdeeff",
                    "textColor": "000716ff"
                }
            },
            "lightMode": {
                "active": {
                    "backgroundColor": "033160ff",
                    "textColor": "ffffffff"
                },
                "defaults": {
                    "backgroundColor": "0972d3ff",
                    "textColor": "ffffffff"
                },
                "disabled": {
                    "backgroundColor": "ffffffff",
                    "borderColor": "ffffffff"
                },
                "hover": {
                    "backgroundColor": "033160ff",
                    "textColor": "ffffffff"
                }
            }
```

```
            },
            "secondaryButton": {
                "darkMode": {
                    "active": {
                        "backgroundColor": "354150ff",
                        "borderColor": "89bdeeff",
                        "textColor": "89bdeeff"
                    },
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "539fe5ff",
                        "textColor": "539fe5ff"
                    },
                    "hover": {
                        "backgroundColor": "192534ff",
                        "borderColor": "89bdeeff",
                        "textColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "active": {
                        "backgroundColor": "d3e7f9ff",
                        "borderColor": "033160ff",
                        "textColor": "033160ff"
                    },
                    "defaults": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "0972d3ff",
                        "textColor": "0972d3ff"
                    },
                    "hover": {
                        "backgroundColor": "f2f8fdff",
                        "borderColor": "033160ff",
                        "textColor": "033160ff"
                    }
                }
            }
        }
    },
    "UseCognitoProvidedValues": false,
    "UserPoolId": "ca-central-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive


{
    "ManagedLoginBranding": {
        "Assets": [
            {
                "Bytes":
 "PHN2ZyB3aWR0aD0iMjAwMDAiIGhlaWdodD0iNDAwIiB2aWV3Qm94PSIwIDAgMjAwMDAgNDAwIiBmaWxsPSJub25lIiB4b
+CjxyZWN0IHdpZHRoPSIyMDAwMCIgaGVpZ2h0PSI0MDAiIGZpbGw9InVybCgjcGFpbnQwX2xpbmVhcl8xNzI1OV8yMzY2Nz
+CjxsaW5lYXJHcmFkaWVudCBpZD0icGFpbnQwX2xpbmVhcl8xNzI1OV8yMzY2NzQiIHgxPSItODk0LjI0OSIgeTE9IjE5OS
+Cjwvc3ZnPgo=",
                "Category": "PAGE_FOOTER_BACKGROUND",
                "ColorMode": "DARK",
                "Extension": "SVG"
            }
        ],
        "CreationDate": 1732138490.642,
        "LastModifiedDate": 1732140420.301,
        "ManagedLoginBrandingId": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
        "Settings": {
            "categories": {
                "auth": {
                    "authMethodOrder": [
                        [
                            {
                                "display": "BUTTON",
                                "type": "FEDERATED"
                            },
                            {
                                "display": "INPUT",
                                "type": "USERNAME_PASSWORD"
                            }
                        ]
                    ],
                    "federation": {
                        "interfaceStyle": "BUTTON_LIST",
```

```
                    "order": [
                    ]
                }
            },
            "form": {
                "displayGraphics": true,
                "instructions": {
                    "enabled": false
                },
                "languageSelector": {
                    "enabled": false
                },
                "location": {
                    "horizontal": "CENTER",
                    "vertical": "CENTER"
                },
                "sessionTimerDisplay": "NONE"
            },
            "global": {
                "colorSchemeMode": "LIGHT",
                "pageFooter": {
                    "enabled": false
                },
                "pageHeader": {
                    "enabled": false
                },
                "spacingDensity": "REGULAR"
            },
            "signUp": {
                "acceptanceElements": [
                    {
                        "enforcement": "NONE",
                        "textKey": "en"
                    }
                ]
            }
        },
        "componentClasses": {
            "buttons": {
                "borderRadius": 8.0
            },
            "divider": {
                "darkMode": {
                    "borderColor": "232b37ff"
```

```
                    },
                    "lightMode": {
                        "borderColor": "ebebf0ff"
                    }
                },
                "dropDown": {
                    "borderRadius": 8.0,
                    "darkMode": {
                        "defaults": {
                            "itemBackgroundColor": "192534ff"
                        },
                        "hover": {
                            "itemBackgroundColor": "081120ff",
                            "itemBorderColor": "5f6b7aff",
                            "itemTextColor": "e9ebedff"
                        },
                        "match": {
                            "itemBackgroundColor": "d1d5dbff",
                            "itemTextColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "defaults": {
                            "itemBackgroundColor": "ffffffff"
                        },
                        "hover": {
                            "itemBackgroundColor": "f4f4f4ff",
                            "itemBorderColor": "7d8998ff",
                            "itemTextColor": "000716ff"
                        },
                        "match": {
                            "itemBackgroundColor": "414d5cff",
                            "itemTextColor": "0972d3ff"
                        }
                    }
                },
                "focusState": {
                    "darkMode": {
                        "borderColor": "539fe5ff"
                    },
                    "lightMode": {
                        "borderColor": "0972d3ff"
                    }
                },
```

```
                "idpButtons": {
                    "icons": {
                        "enabled": true
                    }
                },
                "input": {
                    "borderRadius": 8.0,
                    "darkMode": {
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "5f6b7aff"
                        },
                        "placeholderColor": "8d99a8ff"
                    },
                    "lightMode": {
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "7d8998ff"
                        },
                        "placeholderColor": "5f6b7aff"
                    }
                },
                "inputDescription": {
                    "darkMode": {
                        "textColor": "8d99a8ff"
                    },
                    "lightMode": {
                        "textColor": "5f6b7aff"
                    }
                },
                "inputLabel": {
                    "darkMode": {
                        "textColor": "d1d5dbff"
                    },
                    "lightMode": {
                        "textColor": "000716ff"
                    }
                },
                "link": {
                    "darkMode": {
                        "defaults": {
                            "textColor": "539fe5ff"
                        },
                        "hover": {
```

```
                        "textColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "defaults": {
                        "textColor": "0972d3ff"
                    },
                    "hover": {
                        "textColor": "033160ff"
                    }
                }
            },
            "optionControls": {
                "darkMode": {
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "7d8998ff"
                    },
                    "selected": {
                        "backgroundColor": "539fe5ff",
                        "foregroundColor": "000716ff"
                    }
                },
                "lightMode": {
                    "defaults": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "7d8998ff"
                    },
                    "selected": {
                        "backgroundColor": "0972d3ff",
                        "foregroundColor": "ffffffff"
                    }
                }
            },
            "statusIndicator": {
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff",
                        "indicatorColor": "eb6f6fff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
```

```
                    "success": {
                        "backgroundColor": "001a02ff",
                        "borderColor": "29ad32ff",
                        "indicatorColor": "29ad32ff"
                    },
                    "warning": {
                        "backgroundColor": "1d1906ff",
                        "borderColor": "e0ca57ff",
                        "indicatorColor": "e0ca57ff"
                    }
                },
                "lightMode": {
                    "error": {
                        "backgroundColor": "fff7f7ff",
                        "borderColor": "d91515ff",
                        "indicatorColor": "d91515ff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
                    "success": {
                        "backgroundColor": "f2fcf3ff",
                        "borderColor": "037f0cff",
                        "indicatorColor": "037f0cff"
                    },
                    "warning": {
                        "backgroundColor": "fffce9ff",
                        "borderColor": "8d6605ff",
                        "indicatorColor": "8d6605ff"
                    }
                }
            }
        },
        "components": {
            "alert": {
                "borderRadius": 12.0,
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff"
                    }
                },
                "lightMode": {
                    "error": {
```

```
                    "backgroundColor": "fff7f7ff",
                    "borderColor": "d91515ff"
                }
            }
        },
        "favicon": {
            "enabledTypes": [
                "ICO",
                "SVG"
            ]
        },
        "form": {
            "backgroundImage": {
                "enabled": false
            },
            "borderRadius": 8.0,
            "darkMode": {
                "backgroundColor": "0f1b2aff",
                "borderColor": "424650ff"
            },
            "lightMode": {
                "backgroundColor": "ffffffff",
                "borderColor": "c6c6cdff"
            },
            "logo": {
                "enabled": false,
                "formInclusion": "IN",
                "location": "CENTER",
                "position": "TOP"
            }
        },
        "idpButton": {
            "custom": {
            },
            "standard": {
                "darkMode": {
                    "active": {
                        "backgroundColor": "354150ff",
                        "borderColor": "89bdeeff",
                        "textColor": "89bdeeff"
                    },
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "c6c6cdff",
```

```
                            "textColor": "c6c6cdff"
                        },
                        "hover": {
                            "backgroundColor": "192534ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "d3e7f9ff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        },
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "424650ff",
                            "textColor": "424650ff"
                        },
                        "hover": {
                            "backgroundColor": "f2f8fdff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        }
                    }
                }
            },
            "pageBackground": {
                "darkMode": {
                    "color": "0f1b2aff"
                },
                "image": {
                    "enabled": true
                },
                "lightMode": {
                    "color": "ffffffff"
                }
            },
            "pageFooter": {
                "backgroundImage": {
                    "enabled": false
                },
                "darkMode": {
                    "background": {
```

```
                        "color": "0f141aff"
                    },
                    "borderColor": "424650ff"
                },
                "lightMode": {
                    "background": {
                        "color": "fafafaff"
                    },
                    "borderColor": "d5dbdbff"
                },
                "logo": {
                    "enabled": false,
                    "location": "START"
                }
            },
            "pageHeader": {
                "backgroundImage": {
                    "enabled": false
                },
                "darkMode": {
                    "background": {
                        "color": "0f141aff"
                    },
                    "borderColor": "424650ff"
                },
                "lightMode": {
                    "background": {
                        "color": "fafafaff"
                    },
                    "borderColor": "d5dbdbff"
                },
                "logo": {
                    "enabled": false,
                    "location": "START"
                }
            },
            "pageText": {
                "darkMode": {
                    "bodyColor": "b6bec9ff",
                    "descriptionColor": "b6bec9ff",
                    "headingColor": "d1d5dbff"
                },
                "lightMode": {
                    "bodyColor": "414d5cff",
```

```
                "descriptionColor": "414d5cff",
                "headingColor": "000716ff"
            }
        },
        "phoneNumberSelector": {
            "displayType": "TEXT"
        },
        "primaryButton": {
            "darkMode": {
                "active": {
                    "backgroundColor": "539fe5ff",
                    "textColor": "000716ff"
                },
                "defaults": {
                    "backgroundColor": "539fe5ff",
                    "textColor": "000716ff"
                },
                "disabled": {
                    "backgroundColor": "ffffffff",
                    "borderColor": "ffffffff"
                },
                "hover": {
                    "backgroundColor": "89bdeeff",
                    "textColor": "000716ff"
                }
            },
            "lightMode": {
                "active": {
                    "backgroundColor": "033160ff",
                    "textColor": "ffffffff"
                },
                "defaults": {
                    "backgroundColor": "0972d3ff",
                    "textColor": "ffffffff"
                },
                "disabled": {
                    "backgroundColor": "ffffffff",
                    "borderColor": "ffffffff"
                },
                "hover": {
                    "backgroundColor": "033160ff",
                    "textColor": "ffffffff"
                }
            }
```

```
                },
                "secondaryButton": {
                    "darkMode": {
                        "active": {
                            "backgroundColor": "354150ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        },
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "539fe5ff",
                            "textColor": "539fe5ff"
                        },
                        "hover": {
                            "backgroundColor": "192534ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "d3e7f9ff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        },
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "0972d3ff",
                            "textColor": "0972d3ff"
                        },
                        "hover": {
                            "backgroundColor": "f2f8fdff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        }
                    }
                }
            }
        },
        "UseCognitoProvidedValues": false,
        "UserPoolId": "ca-central-1_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

CreateResourceServer

Creates a new OAuth2.0 resource server and defines custom scopes within it. Resource servers are associated with custom scopes and machine-to-machine (M2M) authorization. For more information, see Access control with resource servers.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Identifier": "string",
   "Name": "string",
   "Scopes": [
      {
         "ScopeDescription": "string",
         "ScopeName": "string"
      }
   ],
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Identifier

A unique resource server identifier for the resource server. The identifier can be an API friendly name like `solar-system-data`. You can also set an API URL like `https://solar-system-data-api.example.com` as your identifier.

Amazon Cognito represents scopes in the access token in the format `$resource-server-identifier/$scope`. Longer scope-identifier strings increase the size of your access tokens.

Type: String

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

Pattern: `[\x21\x23-\x5B\x5D-\x7E]+`

Required: Yes

Name

A friendly name for the resource server.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: Yes

Scopes

A list of custom scopes. Each scope is a key-value map with the keys `ScopeName` and `ScopeDescription`. The name of a custom scope is a combination of `ScopeName` and the resource server `Name` in this request, for example `MyResourceServerName/MyScopeName`.

Type: Array of ResourceServerScopeType objects

Array Members: Maximum number of 100 items.

Required: No

UserPoolId

The ID of the user pool where you want to create a resource server.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "ResourceServer": {
      "Identifier": "string",
      "Name": "string",
      "Scopes": [
         {
            "ScopeDescription": "string",
            "ScopeName": "string"
         }
      ],
      "UserPoolId": "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.

ResourceServer

The details of the new resource server.

Type: ResourceServerType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request creates a resource server for the API at `myapi.example.com` with the scopes `myapi.example.com/international.read` and `myapi.example.com/domestic.read`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
```

```
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateResourceServer
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "Identifier": "myapi.example.com",
   "Name": "Example API with custom access control scopes",
   "Scopes": [
      {
         "ScopeDescription": "International customers",
         "ScopeName": "international.read"
      },
      {
         "ScopeDescription": "Domestic customers",
         "ScopeName": "domestic.read"
      }
   ],
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "ResourceServer": {
  "Identifier": "myapi.example.com",
  "Name": "Example API with custom access control scopes",
  "Scopes": [
   {
    "ScopeDescription": "International customers",
    "ScopeName": "international.read"
   },
   {
    "ScopeDescription": "Domestic customers",
    "ScopeName": "domestic.read"
   }
```

```
  ],
  "UserPoolId": "us-west-2_EXAMPLE"
 }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

CreateUserImportJob

Creates a user import job. You can import users into user pools from a comma-separated values (CSV) file without adding Amazon Cognito MAU costs to your Amazon bill.

To generate a template for your import, see GetCSVHeader. To learn more about CSV import, see Importing users from a CSV file.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "CloudWatchLogsRoleArn": "string",
   "JobName": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

CloudWatchLogsRoleArn

You must specify an IAM role that has permission to log import-job results to Amazon CloudWatch Logs. This parameter is the ARN of that role.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

JobName

A friendly name for the user import job.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: Yes

UserPoolId

The ID of the user pool that you want to import users into.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "UserImportJob": {
      "CloudWatchLogsRoleArn": "string",
      "CompletionDate": number,
      "CompletionMessage": "string",
      "CreationDate": number,
      "FailedUsers": number,
      "ImportedUsers": number,
      "JobId": "string",
```

```
      "JobName": "string",
      "PreSignedUrl": "string",
      "SkippedUsers": number,
      "StartDate": number,
      "Status": "string",
      "UserPoolId": "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.

UserImportJob

The details of the user import job. Includes logging destination, status, and the Amazon S3 pre-signed URL for CSV upload.

Type: UserImportJobType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PreconditionNotMetException

This exception is thrown when a precondition is not met.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request creates an import job in user pool `us-west-2_EXAMPLE`. The job will write log output to CloudWatch Logs with the IAM role `arn:aws:iam::123456789012:role/example-cloudwatch-logs-role`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateUserImportJob
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
```

```
{
   "CloudWatchLogsRoleArn": "arn:aws:iam::123456789012:role/example-cloudwatch-logs-
role",
   "JobName": "Customer import",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "UserImportJob": {
  "CloudWatchLogsRoleArn": "arn:aws:iam::123456789012:role/example-cloudwatch-logs-
role",
  "CreationDate": 1735241621.022,
  "FailedUsers": 0,
  "ImportedUsers": 0,
  "JobId": "import-mAgUtd8PMm",
  "JobName": "Customer import",
  "PreSignedUrl": "https://aws-cognito-idp-user-import-pdx.s3.us-
west-2.amazonaws.com/123456789012/us-west-2_EXAMPLE/import-mAgUtd8PMm?X-Amz-Security-
Token=[token]&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20241226T193341Z&X-
Amz-SignedHeaders=host%3Bx-amz-server-side-encryption&X-Amz-Expires=899&X-Amz-
Credential=[credential]&X-Amz-Signature=[signature]",
  "SkippedUsers": 0,
  "Status": "Created",
  "UserPoolId": "us-west-2_EXAMPLE"
 }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET

- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

CreateUserPool

Creates a new Amazon Cognito user pool. This operation sets basic and advanced configuration options.

You can create a user pool in the Amazon Cognito console to your preferences and use the output of DescribeUserPool to generate requests from that baseline.

Important

If you don't provide a value for an attribute, Amazon Cognito sets it to its default value.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "AccountRecoverySetting": {
      "RecoveryMechanisms": [
         {
            "Name": "string",
            "Priority": number
         }
      ]
   },
   "AdminCreateUserConfig": {
      "AllowAdminCreateUserOnly": boolean,
      "InviteMessageTemplate": {
         "EmailMessage": "string",
         "EmailSubject": "string",
         "SMSMessage": "string"
      },
      "UnusedAccountValidityDays": number
   },
   "AliasAttributes": [ "string" ],
   "AutoVerifiedAttributes": [ "string" ],
   "DeletionProtection": "string",
   "DeviceConfiguration": {
      "ChallengeRequiredOnNewDevice": boolean,
      "DeviceOnlyRememberedOnUserPrompt": boolean
   },
   "EmailConfiguration": {
      "ConfigurationSet": "string",
      "EmailSendingAccount": "string",
      "From": "string",
      "ReplyToEmailAddress": "string",
      "SourceArn": "string"
   },
   "EmailVerificationMessage": "string",
```

```
   "EmailVerificationSubject": "string",
   "LambdaConfig": {
      "CreateAuthChallenge": "string",
      "CustomEmailSender": {
         "LambdaArn": "string",
         "LambdaVersion": "string"
      },
      "CustomMessage": "string",
      "CustomSMSSender": {
         "LambdaArn": "string",
         "LambdaVersion": "string"
      },
      "DefineAuthChallenge": "string",
      "KMSKeyID": "string",
      "PostAuthentication": "string",
      "PostConfirmation": "string",
      "PreAuthentication": "string",
      "PreSignUp": "string",
      "PreTokenGeneration": "string",
      "PreTokenGenerationConfig": {
         "LambdaArn": "string",
         "LambdaVersion": "string"
      },
      "UserMigration": "string",
      "VerifyAuthChallengeResponse": "string"
   },
   "MfaConfiguration": "string",
   "Policies": {
      "PasswordPolicy": {
         "MinimumLength": number,
         "PasswordHistorySize": number,
         "RequireLowercase": boolean,
         "RequireNumbers": boolean,
         "RequireSymbols": boolean,
         "RequireUppercase": boolean,
         "TemporaryPasswordValidityDays": number
      },
      "SignInPolicy": {
         "AllowedFirstAuthFactors": [ "string" ]
      }
   },
   "PoolName": "string",
   "Schema": [
      {
```

```
            "AttributeDataType": "string",
            "DeveloperOnlyAttribute": boolean,
            "Mutable": boolean,
            "Name": "string",
            "NumberAttributeConstraints": {
               "MaxValue": "string",
               "MinValue": "string"
            },
            "Required": boolean,
            "StringAttributeConstraints": {
               "MaxLength": "string",
               "MinLength": "string"
            }
         }
      ],
      "SmsAuthenticationMessage": "string",
      "SmsConfiguration": {
         "ExternalId": "string",
         "SnsCallerArn": "string",
         "SnsRegion": "string"
      },
      "SmsVerificationMessage": "string",
      "UserAttributeUpdateSettings": {
         "AttributesRequireVerificationBeforeUpdate": [ "string" ]
      },
      "UsernameAttributes": [ "string" ],
      "UsernameConfiguration": {
         "CaseSensitive": boolean
      },
      "UserPoolAddOns": {
         "AdvancedSecurityAdditionalFlows": {
            "CustomAuthMode": "string"
         },
         "AdvancedSecurityMode": "string"
      },
      "UserPoolTags": {
         "string" : "string"
      },
      "UserPoolTier": "string",
      "VerificationMessageTemplate": {
         "DefaultEmailOption": "string",
         "EmailMessage": "string",
         "EmailMessageByLink": "string",
         "EmailSubject": "string",
```

```
        "EmailSubjectByLink": "string",
        "SmsMessage": "string"
    }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccountRecoverySetting

The available verified method a user can use to recover their password when they call `ForgotPassword`. You can use this setting to define a preferred method when a user has more than one method available. With this setting, SMS doesn't qualify for a valid password recovery mechanism if the user also has SMS multi-factor authentication (MFA) activated. Email MFA is also disqualifying for account recovery with email. In the absence of this setting, Amazon Cognito uses the legacy behavior to determine the recovery method where SMS is preferred over email.

As a best practice, configure both `verified_email` and `verified_phone_number`, with one having a higher priority than the other.

Type: AccountRecoverySettingType object

Required: No

AdminCreateUserConfig

The configuration for administrative creation of users. Includes the template for the invitation message for new users, the duration of temporary passwords, and permitting self-service sign-up.

Type: AdminCreateUserConfigType object

Required: No

AliasAttributes

Attributes supported as an alias for this user pool. For more information about alias attributes, see Customizing sign-in attributes.

Type: Array of strings

Valid Values: `phone_number | email | preferred_username`

Required: No

AutoVerifiedAttributes

The attributes that you want your user pool to automatically verify. For more information, see Verifying contact information at sign-up.

Type: Array of strings

Valid Values: `phone_number | email`

Required: No

DeletionProtection

When active, `DeletionProtection` prevents accidental deletion of your user pool. Before you can delete a user pool that you have protected against deletion, you must deactivate this feature.

When you try to delete a protected user pool in a `DeleteUserPool` API request, Amazon Cognito returns an `InvalidParameterException` error. To delete a protected user pool, send a new `DeleteUserPool` request after you deactivate deletion protection in an `UpdateUserPool` API request.

Type: String

Valid Values: `ACTIVE | INACTIVE`

Required: No

DeviceConfiguration

The device-remembering configuration for a user pool. Device remembering or device tracking is a "Remember me on this device" option for user pools that perform authentication with the device key of a trusted device in the back end, instead of a user-provided MFA code. For more information about device authentication, see Working with user devices in your user pool. A null value indicates that you have deactivated device remembering in your user pool.

> **Note**
>
> When you provide a value for any `DeviceConfiguration` field, you activate the Amazon Cognito device-remembering feature. For more information, see Working with devices.

Type: DeviceConfigurationType object

Required: No

EmailConfiguration

The email configuration of your user pool. The email configuration type sets your preferred sending method, Amazon Region, and sender for messages from your user pool.

Type: EmailConfigurationType object

Required: No

EmailVerificationMessage

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*\{####\}[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*`

Required: No

EmailVerificationSubject

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s]+`

Required: No

LambdaConfig

A collection of user pool Lambda triggers. Amazon Cognito invokes triggers at several possible stages of authentication operations. Triggers can modify the outcome of the operations that invoked them.

Type: LambdaConfigType object

Required: No

MfaConfiguration

Sets multi-factor authentication (MFA) to be on, off, or optional. When `ON`, all users must set up MFA before they can sign in. When `OPTIONAL`, your application must make a client-side determination of whether a user wants to register an MFA device. For user pools with adaptive authentication with threat protection, choose `OPTIONAL`.

When `MfaConfiguration` is `OPTIONAL`, managed login doesn't automatically prompt users to set up MFA. Amazon Cognito generates MFA prompts in API responses and in managed login for users who have chosen and configured a preferred MFA factor.

Type: String

Valid Values: `OFF | ON | OPTIONAL`

Required: No

Policies

The password policy and sign-in policy in the user pool. The password policy sets options like password complexity requirements and password history. The sign-in policy sets the options available to applications in choice-based authentication.

Type: UserPoolPolicyType object

Required: No

PoolName

A friendly name for your user pool.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: Yes

Schema

An array of attributes for the new user pool. You can add custom attributes and modify the properties of default attributes. The specifications in this parameter set the required attributes in your user pool. For more information, see Working with user attributes.

Type: Array of SchemaAttributeType objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: No

SmsAuthenticationMessage

The contents of the SMS message that your user pool sends to users in SMS OTP and MFA authentication.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `.*\{####\}.*`

Required: No

SmsConfiguration

The settings for your Amazon Cognito user pool to send SMS messages with Amazon Simple Notification Service. To send SMS messages with Amazon SNS in the Amazon Region that you want, the Amazon Cognito user pool uses an Amazon Identity and Access Management (IAM) role in your Amazon Web Services account. For more information see SMS message settings.

Type: SmsConfigurationType object

Required: No

SmsVerificationMessage

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `.*\{####\}.*`

Required: No

UserAttributeUpdateSettings

The settings for updates to user attributes. These settings include the property `AttributesRequireVerificationBeforeUpdate`, a user-pool setting that tells Amazon Cognito how to handle changes to the value of your users' email address and phone number attributes. For more information, see Verifying updates to email addresses and phone numbers.

Type: UserAttributeUpdateSettingsType object

Required: No

UsernameAttributes

Specifies whether a user can use an email address or phone number as a username when they sign up. For more information, see Customizing sign-in attributes.

Type: Array of strings

Valid Values: `phone_number | email`

Required: No

UsernameConfiguration

Sets the case sensitivity option for sign-in usernames. When `CaseSensitive` is `false` (case insensitive), users can sign in with any combination of capital and lowercase letters. For example, `username`, `USERNAME`, or `UserName`, or for email, `email@example.com` or `EMaiL@eXamplE.Com`. For most use cases, set case sensitivity to `false` as a best practice. When usernames and email addresses are case insensitive, Amazon Cognito treats any variation in case as the same user, and prevents a case variation from being assigned to the same attribute for a different user.

When `CaseSensitive` is `true` (case sensitive), Amazon Cognito interprets `USERNAME` and `UserName` as distinct users.

This configuration is immutable after you set it.

Type: UsernameConfigurationType object

Required: No

UserPoolAddOns

Contains settings for activation of threat protection, including the operating mode and additional authentication types. To log user security information but take no action, set to `AUDIT`. To configure automatic security responses to potentially unwanted traffic to your user pool, set to `ENFORCED`.

For more information, see Adding advanced security to a user pool. To activate this setting, your user pool must be on the Plus tier.

Type: UserPoolAddOnsType object

Required: No

UserPoolTags

The tag keys and values to assign to the user pool. A tag is a label that you can use to categorize and manage user pools in different ways, such as by purpose, owner, environment, or other criteria.

Type: String to string map

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

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

Required: No

UserPoolTier

The user pool feature plan, or tier. This parameter determines the eligibility of the user pool for features like managed login, access-token customization, and threat protection. Defaults to `ESSENTIALS`.

Type: String

Valid Values: `LITE | ESSENTIALS | PLUS`

Required: No

VerificationMessageTemplate

The template for the verification message that your user pool delivers to users who set an email address or phone number attribute.

Set the email message type that corresponds to your `DefaultEmailOption` selection. For `CONFIRM_WITH_LINK`, specify an `EmailMessageByLink` and leave `EmailMessage` blank. For `CONFIRM_WITH_CODE`, specify an `EmailMessage` and leave `EmailMessageByLink` blank. When you supply both parameters with either choice, Amazon Cognito returns an error.

Type: VerificationMessageTemplateType object

Required: No

Response Syntax

```
{
   "UserPool": {
      "AccountRecoverySetting": {
         "RecoveryMechanisms": [
            {
               "Name": "string",
               "Priority": number
            }
         ]
      },
      "AdminCreateUserConfig": {
         "AllowAdminCreateUserOnly": boolean,
         "InviteMessageTemplate": {
            "EmailMessage": "string",
            "EmailSubject": "string",
            "SMSMessage": "string"
         },
         "UnusedAccountValidityDays": number
      },
      "AliasAttributes": [ "string" ],
      "Arn": "string",
      "AutoVerifiedAttributes": [ "string" ],
      "CreationDate": number,
      "CustomDomain": "string",
      "DeletionProtection": "string",
      "DeviceConfiguration": {
         "ChallengeRequiredOnNewDevice": boolean,
         "DeviceOnlyRememberedOnUserPrompt": boolean
      },
      "Domain": "string",
      "EmailConfiguration": {
```

```
            "ConfigurationSet": "string",
            "EmailSendingAccount": "string",
            "From": "string",
            "ReplyToEmailAddress": "string",
            "SourceArn": "string"
         },
         "EmailConfigurationFailure": "string",
         "EmailVerificationMessage": "string",
         "EmailVerificationSubject": "string",
         "EstimatedNumberOfUsers": number,
         "Id": "string",
         "LambdaConfig": {
            "CreateAuthChallenge": "string",
            "CustomEmailSender": {
               "LambdaArn": "string",
               "LambdaVersion": "string"
            },
            "CustomMessage": "string",
            "CustomSMSSender": {
               "LambdaArn": "string",
               "LambdaVersion": "string"
            },
            "DefineAuthChallenge": "string",
            "KMSKeyID": "string",
            "PostAuthentication": "string",
            "PostConfirmation": "string",
            "PreAuthentication": "string",
            "PreSignUp": "string",
            "PreTokenGeneration": "string",
            "PreTokenGenerationConfig": {
               "LambdaArn": "string",
               "LambdaVersion": "string"
            },
            "UserMigration": "string",
            "VerifyAuthChallengeResponse": "string"
         },
         "LastModifiedDate": number,
         "MfaConfiguration": "string",
         "Name": "string",
         "Policies": {
            "PasswordPolicy": {
               "MinimumLength": number,
               "PasswordHistorySize": number,
               "RequireLowercase": boolean,
```

```
            "RequireNumbers": boolean,
            "RequireSymbols": boolean,
            "RequireUppercase": boolean,
            "TemporaryPasswordValidityDays": number
         },
         "SignInPolicy": {
            "AllowedFirstAuthFactors": [ "string" ]
         }
      },
      "SchemaAttributes": [
         {
            "AttributeDataType": "string",
            "DeveloperOnlyAttribute": boolean,
            "Mutable": boolean,
            "Name": "string",
            "NumberAttributeConstraints": {
               "MaxValue": "string",
               "MinValue": "string"
            },
            "Required": boolean,
            "StringAttributeConstraints": {
               "MaxLength": "string",
               "MinLength": "string"
            }
         }
      ],
      "SmsAuthenticationMessage": "string",
      "SmsConfiguration": {
         "ExternalId": "string",
         "SnsCallerArn": "string",
         "SnsRegion": "string"
      },
      "SmsConfigurationFailure": "string",
      "SmsVerificationMessage": "string",
      "Status": "string",
      "UserAttributeUpdateSettings": {
         "AttributesRequireVerificationBeforeUpdate": [ "string" ]
      },
      "UsernameAttributes": [ "string" ],
      "UsernameConfiguration": {
         "CaseSensitive": boolean
      },
      "UserPoolAddOns": {
         "AdvancedSecurityAdditionalFlows": {
```

```
            "CustomAuthMode": "string"
         },
         "AdvancedSecurityMode": "string"
      },
      "UserPoolTags": {
         "string" : "string"
      },
      "UserPoolTier": "string",
      "VerificationMessageTemplate": {
         "DefaultEmailOption": "string",
         "EmailMessage": "string",
         "EmailMessageByLink": "string",
         "EmailSubject": "string",
         "EmailSubjectByLink": "string",
         "SmsMessage": "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.

UserPool

The details of the created user pool.

Type: UserPoolType object

Errors

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

FeatureUnavailableInTierException

This exception is thrown when a feature you attempted to configure isn't available in your current feature plan.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

TierChangeNotAllowedException

This exception is thrown when you've attempted to change your feature plan but the operation isn't permitted.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserPoolTaggingException

This exception is thrown when a user pool tag can't be set or updated.

HTTP Status Code: 400

Examples

Example

The following example creates a user pool with all configurable properties set to an example value. The resulting user pool allows sign-in with username or email address, has optional MFA, and has a Lambda function assigned to each possible trigger.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateUserPool
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "AccountRecoverySetting": {
        "RecoveryMechanisms": [
            {
                "Name": "verified_email",
                "Priority": 1
```

```
            }
        ]
    },
    "AdminCreateUserConfig": {
        "AllowAdminCreateUserOnly": false,
        "InviteMessageTemplate": {
            "EmailMessage": "Your username is {username} and temporary password is
 {####}.",
            "EmailSubject": "Your sign-in information",
            "SMSMessage": "Your username is {username} and temporary password is
 {####}."
        }
    },
    "AliasAttributes": [
        "email"
    ],
    "AutoVerifiedAttributes": [
        "email"
    ],
    "DeviceConfiguration": {
        "ChallengeRequiredOnNewDevice": true,
        "DeviceOnlyRememberedOnUserPrompt": true
    },
    "DeletionProtection": "ACTIVE",
    "EmailConfiguration": {
        "ConfigurationSet": "my-test-ses-configuration-set",
        "EmailSendingAccount": "DEVELOPER",
        "From": "support@example.com",
        "ReplyToEmailAddress": "support@example.com",
        "SourceArn": "arn:aws:ses:us-east-1:123456789012:identity/support@example.com"
    },
    "EmailVerificationMessage": "Your verification code is {####}.",
    "EmailVerificationSubject": "Verify your email address",
    "LambdaConfig": {
        "KMSKeyID": "arn:aws:kms:us-east-1:123456789012:key/
a6c4f8e2-0c45-47db-925f-87854bc9e357",
        "CustomEmailSender": {
            "LambdaArn": "arn:aws:lambda:us-east-1:123456789012:function:MyFunction",
            "LambdaVersion": "V1_0"
        },
        "CustomSMSSender": {
            "LambdaArn": "arn:aws:lambda:us-east-1:123456789012:function:MyFunction",
            "LambdaVersion": "V1_0"
        },
```

```
        "CustomMessage": "arn:aws:lambda:us-east-1:123456789012:function:MyFunction",
        "DefineAuthChallenge": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
        "PostAuthentication": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
        "PostConfirmation": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
        "PreAuthentication": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
        "PreSignUp": "arn:aws:lambda:us-east-1:123456789012:function:MyFunction",
        "PreTokenGeneration": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
        "UserMigration": "arn:aws:lambda:us-east-1:123456789012:function:MyFunction",
        "VerifyAuthChallengeResponse": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction"
    },
    "MfaConfiguration": "OPTIONAL",
    "Policies": {
        "PasswordPolicy": {
            "MinimumLength": 6,
            "RequireLowercase": true,
            "RequireNumbers": true,
            "RequireSymbols": true,
            "RequireUppercase": true,
            "TemporaryPasswordValidityDays": 7
        },
        "SignInPolicy": {
            "AllowedFirstAuthFactors": [
                "PASSWORD",
                "EMAIL_OTP",
                "WEB_AUTHN"
            ]
        }
    },
    "PoolName": "my-test-user-pool",
    "Schema": [
        {
            "AttributeDataType": "Number",
            "DeveloperOnlyAttribute": true,
            "Mutable": true,
            "Name": "mydev",
            "NumberAttributeConstraints": {
                "MaxValue": "99",
                "MinValue": "1"
```

```
            },
            "Required": false,
            "StringAttributeConstraints": {
                "MaxLength": "99",
                "MinLength": "1"
            }
        }
    ],
    "SmsAuthenticationMessage": "Your verification code is {####}.",
    "SmsConfiguration": {
        "ExternalId": "my-role-external-id",
        "SnsCallerArn": "arn:aws:iam::123456789012:role/service-role/test-cognito-SMS-
Role"
    },
    "SmsVerificationMessage": "Your verification code is {####}.",
    "UserAttributeUpdateSettings": {
        "AttributesRequireVerificationBeforeUpdate": [
            "email"
        ]
    },
    "UsernameConfiguration": {
        "CaseSensitive": true
    },
    "UserPoolAddOns": {
        "AdvancedSecurityMode": "OFF"
    },
    "UserPoolTags": {
        "my-test-tag-key": "my-test-tag-key"
    },
    "UserPoolTier": "ESSENTIALS",
    "VerificationMessageTemplate": {
        "DefaultEmailOption": "CONFIRM_WITH_CODE",
        "EmailMessage": "Your confirmation code is {####}",
        "EmailMessageByLink": "Choose this link to {##verify your email##}",
        "EmailSubject": "Here is your confirmation code",
        "EmailSubjectByLink": "Here is your confirmation link",
        "SmsMessage": "Your confirmation code is {####}"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "UserPool": {
        "AccountRecoverySetting": {
            "RecoveryMechanisms": [
                {
                    "Name": "verified_email",
                    "Priority": 1
                }
            ]
        },
        "AdminCreateUserConfig": {
            "AllowAdminCreateUserOnly": false,
            "InviteMessageTemplate": {
                "EmailMessage": "Your username is {username} and temporary password is
 {####}.",
                "EmailSubject": "Your sign-in information",
                "SMSMessage": "Your username is {username} and temporary password is
 {####}."
            },
            "UnusedAccountValidityDays": 7
        },
        "AliasAttributes": [
            "email"
        ],
        "Arn": "arn:aws:cognito-idp:us-east-1:123456789012:userpool/us-east-1_EXAMPLE",
        "AutoVerifiedAttributes": [
            "email"
        ],
        "CreationDate": 1689721665.239,
        "DeletionProtection": "ACTIVE",
        "DeviceConfiguration": {
            "ChallengeRequiredOnNewDevice": true,
            "DeviceOnlyRememberedOnUserPrompt": true
        },
        "EmailConfiguration": {
            "ConfigurationSet": "my-test-ses-configuration-set",
            "EmailSendingAccount": "DEVELOPER",
            "From": "support@example.com",
```

```
            "ReplyToEmailAddress": "support@example.com",
            "SourceArn": "arn:aws:ses:us-east-1:123456789012:identity/
support@example.com"
        },
        "EmailVerificationMessage": "Your verification code is {####}.",
        "EmailVerificationSubject": "Verify your email address",
        "EstimatedNumberOfUsers": 0,
        "Id": "us-east-1_EXAMPLE",
        "LambdaConfig": {
            "CustomEmailSender": {
                "LambdaArn": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
                "LambdaVersion": "V1_0"
            },
            "CustomMessage": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "CustomSMSSender": {
                "LambdaArn": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
                "LambdaVersion": "V1_0"
            },
            "DefineAuthChallenge": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "KMSKeyID": "arn:aws:kms:us-
east-1:767671399759:key/4d43904c-8edf-4bb4-9fca-fb1a80e41cbe",
            "PostAuthentication": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "PostConfirmation": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "PreAuthentication": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "PreSignUp": "arn:aws:lambda:us-east-1:123456789012:function:MyFunction",
            "PreTokenGeneration": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "UserMigration": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "VerifyAuthChallengeResponse": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction"
        },
        "LastModifiedDate": 1689721665.239,
        "MfaConfiguration": "OPTIONAL",
        "Name": "my-test-user-pool",
        "Policies": {
            "PasswordPolicy": {
```

```
                "MinimumLength": 6,
                "RequireLowercase": true,
                "RequireNumbers": true,
                "RequireSymbols": true,
                "RequireUppercase": true,
                "TemporaryPasswordValidityDays": 7
            }
        },
        "SchemaAttributes": [
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": false,
                "Name": "sub",
                "Required": true,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "1"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "name",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "given_name",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
```

```
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "family_name",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "middle_name",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "nickname",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "preferred_username",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
```

```
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "profile",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "picture",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "website",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "email",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "Boolean",
```

```
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "email_verified",
                "Required": false
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "gender",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "birthdate",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "10",
                    "MinLength": "10"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "zoneinfo",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "locale",
                "Required": false,
```

```
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "phone_number",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "Boolean",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "phone_number_verifie",
                "Required": false
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "address",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "Number",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "updated_at",
                "NumberAttributeConstraints": {
                    "MinValue": "0"
                },
                "Required": false
            },
```

```
            {
                "AttributeDataType": "Number",
                "DeveloperOnlyAttribute": true,
                "Mutable": true,
                "Name": "dev:custom:mydev",
                "NumberAttributeConstraints": {
                    "MaxValue": "99",
                    "MinValue": "1"
                },
                "Required": false
            }
        ],
        "SmsAuthenticationMessage": "Your verification code is {####}.",
        "SmsConfiguration": {
            "ExternalId": "my-role-external-id",
            "SnsCallerArn": "arn:aws:iam::123456789012:role/service-role/test-cognito-
SMS-Role",
            "SnsRegion": "us-east-1"
        },
        "SmsVerificationMessage": "Your verification code is {####}.",
        "UserAttributeUpdateSettings": {
            "AttributesRequireVerificationBeforeUpdate": [
                "email"
            ]
        },
        "UserPoolAddOns": {
            "AdvancedSecurityMode": "OFF"
        },
        "UserPoolTags": {
            "my-test-tag-key": "my-test-tag-value"
        },
        "UserPoolTier": "ESSENTIALS",
        "UsernameConfiguration": {
            "CaseSensitive": true
        },
        "VerificationMessageTemplate": {
            "DefaultEmailOption": "CONFIRM_WITH_CODE",
            "EmailMessage": "Your confirmation code is {####}",
            "EmailMessageByLink": "Choose this link to {##verify your email##}",
            "EmailSubject": "Here is your confirmation code",
            "EmailSubjectByLink": "Here is your confirmation link",
            "SmsMessage": "Your confirmation code is {####}"
        }
    }
```

```
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

CreateUserPoolClient

Creates an app client in a user pool. This operation sets basic and advanced configuration options.

You can create an app client in the Amazon Cognito console to your preferences and use the output of DescribeUserPoolClient to generate requests from that baseline.

New app clients activate token revocation by default. For more information about revoking tokens, see RevokeToken.

Unlike app clients created in the console, Amazon Cognito doesn't automatically assign a branding style to app clients that you configure with this API operation. Managed login and classic hosted UI pages aren't available for your client until after you apply a branding style.

Apply a branding style with the CreateManagedLoginBranding operation. For more information, see Managed login branding.

Important

If you don't provide a value for an attribute, Amazon Cognito sets it to its default value.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
```

```
    "AccessTokenValidity": number,
    "AllowedOAuthFlows": [ "string" ],
    "AllowedOAuthFlowsUserPoolClient": boolean,
    "AllowedOAuthScopes": [ "string" ],
    "AnalyticsConfiguration": {
       "ApplicationArn": "string",
       "ApplicationId": "string",
       "ExternalId": "string",
       "RoleArn": "string",
       "UserDataShared": boolean
    },
    "AuthSessionValidity": number,
    "CallbackURLs": [ "string" ],
    "ClientName": "string",
    "DefaultRedirectURI": "string",
    "EnablePropagateAdditionalUserContextData": boolean,
    "EnableTokenRevocation": boolean,
    "ExplicitAuthFlows": [ "string" ],
    "GenerateSecret": boolean,
    "IdTokenValidity": number,
    "LogoutURLs": [ "string" ],
    "PreventUserExistenceErrors": "string",
    "ReadAttributes": [ "string" ],
    "RefreshTokenRotation": {
       "Feature": "string",
       "RetryGracePeriodSeconds": number
    },
    "RefreshTokenValidity": number,
    "SupportedIdentityProviders": [ "string" ],
    "TokenValidityUnits": {
       "AccessToken": "string",
       "IdToken": "string",
       "RefreshToken": "string"
    },
    "UserPoolId": "string",
    "WriteAttributes": [ "string" ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessTokenValidity

The access token time limit. After this limit expires, your user can't use their access token. To specify the time unit for `AccessTokenValidity` as `seconds`, `minutes`, `hours`, or `days`, set a `TokenValidityUnits` value in your API request.

For example, when you set `AccessTokenValidity` to `10` and `TokenValidityUnits` to `hours`, your user can authorize access with their access token for 10 hours.

The default time unit for `AccessTokenValidity` in an API request is hours. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your access tokens are valid for one hour.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

Required: No

AllowedOAuthFlows

The OAuth grant types that you want your app client to generate for clients in managed login authentication. To create an app client that generates client credentials grants, you must add `client_credentials` as the only allowed OAuth flow.

code

Use a code grant flow, which provides an authorization code as the response. This code can be exchanged for access tokens with the `/oauth2/token` endpoint.

implicit

Issue the access token, and the ID token when scopes like `openid` and `profile` are requested, directly to your user.

client_credentials

Issue the access token from the `/oauth2/token` endpoint directly to a non-person user, authorized by a combination of the client ID and client secret.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 3 items.

Valid Values: `code | implicit | client_credentials`

Required: No

AllowedOAuthFlowsUserPoolClient

Set to `true` to use OAuth 2.0 authorization server features in your app client.

This parameter must have a value of `true` before you can configure the following features in your app client.

- `CallBackURLs`: Callback URLs.
- `LogoutURLs`: Sign-out redirect URLs.
- `AllowedOAuthScopes`: OAuth 2.0 scopes.
- `AllowedOAuthFlows`: Support for authorization code, implicit, and client credentials OAuth 2.0 grants.

To use authorization server features, configure one of these features in the Amazon Cognito console or set `AllowedOAuthFlowsUserPoolClient` to `true` in a `CreateUserPoolClient` or `UpdateUserPoolClient` API request. If you don't set a value for `AllowedOAuthFlowsUserPoolClient` in a request with the Amazon CLI or SDKs, it defaults to `false`. When `false`, only SDK-based API sign-in is permitted.

Type: Boolean

Required: No

AllowedOAuthScopes

The OAuth, OpenID Connect (OIDC), and custom scopes that you want to permit your app client to authorize access with. Scopes govern access control to user pool self-service API operations, user data from the `userInfo` endpoint, and third-party APIs. Scope values include `phone`, `email`, `openid`, and `profile`. The `aws.cognito.signin.user.admin` scope authorizes user self-service operations. Custom scopes with resource servers authorize access to external APIs.

Type: Array of strings

Array Members: Maximum number of 50 items.

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

Pattern: `[\x21\x23-\x5B\x5D-\x7E]+`

Required: No

AnalyticsConfiguration

The user pool analytics configuration for collecting metrics and sending them to your Amazon Pinpoint campaign.

In Amazon Regions where Amazon Pinpoint isn't available, user pools might not have access to analytics or might be configurable with campaigns in the US East (N. Virginia) Region. For more information, see Using Amazon Pinpoint analytics.

Type: AnalyticsConfigurationType object

Required: No

AuthSessionValidity

Amazon Cognito creates a session token for each API request in an authentication flow. `AuthSessionValidity` is the duration, in minutes, of that session token. Your user pool native user must respond to each authentication challenge before the session expires.

Type: Integer

Valid Range: Minimum value of 3. Maximum value of 15.

Required: No

CallbackURLs

A list of allowed redirect, or callback, URLs for managed login authentication. These URLs are the paths where you want to send your users' browsers after they complete authentication with managed login or a third-party IdP. Typically, callback URLs are the home of an application that uses OAuth or OIDC libraries to process authentication outcomes.

A redirect URI must meet the following requirements:

- Be an absolute URI.
- Be registered with the authorization server. Amazon Cognito doesn't accept authorization requests with `redirect_uri` values that aren't in the list of `CallbackURLs` that you provide in this parameter.
- Not include a fragment component.

See OAuth 2.0 - Redirection Endpoint.

Amazon Cognito requires HTTPS over HTTP except for http://localhost for testing purposes only.

App callback URLs such as myapp://example are also supported.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

ClientName

A friendly name for the app client that you want to create.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: Yes

DefaultRedirectURI

The default redirect URI. In app clients with one assigned IdP, replaces `redirect_uri` in authentication requests. Must be in the `CallbackURLs` list.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

EnablePropagateAdditionalUserContextData

When `true`, your application can include additional `UserContextData` in authentication requests. This data includes the IP address, and contributes to analysis by threat protection features. For more information about propagation of user context data, see Adding session data to API requests. If you don't include this parameter, you can't send the

source IP address to Amazon Cognito threat protection features. You can only activate `EnablePropagateAdditionalUserContextData` in an app client that has a client secret.

Type: Boolean

Required: No

EnableTokenRevocation

Activates or deactivates token revocation in the target app client.

Revoke tokens with RevokeToken.

If you don't include this parameter, token revocation is automatically activated for the new user pool client.

Type: Boolean

Required: No

ExplicitAuthFlows

The authentication flows that you want your user pool client to support. For each app client in your user pool, you can sign in your users with any combination of one or more flows, including with a user name and Secure Remote Password (SRP), a user name and password, or a custom authentication process that you define with Lambda functions.

> **Note**
>
> If you don't specify a value for `ExplicitAuthFlows`, your app client supports `ALLOW_REFRESH_TOKEN_AUTH`, `ALLOW_USER_SRP_AUTH`, and `ALLOW_CUSTOM_AUTH`.

The values for authentication flow options include the following.

- `ALLOW_USER_AUTH`: Enable selection-based sign-in with `USER_AUTH`. This setting covers username-password, secure remote password (SRP), passwordless, and passkey authentication. This authentiation flow can do username-password and SRP authentication without other `ExplicitAuthFlows` permitting them. For example users can complete an SRP challenge through `USER_AUTH` without the flow `USER_SRP_AUTH` being active for the app client. This flow doesn't include `CUSTOM_AUTH`.

  To activate this setting, your user pool must be in the Essentials tier or higher.

- ALLOW_ADMIN_USER_PASSWORD_AUTH: Enable admin based user password authentication flow ADMIN_USER_PASSWORD_AUTH. This setting replaces the ADMIN_NO_SRP_AUTH setting. With this authentication flow, your app passes a user name and password to Amazon Cognito in the request, instead of using the Secure Remote Password (SRP) protocol to securely transmit the password.
- ALLOW_CUSTOM_AUTH: Enable Lambda trigger based authentication.
- ALLOW_USER_PASSWORD_AUTH: Enable user password-based authentication. In this flow, Amazon Cognito receives the password in the request instead of using the SRP protocol to verify passwords.
- ALLOW_USER_SRP_AUTH: Enable SRP-based authentication.
- ALLOW_REFRESH_TOKEN_AUTH: Enable authflow to refresh tokens.

In some environments, you will see the values ADMIN_NO_SRP_AUTH, CUSTOM_AUTH_FLOW_ONLY, or USER_PASSWORD_AUTH. You can't assign these legacy ExplicitAuthFlows values to user pool clients at the same time as values that begin with ALLOW_, like ALLOW_USER_SRP_AUTH.

Type: Array of strings

Valid Values: ADMIN_NO_SRP_AUTH | CUSTOM_AUTH_FLOW_ONLY | USER_PASSWORD_AUTH | ALLOW_ADMIN_USER_PASSWORD_AUTH | ALLOW_CUSTOM_AUTH | ALLOW_USER_PASSWORD_AUTH | ALLOW_USER_SRP_AUTH | ALLOW_REFRESH_TOKEN_AUTH | ALLOW_USER_AUTH

Required: No

GenerateSecret

When true, generates a client secret for the app client. Client secrets are used with server-side and machine-to-machine applications. Client secrets are automatically generated; you can't specify a secret value. For more information, see App client types.

Type: Boolean

Required: No

IdTokenValidity

The ID token time limit. After this limit expires, your user can't use their ID token. To specify the time unit for IdTokenValidity as seconds, minutes, hours, or days, set a TokenValidityUnits value in your API request.

For example, when you set `IdTokenValidity` as `10` and `TokenValidityUnits` as `hours`, your user can authenticate their session with their ID token for 10 hours.

The default time unit for `IdTokenValidity` in an API request is hours. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your ID tokens are valid for one hour.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

Required: No

LogoutURLs

A list of allowed logout URLs for managed login authentication. When you pass `logout_uri` and `client_id` parameters to `/logout`, Amazon Cognito signs out your user and redirects them to the logout URL. This parameter describes the URLs that you want to be the permitted targets of `logout_uri`. A typical use of these URLs is when a user selects "Sign out" and you redirect them to your public homepage. For more information, see Logout endpoint.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

PreventUserExistenceErrors

When `ENABLED`, suppresses messages that might indicate a valid user exists when someone attempts sign-in. This parameters sets your preference for the errors and responses that you want Amazon Cognito APIs to return during authentication, account confirmation, and password recovery when the user doesn't exist in the user pool. When set to `ENABLED` and the user doesn't exist, authentication returns an error indicating either the username or password was incorrect. Account confirmation and password recovery return a response indicating a code was sent to a simulated destination. When set to `LEGACY`, those APIs return a `UserNotFoundException` exception if the user doesn't exist in the user pool.

Defaults to LEGACY.

This setting affects the behavior of the following API operations.

- AdminInitiateAuth
- AdminRespondToAuthChallenge
- InitiateAuth
- RespondToAuthChallenge
- ForgotPassword
- ConfirmForgotPassword
- ConfirmSignUp
- ResendConfirmationCode

Type: String

Valid Values: LEGACY | ENABLED

Required: No

ReadAttributes

The list of user attributes that you want your app client to have read access to. After your user authenticates in your app, their access token authorizes them to read their own attribute value for any attribute in this list.

An example of this kind of activity is when your user selects a link to view their profile information. Your app makes a GetUser API request to retrieve and display your user's profile data.

When you don't specify the ReadAttributes for your app client, your app can read the values of email_verified, phone_number_verified, and the standard attributes of your user pool. When your user pool app client has read access to these default attributes, ReadAttributes doesn't return any information. Amazon Cognito only populates ReadAttributes in the API response if you have specified your own custom set of read attributes.

Type: Array of strings

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

Required: No

RefreshTokenRotation

The configuration of your app client for refresh token rotation. When enabled, your app client issues new ID, access, and refresh tokens when users renew their sessions with refresh tokens. When disabled, token refresh issues only ID and access tokens.

Refresh token rotation must be completed with GetTokensFromRefreshToken. With refresh token rotation disabled, you can complete token refresh with `GetTokensFromRefreshToken` and with `REFRESH_TOKEN_AUTH` in InitiateAuth:AuthFlow and AdminInitiateAuth:AuthFlow.

Type: RefreshTokenRotationType object

Required: No

RefreshTokenValidity

The refresh token time limit. After this limit expires, your user can't use their refresh token. To specify the time unit for `RefreshTokenValidity` as `seconds`, `minutes`, `hours`, or `days`, set a `TokenValidityUnits` value in your API request.

For example, when you set `RefreshTokenValidity` as `10` and `TokenValidityUnits` as `days`, your user can refresh their session and retrieve new access and ID tokens for 10 days.

The default time unit for `RefreshTokenValidity` in an API request is days. You can't set `RefreshTokenValidity` to 0. If you do, Amazon Cognito overrides the value with the default value of 30 days. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your refresh tokens are valid for 30 days.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 315360000.

Required: No

SupportedIdentityProviders

A list of provider names for the identity providers (IdPs) that are supported on this client. The following are supported: `COGNITO`, `Facebook`, `Google`, `SignInWithApple`, and `LoginWithAmazon`. You can also specify the names that you configured for the SAML and OIDC IdPs in your user pool, for example `MySAMLIdP` or `MyOIDCIdP`.

This parameter sets the IdPs that managed login will display on the login page for your app client. The removal of `COGNITO` from this list doesn't prevent authentication operations for local users with the user pools API in an Amazon SDK. The only way to prevent SDK-based authentication is to block access with a Amazon WAF rule.

Type: Array of strings

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: No

TokenValidityUnits

The units that validity times are represented in. The default unit for refresh tokens is days, and the default for ID and access tokens are hours.

Type: TokenValidityUnitsType object

Required: No

UserPoolId

The ID of the user pool where you want to create an app client.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

WriteAttributes

The list of user attributes that you want your app client to have write access to. After your user authenticates in your app, their access token authorizes them to set or modify their own attribute value for any attribute in this list.

An example of this kind of activity is when you present your user with a form to update their profile information and they change their last name. Your app then makes an UpdateUserAttributes API request and sets `family_name` to the new value.

When you don't specify the `WriteAttributes` for your app client, your app can write the values of the Standard attributes of your user pool. When your user pool has write access to

these default attributes, `WriteAttributes` doesn't return any information. Amazon Cognito only populates `WriteAttributes` in the API response if you have specified your own custom set of write attributes.

If your app client allows users to sign in through an IdP, this array must include all attributes that you have mapped to IdP attributes. Amazon Cognito updates mapped attributes when users sign in to your application through an IdP. If your app client does not have write access to a mapped attribute, Amazon Cognito throws an error when it tries to update the attribute. For more information, see Specifying IdP Attribute Mappings for Your user pool.

Type: Array of strings

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

Required: No

Response Syntax

```
{
   "UserPoolClient": {
      "AccessTokenValidity": number,
      "AllowedOAuthFlows": [ "string" ],
      "AllowedOAuthFlowsUserPoolClient": boolean,
      "AllowedOAuthScopes": [ "string" ],
      "AnalyticsConfiguration": {
         "ApplicationArn": "string",
         "ApplicationId": "string",
         "ExternalId": "string",
         "RoleArn": "string",
         "UserDataShared": boolean
      },
      "AuthSessionValidity": number,
      "CallbackURLs": [ "string" ],
      "ClientId": "string",
      "ClientName": "string",
      "ClientSecret": "string",
      "CreationDate": number,
      "DefaultRedirectURI": "string",
      "EnablePropagateAdditionalUserContextData": boolean,
      "EnableTokenRevocation": boolean,
      "ExplicitAuthFlows": [ "string" ],
      "IdTokenValidity": number,
```

```
      "LastModifiedDate": number,
      "LogoutURLs": [ "string" ],
      "PreventUserExistenceErrors": "string",
      "ReadAttributes": [ "string" ],
      "RefreshTokenRotation": {
         "Feature": "string",
         "RetryGracePeriodSeconds": number
      },
      "RefreshTokenValidity": number,
      "SupportedIdentityProviders": [ "string" ],
      "TokenValidityUnits": {
         "AccessToken": "string",
         "IdToken": "string",
         "RefreshToken": "string"
      },
      "UserPoolId": "string",
      "WriteAttributes": [ "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.

UserPoolClient

The details of the new app client.

Type: UserPoolClientType object

Errors

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

FeatureUnavailableInTierException

This exception is thrown when a feature you attempted to configure isn't available in your current feature plan.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidOAuthFlowException

This exception is thrown when the specified OAuth flow is not valid.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

ScopeDoesNotExistException

This exception is thrown when the specified scope doesn't exist.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example creates an app client with all configurable properties set to an example value. The resulting user pool client connects to an analytics client, allows sign-in with username and password, and has two external identity providers associated with it.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateUserPoolClient
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "AccessTokenValidity": 6,
    "AllowedOAuthFlows": [
        "code"
    ],
    "AllowedOAuthFlowsUserPoolClient": true,
    "AllowedOAuthScopes": [
        "aws.cognito.signin.user.admin",
        "openid"
    ],
    "AnalyticsConfiguration": {
        "ApplicationId": "d70b2ba36a8c4dc5a04a0451a31a1e12",
        "ExternalId": "my-external-id",
        "RoleArn": "arn:aws:iam::123456789012:role/test-cognitouserpool-role",
        "UserDataShared": true
    },
    "CallbackURLs": [
        "https://example.com",
        "http://localhost",
        "myapp://example"
    ],
    "ClientName": "my-test-app-client",
    "DefaultRedirectURI": "https://example.com",
```

```
    "ExplicitAuthFlows": [
        "ALLOW_USER_AUTH",
        "ALLOW_ADMIN_USER_PASSWORD_AUTH",
        "ALLOW_USER_PASSWORD_AUTH",
        "ALLOW_REFRESH_TOKEN_AUTH"
    ],
    "GenerateSecret": true,
    "IdTokenValidity": 6,
    "LogoutURLs": [
        "https://example.com/logout"
    ],
    "PreventUserExistenceErrors": "ENABLED",
    "ReadAttributes": [
        "email",
        "address",
        "preferred_username"
    ],
    "RefreshTokenValidity": 6,
    "SupportedIdentityProviders": [
        "SignInWithApple",
        "MySSO"
    ],
    "TokenValidityUnits": {
        "AccessToken": "hours",
        "IdToken": "minutes",
        "RefreshToken": "days"
    },
    "UserPoolId": "us-east-1_EXAMPLE",
    "WriteAttributes": [
        "family_name",
        "email"
    ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

```
{
      "UserPoolClient": {
        "AccessTokenValidity": 6,
        "AllowedOAuthFlows": [
          "code"
        ],
        "AllowedOAuthFlowsUserPoolClient": true,
        "AllowedOAuthScopes": [
          "aws.cognito.signin.user.admin",
          "openid"
        ],
        "AnalyticsConfiguration": {
          "ApplicationId": "d70b2ba36a8c4dc5a04a0451a31a1e12",
          "ExternalId": "my-external-id",
          "RoleArn": "arn:aws:iam::123456789012:role/test-cognitouserpool-role",
          "UserDataShared": true
        },
        "AuthSessionValidity": 3,
        "CallbackURLs": [
          "https://example.com",
          "http://localhost",
          "myapp://example"
        ],
        "ClientId": "1example23456789",
        "ClientName": "my-test-app-client",
        "ClientSecret": "13ka4h7u28d9oo44tqpq9djqsfvhvu8rk4d2ighvpu0k8fj1c2r9",
        "CreationDate": 1689885426.107,
        "DefaultRedirectURI": "https://example.com",
        "EnablePropagateAdditionalUserContextData": false,
        "EnableTokenRevocation": true,
        "ExplicitAuthFlows": [
          "ALLOW_USER_AUTH",
          "ALLOW_USER_PASSWORD_AUTH",
          "ALLOW_ADMIN_USER_PASSWORD_AUTH",
          "ALLOW_REFRESH_TOKEN_AUTH"
        ],
        "IdTokenValidity": 6,
        "LastModifiedDate": 1689885426.107,
        "LogoutURLs": [
          "https://example.com/logout"
        ],
        "PreventUserExistenceErrors": "ENABLED",
        "ReadAttributes": [
          "address",
```

```
            "preferred_username",
            "email"
          ],
          "RefreshTokenValidity": 6,
          "SupportedIdentityProviders": [
            "SignInWithApple",
            "MySSO"
          ],
          "TokenValidityUnits": {
            "AccessToken": "hours",
            "IdToken": "minutes",
            "RefreshToken": "days"
          },
          "UserPoolId": "us-east-1_EXAMPLE",
          "WriteAttributes": [
            "family_name",
            "email"
          ]
        }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

CreateUserPoolDomain

A user pool domain hosts managed login, an authorization server and web server for authentication in your application. This operation creates a new user pool prefix domain or custom domain and sets the managed login branding version. Set the branding version to 1 for hosted UI (classic) or 2 for managed login. When you choose a custom domain, you must provide an SSL certificate in the US East (N. Virginia) Amazon Region in your request.

Your prefix domain might take up to one minute to take effect. Your custom domain is online within five minutes, but it can take up to one hour to distribute your SSL certificate.

For more information about adding a custom domain to your user pool, see Configuring a user pool domain.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "CustomDomainConfig": {
      "CertificateArn": "string"
   },
   "Domain": "string",
   "ManagedLoginVersion": number,
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

CustomDomainConfig

The configuration for a custom domain. Configures your domain with an Amazon Certificate Manager certificate in the `us-east-1` Region.

Provide this parameter only if you want to use a custom domain for your user pool. Otherwise, you can omit this parameter and use a prefix domain instead.

When you create a custom domain, the passkey RP ID defaults to the custom domain. If you had a prefix domain active, this will cause passkey integration for your prefix domain to stop working due to a mismatch in RP ID. To keep the prefix domain passkey integration working, you can explicitly set RP ID to the prefix domain.

Update the RP ID in a SetUserPoolMfaConfig request.

Type: CustomDomainConfigType object

Required: No

Domain

The domain string. For custom domains, this is the fully-qualified domain name, such as `auth.example.com`. For prefix domains, this is the prefix alone, such as `myprefix`. A prefix value of `myprefix` for a user pool in the `us-east-1` Region results in a domain of `myprefix.auth.us-east-1.amazoncognito.com`.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

Required: Yes

ManagedLoginVersion

The version of managed login branding that you want to apply to your domain. A value of 1 indicates hosted UI (classic) and a version of 2 indicates managed login.

Managed login requires that your user pool be configured for any feature plan other than `Lite`.

Type: Integer

Required: No

UserPoolId

The ID of the user pool where you want to add a domain.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "CloudFrontDomain": "string",
   "ManagedLoginVersion": number
}
```

Response Elements

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

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

CloudFrontDomain

The fully-qualified domain name (FQDN) of the Amazon CloudFront distribution that hosts your managed login or classic hosted UI pages. Your domain-name authority must have an alias record that points requests for your custom domain to this FQDN. Amazon Cognito returns this value if you set a custom domain with `CustomDomainConfig`. If you set an Amazon Cognito prefix domain, this parameter returns null.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

ManagedLoginVersion

The version of managed login branding applied your domain. A value of 1 indicates hosted UI (classic) and a version of 2 indicates managed login.

Type: Integer

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

FeatureUnavailableInTierException

This exception is thrown when a feature you attempted to configure isn't available in your current feature plan.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

Examples

Example

The following example creates a user pool custom domain. Amazon Cognito creates resources for the resulting domain `auth.example.com` at the CloudFront distribution `example.cloudfront.net`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.ca-central-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateUserPoolDomain
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "CustomDomainConfig": {
      "CertificateArn": "arn:aws:acm:us-east-1:123456789012:certificate/
a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
   },
   "Domain": "auth.example.com",
   "ManagedLoginVersion": 2,
   "UserPoolId": "ca-central-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
```

```
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "CloudFrontDomain": "example.cloudfront.net",
 "ManagedLoginVersion": 2
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteGroup

Deletes a group from the specified user pool. When you delete a group, that group no longer contributes to users' `cognito:preferred_group` or `cognito:groups` claims, and no longer influence access-control decision that are based on group membership. For more information about user pool groups, see Adding groups to a user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "GroupName": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

GroupName

The name of the group that you want to delete.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to delete the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request deletes the group `ExampleGroup` in the user pool `us-west-2_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteGroup
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "GroupName": "ExampleGroup",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2

- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteIdentityProvider

Deletes a user pool identity provider (IdP). After you delete an IdP, users can no longer sign in to your user pool through that IdP. For more information about user pool IdPs, see Third-party IdP sign-in.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "ProviderName": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ProviderName

The name of the IdP that you want to delete.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to delete the identity provider.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnsupportedIdentityProviderException

This exception is thrown when the specified identifier isn't supported.

HTTP Status Code: 400

Examples

Example

The following example request deletes the IdP `MyIdP` in user pool `us-west-2_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteIdentityProvider
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ProviderName": "MyIdP",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteManagedLoginBranding

Deletes a managed login branding style. When you delete a style, you delete the branding association for an app client. When an app client doesn't have a style assigned, your managed login pages for that app client are nonfunctional until you create a new style or switch the domain branding version.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "ManagedLoginBrandingId": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ManagedLoginBrandingId

The ID of the managed login branding style that you want to delete.

Type: String

Pattern: `^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[4][0-9a-fA-F]{3}-[89abAB][0-9a-fA-F]{3}-[0-9a-fA-F]{12}$`

Required: Yes

UserPoolId

The ID of the user pool that contains the managed login branding style that you want to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request deletes the managed login style with ID `a1b2c3d4-5678-90ab-cdef-EXAMPLE11111` from user pool `us-west-2_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteManagedLoginBranding
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ManagedLoginBrandingId": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

See Also

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

- Amazon Command Line Interface

- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteResourceServer

Deletes a resource server. After you delete a resource server, users can no longer generate access tokens with scopes that are associate with that resource server.

Resource servers are associated with custom scopes and machine-to-machine (M2M) authorization. For more information, see Access control with resource servers.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Identifier": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Identifier

The identifier of the resource server that you want to delete.

Type: String

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

Pattern: `[\x21\x23-\x5B\x5D-\x7E]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to delete the resource server.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request deletes the resource server `MyAPI` from user pool `us-west-2_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteResourceServer
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "Identifier": "MyAPI",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

See Also

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

- Amazon Command Line Interface

- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteUser

Deletes the profile of the currently signed-in user. A deleted user profile can no longer be used to sign in and can't be restored.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request deletes the user with the access token `eyJra456defEXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET

- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteUserAttributes

Deletes attributes from the currently signed-in user. For example, your application can submit a request to this operation when a user wants to remove their `birthdate` attribute value.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "UserAttributeNames": [ "string" ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

UserAttributeNames

An array of strings representing the user attribute names you want to delete.

For custom attributes, you must prepend the `custom:` prefix to the attribute name, for example `custom:department`.

Type: Array of strings

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request deletes the attributes `nickname` and `middle_name` from the user with the access token `eyJra456defEXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
```

```
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteUserAttributes
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "UserAttributeNames": [
       "nickname",
       "middle_name"
       ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteUserPool

Deletes a user pool. After you delete a user pool, users can no longer sign in to any associated applications.

When you delete a user pool, it's no longer visible or operational in your Amazon Web Services account. Amazon Cognito retains deleted user pools in an inactive state for 14 days, then begins a cleanup process that fully removes them from Amazon systems. In case of accidental deletion, contact Amazon Web Services Support within 14 days for restoration assistance.

Amazon Cognito begins full deletion of all resources from deleted user pools after 14 days. In the case of large user pools, the cleanup process might take significant additional time before all user data is permanently deleted.

Request Syntax

```
{
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

UserPoolId

The ID of the user pool that you want to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserImportInProgressException

This exception is thrown when you're trying to modify a user pool while a user import job is in progress for that pool.

HTTP Status Code: 400

Examples

Example

The following example request doesn't succeed in deletion of the user pool `us-west-2_EXAMPLE` because deletion protection is active.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteUserPool
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "__type": "InvalidParameterException",
 "message": "User pool cannot be deleted. It has a domain configured that should be
 deleted first."
}
```

Example

The following example request deletes the user pool `us-west-2_EXAMPLE` after deletion protection is inactive.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteUserPool
User-Agent: <UserAgentString>
```

```
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteUserPoolClient

Deletes a user pool app client. After you delete an app client, users can no longer sign in to the associated application.

Request Syntax

```
{
   "ClientId": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientId

The ID of the user pool app client that you want to delete.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to delete the client.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request deletes the user pool client with ID `1example23456789` from user pool `us-west-2_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteUserPoolClient
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteUserPoolDomain

Given a user pool ID and domain identifier, deletes a user pool domain. After you delete a user pool domain, your managed login pages and authorization server are no longer available.

Request Syntax

```
{
   "Domain": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Domain

The domain that you want to delete. For custom domains, this is the fully-qualified domain name like `auth.example.com`. For Amazon Cognito prefix domains, this is the prefix alone, like `myprefix`.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

Required: Yes

UserPoolId

The ID of the user pool where you want to delete the domain.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

Examples

Example

The following example request deletes the Amazon Cognito prefix domain `mytestdomain` from the user pool `us-west-2_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteUserPoolDomain
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "Domain": "mytestdomain",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3

- Amazon SDK for Python
- Amazon SDK for Ruby V3

DeleteWebAuthnCredential

Deletes a registered passkey, or WebAuthn, authenticator for the currently signed-in user.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "CredentialId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

CredentialId

The unique identifier of the passkey that you want to delete.

Look up registered devices with ListWebAuthnCredentials.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

Examples

Example

The following example request deletes the passkey credential with ID `gDHtiE8JgY8mZS_ABDl9sScfjgTG7TPwhlj4et9lxNlR1LTtwnqwE_ObtR1hN_xU` from the user with access token `eyJra456defEXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DeleteWebAuthnCredential
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "AccessToken":"eyJra456defEXAMPLE",
    "CredentialId":"gDHtiE8JgY8mZS_ABDl9sScfjgTG7TPwhlj4et9lxNlR1LTtwnqwE_ObtR1hN_xU"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeIdentityProvider

Given a user pool ID and identity provider (IdP) name, returns details about the IdP.

Request Syntax

```
{
   "ProviderName": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ProviderName

The name of the IdP that you want to describe.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: Yes

UserPoolId

The ID of the user pool that has the IdP that you want to describe..

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "IdentityProvider": {
      "AttributeMapping": {
         "string" : "string"
      },
      "CreationDate": number,
      "IdpIdentifiers": [ "string" ],
      "LastModifiedDate": number,
      "ProviderDetails": {
         "string" : "string"
      },
      "ProviderName": "string",
      "ProviderType": "string",
      "UserPoolId": "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.

IdentityProvider

The details of the requested IdP.

Type: IdentityProviderType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request describes a Google IdP.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeIdentityProvider
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ProviderName": "Google",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "IdentityProvider": {
  "AttributeMapping": {
   "email": "email",
   "username": "sub"
  },
  "CreationDate": 1635187122.265,
  "IdpIdentifiers": [],
  "LastModifiedDate": 1697051749.303,
  "ProviderDetails": {
   "attributes_url": "https://people.googleapis.com/v1/people/me?personFields=",
   "attributes_url_add_attributes": "true",
   "authorize_scopes": "email profile openid",
   "authorize_url": "https://accounts.google.com/o/oauth2/v2/auth",
   "client_id": "[client ID].apps.googleusercontent.com",
   "client_secret": "[client secret]",
   "oidc_issuer": "https://accounts.google.com",
   "token_request_method": "POST",
   "token_url": "https://www.googleapis.com/oauth2/v4/token"
  },
  "ProviderName": "Google",
  "ProviderType": "Google",
  "UserPoolId": "us-west-2_EXAMPLE"
 }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++

- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeManagedLoginBranding

Given the ID of a managed login branding style, returns detailed information about the style.

Request Syntax

```
{
   "ManagedLoginBrandingId": "string",
   "ReturnMergedResources": boolean,
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ManagedLoginBrandingId

The ID of the managed login branding style that you want to get more information about.

Type: String

Pattern: `^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[4][0-9a-fA-F]{3}-[89abAB][0-9a-fA-F]{3}-[0-9a-fA-F]{12}$`

Required: Yes

ReturnMergedResources

When `true`, returns values for branding options that are unchanged from Amazon Cognito defaults. When `false` or when you omit this parameter, returns only values that you customized in your branding style.

Type: Boolean

Required: No

UserPoolId

The ID of the user pool that contains the managed login branding style that you want to get information about.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "ManagedLoginBranding": {
      "Assets": [
         {
            "Bytes": blob,
            "Category": "string",
            "ColorMode": "string",
            "Extension": "string",
            "ResourceId": "string"
         }
      ],
      "CreationDate": number,
      "LastModifiedDate": number,
      "ManagedLoginBrandingId": "string",
      "Settings": JSON value,
      "UseCognitoProvidedValues": boolean,
      "UserPoolId": "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.

ManagedLoginBranding

The details of the requested branding style.

Type: ManagedLoginBrandingType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the details of the managed login style with ID `a1b2c3d4-5678-90ab-cdef-EXAMPLE11111`.

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.ca-central-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeManagedLoginBranding
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ReturnMergedResources": false,
   "UserPoolId": "ca-central-1_EXAMPLE",
   "ManagedLoginBrandingId":"a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "ManagedLoginBranding": {
        "Assets": [
            {
                "Bytes": "[encoded image file]",
                "Category": "PAGE_FOOTER_LOGO",
                "ColorMode": "LIGHT",
                "Extension": "JPEG"
            }
        ],
        "CreationDate": 1732667944.313,
        "LastModifiedDate": 1732668950.888,
        "ManagedLoginBrandingId": "ef1bb4d9-a28f-4dc6-94c6-49a605de6a6a",
        "Settings": {
            "categories": {
                "auth": {
                    "authMethodOrder": [
                        [
                            {
                                "display": "BUTTON",
                                "type": "FEDERATED"
```

```
                        },
                        {
                            "display": "INPUT",
                            "type": "USERNAME_PASSWORD"
                        }
                    ]
                ],
                "federation": {
                    "interfaceStyle": "BUTTON_LIST",
                    "order": [
                    ]
                }
            },
            "form": {
                "displayGraphics": true,
                "instructions": {
                    "enabled": false
                },
                "languageSelector": {
                    "enabled": false
                },
                "location": {
                    "horizontal": "CENTER",
                    "vertical": "CENTER"
                },
                "sessionTimerDisplay": "NONE"
            },
            "global": {
                "colorSchemeMode": "LIGHT",
                "pageFooter": {
                    "enabled": true
                },
                "pageHeader": {
                    "enabled": true
                },
                "spacingDensity": "REGULAR"
            },
            "signUp": {
                "acceptanceElements": [
                    {
                        "enforcement": "NONE",
                        "textKey": "en"
                    }
                ]
```

```
            }
        },
        "componentClasses": {
            "buttons": {
                "borderRadius": 8.0
            },
            "divider": {
                "darkMode": {
                    "borderColor": "232b37ff"
                },
                "lightMode": {
                    "borderColor": "ebebf0ff"
                }
            },
            "dropDown": {
                "borderRadius": 8.0,
                "darkMode": {
                    "defaults": {
                        "itemBackgroundColor": "192534ff"
                    },
                    "hover": {
                        "itemBackgroundColor": "081120ff",
                        "itemBorderColor": "5f6b7aff",
                        "itemTextColor": "e9ebedff"
                    },
                    "match": {
                        "itemBackgroundColor": "d1d5dbff",
                        "itemTextColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "defaults": {
                        "itemBackgroundColor": "ffffffff"
                    },
                    "hover": {
                        "itemBackgroundColor": "f4f4f4ff",
                        "itemBorderColor": "7d8998ff",
                        "itemTextColor": "000716ff"
                    },
                    "match": {
                        "itemBackgroundColor": "414d5cff",
                        "itemTextColor": "0972d3ff"
                    }
                }
```

```
                },
                "focusState": {
                    "darkMode": {
                        "borderColor": "539fe5ff"
                    },
                    "lightMode": {
                        "borderColor": "0972d3ff"
                    }
                },
                "idpButtons": {
                    "icons": {
                        "enabled": true
                    }
                },
                "input": {
                    "borderRadius": 8.0,
                    "darkMode": {
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "5f6b7aff"
                        },
                        "placeholderColor": "8d99a8ff"
                    },
                    "lightMode": {
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "7d8998ff"
                        },
                        "placeholderColor": "5f6b7aff"
                    }
                },
                "inputDescription": {
                    "darkMode": {
                        "textColor": "8d99a8ff"
                    },
                    "lightMode": {
                        "textColor": "5f6b7aff"
                    }
                },
                "inputLabel": {
                    "darkMode": {
                        "textColor": "d1d5dbff"
                    },
                    "lightMode": {
```

```
                    "textColor": "000716ff"
                }
            },
            "link": {
                "darkMode": {
                    "defaults": {
                        "textColor": "539fe5ff"
                    },
                    "hover": {
                        "textColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "defaults": {
                        "textColor": "0972d3ff"
                    },
                    "hover": {
                        "textColor": "033160ff"
                    }
                }
            },
            "optionControls": {
                "darkMode": {
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "7d8998ff"
                    },
                    "selected": {
                        "backgroundColor": "539fe5ff",
                        "foregroundColor": "000716ff"
                    }
                },
                "lightMode": {
                    "defaults": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "7d8998ff"
                    },
                    "selected": {
                        "backgroundColor": "0972d3ff",
                        "foregroundColor": "ffffffff"
                    }
                }
            },
            "statusIndicator": {
```

```
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff",
                        "indicatorColor": "eb6f6fff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
                    "success": {
                        "backgroundColor": "001a02ff",
                        "borderColor": "29ad32ff",
                        "indicatorColor": "29ad32ff"
                    },
                    "warning": {
                        "backgroundColor": "1d1906ff",
                        "borderColor": "e0ca57ff",
                        "indicatorColor": "e0ca57ff"
                    }
                },
                "lightMode": {
                    "error": {
                        "backgroundColor": "fff7f7ff",
                        "borderColor": "d91515ff",
                        "indicatorColor": "d91515ff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
                    "success": {
                        "backgroundColor": "f2fcf3ff",
                        "borderColor": "037f0cff",
                        "indicatorColor": "037f0cff"
                    },
                    "warning": {
                        "backgroundColor": "fffce9ff",
                        "borderColor": "8d6605ff",
                        "indicatorColor": "8d6605ff"
                    }
                }
            }
        },
        "components": {
            "alert": {
```

```
                    "borderRadius": 12.0,
                    "darkMode": {
                        "error": {
                            "backgroundColor": "1a0000ff",
                            "borderColor": "eb6f6fff"
                        }
                    },
                    "lightMode": {
                        "error": {
                            "backgroundColor": "fff7f7ff",
                            "borderColor": "d91515ff"
                        }
                    }
                },
                "favicon": {
                    "enabledTypes": [
                        "ICO",
                        "SVG"
                    ]
                },
                "form": {
                    "backgroundImage": {
                        "enabled": false
                    },
                    "borderRadius": 8.0,
                    "darkMode": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "424650ff"
                    },
                    "lightMode": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "c6c6cdff"
                    },
                    "logo": {
                        "enabled": false,
                        "formInclusion": "IN",
                        "location": "CENTER",
                        "position": "TOP"
                    }
                },
                "idpButton": {
                    "custom": {
                    },
                    "standard": {
```

```
                    "darkMode": {
                        "active": {
                            "backgroundColor": "354150ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        },
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "c6c6cdff",
                            "textColor": "c6c6cdff"
                        },
                        "hover": {
                            "backgroundColor": "192534ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "d3e7f9ff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        },
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "424650ff",
                            "textColor": "424650ff"
                        },
                        "hover": {
                            "backgroundColor": "f2f8fdff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        }
                    }
                }
            },
            "pageBackground": {
                "darkMode": {
                    "color": "0f1b2aff"
                },
                "image": {
                    "enabled": true
                },
                "lightMode": {
```

```
                    "color": "ffffffff"
                }
            },
            "pageFooter": {
                "backgroundImage": {
                    "enabled": false
                },
                "darkMode": {
                    "background": {
                        "color": "0f141aff"
                    },
                    "borderColor": "424650ff"
                },
                "lightMode": {
                    "background": {
                        "color": "fafafaff"
                    },
                    "borderColor": "d5dbdbff"
                },
                "logo": {
                    "enabled": true,
                    "location": "CENTER"
                }
            },
            "pageHeader": {
                "backgroundImage": {
                    "enabled": false
                },
                "darkMode": {
                    "background": {
                        "color": "0f141aff"
                    },
                    "borderColor": "424650ff"
                },
                "lightMode": {
                    "background": {
                        "color": "fafafaff"
                    },
                    "borderColor": "d5dbdbff"
                },
                "logo": {
                    "enabled": false,
                    "location": "START"
                }
```

```
                },
                "pageText": {
                    "darkMode": {
                        "bodyColor": "b6bec9ff",
                        "descriptionColor": "b6bec9ff",
                        "headingColor": "d1d5dbff"
                    },
                    "lightMode": {
                        "bodyColor": "414d5cff",
                        "descriptionColor": "414d5cff",
                        "headingColor": "000716ff"
                    }
                },
                "phoneNumberSelector": {
                    "displayType": "TEXT"
                },
                "primaryButton": {
                    "darkMode": {
                        "active": {
                            "backgroundColor": "539fe5ff",
                            "textColor": "000716ff"
                        },
                        "defaults": {
                            "backgroundColor": "539fe5ff",
                            "textColor": "000716ff"
                        },
                        "disabled": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "ffffffff"
                        },
                        "hover": {
                            "backgroundColor": "89bdeeff",
                            "textColor": "000716ff"
                        }
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "033160ff",
                            "textColor": "ffffffff"
                        },
                        "defaults": {
                            "backgroundColor": "0972d3ff",
                            "textColor": "ffffffff"
                        },
```

```
                        "disabled": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "ffffffff"
                        },
                        "hover": {
                            "backgroundColor": "033160ff",
                            "textColor": "ffffffff"
                        }
                    }
                },
                "secondaryButton": {
                    "darkMode": {
                        "active": {
                            "backgroundColor": "354150ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        },
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "539fe5ff",
                            "textColor": "539fe5ff"
                        },
                        "hover": {
                            "backgroundColor": "192534ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "d3e7f9ff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        },
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "0972d3ff",
                            "textColor": "0972d3ff"
                        },
                        "hover": {
                            "backgroundColor": "f2f8fdff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        }
```

```
                    }
                }
            }
        },
        "UseCognitoProvidedValues": false,
        "UserPoolId": "ca-central-1_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeManagedLoginBrandingByClient

Given the ID of a user pool app client, returns detailed information about the style assigned to the app client.

Request Syntax

```
{
   "ClientId": "string",
   "ReturnMergedResources": boolean,
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientId

The app client that's assigned to the branding style that you want more information about.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ReturnMergedResources

When `true`, returns values for branding options that are unchanged from Amazon Cognito defaults. When `false` or when you omit this parameter, returns only values that you customized in your branding style.

Type: Boolean

Required: No

UserPoolId

The ID of the user pool that contains the app client where you want more information about the managed login branding style.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "ManagedLoginBranding": {
      "Assets": [
         {
            "Bytes": blob,
            "Category": "string",
            "ColorMode": "string",
            "Extension": "string",
            "ResourceId": "string"
         }
      ],
      "CreationDate": number,
      "LastModifiedDate": number,
      "ManagedLoginBrandingId": "string",
      "Settings": JSON value,
      "UseCognitoProvidedValues": boolean,
      "UserPoolId": "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.

ManagedLoginBranding

The details of the requested branding style.

Type: ManagedLoginBrandingType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns managed login style details for the app client with ID `1example23456789`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.ca-central-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeManagedLoginBrandingByClient
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "ReturnMergedResources": false,
   "UserPoolId": "ca-central-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "ManagedLoginBranding": {
        "Assets": [
            {
                "Bytes": "[encoded image file]",
                "Category": "PAGE_FOOTER_LOGO",
                "ColorMode": "LIGHT",
                "Extension": "JPEG"
            }
        ],
        "CreationDate": 1732667944.313,
```

```
        "LastModifiedDate": 1732668950.888,
        "ManagedLoginBrandingId": "ef1bb4d9-a28f-4dc6-94c6-49a605de6a6a",
        "Settings": {
            "categories": {
                "auth": {
                    "authMethodOrder": [
                        [
                            {
                                "display": "BUTTON",
                                "type": "FEDERATED"
                            },
                            {
                                "display": "INPUT",
                                "type": "USERNAME_PASSWORD"
                            }
                        ]
                    ],
                    "federation": {
                        "interfaceStyle": "BUTTON_LIST",
                        "order": [
                        ]
                    }
                },
                "form": {
                    "displayGraphics": true,
                    "instructions": {
                        "enabled": false
                    },
                    "languageSelector": {
                        "enabled": false
                    },
                    "location": {
                        "horizontal": "CENTER",
                        "vertical": "CENTER"
                    },
                    "sessionTimerDisplay": "NONE"
                },
                "global": {
                    "colorSchemeMode": "LIGHT",
                    "pageFooter": {
                        "enabled": true
                    },
                    "pageHeader": {
                        "enabled": true
```

```
                },
                "spacingDensity": "REGULAR"
            },
            "signUp": {
                "acceptanceElements": [
                    {
                        "enforcement": "NONE",
                        "textKey": "en"
                    }
                ]
            }
        },
        "componentClasses": {
            "buttons": {
                "borderRadius": 8.0
            },
            "divider": {
                "darkMode": {
                    "borderColor": "232b37ff"
                },
                "lightMode": {
                    "borderColor": "ebebf0ff"
                }
            },
            "dropDown": {
                "borderRadius": 8.0,
                "darkMode": {
                    "defaults": {
                        "itemBackgroundColor": "192534ff"
                    },
                    "hover": {
                        "itemBackgroundColor": "081120ff",
                        "itemBorderColor": "5f6b7aff",
                        "itemTextColor": "e9ebedff"
                    },
                    "match": {
                        "itemBackgroundColor": "d1d5dbff",
                        "itemTextColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "defaults": {
                        "itemBackgroundColor": "ffffffff"
                    },
```

```
                        "hover": {
                            "itemBackgroundColor": "f4f4f4ff",
                            "itemBorderColor": "7d8998ff",
                            "itemTextColor": "000716ff"
                        },
                        "match": {
                            "itemBackgroundColor": "414d5cff",
                            "itemTextColor": "0972d3ff"
                        }
                    }
                },
                "focusState": {
                    "darkMode": {
                        "borderColor": "539fe5ff"
                    },
                    "lightMode": {
                        "borderColor": "0972d3ff"
                    }
                },
                "idpButtons": {
                    "icons": {
                        "enabled": true
                    }
                },
                "input": {
                    "borderRadius": 8.0,
                    "darkMode": {
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "5f6b7aff"
                        },
                        "placeholderColor": "8d99a8ff"
                    },
                    "lightMode": {
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "7d8998ff"
                        },
                        "placeholderColor": "5f6b7aff"
                    }
                },
                "inputDescription": {
                    "darkMode": {
                        "textColor": "8d99a8ff"
```

```
                    },
                    "lightMode": {
                        "textColor": "5f6b7aff"
                    }
                },
                "inputLabel": {
                    "darkMode": {
                        "textColor": "d1d5dbff"
                    },
                    "lightMode": {
                        "textColor": "000716ff"
                    }
                },
                "link": {
                    "darkMode": {
                        "defaults": {
                            "textColor": "539fe5ff"
                        },
                        "hover": {
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "defaults": {
                            "textColor": "0972d3ff"
                        },
                        "hover": {
                            "textColor": "033160ff"
                        }
                    }
                },
                "optionControls": {
                    "darkMode": {
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "7d8998ff"
                        },
                        "selected": {
                            "backgroundColor": "539fe5ff",
                            "foregroundColor": "000716ff"
                        }
                    },
                    "lightMode": {
                        "defaults": {
```

```
                        "backgroundColor": "ffffffff",
                        "borderColor": "7d8998ff"
                    },
                    "selected": {
                        "backgroundColor": "0972d3ff",
                        "foregroundColor": "ffffffff"
                    }
                }
            },
            "statusIndicator": {
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff",
                        "indicatorColor": "eb6f6fff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
                    "success": {
                        "backgroundColor": "001a02ff",
                        "borderColor": "29ad32ff",
                        "indicatorColor": "29ad32ff"
                    },
                    "warning": {
                        "backgroundColor": "1d1906ff",
                        "borderColor": "e0ca57ff",
                        "indicatorColor": "e0ca57ff"
                    }
                },
                "lightMode": {
                    "error": {
                        "backgroundColor": "fff7f7ff",
                        "borderColor": "d91515ff",
                        "indicatorColor": "d91515ff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
                    "success": {
                        "backgroundColor": "f2fcf3ff",
                        "borderColor": "037f0cff",
                        "indicatorColor": "037f0cff"
                    },
```

```
                    "warning": {
                        "backgroundColor": "fffce9ff",
                        "borderColor": "8d6605ff",
                        "indicatorColor": "8d6605ff"
                    }
                }
            }
        },
        "components": {
            "alert": {
                "borderRadius": 12.0,
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff"
                    }
                },
                "lightMode": {
                    "error": {
                        "backgroundColor": "fff7f7ff",
                        "borderColor": "d91515ff"
                    }
                }
            },
            "favicon": {
                "enabledTypes": [
                    "ICO",
                    "SVG"
                ]
            },
            "form": {
                "backgroundImage": {
                    "enabled": false
                },
                "borderRadius": 8.0,
                "darkMode": {
                    "backgroundColor": "0f1b2aff",
                    "borderColor": "424650ff"
                },
                "lightMode": {
                    "backgroundColor": "ffffffff",
                    "borderColor": "c6c6cdff"
                },
                "logo": {
```

```
                        "enabled": false,
                        "formInclusion": "IN",
                        "location": "CENTER",
                        "position": "TOP"
                    }
                },
                "idpButton": {
                    "custom": {
                    },
                    "standard": {
                        "darkMode": {
                            "active": {
                                "backgroundColor": "354150ff",
                                "borderColor": "89bdeeff",
                                "textColor": "89bdeeff"
                            },
                            "defaults": {
                                "backgroundColor": "0f1b2aff",
                                "borderColor": "c6c6cdff",
                                "textColor": "c6c6cdff"
                            },
                            "hover": {
                                "backgroundColor": "192534ff",
                                "borderColor": "89bdeeff",
                                "textColor": "89bdeeff"
                            }
                        },
                        "lightMode": {
                            "active": {
                                "backgroundColor": "d3e7f9ff",
                                "borderColor": "033160ff",
                                "textColor": "033160ff"
                            },
                            "defaults": {
                                "backgroundColor": "ffffffff",
                                "borderColor": "424650ff",
                                "textColor": "424650ff"
                            },
                            "hover": {
                                "backgroundColor": "f2f8fdff",
                                "borderColor": "033160ff",
                                "textColor": "033160ff"
                            }
                        }
```

```
                    }
                },
                "pageBackground": {
                    "darkMode": {
                        "color": "0f1b2aff"
                    },
                    "image": {
                        "enabled": true
                    },
                    "lightMode": {
                        "color": "ffffffff"
                    }
                },
                "pageFooter": {
                    "backgroundImage": {
                        "enabled": false
                    },
                    "darkMode": {
                        "background": {
                            "color": "0f141aff"
                        },
                        "borderColor": "424650ff"
                    },
                    "lightMode": {
                        "background": {
                            "color": "fafafaff"
                        },
                        "borderColor": "d5dbdbff"
                    },
                    "logo": {
                        "enabled": true,
                        "location": "CENTER"
                    }
                },
                "pageHeader": {
                    "backgroundImage": {
                        "enabled": false
                    },
                    "darkMode": {
                        "background": {
                            "color": "0f141aff"
                        },
                        "borderColor": "424650ff"
                    },
```

```
                    "lightMode": {
                        "background": {
                            "color": "fafafaff"
                        },
                        "borderColor": "d5dbdbff"
                    },
                    "logo": {
                        "enabled": false,
                        "location": "START"
                    }
                },
                "pageText": {
                    "darkMode": {
                        "bodyColor": "b6bec9ff",
                        "descriptionColor": "b6bec9ff",
                        "headingColor": "d1d5dbff"
                    },
                    "lightMode": {
                        "bodyColor": "414d5cff",
                        "descriptionColor": "414d5cff",
                        "headingColor": "000716ff"
                    }
                },
                "phoneNumberSelector": {
                    "displayType": "TEXT"
                },
                "primaryButton": {
                    "darkMode": {
                        "active": {
                            "backgroundColor": "539fe5ff",
                            "textColor": "000716ff"
                        },
                        "defaults": {
                            "backgroundColor": "539fe5ff",
                            "textColor": "000716ff"
                        },
                        "disabled": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "ffffffff"
                        },
                        "hover": {
                            "backgroundColor": "89bdeeff",
                            "textColor": "000716ff"
                        }
```

```
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "033160ff",
                            "textColor": "ffffffff"
                        },
                        "defaults": {
                            "backgroundColor": "0972d3ff",
                            "textColor": "ffffffff"
                        },
                        "disabled": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "ffffffff"
                        },
                        "hover": {
                            "backgroundColor": "033160ff",
                            "textColor": "ffffffff"
                        }
                    }
                },
                "secondaryButton": {
                    "darkMode": {
                        "active": {
                            "backgroundColor": "354150ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        },
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "539fe5ff",
                            "textColor": "539fe5ff"
                        },
                        "hover": {
                            "backgroundColor": "192534ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "d3e7f9ff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        },
```

```
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "0972d3ff",
                            "textColor": "0972d3ff"
                        },
                        "hover": {
                            "backgroundColor": "f2f8fdff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        }
                    }
                }
            }
        },
        "UseCognitoProvidedValues": false,
        "UserPoolId": "ca-central-1_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeResourceServer

Describes a resource server. For more information about resource servers, see Access control with resource servers.

Request Syntax

```
{
   "Identifier": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Identifier

A unique resource server identifier for the resource server. The identifier can be an API friendly name like `solar-system-data`. You can also set an API URL like `https://solar-system-data-api.example.com` as your identifier.

Amazon Cognito represents scopes in the access token in the format `$resource-server-identifier/$scope`. Longer scope-identifier strings increase the size of your access tokens.

Type: String

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

Pattern: `[\x21\x23-\x5B\x5D-\x7E]+`

Required: Yes

UserPoolId

The ID of the user pool that hosts the resource server.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "ResourceServer": {
      "Identifier": "string",
      "Name": "string",
      "Scopes": [
         {
            "ScopeDescription": "string",
            "ScopeName": "string"
         }
      ],
      "UserPoolId": "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.

ResourceServer

The details of the requested resource server.

Type: ResourceServerType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns details about the resource server `myapi.example.com` in user pool `us-west-2_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeResourceServer
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "Identifier": "myapi.example.com",
```

```
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "ResourceServer": {
  "Identifier": "myapi.example.com",
  "Name": "Example API with custom access control scopes",
  "Scopes": [
   {
    "ScopeDescription": "International customers",
    "ScopeName": "international.read"
   },
   {
    "ScopeDescription": "Domestic customers",
    "ScopeName": "domestic.read"
   }
  ],
  "UserPoolId": "us-west-2_EXAMPLE"
 }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3

- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeRiskConfiguration

Given an app client or user pool ID where threat protection is configured, describes the risk configuration. This operation returns details about adaptive authentication, compromised credentials, and IP-address allow- and denylists. For more information about threat protection, see Threat protection.

Request Syntax

```
{
   "ClientId": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientId

The ID of the app client with the risk configuration that you want to inspect. You can apply default risk configuration at the user pool level and further customize it from user pool defaults at the app-client level. Specify `ClientId` to inspect client-level configuration, or `UserPoolId` to inspect pool-level configuration.

Type: String

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

Pattern: `[\w+]+`

Required: No

UserPoolId

The ID of the user pool with the risk configuration that you want to inspect. You can apply default risk configuration at the user pool level and further customize it from user pool defaults at the app-client level. Specify `ClientId` to inspect client-level configuration, or `UserPoolId` to inspect pool-level configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "RiskConfiguration": {
      "AccountTakeoverRiskConfiguration": {
         "Actions": {
            "HighAction": {
               "EventAction": "string",
               "Notify": boolean
            },
            "LowAction": {
               "EventAction": "string",
               "Notify": boolean
            },
            "MediumAction": {
               "EventAction": "string",
               "Notify": boolean
            }
         },
         "NotifyConfiguration": {
            "BlockEmail": {
               "HtmlBody": "string",
               "Subject": "string",
               "TextBody": "string"
            },
            "From": "string",
            "MfaEmail": {
               "HtmlBody": "string",
               "Subject": "string",
               "TextBody": "string"
            },
            "NoActionEmail": {
               "HtmlBody": "string",
               "Subject": "string",
               "TextBody": "string"
```

```
            },
            "ReplyTo": "string",
            "SourceArn": "string"
         }
      },
      "ClientId": "string",
      "CompromisedCredentialsRiskConfiguration": {
         "Actions": {
            "EventAction": "string"
         },
         "EventFilter": [ "string" ]
      },
      "LastModifiedDate": number,
      "RiskExceptionConfiguration": {
         "BlockedIPRangeList": [ "string" ],
         "SkippedIPRangeList": [ "string" ]
      },
      "UserPoolId": "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.

RiskConfiguration

The details of the requested risk configuration.

Type: RiskConfigurationType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserPoolAddOnNotEnabledException

This exception is thrown when user pool add-ons aren't enabled.

HTTP Status Code: 400

Examples

Example

The following example request describes the threat protection configuration of the app client with ID `1example23456789`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeRiskConfiguration
User-Agent: <UserAgentString>
```

```
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "RiskConfiguration": {
        "AccountTakeoverRiskConfiguration": {
            "Actions": {
                "HighAction": {
                    "EventAction": "MFA_REQUIRED",
                    "Notify": true
                },
                "LowAction": {
                    "EventAction": "NO_ACTION",
                    "Notify": true
                },
                "MediumAction": {
                    "EventAction": "MFA_IF_CONFIGURED",
                    "Notify": true
                }
            },
            "NotifyConfiguration": {
                "BlockEmail": {
                    "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We blocked an
 unrecognized sign-in to your account with this information:\n<ul>\n<li>Time: {login-
time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</li>\n</
ul>\nIf this sign-in was not by you, you should change your password and notify us by
 clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was by
 you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</pre>
\n</body>\n</html>",
```

```
                    "Subject": "Blocked sign-in attempt",
                    "TextBody": "We blocked an unrecognized sign-in to your account
 with this information:\nTime: {login-time}\nDevice: {device-name}\nLocation: {city},
 {country}\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can follow
 {one-click-link-valid} to let us know"
                },
                "From": "admin@example.com",
                "MfaEmail": {
                    "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We required you to
 use multi-factor authentication for the following sign-in attempt:\n<ul>\n<li>Time:
 {login-time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</
li>\n</ul>\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was
 by you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</
pre>\n</body>\n</html>",
                    "Subject": "New sign-in attempt",
                    "TextBody": "We required you to use multi-factor authentication for
 the following sign-in attempt:\nTime: {login-time}\nDevice: {device-name}\nLocation:
 {city}, {country}\nIf this sign-in was not by you, you should change your password and
 notify us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can
 follow {one-click-link-valid} to let us know"
                },
                "NoActionEmail": {
                    "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We observed an
 unrecognized sign-in to your account with this information:\n<ul>\n<li>Time: {login-
time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</li>\n</
ul>\nIf this sign-in was not by you, you should change your password and notify us by
 clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was by
 you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</pre>
\n</body>\n</html>",
                    "Subject": "New sign-in attempt",
                    "TextBody": "We observed an unrecognized sign-in to your account
 with this information:\nTime: {login-time}\nDevice: {device-name}\nLocation: {city},
 {country}\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can follow
 {one-click-link-valid} to let us know"
                },
                "ReplyTo": "admin@example.com",
                "SourceArn": "arn:aws:ses:us-east-1:123456789012:identity/
admin@example.com"
            }
```

```
        },
        "ClientId": "1example23456789",
        "CompromisedCredentialsRiskConfiguration": {
            "Actions": {
                "EventAction": "BLOCK"
            },
            "EventFilter": [
                "PASSWORD_CHANGE",
                "SIGN_UP",
                "SIGN_IN"
            ]
        },
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeUserImportJob

Describes a user import job. For more information about user CSV import, see Importing users from a CSV file.

Request Syntax

```
{
   "JobId": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

JobId

The Id of the user import job that you want to describe.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `import-[0-9a-zA-Z-]+`

Required: Yes

UserPoolId

The ID of the user pool that's associated with the import job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "UserImportJob": {
      "CloudWatchLogsRoleArn": "string",
      "CompletionDate": number,
      "CompletionMessage": "string",
      "CreationDate": number,
      "FailedUsers": number,
      "ImportedUsers": number,
      "JobId": "string",
      "JobName": "string",
      "PreSignedUrl": "string",
      "SkippedUsers": number,
      "StartDate": number,
      "Status": "string",
      "UserPoolId": "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.

UserImportJob

The details of the user import job. Includes logging destination, status, and the Amazon S3 pre-signed URL for CSV upload.

Type: UserImportJobType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request describes the user import operation with the ID `import-mAgUtd8PMm`. In this example, the job ran after creation and successfully imported 99 users.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeUserImportJob
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
```

```
   "JobId": "import-mAgUtd8PMm",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "UserImportJob": {
  "CloudWatchLogsRoleArn": "arn:aws:iam::123456789012:role/example-cloudwatch-logs-
role",
  "CreationDate": 1735241621.022,
  "FailedUsers": 1,
  "ImportedUsers": 99,
  "JobId": "import-mAgUtd8PMm",
  "JobName": "Customer import",
  "PreSignedUrl": "https://aws-cognito-idp-user-import-pdx.s3.us-
west-2.amazonaws.com/123456789012/us-west-2_EXAMPLE/import-mAgUtd8PMm?X-Amz-Security-
Token=[token]&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20241226T193341Z&X-
Amz-SignedHeaders=host%3Bx-amz-server-side-encryption&X-Amz-Expires=899&X-Amz-
Credential=[credential]&X-Amz-Signature=[signature]",
  "SkippedUsers": 0,
  "Status": "Succeeded",
  "UserPoolId": "us-west-2_EXAMPLE"
 }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2

- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeUserPool

Given a user pool ID, returns configuration information. This operation is useful when you want to inspect an existing user pool and programmatically replicate the configuration to another user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

UserPoolId

The ID of the user pool you want to describe.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "UserPool": {
      "AccountRecoverySetting": {
         "RecoveryMechanisms": [
            {
               "Name": "string",
               "Priority": number
            }
         ]
      },
      "AdminCreateUserConfig": {
         "AllowAdminCreateUserOnly": boolean,
         "InviteMessageTemplate": {
            "EmailMessage": "string",
            "EmailSubject": "string",
            "SMSMessage": "string"
         },
         "UnusedAccountValidityDays": number
      },
      "AliasAttributes": [ "string" ],
      "Arn": "string",
      "AutoVerifiedAttributes": [ "string" ],
      "CreationDate": number,
      "CustomDomain": "string",
      "DeletionProtection": "string",
      "DeviceConfiguration": {
         "ChallengeRequiredOnNewDevice": boolean,
         "DeviceOnlyRememberedOnUserPrompt": boolean
      },
      "Domain": "string",
      "EmailConfiguration": {
         "ConfigurationSet": "string",
         "EmailSendingAccount": "string",
         "From": "string",
         "ReplyToEmailAddress": "string",
         "SourceArn": "string"
      },
      "EmailConfigurationFailure": "string",
```

```
      "EmailVerificationMessage": "string",
      "EmailVerificationSubject": "string",
      "EstimatedNumberOfUsers": number,
      "Id": "string",
      "LambdaConfig": {
         "CreateAuthChallenge": "string",
         "CustomEmailSender": {
            "LambdaArn": "string",
            "LambdaVersion": "string"
         },
         "CustomMessage": "string",
         "CustomSMSSender": {
            "LambdaArn": "string",
            "LambdaVersion": "string"
         },
         "DefineAuthChallenge": "string",
         "KMSKeyID": "string",
         "PostAuthentication": "string",
         "PostConfirmation": "string",
         "PreAuthentication": "string",
         "PreSignUp": "string",
         "PreTokenGeneration": "string",
         "PreTokenGenerationConfig": {
            "LambdaArn": "string",
            "LambdaVersion": "string"
         },
         "UserMigration": "string",
         "VerifyAuthChallengeResponse": "string"
      },
      "LastModifiedDate": number,
      "MfaConfiguration": "string",
      "Name": "string",
      "Policies": {
         "PasswordPolicy": {
            "MinimumLength": number,
            "PasswordHistorySize": number,
            "RequireLowercase": boolean,
            "RequireNumbers": boolean,
            "RequireSymbols": boolean,
            "RequireUppercase": boolean,
            "TemporaryPasswordValidityDays": number
         },
         "SignInPolicy": {
            "AllowedFirstAuthFactors": [ "string" ]
```

```
        }
    },
    "SchemaAttributes": [
        {
            "AttributeDataType": "string",
            "DeveloperOnlyAttribute": boolean,
            "Mutable": boolean,
            "Name": "string",
            "NumberAttributeConstraints": {
                "MaxValue": "string",
                "MinValue": "string"
            },
            "Required": boolean,
            "StringAttributeConstraints": {
                "MaxLength": "string",
                "MinLength": "string"
            }
        }
    ],
    "SmsAuthenticationMessage": "string",
    "SmsConfiguration": {
        "ExternalId": "string",
        "SnsCallerArn": "string",
        "SnsRegion": "string"
    },
    "SmsConfigurationFailure": "string",
    "SmsVerificationMessage": "string",
    "Status": "string",
    "UserAttributeUpdateSettings": {
        "AttributesRequireVerificationBeforeUpdate": [ "string" ]
    },
    "UsernameAttributes": [ "string" ],
    "UsernameConfiguration": {
        "CaseSensitive": boolean
    },
    "UserPoolAddOns": {
        "AdvancedSecurityAdditionalFlows": {
            "CustomAuthMode": "string"
        },
        "AdvancedSecurityMode": "string"
    },
    "UserPoolTags": {
        "string" : "string"
    },
```

```
      "UserPoolTier": "string",
      "VerificationMessageTemplate": {
         "DefaultEmailOption": "string",
         "EmailMessage": "string",
         "EmailMessageByLink": "string",
         "EmailSubject": "string",
         "EmailSubjectByLink": "string",
         "SmsMessage": "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.

UserPool

The details of the requested user pool.

Type: UserPoolType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserPoolTaggingException

This exception is thrown when a user pool tag can't be set or updated.

HTTP Status Code: 400

Examples

Example

The following example request describes the user pool `us-east-1_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeUserPool
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "UserPoolId": "us-east-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
```

```
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "UserPool": {
        "AccountRecoverySetting": {
            "RecoveryMechanisms": [
                {
                    "Name": "verified_email",
                    "Priority": 1
                }
            ]
        },
        "AdminCreateUserConfig": {
            "AllowAdminCreateUserOnly": false,
            "InviteMessageTemplate": {
                "EmailMessage": "Your username is {username} and temporary password is
 {####}.",
                "EmailSubject": "Your sign-in information",
                "SMSMessage": "Your username is {username} and temporary password is
 {####}."
            },
            "UnusedAccountValidityDays": 7
        },
        "AliasAttributes": [
            "email"
        ],
        "Arn": "arn:aws:cognito-idp:us-east-1:123456789012:userpool/us-east-1_EXAMPLE",
        "AutoVerifiedAttributes": [
            "email"
        ],
        "CreationDate": 1689721665.239,
        "DeletionProtection": "ACTIVE",
        "DeviceConfiguration": {
            "ChallengeRequiredOnNewDevice": true,
            "DeviceOnlyRememberedOnUserPrompt": true
        },
        "EmailConfiguration": {
            "ConfigurationSet": "my-test-ses-configuration-set",
            "EmailSendingAccount": "DEVELOPER",
            "From": "support@example.com",
            "ReplyToEmailAddress": "support@example.com",
```

```
            "SourceArn": "arn:aws:ses:us-east-1:123456789012:identity/
support@example.com"
        },
        "EmailVerificationMessage": "Your verification code is {####}.",
        "EmailVerificationSubject": "Verify your email address",
        "EstimatedNumberOfUsers": 0,
        "Id": "us-east-1_EXAMPLE",
        "LambdaConfig": {
            "CustomEmailSender": {
                "LambdaArn": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
                "LambdaVersion": "V1_0"
            },
            "CustomMessage": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "CustomSMSSender": {
                "LambdaArn": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
                "LambdaVersion": "V1_0"
            },
            "DefineAuthChallenge": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "KMSKeyID": "arn:aws:kms:us-
east-1:767671399759:key/4d43904c-8edf-4bb4-9fca-fb1a80e41cbe",
            "PostAuthentication": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "PostConfirmation": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "PreAuthentication": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "PreSignUp": "arn:aws:lambda:us-east-1:123456789012:function:MyFunction",
            "PreTokenGeneration": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "UserMigration": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
            "VerifyAuthChallengeResponse": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction"
        },
        "LastModifiedDate": 1689721665.239,
        "MfaConfiguration": "OPTIONAL",
        "Name": "my-test-user-pool",
        "Policies": {
            "PasswordPolicy": {
                "MinimumLength": 6,
```

```
                "RequireLowercase": true,
                "RequireNumbers": true,
                "RequireSymbols": true,
                "RequireUppercase": true,
                "TemporaryPasswordValidityDays": 7
            }
        },
        "SchemaAttributes": [
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": false,
                "Name": "sub",
                "Required": true,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "1"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "name",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "given_name",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
```

```
                "Mutable": true,
                "Name": "family_name",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "middle_name",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "nickname",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "preferred_username",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
```

```
                "Mutable": true,
                "Name": "profile",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "picture",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "website",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "email",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "Boolean",
                "DeveloperOnlyAttribute": false,
```

```
                "Mutable": true,
                "Name": "email_verified",
                "Required": false
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "gender",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "birthdate",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "10",
                    "MinLength": "10"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "zoneinfo",
                "Required": false,
                "StringAttributeConstraints": {
                    "MaxLength": "2048",
                    "MinLength": "0"
                }
            },
            {
                "AttributeDataType": "String",
                "DeveloperOnlyAttribute": false,
                "Mutable": true,
                "Name": "locale",
                "Required": false,
                "StringAttributeConstraints": {
```

```
                "MaxLength": "2048",
                "MinLength": "0"
            }
        },
        {
            "AttributeDataType": "String",
            "DeveloperOnlyAttribute": false,
            "Mutable": true,
            "Name": "phone_number",
            "Required": false,
            "StringAttributeConstraints": {
                "MaxLength": "2048",
                "MinLength": "0"
            }
        },
        {
            "AttributeDataType": "Boolean",
            "DeveloperOnlyAttribute": false,
            "Mutable": true,
            "Name": "phone_number_verifie",
            "Required": false
        },
        {
            "AttributeDataType": "String",
            "DeveloperOnlyAttribute": false,
            "Mutable": true,
            "Name": "address",
            "Required": false,
            "StringAttributeConstraints": {
                "MaxLength": "2048",
                "MinLength": "0"
            }
        },
        {
            "AttributeDataType": "Number",
            "DeveloperOnlyAttribute": false,
            "Mutable": true,
            "Name": "updated_at",
            "NumberAttributeConstraints": {
                "MinValue": "0"
            },
            "Required": false
        },
        {
```

```
                "AttributeDataType": "Number",
                "DeveloperOnlyAttribute": true,
                "Mutable": true,
                "Name": "dev:custom:mydev",
                "NumberAttributeConstraints": {
                    "MaxValue": "99",
                    "MinValue": "1"
                },
                "Required": false
            }
        ],
        "SmsAuthenticationMessage": "Your verification code is {####}.",
        "SmsConfiguration": {
            "ExternalId": "my-role-external-id",
            "SnsCallerArn": "arn:aws:iam::123456789012:role/service-role/test-cognito-
SMS-Role",
            "SnsRegion": "us-east-1"
        },
        "SmsVerificationMessage": "Your verification code is {####}.",
        "UserAttributeUpdateSettings": {
            "AttributesRequireVerificationBeforeUpdate": [
                "email"
            ]
        },
        "UserPoolAddOns": {
            "AdvancedSecurityMode": "OFF"
        },
        "UserPoolTags": {
            "my-test-tag-key": "my-test-tag-value"
        },
        "UserPoolTier": "ESSENTIALS",
        "UsernameConfiguration": {
            "CaseSensitive": true
        },
        "VerificationMessageTemplate": {
            "DefaultEmailOption": "CONFIRM_WITH_CODE",
            "EmailMessage": "Your confirmation code is {####}",
            "EmailMessageByLink": "Choose this link to {##verify your email##}",
            "EmailSubject": "Here is your confirmation code",
            "EmailSubjectByLink": "Here is your confirmation link",
            "SmsMessage": "Your confirmation code is {####}"
        }
    }
```

```
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeUserPoolClient

Given an app client ID, returns configuration information. This operation is useful when you want to inspect an existing app client and programmatically replicate the configuration to another app client. For more information about app clients, see App clients.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "ClientId": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientId

The ID of the app client that you want to describe.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

UserPoolId

The ID of the user pool that contains the app client you want to describe.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "UserPoolClient": {
      "AccessTokenValidity": number,
      "AllowedOAuthFlows": [ "string" ],
      "AllowedOAuthFlowsUserPoolClient": boolean,
      "AllowedOAuthScopes": [ "string" ],
      "AnalyticsConfiguration": {
         "ApplicationArn": "string",
         "ApplicationId": "string",
         "ExternalId": "string",
         "RoleArn": "string",
         "UserDataShared": boolean
      },
      "AuthSessionValidity": number,
      "CallbackURLs": [ "string" ],
      "ClientId": "string",
      "ClientName": "string",
      "ClientSecret": "string",
      "CreationDate": number,
      "DefaultRedirectURI": "string",
      "EnablePropagateAdditionalUserContextData": boolean,
      "EnableTokenRevocation": boolean,
      "ExplicitAuthFlows": [ "string" ],
      "IdTokenValidity": number,
      "LastModifiedDate": number,
      "LogoutURLs": [ "string" ],
      "PreventUserExistenceErrors": "string",
      "ReadAttributes": [ "string" ],
```

```
      "RefreshTokenRotation": {
         "Feature": "string",
         "RetryGracePeriodSeconds": number
      },
      "RefreshTokenValidity": number,
      "SupportedIdentityProviders": [ "string" ],
      "TokenValidityUnits": {
         "AccessToken": "string",
         "IdToken": "string",
         "RefreshToken": "string"
      },
      "UserPoolId": "string",
      "WriteAttributes": [ "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.

UserPoolClient

The details of the request app client.

Type: UserPoolClientType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request describes the app client with the ID `1example23456789`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeUserPoolClient
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "UserPoolId": "us-east-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
```

```
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
      "UserPoolClient": {
        "AccessTokenValidity": 6,
        "AllowedOAuthFlows": [
          "code"
        ],
        "AllowedOAuthFlowsUserPoolClient": true,
        "AllowedOAuthScopes": [
          "aws.cognito.signin.user.admin",
          "openid"
        ],
        "AnalyticsConfiguration": {
          "ApplicationId": "d70b2ba36a8c4dc5a04a0451a31a1e12",
          "ExternalId": "my-external-id",
          "RoleArn": "arn:aws:iam::123456789012:role/test-cognitouserpool-role",
          "UserDataShared": true
        },
        "AuthSessionValidity": 3,
        "CallbackURLs": [
          "https://example.com",
          "http://localhost",
          "myapp://example"
        ],
        "ClientId": "1example23456789",
        "ClientName": "my-test-app-client",
        "ClientSecret": "13ka4h7u28d9oo44tqpq9djqsfvhvu8rk4d2ighvpu0k8fj1c2r9",
        "CreationDate": 1689885426.107,
        "DefaultRedirectURI": "https://example.com",
        "EnablePropagateAdditionalUserContextData": false,
        "EnableTokenRevocation": true,
        "ExplicitAuthFlows": [
          "ALLOW_USER_AUTH",
          "ALLOW_USER_PASSWORD_AUTH",
          "ALLOW_ADMIN_USER_PASSWORD_AUTH",
          "ALLOW_REFRESH_TOKEN_AUTH"
        ],
        "IdTokenValidity": 6,
        "LastModifiedDate": 1689885426.107,
        "LogoutURLs": [
```

```
            "https://example.com/logout"
        ],
        "PreventUserExistenceErrors": "ENABLED",
        "ReadAttributes": [
          "address",
          "preferred_username",
          "email"
        ],
        "RefreshTokenValidity": 6,
        "SupportedIdentityProviders": [
          "SignInWithApple",
          "MySSO"
        ],
        "TokenValidityUnits": {
          "AccessToken": "hours",
          "IdToken": "minutes",
          "RefreshToken": "days"
        },
        "UserPoolId": "us-east-1_EXAMPLE",
        "WriteAttributes": [
          "family_name",
          "email"
        ]
      }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3

- Amazon SDK for Python
- Amazon SDK for Ruby V3

DescribeUserPoolDomain

Given a user pool domain name, returns information about the domain configuration.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Domain": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Domain

The domain that you want to describe. For custom domains, this is the fully-qualified domain name, such as `auth.example.com`. For Amazon Cognito prefix domains, this is the prefix alone, such as `auth`.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

Required: Yes

Response Syntax

```
{
   "DomainDescription": {
      "AWSAccountId": "string",
      "CloudFrontDistribution": "string",
      "CustomDomainConfig": {
         "CertificateArn": "string"
      },
      "Domain": "string",
      "ManagedLoginVersion": number,
      "S3Bucket": "string",
      "Status": "string",
      "UserPoolId": "string",
      "Version": "string"
   }
}
```

Response Elements

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

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

DomainDescription

The details of the requested user pool domain.

Type: DomainDescriptionType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

Examples

Example

The following example request describes the custom domain `auth.example.com` for the user pool `us-west-2_EXAMPLE`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.DescribeUserPoolDomain
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "Domain": "auth.example.com"
}
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "DomainDescription": {
        "AWSAccountId": "123456789012",
        "CloudFrontDistribution": "example.cloudfront.net",
        "CustomDomainConfig": {
            "CertificateArn": "arn:aws:acm:us-east-1:123456789012:certificate/
a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
        },
        "Domain": "auth.example.com",
        "ManagedLoginVersion": 2,
        "S3Bucket": "aws-cognito-prod-pdx-assets",
        "Status": "ACTIVE",
        "UserPoolId": "us-west-2_EXAMPLE",
        "Version": "20241127003837"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ForgetDevice

Given a device key, deletes a remembered device as the currently signed-in user. For more information about device authentication, see Working with user devices in your user pool.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "DeviceKey": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: No

DeviceKey

The unique identifier, or device key, of the device that the user wants to forget.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request .

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ForgetDevice
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
  "AccessToken": "eyJra456defEXAMPLE",
  "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ForgotPassword

Sends a password-reset confirmation code for the currently signed-in user.

For the `Username` parameter, you can use the username or user alias.

Amazon Cognito sends the code with the delivery method specified by your user pool CreateUserPool:AccountRecoverySetting configuration. For more information, see Recovering user accounts in the *Amazon Cognito Developer Guide*. Users must submit the code in a ConfirmForgotPassword request.

If neither a verified phone number nor a verified email exists, Amazon Cognito responds with an `InvalidParameterException` error . If your app client has a client secret and you don't provide a `SECRET_HASH` parameter, this API returns `NotAuthorizedException`.

To use this API operation, your user pool must have self-service account recovery configured with AdminCreateUserConfigType:AllowAdminCreateUserOnly set to `false` for your user pool. Use AdminSetUserPassword if you manage passwords as an administrator.

Note

Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After

you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Request Syntax

```
{
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
   },
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "SecretHash": "string",
   "UserContextData": {
      "EncodedData": "string",
      "IpAddress": "string"
   },
   "Username": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

ClientId

The ID of the user pool app client associated with the current signed-in user.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the ForgotPassword API action, Amazon Cognito invokes any functions that are assigned to the following triggers: *pre sign-up*, *custom message*, and *user migration*. When Amazon Cognito invokes any of these functions, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your ForgotPassword request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

SecretHash

A keyed-hash message authentication code (HMAC) calculated using the secret key of a user pool client and username plus the client ID in the message. For more information about `SecretHash`, see Computing secret hash values.

Type: String

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

Pattern: `[\w+=/]+`

Required: No

UserContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: UserContextDataType object

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Response Syntax

```
{
   "CodeDeliveryDetails": {
      "AttributeName": "string",
      "DeliveryMedium": "string",
      "Destination": "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.

CodeDeliveryDetails

Information about the phone number or email address that Amazon Cognito sent the password-recovery code to.

Type: CodeDeliveryDetailsType object

Errors

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

CodeDeliveryFailureException

This exception is thrown when a verification code fails to deliver successfully.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request requests a forgot-password code for the user "testuser". Amazon Cognito responds with confirmation that it has delivered the code in an email message.

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ForgotPassword
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "Username": "testuser"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
   "CodeDeliveryDetails": {
        "AttributeName": "email",
        "DeliveryMedium": "EMAIL",
        "Destination": "a***@e***"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3

- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetCSVHeader

Given a user pool ID, generates a comma-separated value (CSV) list populated with available user attributes in the user pool. This list is the header for the CSV file that determines the users in a user import job. Save the content of `CSVHeader` in the response as a `.csv` file and populate it with the usernames and attributes of users that you want to import. For more information about CSV user import, see Importing users from a CSV file.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

UserPoolId

The ID of the user pool that you want to import users into.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "CSVHeader": [ "string" ],
   "UserPoolId": "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.

CSVHeader

A comma-separated list of attributes from your user pool. Save this output to a `.csv` file and populate it with the attributes of the users that you want to import.

Type: Array of strings

Length Constraints: Minimum length of 0. Maximum length of 131072.

UserPoolId

The ID of the requested user pool.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request retrieves the attributes from a user pool in CSV format for an import job.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetCSVHeader
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
```

```
Content-Length: <PayloadSizeBytes>
{
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
   "CSVHeader": [
      "name",
      "given_name",
      "family_name",
      "middle_name",
      "nickname",
      "preferred_username",
      "profile",
      "picture",
      "website",
      "email",
      "email_verified",
      "gender",
      "birthdate",
      "zoneinfo",
      "locale",
      "phone_number",
      "phone_number_verified",
      "address",
      "updated_at",
      "custom:costcenter",
      "custom:accesstoken",
      "custom:idtoken",
      "dev:custom:bandwidth",
      "cognito:mfa_enabled",
      "cognito:username"
   ],
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetDevice

Given a device key, returns information about a remembered device for the current user. For more information about device authentication, see Working with user devices in your user pool.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "DeviceKey": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: No

DeviceKey

The key of the device that you want to get information about.

You can get device IDs in the response to a ListDevices request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: Yes

Response Syntax

```
{
   "Device": {
      "DeviceAttributes": [
         {
            "Name": "string",
            "Value": "string"
         }
      ],
      "DeviceCreateDate": number,
      "DeviceKey": "string",
      "DeviceLastAuthenticatedDate": number,
      "DeviceLastModifiedDate": number
   }
}
```

Response Elements

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

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

Device

Details of the requested device. Includes device information, last-accessed and created dates, and the device key.

Type: DeviceType object

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request returns the details of the requested user device.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetDevice
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
}
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
   "Device": {
      "DeviceAttributes": [
         {
            "Name": "device_status",
            "Value": "valid"
         },
         {
            "Name": "device_name",
            "Value": "Dart-device"
         },
         {
            "Name": "last_ip_used",
            "Value": "192.0.2.1"
         }
      ],
      "DeviceCreateDate": 1715100742.022,
      "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
      "DeviceLastAuthenticatedDate": 1715100742.0,
      "DeviceLastModifiedDate": 1723233651.167
   }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin

- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetGroup

Given a user pool ID and a group name, returns information about the user group.

This operation doesn't return group membership. For group membership, see ListUsersInGroup and AdminListGroupsForUser.

For more information about user pool groups, see Adding groups to a user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "GroupName": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

GroupName

The name of the group that you want to get information about.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool that contains the group that you want to query.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Group": {
      "CreationDate": number,
      "Description": "string",
      "GroupName": "string",
      "LastModifiedDate": number,
      "Precedence": number,
      "RoleArn": "string",
      "UserPoolId": "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.

Group

A container for the requested group. Includes description, precedence, and IAM role values.

Type: GroupType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the details of the group `testgroup`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
```

```
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetGroup
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "GroupName": "testgroup",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Group": {
        "CreationDate": 1681422900.933,
        "Description": "This is a user group for testing",
        "GroupName": "testgroup",
        "LastModifiedDate": 1705447583.756,
        "Precedence": 9,
        "RoleArn": "arn:aws:iam::123456789012:role/service-role/my-SMS-Role",
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2

- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetIdentityProviderByIdentifier

Given the identifier of an identity provider (IdP), for example `examplecorp`, returns information about the user pool configuration for that IdP. For more information about IdPs, see Third-party IdP sign-in.

Request Syntax

```
{
   "IdpIdentifier": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

IdpIdentifier

The identifier that you assigned to your user pool. The identifier is an alternative name for an IdP that is distinct from the IdP name. For example, an IdP with a name of `MyIdP` might have an identifier of the email domain `example.com`.

Type: String

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

Pattern: `[\w\s+=.@-]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to get information about the IdP.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "IdentityProvider": {
      "AttributeMapping": {
         "string" : "string"
      },
      "CreationDate": number,
      "IdpIdentifiers": [ "string" ],
      "LastModifiedDate": number,
      "ProviderDetails": {
         "string" : "string"
      },
      "ProviderName": "string",
      "ProviderType": "string",
      "UserPoolId": "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.

IdentityProvider

The configuration of the IdP in your user pool. Includes additional identifiers, the IdP name and type, and trust-relationship details like the issuer URL.

Type: IdentityProviderType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the details of the IdP with the identifier `MySSO`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetIdentityProviderByIdentifier
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "IdpIdentifier": "MySSO",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "IdentityProvider": {
        "AttributeMapping": {
            "email": "idp_email"
        },
        "CreationDate": 1643741231.169,
        "IdpIdentifiers": [
            "MySSO"
        ],
        "LastModifiedDate": 1703798328.069,
        "ProviderDetails": {
            "ActiveEncryptionCertificate": "[Certificate text]",
            "IDPSignout": "false",
            "MetadataFile": "<md:EntityDescriptor xmlns:md=
\"urn:oasis:names:tc:SAML:2.0:metadata\" entityID=\"http://www.example.com/saml
\"><md:IDPSSODescriptor WantAuthnRequestsSigned=\"false\" protocolSupportEnumeration=
\"urn:oasis:names:tc:SAML:2.0:protocol\"><md:KeyDescriptor use=
\"signing\"><ds:KeyInfo xmlns:ds=\"http://www.w3.org/2000/09/xmldsig#
\"><ds:X509Data><ds:X509Certificate>CERTIFICATE_DATA</ds:X509Certificate></
ds:X509Data></ds:KeyInfo></md:KeyDescriptor><md:SingleLogoutService
 Binding=\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST\" Location=
\"https://example.com/slo/saml\"/><md:SingleLogoutService Binding=
\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect\" Location=\"https://example.com/
slo/saml\"/><md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified</
md:NameIDFormat><md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-
format:emailAddress</md:NameIDFormat><md:SingleSignOnService Binding=
\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST\" Location=\"https://example.com/sso/
saml\"/><md:SingleSignOnService Binding=\"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-
Redirect\" Location=\"https://example.com/sso/saml\"/></md:IDPSSODescriptor></
md:EntityDescriptor>",
            "SLORedirectBindingURI": "https://example.com/slo/saml",
            "SSORedirectBindingURI": "https://example.com/sso/saml"
        },
        "ProviderName": "Corp-SSO",
        "ProviderType": "SAML",
        "UserPoolId": "us-west-2_EXAMPLE"
```

```
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetLogDeliveryConfiguration

Given a user pool ID, returns the logging configuration. User pools can export message-delivery error and threat-protection activity logs to external Amazon Web Services services. For more information, see Exporting user pool logs.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

UserPoolId

The ID of the user pool that has the logging configuration that you want to view.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "LogDeliveryConfiguration": {
      "LogConfigurations": [
         {
            "CloudWatchLogsConfiguration": {
               "LogGroupArn": "string"
            },
            "EventSource": "string",
            "FirehoseConfiguration": {
               "StreamArn": "string"
            },
            "LogLevel": "string",
            "S3Configuration": {
               "BucketArn": "string"
            }
         }
      ],
      "UserPoolId": "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.

LogDeliveryConfiguration

The logging configuration of the requested user pool. Includes types of logs configured and their destinations.

Type: LogDeliveryConfigurationType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the log delivery configuration for message-delivery errors to CloudWatch Logs and user activity to Amazon S3.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetLogDeliveryConfiguration
User-Agent: <UserAgentString>
```

```
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "LogDeliveryConfiguration": {
        "LogConfigurations": [
            {
                "CloudWatchLogsConfiguration": {
                    "LogGroupArn": "arn:aws:logs:us-west-2:123456789012:log-
group:cognito-exported"
                },
                "EventSource": "userNotification",
                "LogLevel": "ERROR"
            },
            {
                "EventSource": "userAuthEvents",
                "LogLevel": "INFO",
                "S3Configuration": {
                    "BucketArn": "arn:aws:s3:::amzn-s3-demo-bucket1"
                }
            }
        ],
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetSigningCertificate

Given a user pool ID, returns the signing certificate for SAML 2.0 federation.

Issued certificates are valid for 10 years from the date of issue. Amazon Cognito issues and assigns a new signing certificate annually. This renewal process returns a new value in the response to `GetSigningCertificate`, but doesn't invalidate the original certificate.

For more information, see Signing SAML requests.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

UserPoolId

The ID of the user pool where you want to view the signing certificate.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Certificate": "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.

Certificate

The x.509 certificate that signs SAML 2.0 authentication requests for your user pool.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

Examples

Example

The following example request returns the SAML signing certificate for the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetSigningCertificate
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Certificate": "[Certificate text]"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetTokensFromRefreshToken

Given a refresh token, issues new ID, access, and optionally refresh tokens for the user who owns the submitted token. This operation issues a new refresh token and invalidates the original refresh token after an optional grace period when refresh token rotation is enabled. If refresh token rotation is disabled, issues new ID and access tokens only.

For information about enabling refresh token rotation and the retry grace period, see RefreshTokenRotationType.

This data type is a request parameter of CreateUserPoolClient and UpdateUserPoolClient, and a response parameter of DescribeUserPoolClient.

Request Syntax

```
{
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "ClientSecret": "string",
   "DeviceKey": "string",
   "RefreshToken": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientId

The app client that issued the refresh token to the user who wants to request new tokens.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for certain custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the `GetTokensFromRefreshToken` API action, Amazon Cognito invokes the Lambda function the pre token generation trigger.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ClientSecret

The client secret of the requested app client, if the client has a secret.

Type: String

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

Pattern: `[\w+]+`

Required: No

DeviceKey

When you enable device remembering, Amazon Cognito issues a device key that you can use for device authentication that bypasses multi-factor authentication (MFA). To implement `GetTokensFromRefreshToken` in a user pool with device remembering, you must capture the device key from the initial authentication request. If your application doesn't provide the key of a registered device, Amazon Cognito issues a new one. You must provide the confirmed device key in this request if device remembering is enabled in your user pool.

For more information about device remembering, see Working with devices.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: No

RefreshToken

A valid refresh token that can authorize the request for new tokens. When refresh token rotation is active in the requested app client, this token is invalidated after the request is complete and after an optional grace period.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Response Syntax

```
{
   "AuthenticationResult": {
      "AccessToken": "string",
      "ExpiresIn": number,
      "IdToken": "string",
```

```
      "NewDeviceMetadata": {
         "DeviceGroupKey": "string",
         "DeviceKey": "string"
      },
      "RefreshToken": "string",
      "TokenType": "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.

AuthenticationResult

The object that your application receives after authentication. Contains tokens and information for device authentication.

This data type is a response parameter of authentication operations like InitiateAuth, AdminInitiateAuth, RespondToAuthChallenge, AdminRespondToAuthChallenge, and GetTokensFromRefreshToken. `GetTokensFromRefreshToken` doesn't return `NewDeviceMetadata`.

Type: AuthenticationResultType object

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

RefreshTokenReuseException

This exception is throw when your application requests token refresh with a refresh token that has been invalidated by refresh-token rotation.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetUICustomization

Given a user pool ID or app client, returns information about classic hosted UI branding that you applied, if any. Returns user-pool level branding information if no app client branding is applied, or if you don't specify an app client ID. Returns an empty object if you haven't applied hosted UI branding to either the client or the user pool. For more information, see Hosted UI (classic) branding.

Request Syntax

```
{
   "ClientId": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientId

The ID of the app client that you want to query for branding settings.

Type: String

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

Pattern: `[\w+]+`

Required: No

UserPoolId

The ID of the user pool that you want to query for branding settings.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "UICustomization": {
      "ClientId": "string",
      "CreationDate": number,
      "CSS": "string",
      "CSSVersion": "string",
      "ImageUrl": "string",
      "LastModifiedDate": number,
      "UserPoolId": "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.

UICustomization

Information about the classic hosted UI custom CSS and logo-image branding that you applied to the user pool or app client.

Type: UICustomizationType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request is for an app client that doesn't have a specific hosted UI customization and inherits it from the user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetUICustomization
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
```

```
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "UICustomization": {
        "ClientId": "ALL",
        "CSS": ".logo-customizable {\n\tmax-width: 60%;\n\tmax-height: 30%;
\n}\n.banner-customizable {\n\tpadding: 25px 0px 25px 0px;\n\tbackground-color:
 lightgray;\n}\n.label-customizable {\n\tfont-weight: 400;\n}\n.textDescription-
customizable {\n\tpadding-top: 10px;\n\tpadding-bottom: 10px;\n\tdisplay: block;\n
\tfont-size: 16px;\n}\n.idpDescription-customizable {\n\tpadding-top: 10px;\n\tpadding-
bottom: 10px;\n\tdisplay: block;\n\tfont-size: 16px;\n}\n.legalText-customizable
 {\n\tcolor: #747474;\n\tfont-size: 11px;\n}\n.submitButton-customizable {\n\tfont-
size: 11px;\n\tfont-weight: normal;\n\tmargin: 20px -15px 10px -13px;\n\theight:
 40px;\n\twidth: 108%;\n\tcolor: #fff;\n\tbackground-color: #337ab7;\n\ttext-align:
 center;\n}\n.submitButton-customizable:hover {\n\tcolor: #fff;\n\tbackground-color:
 #286090;\n}\n.errorMessage-customizable {\n\tpadding: 5px;\n\tfont-size: 14px;
\n\twidth: 100%;\n\tbackground: #F5F5F5;\n\tborder: 2px solid #D64958;\n\tcolor:
 #D64958;\n}\n.inputField-customizable {\n\twidth: 100%;\n\theight: 34px;\n\tcolor:
 #555;\n\tbackground-color: #fff;\n\tborder: 1px solid #ccc;\n\tborder-radius:
 0px;\n}\n.inputField-customizable:focus {\n\tborder-color: #66afe9;\n\toutline: 0;
\n}\n.idpButton-customizable {\n\theight: 40px;\n\twidth: 100%;\n\twidth: 100%;\n
\ttext-align: center;\n\tmargin-bottom: 15px;\n\tcolor: #fff;\n\tbackground-color:
 #5bc0de;\n\tborder-color: #46b8da;\n}\n.idpButton-customizable:hover {\n\tcolor:
 #fff;\n\tbackground-color: #31b0d5;\n}\n.socialButton-customizable {\n\tborder-radius:
 2px;\n\theight: 40px;\n\tmargin-bottom: 15px;\n\tpadding: 1px;\n\ttext-align: left;\n
\twidth: 100%;\n}\n.redirect-customizable {\n\ttext-align: center;\n}\n.passwordCheck-
notValid-customizable {\n\tcolor: #DF3312;\n}\n.passwordCheck-valid-customizable {\n
\tcolor: #19BF00;\n}\n.background-customizable {\n\tbackground-color: #fff;\n}\n",
        "CSSUrl": "https://auth.example.com/assets/CSS/custom-css.css",
        "CSSVersion": "20210630174334",
        "ImageUrl": "https://auth.example.com/assets/images/image.jpg",
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetUser

Gets user attributes and and MFA settings for the currently signed-in user.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Response Syntax

```
{
   "MFAOptions": [
      {
         "AttributeName": "string",
         "DeliveryMedium": "string"
      }
   ],
   "PreferredMfaSetting": "string",
   "UserAttributes": [
      {
         "Name": "string",
         "Value": "string"
      }
   ],
   "UserMFASettingList": [ "string" ],
   "Username": "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.

MFAOptions

This response parameter is no longer supported. It provides information only about SMS MFA configurations. It doesn't provide information about time-based one-time password (TOTP) software token MFA configurations. To look up information about either type of MFA configuration, use UserMFASettingList instead.

Type: Array of MFAOptionType objects

PreferredMfaSetting

The user's preferred MFA. Users can prefer SMS message, email message, or TOTP MFA.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

UserAttributes

An array of name-value pairs representing user attributes.

Custom attributes are prepended with the `custom:` prefix.

Type: Array of AttributeType objects

UserMFASettingList

The MFA options that are activated for the user. The possible values in this list are `SMS_MFA`, `EMAIL_OTP`, and `SOFTWARE_TOKEN_MFA`.

Type: Array of strings

Length Constraints: Minimum length of 0. Maximum length of 131072.

Username

The name of the user that you requested.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request returns the details of the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetUser
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "UserAttributes": [
        {
            "Name": "sub",
            "Value": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
        },
        {
            "Name": "identities",
            "Value": "[{\"userId\":\"a1b2c3d4-5678-90ab-cdef-EXAMPLE22222\",
\"providerName\":\"SignInWithApple\",\"providerType\":\"SignInWithApple\",\"issuer
\":null,\"primary\":false,\"dateCreated\":1701125599632}]"
        },
        {
            "Name": "email_verified",
            "Value": "true"
        },
        {
            "Name": "custom:state",
            "Value": "Maine"
        },
```

```
        {
            "Name": "name",
            "Value": "John Doe"
        },
        {
            "Name": "phone_number_verified",
            "Value": "true"
        },
        {
            "Name": "phone_number",
            "Value": "+12065551212"
        },
        {
            "Name": "preferred_username",
            "Value": "jamesdoe"
        },
        {
            "Name": "locale",
            "Value": "EMEA"
        },
        {
            "Name": "email",
            "Value": "jamesdoe@example.com"
        }
    ],
    "Username": "johndoe"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin

- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetUserAttributeVerificationCode

Given an attribute name, sends a user attribute verification code for the specified attribute name to the currently signed-in user.

The user must return the code to Amazon Cognito in a VerifyUserAttribute request.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

> **Note**
>
> This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
> If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Request Syntax

```
{
```

```
    "AccessToken": "string",
    "AttributeName": "string",
    "ClientMetadata": {
       "string" : "string"
    }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

AttributeName

The name of the attribute that the user wants to verify, for example `email`.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the GetUserAttributeVerificationCode API action, Amazon Cognito invokes the

function that is assigned to the *custom message* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your GetUserAttributeVerificationCode request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Response Syntax

```
{
   "CodeDeliveryDetails": {
      "AttributeName": "string",
      "DeliveryMedium": "string",
      "Destination": "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.

CodeDeliveryDetails

Information about the delivery destination of the user attribute verification code.

Type: CodeDeliveryDetailsType object

Errors

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

CodeDeliveryFailureException

This exception is thrown when a verification code fails to deliver successfully.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request sends a new confirmation code to the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetUserAttributeVerificationCode
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "AttributeName": "email"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "CodeDeliveryDetails": {
        "AttributeName": "email",
        "DeliveryMedium": "EMAIL",
        "Destination": "t***@e***"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2

- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetUserAuthFactors

Lists the authentication options for the currently signed-in user. Returns the following:

1. The user's multi-factor authentication (MFA) preferences.
2. The user's options for choice-based authentication with the `USER_AUTH` flow.

   The list of options in the response to this query are eligible RespondToAuthChallenge:ChallengeName selections for `PREFERRED_CHALLENGE` and are returned in InitiateAuth:AvailableChallenges when you don't request a `PREFERRED_CHALLENGE`. The InitiateAuth:AuthParameters and RespondToAuthChallenge:ChallengeResponses are specific to each challenge.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Response Syntax

```
{
   "ConfiguredUserAuthFactors": [ "string" ],
   "PreferredMfaSetting": "string",
   "UserMFASettingList": [ "string" ],
   "Username": "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.

ConfiguredUserAuthFactors

The authentication types that are available to the user with `USER_AUTH` sign-in, for example `["PASSWORD", "WEB_AUTHN"]`.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 8 items.

Valid Values: `PASSWORD | EMAIL_OTP | SMS_OTP | WEB_AUTHN`

PreferredMfaSetting

The challenge method that Amazon Cognito returns to the user in response to sign-in requests. Users can prefer SMS message, email message, or TOTP MFA.

Change preferred MFA methods for a user with SetUserMFAPreference or AdminSetUserMFAPreference.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

UserMFASettingList

The MFA options that are activated for the user. The possible values in this list are `SMS_MFA`, `EMAIL_OTP`, and `SOFTWARE_TOKEN_MFA`.

SMS and email message MFA are always available to users when your user pool is configured with CreateUserPool:SmsConfiguration or CreateUserPool:EmailConfiguration in `DEVELOPER` mode, respectively. Whether Amazon Cognito presents an MFA challenge and the format of the challenge are set by the `PreferredMfa` boolean of SetUserMFAPreference.

Type: Array of strings

Length Constraints: Minimum length of 0. Maximum length of 131072.

Username

The name of the user who is eligible for the authentication factors in the response.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request returns the sign-in factors for the current user. They don't have MFA set up.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetUserAuthFactors
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "ConfiguredUserAuthFactors": [
        "PASSWORD",
        "EMAIL_OTP",
        "SMS_OTP",
        "WEB_AUTHN"
    ],
    "Username": "testuser"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GetUserPoolMfaConfig

Given a user pool ID, returns configuration for sign-in with WebAuthn authenticators and for multi-factor authentication (MFA). This operation describes the following:

- The WebAuthn relying party (RP) ID and user-verification settings.
- The required, optional, or disabled state of MFA for all user pool users.
- The message templates for email and SMS MFA.
- The enabled or disabled state of time-based one-time password (TOTP) MFA.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

UserPoolId

The ID of the user pool where you want to query WebAuthn and MFA configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "EmailMfaConfiguration": {
      "Message": "string",
      "Subject": "string"
   },
   "MfaConfiguration": "string",
   "SmsMfaConfiguration": {
      "SmsAuthenticationMessage": "string",
      "SmsConfiguration": {
         "ExternalId": "string",
         "SnsCallerArn": "string",
         "SnsRegion": "string"
      }
   },
   "SoftwareTokenMfaConfiguration": {
      "Enabled": boolean
   },
   "WebAuthnConfiguration": {
      "RelyingPartyId": "string",
      "UserVerification": "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.

EmailMfaConfiguration

Shows configuration for user pool email message MFA and sign-in with one-time passwords (OTPs). Includes the subject and body of the email message template for sign-in and MFA messages. To activate this setting, your user pool must be in the Essentials tier or higher.

Type: EmailMfaConfigType object

MfaConfiguration

Displays the state of multi-factor authentication (MFA) as on, off, or optional. When `ON`, all users must set up MFA before they can sign in. When `OPTIONAL`, your application must make a client-side determination of whether a user wants to register an MFA device. For user pools with adaptive authentication with threat protection, choose `OPTIONAL`.

When `MfaConfiguration` is `OPTIONAL`, managed login doesn't automatically prompt users to set up MFA. Amazon Cognito generates MFA prompts in API responses and in managed login for users who have chosen and configured a preferred MFA factor.

Type: String

Valid Values: `OFF | ON | OPTIONAL`

SmsMfaConfiguration

Shows user pool configuration for SMS message MFA. Includes the message template and the SMS message sending configuration for Amazon SNS.

Type: SmsMfaConfigType object

SoftwareTokenMfaConfiguration

Shows user pool configuration for time-based one-time password (TOTP) MFA. Includes TOTP enabled or disabled state.

Type: SoftwareTokenMfaConfigType object

WebAuthnConfiguration

Shows user pool configuration for sign-in with passkey authenticators like biometric devices and security keys. Passkeys are not eligible MFA factors. They are instead an eligible primary sign-in factor for choice-based authentication, or the `USER_AUTH` flow.

Type: WebAuthnConfigurationType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the MFA and WebAuthn configuration for the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
```

```
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GetUserPoolMfaConfig
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "EmailMfaConfiguration": {
        "Message": "Complete your sign-in: use {####}",
        "Subject": "Your sign-in code"
    },
    "MfaConfiguration": "OPTIONAL",
    "SmsMfaConfiguration": {
        "SmsAuthenticationMessage": "Do not share this code with anyone. Your code is
 {####}.",
        "SmsConfiguration": {
            "ExternalId": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
            "SnsCallerArn": "arn:aws:iam::123456789012:role/service-role/cognito-SMS-
Role",
            "SnsRegion": "us-west-2"
        }
    },
    "SoftwareTokenMfaConfiguration": {
        "Enabled": true
    },
    "WebAuthnConfiguration": {
        "RelyingPartyId": "auth.example.com",
        "UserVerification": "preferred"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

GlobalSignOut

Invalidates the identity, access, and refresh tokens that Amazon Cognito issued to a user. Call this operation when your user signs out of your app. This results in the following behavior.

- Amazon Cognito no longer accepts *token-authorized* user operations that you authorize with a signed-out user's access tokens. For more information, see Using the Amazon Cognito user pools API and user pool endpoints.

  Amazon Cognito returns an `Access Token has been revoked` error when your app attempts to authorize a user pools API request with a revoked access token that contains the scope `aws.cognito.signin.user.admin`.
- Amazon Cognito no longer accepts a signed-out user's ID token in a GetId request to an identity pool with `ServerSideTokenCheck` enabled for its user pool IdP configuration in CognitoIdentityProvider.
- Amazon Cognito no longer accepts a signed-out user's refresh tokens in refresh requests.

Other requests might be valid until your user's token expires. This operation doesn't clear the managed login session cookie. To clear the session for a user who signed in with managed login or the classic hosted UI, direct their browser session to the logout endpoint.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string"
```

```
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

Examples

Example

The following example request signs out the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.GlobalSignOut
```

```
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

InitiateAuth

Declares an authentication flow and initiates sign-in for a user in the Amazon Cognito user directory. Amazon Cognito might respond with an additional challenge or an `AuthenticationResult` that contains the outcome of a successful authentication. You can't sign in a user with a federated IdP with `InitiateAuth`. For more information, see Authentication.

Note

Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Request Syntax

```
{
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
```

```
    },
    "AuthFlow": "string",
    "AuthParameters": {
       "string" : "string"
    },
    "ClientId": "string",
    "ClientMetadata": {
       "string" : "string"
    },
    "Session": "string",
    "UserContextData": {
       "EncodedData": "string",
       "IpAddress": "string"
    }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

AuthFlow

The authentication flow that you want to initiate. Each `AuthFlow` has linked `AuthParameters` that you must submit. The following are some example flows.

Include the required InitiateAuth:AuthParameters for the flow that you choose.

USER_AUTH

The entry point for choice-based authentication with passwords, one-time passwords, and WebAuthn authenticators. Request a preferred authentication type or review available authentication types. From the offered authentication types, select one in a challenge

response and then authenticate with that method in an additional challenge response. To activate this setting, your user pool must be in the Essentials tier or higher.

USER_SRP_AUTH

Username-password authentication with the Secure Remote Password (SRP) protocol. For more information, see Use SRP password verification in custom authentication flow.

REFRESH_TOKEN_AUTH and REFRESH_TOKEN

Receive new ID and access tokens when you pass a `REFRESH_TOKEN` parameter with a valid refresh token as the value. For more information, see Using the refresh token.

CUSTOM_AUTH

Custom authentication with Lambda triggers. For more information, see Custom authentication challenge Lambda triggers.

USER_PASSWORD_AUTH

Client-side username-password authentication with the password sent directly in the request. For more information about client-side and server-side authentication, see SDK authorization models.

`ADMIN_USER_PASSWORD_AUTH` is a flow type of `AdminInitiateAuth` and isn't valid for InitiateAuth. `ADMIN_NO_SRP_AUTH` is a legacy server-side username-password flow and isn't valid for InitiateAuth.

Type: String

Valid Values: `USER_SRP_AUTH | REFRESH_TOKEN_AUTH | REFRESH_TOKEN | CUSTOM_AUTH | ADMIN_NO_SRP_AUTH | USER_PASSWORD_AUTH | ADMIN_USER_PASSWORD_AUTH | USER_AUTH`

Required: Yes

AuthParameters

The authentication parameters. These are inputs corresponding to the `AuthFlow` that you're invoking.

The required values are specific to the InitiateAuth:AuthFlow.

The following are some authentication flows and their parameters. Add a `SECRET_HASH` parameter if your app client has a client secret.

- USER_AUTH: USERNAME (required), PREFERRED_CHALLENGE. If you don't provide a value for PREFERRED_CHALLENGE, Amazon Cognito responds with the AvailableChallenges parameter that specifies the available sign-in methods.
- USER_SRP_AUTH: USERNAME (required), SRP_A (required), DEVICE_KEY.
- USER_PASSWORD_AUTH: USERNAME (required), PASSWORD (required), DEVICE_KEY.
- REFRESH_TOKEN_AUTH/REFRESH_TOKEN: REFRESH_TOKEN (required), DEVICE_KEY.
- CUSTOM_AUTH: USERNAME (required), SECRET_HASH (if app client is configured with client secret), DEVICE_KEY. To start the authentication flow with password verification, include ChallengeName: SRP_A and SRP_A: (The SRP_A Value).

For more information about SECRET_HASH, see Computing secret hash values. For information about DEVICE_KEY, see Working with user devices in your user pool.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ClientId

The ID of the app client that your user wants to sign in to.

Type: String

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

Pattern: [\w+]+

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for certain custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you send an InitiateAuth request, Amazon Cognito invokes the Lambda functions that are specified for various triggers. The ClientMetadata value is passed as input to the functions for only the following triggers.

- Pre sign-up
- Pre authentication
- User migration

When Amazon Cognito invokes the functions for these triggers, it passes a JSON payload as input to the function. This payload contains a `validationData` attribute with the data that you assigned to the `ClientMetadata` parameter in your `InitiateAuth` request. In your function, `validationData` can contribute to operations that require data that isn't in the default payload.

`InitiateAuth` requests invokes the following triggers without `ClientMetadata` as input.

- Post authentication
- Custom message
- Pre token generation
- Create auth challenge
- Define auth challenge
- Custom email sender
- Custom SMS sender

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Session

The optional session ID from a `ConfirmSignUp` API request. You can sign in a user directly from the sign-up process with the `USER_AUTH` authentication flow. When you pass the session ID to `InitiateAuth`, Amazon Cognito assumes the SMS or email message one-time verification password from `ConfirmSignUp` as the primary authentication factor. You're not required to submit this code a second time. This option is only valid for users who have confirmed their sign-up and are signing in for the first time within the authentication flow session duration of the session ID.

Type: String

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

Required: No

UserContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: UserContextDataType object

Required: No

Response Syntax

```
{
   "AuthenticationResult": {
      "AccessToken": "string",
      "ExpiresIn": number,
      "IdToken": "string",
```

```
      "NewDeviceMetadata": {
         "DeviceGroupKey": "string",
         "DeviceKey": "string"
      },
      "RefreshToken": "string",
      "TokenType": "string"
   },
   "AvailableChallenges": [ "string" ],
   "ChallengeName": "string",
   "ChallengeParameters": {
      "string" : "string"
   },
   "Session": "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.

AuthenticationResult

The result of a successful and complete authentication request. This result is only returned if the user doesn't need to pass another challenge. If they must pass another challenge before they get tokens, Amazon Cognito returns a challenge in `ChallengeName`, `ChallengeParameters`, and `Session` response parameters.

Type: AuthenticationResultType object

AvailableChallenges

This response parameter lists the available authentication challenges that users can select from in choice-based authentication. For example, they might be able to choose between passkey authentication, a one-time password from an SMS message, and a traditional password.

Type: Array of strings

Valid Values: `SMS_MFA | EMAIL_OTP | SOFTWARE_TOKEN_MFA | SELECT_MFA_TYPE | MFA_SETUP | PASSWORD_VERIFIER | CUSTOM_CHALLENGE | SELECT_CHALLENGE | DEVICE_SRP_AUTH | DEVICE_PASSWORD_VERIFIER | ADMIN_NO_SRP_AUTH | NEW_PASSWORD_REQUIRED | SMS_OTP | PASSWORD | WEB_AUTHN | PASSWORD_SRP`

ChallengeName

The name of an additional authentication challenge that you must respond to.

Collect the challenge response from the user and submit it in a RespondToAuthChallenge request. To link this response to the new request, include the `Session` response parameter in the next request.

Possible challenges include the following:

> **Note**
>
> All of the following challenges require `USERNAME` and, when the app client has a client secret, `SECRET_HASH` in the parameters.

- `WEB_AUTHN`: Respond to the challenge with the results of a successful authentication with a WebAuthn authenticator, or passkey. Examples of WebAuthn authenticators include biometric devices and security keys.
- `PASSWORD`: Respond with `USER_PASSWORD_AUTH` parameters: `USERNAME` (required), `PASSWORD` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- `PASSWORD_SRP`: Respond with `USER_SRP_AUTH` parameters: `USERNAME` (required), `SRP_A` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- `SELECT_CHALLENGE`: Respond to the challenge with `USERNAME` and an `ANSWER` that matches one of the challenge types in the `AvailableChallenges` response parameter.
- `SMS_MFA`: Respond with an `SMS_MFA_CODE` that your user pool delivered in an SMS message.
- `EMAIL_OTP`: Respond with an `EMAIL_OTP_CODE` that your user pool delivered in an email message.
- `PASSWORD_VERIFIER`: Respond with `PASSWORD_CLAIM_SIGNATURE`, `PASSWORD_CLAIM_SECRET_BLOCK`, and `TIMESTAMP` after client-side SRP calculations.
- `CUSTOM_CHALLENGE`: This is returned if your custom authentication flow determines that the user should pass another challenge before tokens are issued. The parameters of the challenge are determined by your Lambda function.
- `DEVICE_SRP_AUTH`: Respond with the initial parameters of device SRP authentication. For more information, see Signing in with a device.

- DEVICE_PASSWORD_VERIFIER: Respond with PASSWORD_CLAIM_SIGNATURE, PASSWORD_CLAIM_SECRET_BLOCK, and TIMESTAMP after client-side SRP calculations. For more information, see Signing in with a device.
- NEW_PASSWORD_REQUIRED: For users who are required to change their passwords after successful first login. Respond to this challenge with NEW_PASSWORD and any required attributes that Amazon Cognito returned in the requiredAttributes parameter. You can also set values for attributes that aren't required by your user pool and that your app client can write.

  Amazon Cognito only returns this challenge for users who have temporary passwords. When you create passwordless users, you must provide values for all required attributes.

  > **Note**
  >
  > In a NEW_PASSWORD_REQUIRED challenge response, you can't modify a required attribute that already has a value. In AdminRespondToAuthChallenge or RespondToAuthChallenge, set a value for any keys that Amazon Cognito returned in the requiredAttributes parameter, then use the AdminUpdateUserAttributes or UpdateUserAttributes API operation to modify the value of any additional attributes.

- MFA_SETUP: For users who are required to setup an MFA factor before they can sign in. The MFA types activated for the user pool will be listed in the challenge parameters MFAS_CAN_SETUP value.

  To set up time-based one-time password (TOTP) MFA, use the session returned in this challenge from InitiateAuth or AdminInitiateAuth as an input to AssociateSoftwareToken. Then, use the session returned by VerifySoftwareToken as an input to RespondToAuthChallenge or AdminRespondToAuthChallenge with challenge name MFA_SETUP to complete sign-in.

  To set up SMS or email MFA, collect a phone_number or email attribute for the user. Then restart the authentication flow with an InitiateAuth or AdminInitiateAuth request.

Type: String

Valid Values: SMS_MFA | EMAIL_OTP | SOFTWARE_TOKEN_MFA | SELECT_MFA_TYPE | MFA_SETUP | PASSWORD_VERIFIER | CUSTOM_CHALLENGE | SELECT_CHALLENGE

| DEVICE_SRP_AUTH | DEVICE_PASSWORD_VERIFIER | ADMIN_NO_SRP_AUTH | NEW_PASSWORD_REQUIRED | SMS_OTP | PASSWORD | WEB_AUTHN | PASSWORD_SRP

ChallengeParameters

The required parameters of the ChallengeName challenge.

Collect the challenge response from the user and submit it in a RespondToAuthChallenge request. To link this response to the new request, include the Session response parameter in the next request.

All challenges require USERNAME. They also require SECRET_HASH if your app client has a client secret.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Session

The session identifier that links a challenge response to the initial authentication request. If the user must pass another challenge, Amazon Cognito returns a session ID and challenge parameters.

Include this session ID in a RespondToAuthChallenge API request.

Type: String

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UnsupportedOperationException

Exception that is thrown when you attempt to perform an operation that isn't enabled for the user pool client.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example starts the user `testuser` in the passkey authentication flow. The user pool and app client have password, passkey, and OTP options. User verification is set to `preferred` for the user pool, so the user isn't required to have a passkey with user-verification support.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.InitiateAuth
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "AuthFlow": "USER_AUTH",
    "ClientId": "1example23456789",
    "AuthParameters": {
        "USERNAME": "testuser",
        "PREFERRED_CHALLENGE": "WEB_AUTHN"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
```

```
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "AvailableChallenges": [
        "PASSWORD_SRP",
        "PASSWORD",
        "EMAIL_OTP",
        "WEB_AUTHN"
    ],
    "ChallengeName": "WEB_AUTHN",
    "ChallengeParameters": {
        "CREDENTIAL_REQUEST_OPTIONS": "{\"challenge\":\"[challenge string]\",\"timeout
\":180000,\"rpId\":\"auth.example.com\",\"allowCredentials\":[{\"type\":\"public-key
\",\"id\":\"[key ID]\",\"transports\":[]},{\"type\":\"public-key\",\"id\":\"[key ID]\",
\"transports\":[\"internal\"]}],\"userVerification\":\"preferred\"}"
    },
    "Session": "AYABeC1-
y8qooiuysEv0uM4wAqQAHQABAAdTZXJ2aWNlABBDb2duaXRvVXNlclBvb2xzAAEAB2F3cy1rbXMAS2Fybjphd3M6a21zOnV
}
```

Example

The following example requests sign-in for the user `testuser` in a user pool where they're eligible for sign in with email OTP.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.InitiateAuth
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "AuthFlow": "USER_AUTH",
    "ClientId": "1example23456789",
```

```
    "AuthParameters": {
        "USERNAME": "testuser",
        "PREFERRED_CHALLENGE": "EMAIL_OTP"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "AvailableChallenges": [
        "PASSWORD_SRP",
        "PASSWORD",
        "EMAIL_OTP",
        "WEB_AUTHN"
    ],
    "ChallengeName": "EMAIL_OTP",
    "ChallengeParameters": {
        "CODE_DELIVERY_DELIVERY_MEDIUM": "EMAIL",
        "CODE_DELIVERY_DESTINATION": "t***@e***"
    },
    "Session": "AYABeC1-
y8qooiuysEv0uM4wAqQAHQABAAdTZXJ2aWNlABBDb2duaXRvVXNlclBvb2xzAAEAB2F3cy1rbXMAS2Fybjphd3M6a21zOnV
}
```

Example

The following example signs in the user `mytestuser` with analytics data, client metadata, and user context data for advanced security.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
```

```
X-Amz-Target: AWSCognitoIdentityProviderService.InitiateAuth
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "AuthFlow": "USER_PASSWORD_AUTH",
    "ClientId": "1example23456789",
    "AuthParameters": {
        "USERNAME": "mytestuser",
        "PASSWORD": "This-is-my-test-99!",
        "SECRET_HASH": "oT5ZkS8ctnrhYeeGsGTvOzPhoc/Jd1cO5fueBWFVmp8="
    },
    "AnalyticsMetadata": {
        "AnalyticsEndpointId": "d70b2ba36a8c4dc5a04a0451a31a1e12"
    },
    "UserContextData": {
        "EncodedData": "AmazonCognitoAdvancedSecurityData_object",
        "IpAddress": "192.0.2.1"
    },
    "ClientMetadata": {
        "MyTestKey": "MyTestValue"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "ChallengeName": "SOFTWARE_TOKEN_MFA",
    "ChallengeParameters": {
        "USER_ID_FOR_SRP": "mytestuser",
        "FRIENDLY_DEVICE_NAME": "mytestauthenticator"
    },
    "Session": "AYABeC1-
y8qooiuysEv0uM4wAqQAHQABAAdTZXJ2aWNlABBDb2duaXRvVXNlclBvb2xzAAEAB2F3cy1rbXMAS2Fybjphd3M6a21zOnV
}
```

Example

The following example exchanges a refresh token for access and ID tokens.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.InitiateAuth
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "AuthFlow": "REFRESH_TOKEN",
    "ClientId": "1example23456789",
    "AuthParameters": {
        "REFRESH_TOKEN": "eyJ123abcEXAMPLE",
        "SECRET_HASH": "7P85/EXAMPLE"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "AuthenticationResult": {
        "AccessToken": "eyJra456defEXAMPLE",
        "ExpiresIn": 3600,
        "IdToken": "eyJra789ghiEXAMPLE",
        "TokenType": "Bearer"
    },
    "ChallengeParameters": {}
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListDevices

Lists the devices that Amazon Cognito has registered to the currently signed-in user. For more information about device authentication, see Working with user devices in your user pool.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "Limit": number,
   "PaginationToken": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Limit

The maximum number of devices that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

PaginationToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Required: No

Response Syntax

```
{
   "Devices": [
      {
         "DeviceAttributes": [
            {
               "Name": "string",
               "Value": "string"
            }
         ],
         "DeviceCreateDate": number,
         "DeviceKey": "string",
         "DeviceLastAuthenticatedDate": number,
         "DeviceLastModifiedDate": number
      }
```

```
    ],
    "PaginationToken": "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.

Devices

An array of devices and their details. Each entry that's returned includes device information, last-accessed and created dates, and the device key.

Type: Array of DeviceType objects

PaginationToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request returns the two devices registered by the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListDevices
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Devices": [
        {
            "DeviceAttributes": [
                {
                    "Name": "device_status",
                    "Value": "valid"
                },
                {
                    "Name": "device_name",
                    "Value": "Dart-device"
```

```
                },
                {
                    "Name": "last_ip_used",
                    "Value": "192.0.2.1"
                }
            ],
            "DeviceCreateDate": 1715100742.022,
            "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
            "DeviceLastAuthenticatedDate": 1715100742.0,
            "DeviceLastModifiedDate": 1723233651.167
        },
        {
            "DeviceAttributes": [
                {
                    "Name": "device_status",
                    "Value": "valid"
                },
                {
                    "Name": "last_ip_used",
                    "Value": "192.0.2.2"
                }
            ],
            "DeviceCreateDate": 1726856147.993,
            "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE22222",
            "DeviceLastAuthenticatedDate": 1726856147.0,
            "DeviceLastModifiedDate": 1726856147.993
        }
    ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3

- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListGroups

Given a user pool ID, returns user pool groups and their details.

This operation doesn't return group membership. For group membership, see ListUsersInGroup and AdminListGroupsForUser. For more information about user pool groups, see Adding groups to a user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Limit": number,
   "NextToken": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Limit

The maximum number of groups that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Required: No

UserPoolId

The ID of the user pool where you want to list user groups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Groups": [
      {
         "CreationDate": number,
         "Description": "string",
         "GroupName": "string",
         "LastModifiedDate": number,
         "Precedence": number,
```

```
            "RoleArn": "string",
            "UserPoolId": "string"
        }
    ],
    "NextToken": "string"
}
```

Response Elements

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

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

Groups

An array of groups and their details. Each entry that's returned includes description, precedence, and IAM role values.

Type: Array of GroupType objects

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request lists two groups in a user pool that has a Facebook identity provider.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListGroups
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "UserPoolId": "us-west-2_EXAMPLE",
```

```
   "Limit": 2
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Groups": [
        {
            "CreationDate": 1681760899.633,
            "Description": "My test group",
            "GroupName": "testgroup",
            "LastModifiedDate": 1681760899.633,
            "Precedence": 1,
            "UserPoolId": "us-west-2_EXAMPLE"
        },
        {
            "CreationDate": 1642632749.051,
            "Description": "Autogenerated group for users who sign in using Facebook",
            "GroupName": "us-west-2_EXAMPLE_Facebook",
            "LastModifiedDate": 1642632749.051,
            "UserPoolId": "us-west-2_EXAMPLE"
        }
    ],
    "NextToken": "[Pagination token]"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2

- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListIdentityProviders

Given a user pool ID, returns information about configured identity providers (IdPs). For more information about IdPs, see Third-party IdP sign-in.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

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

Request Parameters

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

The request accepts the following data in JSON format.

MaxResults

The maximum number of IdPs that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Required: No

UserPoolId

The ID of the user pool where you want to list IdPs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "Providers": [
      {
         "CreationDate": number,
         "LastModifiedDate": number,
         "ProviderName": "string",
         "ProviderType": "string"
      }
   ]
}
```

Response Elements

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

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

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Providers

An array of the IdPs in your user pool. For each, the response includes identifiers, the IdP name and type, and trust-relationship details like the issuer URL.

Type: Array of ProviderDescription objects

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the two configured IdPs in the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListIdentityProviders
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
```

```
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Providers": [
        {
            "CreationDate": 1619477386.504,
            "LastModifiedDate": 1703798328.142,
            "ProviderName": "Azure",
            "ProviderType": "SAML"
        },
        {
            "CreationDate": 1642698776.175,
            "LastModifiedDate": 1642699086.453,
            "ProviderName": "LoginWithAmazon",
            "ProviderType": "LoginWithAmazon"
        }
    ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListResourceServers

Given a user pool ID, returns all resource servers and their details. For more information about resource servers, see Access control with resource servers.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

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

Request Parameters

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

The request accepts the following data in JSON format.

MaxResults

The maximum number of resource servers that you want Amazon Cognito to return in the response.

Type: Integer

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

Required: No

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Required: No

UserPoolId

The ID of the user pool where you want to list resource servers.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "ResourceServers": [
      {
         "Identifier": "string",
         "Name": "string",
         "Scopes": [
            {
               "ScopeDescription": "string",
               "ScopeName": "string"
```

```
            }
         ],
         "UserPoolId": "string"
      }
   ]
}
```

Response Elements

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

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

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

ResourceServers

An array of resource servers and the details of their configuration. For each, the response includes names, identifiers, and custom scopes.

Type: Array of ResourceServerType objects

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the two configured resource servers in the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListResourceServers
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "ResourceServers": [
        {
            "Identifier": "myapi.example.com",
            "Name": "Example API with custom access control scopes",
            "Scopes": [
                {
                    "ScopeDescription": "International customers",
                    "ScopeName": "international.read"
                },
                {
                    "ScopeDescription": "Domestic customers",
                    "ScopeName": "domestic.read"
                }
            ],
            "UserPoolId": "us-west-2_EXAMPLE"
        },
        {
            "Identifier": "myapi2.example.com",
            "Name": "Another example API for access control",
            "Scopes": [
                {
                    "ScopeDescription": "B2B customers",
                    "ScopeName": "b2b.read"
                }
            ],
            "UserPoolId": "us-west-2_EXAMPLE"
        }
    ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListTagsForResource

Lists the tags that are assigned to an Amazon Cognito user pool. For more information, see Tagging resources.

Request Syntax

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

Request Parameters

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

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the user pool that the tags are assigned to.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

Response Syntax

```
{
   "Tags": {
      "string" : "string"
   }
}
```

Response Elements

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

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

Tags

The tags that are assigned to the user pool.

Type: String to string map

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

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the tag keys and values for the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListTagsForResource
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ResourceArn": "arn:aws:cognito-idp:us-west-2:123456789012:userpool/us-
west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Tags": {
        "administrator": "Jie",
        "tenant": "ExampleCorp"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListUserImportJobs

Given a user pool ID, returns user import jobs and their details. Import jobs are retained in user pool configuration so that you can stage, stop, start, review, and delete them. For more information about user import, see Importing users from a CSV file.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "MaxResults": number,
   "PaginationToken": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

MaxResults

The maximum number of import jobs that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 60.

Required: Yes

PaginationToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Required: No

UserPoolId

The ID of the user pool where you want to list import jobs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "PaginationToken": "string",
   "UserImportJobs": [
      {
         "CloudWatchLogsRoleArn": "string",
         "CompletionDate": number,
         "CompletionMessage": "string",
         "CreationDate": number,
         "FailedUsers": number,
         "ImportedUsers": number,
         "JobId": "string",
         "JobName": "string",
```

```
            "PreSignedUrl": "string",
            "SkippedUsers": number,
            "StartDate": number,
            "Status": "string",
            "UserPoolId": "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.

PaginationToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

UserImportJobs

An array of user import jobs from the requested user pool. For each, the response includes logging destination, status, and the Amazon S3 pre-signed URL for CSV upload.

Type: Array of UserImportJobType objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the first three import jobs in the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListUserImportJobs
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "UserPoolId": "us-west-2_EXAMPLE",
```

```
    "MaxResults": 3
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "PaginationToken": "us-west-2_EXAMPLE#import-example3#1667948397084",
    "UserImportJobs": [
        {
            "CloudWatchLogsRoleArn": "arn:aws:iam::123456789012:role/service-role/
Cognito-UserImport-Role",
            "CompletionDate": 1735329786.142,
            "CompletionMessage": "The user import job has expired.",
            "CreationDate": 1735241621.022,
            "FailedUsers": 0,
            "ImportedUsers": 0,
            "JobId": "import-example1",
            "JobName": "Test-import-job-1",
            "PreSignedUrl": "https://aws-cognito-idp-user-import-pdx.s3.us-
west-2.amazonaws.com/123456789012/us-west-2_EXAMPLE/import-mAgUtd8PMm?X-Amz-Security-
Token=[token]&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20241226T193341Z&X-
Amz-SignedHeaders=host%3Bx-amz-server-side-encryption&X-Amz-Expires=899&X-Amz-
Credential=[credential]&X-Amz-Signature=[signature]",
            "SkippedUsers": 0,
            "Status": "Expired",
            "UserPoolId": "us-west-2_EXAMPLE"
        },
        {
            "CloudWatchLogsRoleArn": "arn:aws:iam::123456789012:role/service-role/
Cognito-UserImport-Role",
            "CompletionDate": 1681509058.408,
            "CompletionMessage": "Too many users have failed or been skipped during the
 import.",
            "CreationDate": 1681509001.477,
            "FailedUsers": 1,
            "ImportedUsers": 0,
            "JobId": "import-example2",
```

```
            "JobName": "Test-import-job-2",
            "PreSignedUrl": "https://aws-cognito-idp-user-import-pdx.s3.us-
west-2.amazonaws.com/123456789012/us-west-2_EXAMPLE/import-mAgUtd8PMm?X-Amz-Security-
Token=[token]&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20241226T193341Z&X-
Amz-SignedHeaders=host%3Bx-amz-server-side-encryption&X-Amz-Expires=899&X-Amz-
Credential=[credential]&X-Amz-Signature=[signature]",
            "SkippedUsers": 0,
            "StartDate": 1681509057.965,
            "Status": "Failed",
            "UserPoolId": "us-west-2_EXAMPLE"
        },
        {
            "CloudWatchLogsRoleArn": "arn:aws:iam::123456789012:role/service-role/
Cognito-UserImport-Role",
            "CompletionDate": 1.667864578676E9,
            "CompletionMessage": "Import Job Completed Successfully.",
            "CreationDate": 1.667864480281E9,
            "FailedUsers": 0,
            "ImportedUsers": 6,
            "JobId": "import-example3",
            "JobName": "Test-import-job-3",
            "PreSignedUrl": "https://aws-cognito-idp-user-import-pdx.s3.us-
west-2.amazonaws.com/123456789012/us-west-2_EXAMPLE/import-mAgUtd8PMm?X-Amz-Security-
Token=[token]&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20241226T193341Z&X-
Amz-SignedHeaders=host%3Bx-amz-server-side-encryption&X-Amz-Expires=899&X-Amz-
Credential=[credential]&X-Amz-Signature=[signature]",
            "SkippedUsers": 0,
            "StartDate": 1.667864578167E9,
            "Status": "Succeeded",
            "UserPoolId": "us-west-2_EXAMPLE"
        }
    ]
}
```


See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++

- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListUserPoolClients

Given a user pool ID, lists app clients. App clients are sets of rules for the access that you want a user pool to grant to one application. For more information, see App clients.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

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

Request Parameters

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

The request accepts the following data in JSON format.

MaxResults

The maximum number of app clients that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 60.

Required: No

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Required: No

UserPoolId

The ID of the user pool where you want to list user pool clients.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "UserPoolClients": [
      {
         "ClientId": "string",
         "ClientName": "string",
         "UserPoolId": "string"
      }
   ]
}
```

Response Elements

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

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

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

UserPoolClients

An array of app clients and their details. Includes app client ID and name.

To get more information about one app client, retrieve an app client ID and add it to a DescribeUserPoolClient request.

Type: Array of UserPoolClientDescription objects

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request returns the first three app clients in the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListUserPoolClients
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "MaxResults": 3,
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
```

```
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "NextToken": "[Pagination token]",
    "UserPoolClients": [
        {
            "ClientId": "1example23456789",
            "ClientName": "app-client-1",
            "UserPoolId": "us-west-2_EXAMPLE"
        },
        {
            "ClientId": "2example34567890",
            "ClientName": "app-client-2",
            "UserPoolId": "us-west-2_EXAMPLE"
        },
        {
            "ClientId": "3example45678901",
            "ClientName": "app-client-3",
            "UserPoolId": "us-west-2_EXAMPLE"
        }
    ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python

- Amazon SDK for Ruby V3

ListUserPools

Lists user pools and their details in the current Amazon Web Services account.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

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

Request Parameters

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

The request accepts the following data in JSON format.

MaxResults

The maximum number of user pools that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 60.

Required: Yes

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Required: No

Response Syntax

```
{
   "NextToken": "string",
   "UserPools": [
      {
         "CreationDate": number,
         "Id": "string",
         "LambdaConfig": {
            "CreateAuthChallenge": "string",
            "CustomEmailSender": {
               "LambdaArn": "string",
               "LambdaVersion": "string"
            },
            "CustomMessage": "string",
            "CustomSMSSender": {
               "LambdaArn": "string",
               "LambdaVersion": "string"
            },
            "DefineAuthChallenge": "string",
            "KMSKeyID": "string",
            "PostAuthentication": "string",
            "PostConfirmation": "string",
            "PreAuthentication": "string",
            "PreSignUp": "string",
            "PreTokenGeneration": "string",
```

```
            "PreTokenGenerationConfig": {
               "LambdaArn": "string",
               "LambdaVersion": "string"
            },
            "UserMigration": "string",
            "VerifyAuthChallengeResponse": "string"
         },
         "LastModifiedDate": number,
         "Name": "string",
         "Status": "string"
      }
   ]
}
```

Response Elements

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

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

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

UserPools

An array of user pools and their configuration details.

Type: Array of UserPoolDescriptionType objects

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request lists the first three user pools in the Amazon Web Services account associated with the user that signed the request.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListUserPools
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "MaxResults": 3
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "NextToken": "[Pagination token]",
    "UserPools": [
        {
            "CreationDate": 1681502497.741,
            "Id": "us-west-2_EXAMPLE1",
            "LambdaConfig": {
                "CustomMessage": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
                "PreSignUp": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
                "PreTokenGeneration": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
                "PreTokenGenerationConfig": {
                    "LambdaArn": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction",
                    "LambdaVersion": "V1_0"
                }
            },
            "LastModifiedDate": 1681502497.741,
            "Name": "user pool 1"
        },
        {
            "CreationDate": 1686064178.717,
            "Id": "us-west-2_EXAMPLE2",
            "LambdaConfig": {
            },
            "LastModifiedDate": 1686064178.873,
            "Name": "user pool 2"
        },
        {
            "CreationDate": 1627681712.237,
            "Id": "us-west-2_EXAMPLE3",
            "LambdaConfig": {
                "UserMigration": "arn:aws:lambda:us-
east-1:123456789012:function:MyFunction"
```

```
            },
            "LastModifiedDate": 1678486942.479,
            "Name": "user pool 3"
        }
    ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListUsers

Given a user pool ID, returns a list of users and their basic details in a user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "AttributesToGet": [ "string" ],
   "Filter": "string",
   "Limit": number,
   "PaginationToken": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AttributesToGet

A JSON array of user attribute names, for example `given_name`, that you want Amazon Cognito to include in the response for each user. When you don't provide an `AttributesToGet` parameter, Amazon Cognito returns all attributes for each user.

Use `AttributesToGet` with required attributes in your user pool, or in conjunction with `Filter`. Amazon Cognito returns an error if not all users in the results have set a value for the attribute you request. Attributes that you can't filter on, including custom attributes, must have a value set in every user profile before an `AttributesToGet` parameter returns results.

Type: Array of strings

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

Filter

A filter string of the form `"AttributeName Filter-Type "AttributeValue"`. Quotation marks within the filter string must be escaped using the backslash (\) character. For example, `"family_name = \"Reddy\""`.

- *AttributeName*: The name of the attribute to search for. You can only search for one attribute at a time.
- *Filter-Type*: For an exact match, use =, for example, `"given_name = \"Jon\""`. For a prefix ("starts with") match, use ^=, for example, `"given_name ^= \"Jon\""`.
- *AttributeValue*: The attribute value that must be matched for each user.

If the filter string is empty, `ListUsers` returns all users in the user pool.

You can only search for the following standard attributes:

- `username` (case-sensitive)
- `email`
- `phone_number`
- `name`
- `given_name`
- `family_name`
- `preferred_username`
- `cognito:user_status` (called **Status** in the Console) (case-insensitive)
- `status (called` **`Enabled`** `in the Console) (case-sensitive)`
- `sub`

Custom attributes aren't searchable.

> **Note**
>
> You can also list users with a client-side filter. The server-side filter matches no more than one attribute. For an advanced search, use a client-side filter with the `--query` parameter of the `list-users` action in the Amazon CLI. When you use a client-side filter, ListUsers returns a paginated list of zero or more users. You can receive multiple pages in a row with zero results. Repeat the query with each pagination token that is returned until you receive a null pagination token value, and then review the combined result.
> For more information about server-side and client-side filtering, see FilteringAmazon CLI output in the Amazon Command Line Interface User Guide.

For more information, see Searching for Users Using the ListUsers API and Examples of Using the ListUsers API in the *Amazon Cognito Developer Guide*.

Type: String

Length Constraints: Maximum length of 256.

Required: No

Limit

The maximum number of users that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

PaginationToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Required: No

UserPoolId

The ID of the user pool where you want to display or search for users.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "PaginationToken": "string",
   "Users": [
      {
         "Attributes": [
            {
               "Name": "string",
               "Value": "string"
            }
         ],
         "Enabled": boolean,
         "MFAOptions": [
            {
               "AttributeName": "string",
               "DeliveryMedium": "string"
            }
         ],
         "UserCreateDate": number,
         "UserLastModifiedDate": number,
         "Username": "string",
         "UserStatus": "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.

PaginationToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `[\S]+`

Users

An array of user pool users who match your query, and their attributes.

> **Note**
>
> Amazon Cognito creates a profile in your user pool for each local user in your user pool and for each unique user ID from your third-party identity providers (IdPs). When you link users with the AdminLinkProviderForUser API operation, the output of `ListUsers` displays both the IdP user and the local user that you linked. You can identify IdP users in the `Users` object of this API response by the IdP prefix that Amazon Cognito appends to `Username`.

Type: Array of UserType objects

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

This request submits a value for all possible parameters for ListUsers. By iterating the PaginationToken, you can page through and collect all users in a user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListUsers
User-Agent: <UserAgentString>
```

```
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "AttributesToGet": [
        "email",
        "sub"
    ],
    "Filter": "\"email\"^=\"testuser\"",
    "Limit": 3,
    "PaginationToken": "abcd1234EXAMPLE",
    "UserPoolId": "us-east-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "PaginationToken": "efgh5678EXAMPLE",
    "Users": [
        {
            "Attributes": [
                {
                    "Name": "sub",
                    "Value": "eaad0219-2117-439f-8d46-4db20e59268f"
                },
                {
                    "Name": "email",
                    "Value": "testuser@example.com"
                }
            ],
            "Enabled": true,
            "UserCreateDate": 1682955829.578,
            "UserLastModifiedDate": 1689030181.63,
            "UserStatus": "CONFIRMED",
            "Username": "testuser"
```

```
        },
        {
            "Attributes": [
                {
                    "Name": "sub",
                    "Value": "3b994cfd-0b07-4581-be46-3c82f9a70c90"
                },
                {
                    "Name": "email",
                    "Value": "testuser2@example.com"
                }
            ],
            "Enabled": true,
            "UserCreateDate": 1684427979.201,
            "UserLastModifiedDate": 1684427979.201,
            "UserStatus": "UNCONFIRMED",
            "Username": "testuser2"
        },
        {
            "Attributes": [
                {
                    "Name": "sub",
                    "Value": "5929e0d1-4c34-42d1-9b79-a5ecacfe66f7"
                },
                {
                    "Name": "email",
                    "Value": "testuser3@example.com"
                }
            ],
            "Enabled": true,
            "UserCreateDate": 1684427823.641,
            "UserLastModifiedDate": 1684427823.641,
            "UserStatus": "UNCONFIRMED",
            "Username": "testuser3@example.com"
        }
    ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListUsersInGroup

Given a user pool ID and a group name, returns a list of users in the group. For more information about user pool groups, see Adding groups to a user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "GroupName": "string",
   "Limit": number,
   "NextToken": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

GroupName

The name of the group that you want to query for user membership.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Limit

The maximum number of groups that you want Amazon Cognito to return in the response.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Required: No

UserPoolId

The ID of the user pool where you want to view the membership of the requested group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
```

```
   "Users": [
      {
         "Attributes": [
            {
               "Name": "string",
               "Value": "string"
            }
         ],
         "Enabled": boolean,
         "MFAOptions": [
            {
               "AttributeName": "string",
               "DeliveryMedium": "string"
            }
         ],
         "UserCreateDate": number,
         "UserLastModifiedDate": number,
         "Username": "string",
         "UserStatus": "string"
      }
   ]
}
```

Response Elements

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

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

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Users

An array of users who are members in the group, and their attributes.

Type: Array of UserType objects

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request lists the two users of the requested group.

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListUsersInGroup
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "GroupName": "testgroup",
    "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Users": [
        {
            "Attributes": [
                {
                    "Name": "sub",
                    "Value": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
                },
                {
                    "Name": "identities",
                    "Value": "[{\"userId\":\"a1b2c3d4-5678-90ab-cdef-EXAMPLE22222\",
\"providerName\":\"SignInWithApple\",\"providerType\":\"SignInWithApple\",\"issuer
\":null,\"primary\":false,\"dateCreated\":1701125599632}]"
                },
                {
                    "Name": "email_verified",
                    "Value": "true"
                },
                {
                    "Name": "custom:state",
                    "Value": "Maine"
                },
```

```
                {
                    "Name": "name",
                    "Value": "John Doe"
                },
                {
                    "Name": "phone_number_verified",
                    "Value": "true"
                },
                {
                    "Name": "phone_number",
                    "Value": "+12065551212"
                },
                {
                    "Name": "preferred_username",
                    "Value": "jamesdoe"
                },
                {
                    "Name": "locale",
                    "Value": "EMEA"
                },
                {
                    "Name": "email",
                    "Value": "jamesdoe@example.com"
                }
            ],
            "Enabled": true,
            "UserCreateDate": 1682955829.578,
            "UserLastModifiedDate": 1736292876.446,
            "Username": "johndoe",
            "UserStatus": "CONFIRMED"
        },
        {
            "Attributes": [
                {
                    "Name": "sub",
                    "Value": "a1b2c3d4-5678-90ab-cdef-EXAMPLE33333"
                },
                {
                    "Name": "website",
                    "Value": "https://example.com"
                },
                {
                    "Name": "email_verified",
                    "Value": "true"
```

```
                },
                {
                    "Name": "custom:state",
                    "Value": "New York"
                },
                {
                    "Name": "phone_number_verified",
                    "Value": "true"
                },
                {
                    "Name": "given_name",
                    "Value": "Carlos"
                },
                {
                    "Name": "name",
                    "Value": "Carlos Salazar"
                },
                {
                    "Name": "phone_number",
                    "Value": "+12065551212"
                },
                {
                    "Name": "family_name",
                    "Value": "Salazar"
                },
                {
                    "Name": "email",
                    "Value": "carlos.salazar@example.com"
                }
            ],
            "Enabled": true,
            "UserCreateDate": 1701124862.116,
            "UserLastModifiedDate": 1726695472.107,
            "Username": "salazarc",
            "UserStatus": "CONFIRMED"
        }
    ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ListWebAuthnCredentials

Generates a list of the currently signed-in user's registered passkey, or WebAuthn, credentials.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

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

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

MaxResults

The maximum number of the user's passkey credentials that you want to return.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 20.

Required: No

NextToken

This API operation returns a limited number of results. The pagination token is an identifier that you can present in an additional API request with the same parameters. When you include the pagination token, Amazon Cognito returns the next set of items after the current list. Subsequent requests return a new pagination token. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Required: No

Response Syntax

```
{
   "Credentials": [
      {
         "AuthenticatorAttachment": "string",
         "AuthenticatorTransports": [ "string" ],
         "CreatedAt": number,
         "CredentialId": "string",
         "FriendlyCredentialName": "string",
         "RelyingPartyId": "string"
      }
   ],
   "NextToken": "string"
}
```

Response Elements

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

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

Credentials

A list of registered passkeys for a user.

Type: Array of WebAuthnCredentialDescription objects

NextToken

The identifier that Amazon Cognito returned with the previous request to this operation. When you include a pagination token in your request, Amazon Cognito returns the next set of items in the list. By use of this token, you can paginate through the full list of items.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 131072.

Pattern: `[\S]+`

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

Examples

Example

The following example request returns details about the one registered passkey for the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.ListWebAuthnCredentials
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Credentials": [
        {
            "AuthenticatorAttachment": "cross-platform",
```

```
            "CreatedAt": 1736293876.115,
            "CredentialId": "8LApgk4-lNUFHbhm2w6Und7-
uxcc8coJGsPxiogvHoItc64xWQc3r4CEXAMPLE",
            "FriendlyCredentialName": "Roaming passkey",
            "RelyingPartyId": "auth.example.com"
        }
    ]
}
```


See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

ResendConfirmationCode

Resends the code that confirms a new account for a user who has signed up in your user pool. Amazon Cognito sends confirmation codes to the user attribute in the `AutoVerifiedAttributes` property of your user pool. When you prompt new users for the confirmation code, include a "Resend code" option that generates a call to this API operation.

When users submit their new confirmation code, send it to your user pool in a ConfirmSignUp request for account confirmation.

Note

Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Request Syntax

```
{
```

```
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
   },
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "SecretHash": "string",
   "UserContextData": {
      "EncodedData": "string",
      "IpAddress": "string"
   },
   "Username": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

ClientId

The ID of the user pool app client where the user signed up.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the ResendConfirmationCode API action, Amazon Cognito invokes the function that is assigned to the *custom message* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your ResendConfirmationCode request. In your function code in Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

SecretHash

A keyed-hash message authentication code (HMAC) calculated using the secret key of a user pool client and username plus the client ID in the message. For more information about `SecretHash`, see Computing secret hash values.

Type: String

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

Pattern: `[\w+=/]+`

Required: No

UserContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: UserContextDataType object

Required: No

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Response Syntax

```
{
```

```
   "CodeDeliveryDetails": {
      "AttributeName": "string",
      "DeliveryMedium": "string",
      "Destination": "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.

CodeDeliveryDetails

Information about the phone number or email address that Amazon Cognito sent the confirmation code to.

Type: CodeDeliveryDetailsType object

Errors

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

CodeDeliveryFailureException

This exception is thrown when a verification code fails to deliver successfully.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request sends a new email confirmation code to the requested user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
```

```
X-Amz-Target: AWSCognitoIdentityProviderService.ResendConfirmationCode
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "Username": "akua_mansa"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "CodeDeliveryDetails": {
        "AttributeName": "email",
        "DeliveryMedium": "EMAIL",
        "Destination": "a***@e***"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3

- Amazon SDK for Python
- Amazon SDK for Ruby V3

RespondToAuthChallenge

Some API operations in a user pool generate a challenge, like a prompt for an MFA code, for device authentication that bypasses MFA, or for a custom authentication challenge. A `RespondToAuthChallenge` API request provides the answer to that challenge, like a code or a secure remote password (SRP). The parameters of a response to an authentication challenge vary with the type of challenge.

For more information about custom authentication challenges, see Custom authentication challenge Lambda triggers.

Note

Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Request Syntax

```
{
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
   },
   "ChallengeName": "string",
   "ChallengeResponses": {
      "string" : "string"
   },
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "Session": "string",
   "UserContextData": {
      "EncodedData": "string",
      "IpAddress": "string"
   }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

ChallengeName

The name of the challenge that you are responding to.

> **Note**
>
> You can't respond to an ADMIN_NO_SRP_AUTH challenge with this operation.

Possible challenges include the following:

> **Note**
>
> All of the following challenges require USERNAME and, when the app client has a client secret, SECRET_HASH in the parameters.

- WEB_AUTHN: Respond to the challenge with the results of a successful authentication with a WebAuthn authenticator, or passkey. Examples of WebAuthn authenticators include biometric devices and security keys.
- PASSWORD: Respond with USER_PASSWORD_AUTH parameters: USERNAME (required), PASSWORD (required), SECRET_HASH (required if the app client is configured with a client secret), DEVICE_KEY.
- PASSWORD_SRP: Respond with USER_SRP_AUTH parameters: USERNAME (required), SRP_A (required), SECRET_HASH (required if the app client is configured with a client secret), DEVICE_KEY.
- SELECT_CHALLENGE: Respond to the challenge with USERNAME and an ANSWER that matches one of the challenge types in the AvailableChallenges response parameter.
- SMS_MFA: Respond with an SMS_MFA_CODE that your user pool delivered in an SMS message.
- EMAIL_OTP: Respond with an EMAIL_OTP_CODE that your user pool delivered in an email message.
- PASSWORD_VERIFIER: Respond with PASSWORD_CLAIM_SIGNATURE, PASSWORD_CLAIM_SECRET_BLOCK, and TIMESTAMP after client-side SRP calculations.
- CUSTOM_CHALLENGE: This is returned if your custom authentication flow determines that the user should pass another challenge before tokens are issued. The parameters of the challenge are determined by your Lambda function.
- DEVICE_SRP_AUTH: Respond with the initial parameters of device SRP authentication. For more information, see Signing in with a device.

- DEVICE_PASSWORD_VERIFIER: Respond with PASSWORD_CLAIM_SIGNATURE, PASSWORD_CLAIM_SECRET_BLOCK, and TIMESTAMP after client-side SRP calculations. For more information, see Signing in with a device.
- NEW_PASSWORD_REQUIRED: For users who are required to change their passwords after successful first login. Respond to this challenge with NEW_PASSWORD and any required attributes that Amazon Cognito returned in the requiredAttributes parameter. You can also set values for attributes that aren't required by your user pool and that your app client can write.

  Amazon Cognito only returns this challenge for users who have temporary passwords. When you create passwordless users, you must provide values for all required attributes.

  > **Note**
  >
  > In a NEW_PASSWORD_REQUIRED challenge response, you can't modify a required attribute that already has a value. In AdminRespondToAuthChallenge or RespondToAuthChallenge, set a value for any keys that Amazon Cognito returned in the requiredAttributes parameter, then use the AdminUpdateUserAttributes or UpdateUserAttributes API operation to modify the value of any additional attributes.

- MFA_SETUP: For users who are required to setup an MFA factor before they can sign in. The MFA types activated for the user pool will be listed in the challenge parameters MFAS_CAN_SETUP value.

  To set up time-based one-time password (TOTP) MFA, use the session returned in this challenge from InitiateAuth or AdminInitiateAuth as an input to AssociateSoftwareToken. Then, use the session returned by VerifySoftwareToken as an input to RespondToAuthChallenge or AdminRespondToAuthChallenge with challenge name MFA_SETUP to complete sign-in.

  To set up SMS or email MFA, collect a phone_number or email attribute for the user. Then restart the authentication flow with an InitiateAuth or AdminInitiateAuth request.

Type: String

Valid Values: SMS_MFA | EMAIL_OTP | SOFTWARE_TOKEN_MFA | SELECT_MFA_TYPE | MFA_SETUP | PASSWORD_VERIFIER | CUSTOM_CHALLENGE | SELECT_CHALLENGE

| DEVICE_SRP_AUTH | DEVICE_PASSWORD_VERIFIER | ADMIN_NO_SRP_AUTH | NEW_PASSWORD_REQUIRED | SMS_OTP | PASSWORD | WEB_AUTHN | PASSWORD_SRP

Required: Yes

ChallengeResponses

The responses to the challenge that you received in the previous request. Each challenge has its own required response parameters. The following examples are partial JSON request bodies that highlight challenge-response parameters.

> **Important**
>
> You must provide a SECRET_HASH parameter in all challenge responses to an app client that has a client secret. Include a DEVICE_KEY for device authentication.

SELECT_CHALLENGE

```
"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses":
{ "USERNAME": "[username]", "ANSWER": "[Challenge name]"}
```

Available challenges are PASSWORD, PASSWORD_SRP, EMAIL_OTP, SMS_OTP, and WEB_AUTHN.

Complete authentication in the SELECT_CHALLENGE response for PASSWORD, PASSWORD_SRP, and WEB_AUTHN:

- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "WEB_AUTHN", "USERNAME": "[username]", "CREDENTIAL": "[AuthenticationResponseJSON]"}`

  See AuthenticationResponseJSON.
- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "PASSWORD", "USERNAME": "[username]", "PASSWORD": "[password]"}`
- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "PASSWORD_SRP", "USERNAME": "[username]", "SRP_A": "[SRP_A]"}`

For SMS_OTP and EMAIL_OTP, respond with the username and answer. Your user pool will send a code for the user to submit in the next challenge response.

- "ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "SMS_OTP", "USERNAME": "[username]"}
- "ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "EMAIL_OTP", "USERNAME": "[username]"}

SMS_OTP

```
"ChallengeName": "SMS_OTP", "ChallengeResponses": {"SMS_OTP_CODE":
"[code]", "USERNAME": "[username]"}
```

EMAIL_OTP

```
"ChallengeName": "EMAIL_OTP", "ChallengeResponses": {"EMAIL_OTP_CODE":
"[code]", "USERNAME": "[username]"}
```

SMS_MFA

```
"ChallengeName": "SMS_MFA", "ChallengeResponses": {"SMS_MFA_CODE":
"[code]", "USERNAME": "[username]"}
```

PASSWORD_VERIFIER

This challenge response is part of the SRP flow. Amazon Cognito requires that your application respond to this challenge within a few seconds. When the response time exceeds this period, your user pool returns a NotAuthorizedException error.

```
"ChallengeName": "PASSWORD_VERIFIER", "ChallengeResponses":
{"PASSWORD_CLAIM_SIGNATURE": "[claim_signature]",
"PASSWORD_CLAIM_SECRET_BLOCK": "[secret_block]", "TIMESTAMP":
[timestamp], "USERNAME": "[username]"}
```

Add "DEVICE_KEY" when you sign in with a remembered device.

CUSTOM_CHALLENGE

```
"ChallengeName": "CUSTOM_CHALLENGE", "ChallengeResponses":
{"USERNAME": "[username]", "ANSWER": "[challenge_answer]"}
```

Add "DEVICE_KEY" when you sign in with a remembered device.

NEW_PASSWORD_REQUIRED

```
"ChallengeName": "NEW_PASSWORD_REQUIRED", "ChallengeResponses":
{"NEW_PASSWORD": "[new_password]", "USERNAME": "[username]"}
```

To set any required attributes that `InitiateAuth` returned in an `requiredAttributes` parameter, add `"userAttributes.[attribute_name]": "[attribute_value]"`. This parameter can also set values for writable attributes that aren't required by your user pool.

> **Note**
>
> In a `NEW_PASSWORD_REQUIRED` challenge response, you can't modify a required attribute that already has a value. In `AdminRespondToAuthChallenge` or `RespondToAuthChallenge`, set a value for any keys that Amazon Cognito returned in the `requiredAttributes` parameter, then use the `AdminUpdateUserAttributes` or `UpdateUserAttributes` API operation to modify the value of any additional attributes.

SOFTWARE_TOKEN_MFA

```
"ChallengeName": "SOFTWARE_TOKEN_MFA", "ChallengeResponses":
{"USERNAME": "[username]", "SOFTWARE_TOKEN_MFA_CODE":
[authenticator_code]}
```

DEVICE_SRP_AUTH

```
"ChallengeName": "DEVICE_SRP_AUTH", "ChallengeResponses": {"USERNAME":
"[username]", "DEVICE_KEY": "[device_key]", "SRP_A": "[srp_a]"}
```

DEVICE_PASSWORD_VERIFIER

```
"ChallengeName": "DEVICE_PASSWORD_VERIFIER", "ChallengeResponses":
{"DEVICE_KEY": "[device_key]", "PASSWORD_CLAIM_SIGNATURE":
"[claim_signature]", "PASSWORD_CLAIM_SECRET_BLOCK": "[secret_block]",
"TIMESTAMP": [timestamp], "USERNAME": "[username]"}
```

MFA_SETUP

```
"ChallengeName": "MFA_SETUP", "ChallengeResponses": {"USERNAME":
"[username]"}, "SESSION": "[Session ID from VerifySoftwareToken]"
```

SELECT_MFA_TYPE

```
"ChallengeName": "SELECT_MFA_TYPE", "ChallengeResponses": {"USERNAME":
"[username]", "ANSWER": "[SMS_MFA or SOFTWARE_TOKEN_MFA]"}
```

For more information about SECRET_HASH, see Computing secret hash values. For information about DEVICE_KEY, see Working with user devices in your user pool.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ClientId

The ID of the app client where the user is signing in.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the RespondToAuthChallenge API action, Amazon Cognito invokes any functions that are assigned to the following triggers: *post authentication*, *pre token generation*, *define auth challenge*, *create auth challenge*, and *verify auth challenge*. When Amazon Cognito invokes any of these functions, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your RespondToAuthChallenge request. In your function code in Amazon Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Session

The session identifier that maintains the state of authentication requests and challenge responses. If an `AdminInitiateAuth` or `AdminRespondToAuthChallenge` API request results in a determination that your application must pass another challenge, Amazon Cognito returns a session with other challenge parameters. Send this session identifier, unmodified, to the next `AdminRespondToAuthChallenge` request.

Type: String

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

Required: No

UserContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: UserContextDataType object

Required: No

Response Syntax

```
{
   "AuthenticationResult": {
      "AccessToken": "string",
      "ExpiresIn": number,
      "IdToken": "string",
      "NewDeviceMetadata": {
         "DeviceGroupKey": "string",
         "DeviceKey": "string"
      },
      "RefreshToken": "string",
      "TokenType": "string"
   },
   "ChallengeName": "string",
   "ChallengeParameters": {
      "string" : "string"
   },
   "Session": "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.

AuthenticationResult

The outcome of a successful authentication process. After your application has passed all challenges, Amazon Cognito returns an `AuthenticationResult` with the JSON web tokens (JWTs) that indicate successful sign-in.

Type: AuthenticationResultType object

ChallengeName

The name of the next challenge that you must respond to.

Possible challenges include the following:

> **Note**
>
> All of the following challenges require `USERNAME` and, when the app client has a client secret, `SECRET_HASH` in the parameters.

- `WEB_AUTHN`: Respond to the challenge with the results of a successful authentication with a WebAuthn authenticator, or passkey. Examples of WebAuthn authenticators include biometric devices and security keys.
- `PASSWORD`: Respond with `USER_PASSWORD_AUTH` parameters: `USERNAME` (required), `PASSWORD` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- `PASSWORD_SRP`: Respond with `USER_SRP_AUTH` parameters: `USERNAME` (required), `SRP_A` (required), `SECRET_HASH` (required if the app client is configured with a client secret), `DEVICE_KEY`.
- `SELECT_CHALLENGE`: Respond to the challenge with `USERNAME` and an `ANSWER` that matches one of the challenge types in the `AvailableChallenges` response parameter.
- `SMS_MFA`: Respond with an `SMS_MFA_CODE` that your user pool delivered in an SMS message.
- `EMAIL_OTP`: Respond with an `EMAIL_OTP_CODE` that your user pool delivered in an email message.
- `PASSWORD_VERIFIER`: Respond with `PASSWORD_CLAIM_SIGNATURE`, `PASSWORD_CLAIM_SECRET_BLOCK`, and `TIMESTAMP` after client-side SRP calculations.
- `CUSTOM_CHALLENGE`: This is returned if your custom authentication flow determines that the user should pass another challenge before tokens are issued. The parameters of the challenge are determined by your Lambda function.
- `DEVICE_SRP_AUTH`: Respond with the initial parameters of device SRP authentication. For more information, see Signing in with a device.
- `DEVICE_PASSWORD_VERIFIER`: Respond with `PASSWORD_CLAIM_SIGNATURE`, `PASSWORD_CLAIM_SECRET_BLOCK`, and `TIMESTAMP` after client-side SRP calculations. For more information, see Signing in with a device.
- `NEW_PASSWORD_REQUIRED`: For users who are required to change their passwords after successful first login. Respond to this challenge with `NEW_PASSWORD` and any required attributes that Amazon Cognito returned in the `requiredAttributes` parameter. You can

also set values for attributes that aren't required by your user pool and that your app client can write.

Amazon Cognito only returns this challenge for users who have temporary passwords. When you create passwordless users, you must provide values for all required attributes.

> **Note**
>
> In a `NEW_PASSWORD_REQUIRED` challenge response, you can't modify a required attribute that already has a value. In `AdminRespondToAuthChallenge` or `RespondToAuthChallenge`, set a value for any keys that Amazon Cognito returned in the `requiredAttributes` parameter, then use the `AdminUpdateUserAttributes` or `UpdateUserAttributes` API operation to modify the value of any additional attributes.

- `MFA_SETUP`: For users who are required to setup an MFA factor before they can sign in. The MFA types activated for the user pool will be listed in the challenge parameters `MFAS_CAN_SETUP` value.

  To set up time-based one-time password (TOTP) MFA, use the session returned in this challenge from `InitiateAuth` or `AdminInitiateAuth` as an input to `AssociateSoftwareToken`. Then, use the session returned by `VerifySoftwareToken` as an input to `RespondToAuthChallenge` or `AdminRespondToAuthChallenge` with challenge name `MFA_SETUP` to complete sign-in.

  To set up SMS or email MFA, collect a `phone_number` or `email` attribute for the user. Then restart the authentication flow with an `InitiateAuth` or `AdminInitiateAuth` request.

Type: String

Valid Values: `SMS_MFA | EMAIL_OTP | SOFTWARE_TOKEN_MFA | SELECT_MFA_TYPE | MFA_SETUP | PASSWORD_VERIFIER | CUSTOM_CHALLENGE | SELECT_CHALLENGE | DEVICE_SRP_AUTH | DEVICE_PASSWORD_VERIFIER | ADMIN_NO_SRP_AUTH | NEW_PASSWORD_REQUIRED | SMS_OTP | PASSWORD | WEB_AUTHN | PASSWORD_SRP`

ChallengeParameters

The parameters that define your response to the next challenge.

Take the values in `ChallengeParameters` and provide values for them in the `ChallengeResponses` of the next RespondToAuthChallenge request.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Session

The session identifier that maintains the state of authentication requests and challenge responses. If an `InitiateAuth` or `RespondToAuthChallenge` API request results in a determination that your application must pass another challenge, Amazon Cognito returns a session with other challenge parameters. Send this session identifier, unmodified, to the next `RespondToAuthChallenge` request.

Type: String

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

Errors

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

AliasExistsException

This exception is thrown when a user tries to confirm the account with an email address or phone number that has already been supplied as an alias for a different user profile. This exception indicates that an account with this email address or phone already exists in a user pool that you've configured to use email address or phone number as a sign-in alias.

HTTP Status Code: 400

CodeMismatchException

This exception is thrown if the provided code doesn't match what the server was expecting.

HTTP Status Code: 400

ExpiredCodeException

This exception is thrown if a code has expired.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidPasswordException

This exception is thrown when Amazon Cognito encounters an invalid password.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

MFAMethodNotFoundException

This exception is thrown when Amazon Cognito can't find a multi-factor authentication (MFA) method.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordHistoryPolicyViolationException

The message returned when a user's new password matches a previous password and doesn't comply with the password-history policy.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

SoftwareTokenMFANotFoundException

This exception is thrown when the software token time-based one-time password (TOTP) multi-factor authentication (MFA) isn't activated for the user pool.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example completes sign-in for the user `testuser` with an email-message OTP. Because no additional challenges are required, the request returns an `AuthenticationResult` with ID, access, and refresh tokens.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.RespondToAuthChallenge
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "ChallengeName": "EMAIL_OTP",
  "ClientId": "1example23456789",
  "UserPoolId": "us-west-2_EXAMPLE",
  "ChallengeResponses": {
    "USERNAME" : "testuser",
    "EMAIL_OTP_CODE": "12345678"
  },
  "Session": "AYABeC1-
y8qooiuysEv0uM4wAqQAHQABAAdTZXJ2aWNlABBDb2duaXRvVXNlclBvb2xzAAEAB2F3cy1rbXMAS2Fybjphd3M6a21zOnV
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive

{
    "AuthenticationResult": {
        "AccessToken": "eyJra456defEXAMPLE",
        "ExpiresIn": 3600,
        "IdToken": "eyJra789ghiEXAMPLE",
        "RefreshToken": "eyJra123abcEXAMPLE",
        "TokenType": "Bearer"
    },
    "ChallengeParameters": {
    }
```

```
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

RevokeToken

Revokes all of the access tokens generated by, and at the same time as, the specified refresh token. After a token is revoked, you can't use the revoked token to access Amazon Cognito user APIs, or to authorize access to your resource server.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "ClientId": "string",
   "ClientSecret": "string",
   "Token": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientId

The ID of the app client where the token that you want to revoke was issued.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientSecret

The client secret of the requested app client, if the client has a secret.

Type: String

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

Pattern: `[\w+]+`

Required: No

Token

The refresh token that you want to revoke.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnauthorizedException

Exception that is thrown when the request isn't authorized. This can happen due to an invalid access token in the request.

HTTP Status Code: 400

UnsupportedOperationException

Exception that is thrown when you attempt to perform an operation that isn't enabled for the user pool client.

HTTP Status Code: 400

UnsupportedTokenTypeException

Exception that is thrown when an unsupported token is passed to an operation.

HTTP Status Code: 400

Examples

Example

The following example request revokes the current user's refresh token and access tokens.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
```

```
X-Amz-Target: AWSCognitoIdentityProviderService.RevokeToken
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "Token": "eyJj123abcEXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

SetLogDeliveryConfiguration

Sets up or modifies the logging configuration of a user pool. User pools can export user notification logs and, when threat protection is active, user-activity logs. For more information, see Exporting user pool logs.

Request Syntax

```
{
   "LogConfigurations": [
      {
         "CloudWatchLogsConfiguration": {
            "LogGroupArn": "string"
         },
         "EventSource": "string",
         "FirehoseConfiguration": {
            "StreamArn": "string"
         },
         "LogLevel": "string",
         "S3Configuration": {
            "BucketArn": "string"
         }
      }
   ],
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

LogConfigurations

A collection of the logging configurations for a user pool.

Type: Array of LogConfigurationType objects

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Required: Yes

UserPoolId

The ID of the user pool where you want to configure logging.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "LogDeliveryConfiguration": {
      "LogConfigurations": [
         {
            "CloudWatchLogsConfiguration": {
               "LogGroupArn": "string"
            },
            "EventSource": "string",
            "FirehoseConfiguration": {
               "StreamArn": "string"
            },
            "LogLevel": "string",
            "S3Configuration": {
               "BucketArn": "string"
            }
         }
      ],
      "UserPoolId": "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.

LogDeliveryConfiguration

The logging configuration that you applied to the requested user pool.

Type: LogDeliveryConfigurationType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

A `SetLogDeliveryConfiguration` request that exports `userNotification` logs to a log group and `userAuthEvents` logs to an Amazon S3 bucket.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SetLogDeliveryConfiguration
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "LogConfigurations": [
        {
            "CloudWatchLogsConfiguration": {
                "LogGroupArn": "arn:aws:logs:us-west-2:123456789012:log-group:cognito-
exported"
            },
            "EventSource": "userNotification",
            "LogLevel": "ERROR"
        },
        {
            "EventSource": "userAuthEvents",
            "LogLevel": "INFO",
            "S3Configuration": {
                "BucketArn": "arn:aws:s3:::amzn-s3-demo-bucket1"
            }
        }
    ],
    "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
```

```
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
   "LogDeliveryConfiguration": {
      "LogConfigurations": [
        {
            "CloudWatchLogsConfiguration": {
                "LogGroupArn": "arn:aws:logs:us-west-2:123456789012:log-group:cognito-
exported"
            },
            "EventSource": "userNotification",
            "LogLevel": "ERROR"
        },
        {
            "EventSource": "userAuthEvents",
            "LogLevel": "INFO",
            "S3Configuration": {
                "BucketArn": "arn:aws:s3:::amzn-s3-demo-bucket1"
            }
        }
    ],
    "UserPoolId": "us-west-2_EXAMPLE"
   }
}
```

Example

A `SetLogDeliveryConfiguration` request that exports `userAuthEvents` events to a Firehose stream and `userNotification` events to a CloudWatch log group.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SetLogDeliveryConfiguration
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
```

```
{
   "LogConfigurations": [
      {
         "EventSource": "userAuthEvents",
         "FirehoseConfiguration": {
            "StreamArn": "arn:aws:firehose:us-west-2:123456789012:deliverystream/
example-user-pool-activity-exported"
         },
         "LogLevel": "INFO"
      }
   ],
   [
      {
         "CloudWatchLogsConfiguration": {
            "LogGroupArn": "arn:aws:logs:us-west-2:123456789012:log-group:example-user-
pool-error-exported"
         },
         "EventSource": "userNotification",
         "LogLevel": "ERROR"
      }
   ],
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "LogDeliveryConfiguration": {
        "LogConfigurations": [
            {
                "CloudWatchLogsConfiguration": {
                    "LogGroupArn": "arn:aws:firehose:us-
west-2:123456789012:deliverystream/example-user-pool-activity-exported"
                },
                "EventSource": "userNotification",
                "LogLevel": "ERROR"
            },
```

```
            {
                "EventSource": "userAuthEvents",
                "FirehoseConfiguration": {
                    "StreamArn": "arn:aws:logs:us-west-2:123456789012:log-
group:example-user-pool-error-exported"
                },
                "LogLevel": "INFO"
            }
        ],
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

SetRiskConfiguration

Configures threat protection for a user pool or app client. Sets configuration for the following.

- Responses to risks with adaptive authentication
- Responses to vulnerable passwords with compromised-credentials detection
- Notifications to users who have had risky activity detected
- IP-address denylist and allowlist

To set the risk configuration for the user pool to defaults, send this request with only the `UserPoolId` parameter. To reset the threat protection settings of an app client to be inherited from the user pool, send `UserPoolId` and `ClientId` parameters only. To change threat protection to audit-only or off, update the value of `UserPoolAddOns` in an `UpdateUserPool` request. To activate this setting, your user pool must be on the Plus tier.

Request Syntax

```
{
   "AccountTakeoverRiskConfiguration": {
      "Actions": {
         "HighAction": {
            "EventAction": "string",
            "Notify": boolean
         },
         "LowAction": {
            "EventAction": "string",
            "Notify": boolean
         },
         "MediumAction": {
            "EventAction": "string",
            "Notify": boolean
         }
      },
      "NotifyConfiguration": {
         "BlockEmail": {
            "HtmlBody": "string",
            "Subject": "string",
            "TextBody": "string"
         },
         "From": "string",
```

```
            "MfaEmail": {
               "HtmlBody": "string",
               "Subject": "string",
               "TextBody": "string"
            },
            "NoActionEmail": {
               "HtmlBody": "string",
               "Subject": "string",
               "TextBody": "string"
            },
            "ReplyTo": "string",
            "SourceArn": "string"
         }
      },
      "ClientId": "string",
      "CompromisedCredentialsRiskConfiguration": {
         "Actions": {
            "EventAction": "string"
         },
         "EventFilter": [ "string" ]
      },
      "RiskExceptionConfiguration": {
         "BlockedIPRangeList": [ "string" ],
         "SkippedIPRangeList": [ "string" ]
      },
      "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccountTakeoverRiskConfiguration

The settings for automated responses and notification templates for adaptive authentication with threat protection.

Type: AccountTakeoverRiskConfigurationType object

Required: No

ClientId

The ID of the app client where you want to set a risk configuration. If `ClientId` is null, then the risk configuration is mapped to `UserPoolId`. When the client ID is null, the same risk configuration is applied to all the clients in the userPool.

When you include a `ClientId` parameter, Amazon Cognito maps the configuration to the app client. When you include both `ClientId` and `UserPoolId`, Amazon Cognito maps the configuration to the app client only.

Type: String

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

Pattern: `[\w+]+`

Required: No

CompromisedCredentialsRiskConfiguration

The configuration of automated reactions to detected compromised credentials. Includes settings for blocking future sign-in requests and for the types of password-submission events you want to monitor.

Type: CompromisedCredentialsRiskConfigurationType object

Required: No

RiskExceptionConfiguration

A set of IP-address overrides to threat protection. You can set up IP-address always-block and always-allow lists.

Type: RiskExceptionConfigurationType object

Required: No

UserPoolId

The ID of the user pool where you want to set a risk configuration. If you include `UserPoolId` in your request, don't include `ClientId`. When the client ID is null, the same risk configuration is applied to all the clients in the userPool. When you include both `ClientId` and `UserPoolId`, Amazon Cognito maps the configuration to the app client only.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "RiskConfiguration": {
      "AccountTakeoverRiskConfiguration": {
         "Actions": {
            "HighAction": {
               "EventAction": "string",
               "Notify": boolean
            },
            "LowAction": {
               "EventAction": "string",
               "Notify": boolean
            },
            "MediumAction": {
               "EventAction": "string",
               "Notify": boolean
            }
         },
         "NotifyConfiguration": {
            "BlockEmail": {
               "HtmlBody": "string",
               "Subject": "string",
               "TextBody": "string"
            },
            "From": "string",
            "MfaEmail": {
               "HtmlBody": "string",
               "Subject": "string",
               "TextBody": "string"
            },
            "NoActionEmail": {
               "HtmlBody": "string",
               "Subject": "string",
               "TextBody": "string"
```

```
            },
            "ReplyTo": "string",
            "SourceArn": "string"
         }
      },
      "ClientId": "string",
      "CompromisedCredentialsRiskConfiguration": {
         "Actions": {
            "EventAction": "string"
         },
         "EventFilter": [ "string" ]
      },
      "LastModifiedDate": number,
      "RiskExceptionConfiguration": {
         "BlockedIPRangeList": [ "string" ],
         "SkippedIPRangeList": [ "string" ]
      },
      "UserPoolId": "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.

RiskConfiguration

The API response that contains the risk configuration that you set and the timestamp of the most recent change.

Type: RiskConfigurationType object

Errors

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

CodeDeliveryFailureException

This exception is thrown when a verification code fails to deliver successfully.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserPoolAddOnNotEnabledException

This exception is thrown when user pool add-ons aren't enabled.

HTTP Status Code: 400

Examples

Example

The following example request configures the requested app client with adaptive authentication actions, compromised-credentials behavior, and IP-address exceptions. It also configures user notification templates.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SetRiskConfiguration
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "AccountTakeoverRiskConfiguration": {
        "Actions": {
            "HighAction": {
                "EventAction": "MFA_REQUIRED",
                "Notify": true
            },
            "LowAction": {
                "EventAction": "NO_ACTION",
                "Notify": true
            },
            "MediumAction": {
                "EventAction": "MFA_IF_CONFIGURED",
                "Notify": true
            }
        },
        "NotifyConfiguration": {
            "BlockEmail": {
                "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We blocked an
 unrecognized sign-in to your account with this information:\n<ul>\n<li>Time: {login-
time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</li>\n</
ul>\nIf this sign-in was not by you, you should change your password and notify us by
 clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was by
```

```
 you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</pre>
\n</body>\n</html>",
                "Subject": "Blocked sign-in attempt",
                "TextBody": "We blocked an unrecognized sign-in to your account with
 this information:\nTime: {login-time}\nDevice: {device-name}\nLocation: {city},
 {country}\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can follow
 {one-click-link-valid} to let us know"
            },
            "From": "admin@example.com",
            "MfaEmail": {
                "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We required you to
 use multi-factor authentication for the following sign-in attempt:\n<ul>\n<li>Time:
 {login-time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</
li>\n</ul>\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was
 by you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</
pre>\n</body>\n</html>",
                "Subject": "New sign-in attempt",
                "TextBody": "We required you to use multi-factor authentication for
 the following sign-in attempt:\nTime: {login-time}\nDevice: {device-name}\nLocation:
 {city}, {country}\nIf this sign-in was not by you, you should change your password and
 notify us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can
 follow {one-click-link-valid} to let us know"
            },
            "NoActionEmail": {
                "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We observed an
 unrecognized sign-in to your account with this information:\n<ul>\n<li>Time: {login-
time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</li>\n</
ul>\nIf this sign-in was not by you, you should change your password and notify us by
 clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was by
 you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</pre>
\n</body>\n</html>",
                "Subject": "New sign-in attempt",
                "TextBody": "We observed an unrecognized sign-in to your account
 with this information:\nTime: {login-time}\nDevice: {device-name}\nLocation: {city},
 {country}\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can follow
 {one-click-link-valid} to let us know"
            },
            "ReplyTo": "admin@example.com",
```

```
            "SourceArn": "arn:aws:ses:us-west-2:123456789012:identity/
admin@example.com"
        }
    },
    "ClientId": "1example23456789",
    "CompromisedCredentialsRiskConfiguration": {
        "Actions": {
            "EventAction": "BLOCK"
        },
        "EventFilter": [
            "PASSWORD_CHANGE",
            "SIGN_UP",
            "SIGN_IN"
        ]
    },
    "RiskExceptionConfiguration": {
        "BlockedIPRangeList": [
            "192.0.2.1/32",
            "192.0.2.2/32"
        ],
        "SkippedIPRangeList": [
            "203.0.113.1/32",
            "203.0.113.2/32"
        ]
    },
    "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "RiskConfiguration": {
        "AccountTakeoverRiskConfiguration": {
            "Actions": {
                "HighAction": {
                    "EventAction": "MFA_REQUIRED",
                    "Notify": true
```

```
                },
                "LowAction": {
                    "EventAction": "NO_ACTION",
                    "Notify": true
                },
                "MediumAction": {
                    "EventAction": "MFA_IF_CONFIGURED",
                    "Notify": true
                }
            },
            "NotifyConfiguration": {
                "BlockEmail": {
                    "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We blocked an
 unrecognized sign-in to your account with this information:\n<ul>\n<li>Time: {login-
time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</li>\n</
ul>\nIf this sign-in was not by you, you should change your password and notify us by
 clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was by
 you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</pre>
\n</body>\n</html>",
                    "Subject": "Blocked sign-in attempt",
                    "TextBody": "We blocked an unrecognized sign-in to your account
 with this information:\nTime: {login-time}\nDevice: {device-name}\nLocation: {city},
 {country}\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can follow
 {one-click-link-valid} to let us know"
                },
                "From": "admin@example.com",
                "MfaEmail": {
                    "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We required you to
 use multi-factor authentication for the following sign-in attempt:\n<ul>\n<li>Time:
 {login-time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</
li>\n</ul>\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was
 by you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</
pre>\n</body>\n</html>",
                    "Subject": "New sign-in attempt",
                    "TextBody": "We required you to use multi-factor authentication for
 the following sign-in attempt:\nTime: {login-time}\nDevice: {device-name}\nLocation:
 {city}, {country}\nIf this sign-in was not by you, you should change your password and
 notify us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can
 follow {one-click-link-valid} to let us know"
                },
```

```
                "NoActionEmail": {
                    "HtmlBody": "<!DOCTYPE html>\n<html>\n<head>\n\t<title>HTML email
 context</title>\n\t<meta charset=\"utf-8\">\n</head>\n<body>\n<pre>We observed an
 unrecognized sign-in to your account with this information:\n<ul>\n<li>Time: {login-
time}</li>\n<li>Device: {device-name}</li>\n<li>Location: {city}, {country}</li>\n</
ul>\nIf this sign-in was not by you, you should change your password and notify us by
 clicking on <a href={one-click-link-invalid}>this link</a>\nIf this sign-in was by
 you, you can follow <a href={one-click-link-valid}>this link</a> to let us know</pre>
\n</body>\n</html>",
                    "Subject": "New sign-in attempt",
                    "TextBody": "We observed an unrecognized sign-in to your account
 with this information:\nTime: {login-time}\nDevice: {device-name}\nLocation: {city},
 {country}\nIf this sign-in was not by you, you should change your password and notify
 us by clicking on {one-click-link-invalid}\nIf this sign-in was by you, you can follow
 {one-click-link-valid} to let us know"
                },
                "ReplyTo": "admin@example.com",
                "SourceArn": "arn:aws:ses:us-west-2:123456789012:identity/
admin@example.com"
            }
        },
        "ClientId": "1example23456789",
        "CompromisedCredentialsRiskConfiguration": {
            "Actions": {
                "EventAction": "BLOCK"
            },
            "EventFilter": [
                "PASSWORD_CHANGE",
                "SIGN_UP",
                "SIGN_IN"
            ]
        },
        "RiskExceptionConfiguration": {
            "BlockedIPRangeList": [
                "192.0.2.1/32",
                "192.0.2.2/32"
            ],
            "SkippedIPRangeList": [
                "203.0.113.1/32",
                "203.0.113.2/32"
            ]
        },
        "UserPoolId": "us-west-2_EXAMPLE"
    }
```

```
}
```

Example

The following example request clears the threat protection settings of the requested app client.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SetRiskConfiguration
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "ClientId": "1example23456789",
    "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

Example

The following example request resets threat protection settings to default for the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
```

```
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SetRiskConfiguration
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

SetUICustomization

Configures UI branding settings for domains with the hosted UI (classic) branding version. Your user pool must have a domain. Configure a domain with CreateUserPoolDomain.

Set the default configuration for all clients with a `ClientId` of `ALL`. When the `ClientId` value is an app client ID, the settings you pass in this request apply to that app client and override the default `ALL` configuration.

This operation has no effect on managed login pages. To configure branding for domains with the managed login branding version, see CreateManagedLoginBranding.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "ClientId": "string",
   "CSS": "string",
   "ImageFile": blob,
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClientId

The ID of the app client that you want to customize. To apply a default style to all app clients not configured with client-level branding, set this parameter value to `ALL`.

Type: String

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

Pattern: `[\w+]+`

Required: No

CSS

A plaintext CSS file that contains the custom fields that you want to apply to your user pool or app client. To download a template, go to the Amazon Cognito console. Navigate to your user pool *App clients* tab, select *Login pages*, edit *Hosted UI (classic) style*, and select the link to CSS `template.css`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ImageFile

The image that you want to set as your login in the classic hosted UI, as a Base64-formatted binary object.

Type: Base64-encoded binary data object

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

UserPoolId

The ID of the user pool where you want to apply branding to the classic hosted UI.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "UICustomization": {
      "ClientId": "string",
      "CreationDate": number,
      "CSS": "string",
      "CSSVersion": "string",
      "ImageUrl": "string",
      "LastModifiedDate": number,
      "UserPoolId": "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.

UICustomization

Information about the hosted UI branding that you applied.

Type: UICustomizationType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request applies CSS customization and a logo image (the Amazon Cognito logo) to the requested app client.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SetUICustomization
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ClientId": "1example23456789",
   "CSS": ".logo-customizable {\n\tmax-width: 60%;\n\tmax-height: 30%;\n}\n.banner-
customizable {\n\tpadding: 25px 0px 25px 0px;\n\tbackground-color: lightgray;
\n}\n.label-customizable {\n\tfont-weight: 400;\n}\n.textDescription-customizable {\n
\tpadding-top: 10px;\n\tpadding-bottom: 10px;\n\tdisplay: block;\n\tfont-size: 16px;
```

```
\n}\n.idpDescription-customizable {\n\tpadding-top: 10px;\n\tpadding-bottom: 10px;\n
\tdisplay: block;\n\tfont-size: 16px;\n}\n.legalText-customizable {\n\tcolor: #747474;
\n\tfont-size: 11px;\n}\n.submitButton-customizable {\n\tfont-size: 11px;\n\tfont-
weight: normal;\n\tmargin: 20px -15px 10px -13px;\n\theight: 40px;\n\twidth: 108%;\n
\tcolor: #fff;\n\tbackground-color: #337ab7;\n\ttext-align: center;\n}\n.submitButton-
customizable:hover {\n\tcolor: #fff;\n\tbackground-color: #286090;\n}\n.errorMessage-
customizable {\n\tpadding: 5px;\n\tfont-size: 14px;\n\twidth: 100%;\n\tbackground:
 #F5F5F5;\n\tborder: 2px solid #D64958;\n\tcolor: #D64958;\n}\n.inputField-customizable
 {\n\twidth: 100%;\n\theight: 34px;\n\tcolor: #555;\n\tbackground-color: #fff;\n
\tborder: 1px solid #ccc;\n\tborder-radius: 0px;\n}\n.inputField-customizable:focus
 {\n\tborder-color: #66afe9;\n\toutline: 0;\n}\n.idpButton-customizable {\n\theight:
 40px;\n\twidth: 100%;\n\twidth: 100%;\n\ttext-align: center;\n\tmargin-bottom: 15px;\n
\tcolor: #fff;\n\tbackground-color: #5bc0de;\n\tborder-color: #46b8da;\n}\n.idpButton-
customizable:hover {\n\tcolor: #fff;\n\tbackground-color: #31b0d5;\n}\n.socialButton-
customizable {\n\tborder-radius: 2px;\n\theight: 40px;\n\tmargin-bottom: 15px;\n
\tpadding: 1px;\n\ttext-align: left;\n\twidth: 100%;\n}\n.redirect-customizable
 {\n\ttext-align: center;\n}\n.passwordCheck-notValid-customizable {\n\tcolor:
 #DF3312;\n}\n.passwordCheck-valid-customizable {\n\tcolor: #19BF00;\n}\n.background-
customizable {\n\tbackground-color: #fff;\n}\n",
   "ImageFile":
 "iVBORw0KGgoAAAANSUhEUgAAAFAAAABQCAMAAAC5zwKfAAAAAXNSR0IArs4c6QAAAARnQU1BAACxjwv8YQUAAAA2UExUR
Cmsfvm6f3y9P////fM0uqAj
+yNmu6ZpvnZ3eNabuFNYuZneehzhPKzvPTAxwAAAOiMMlkAAAASdFJOU//////////////////////
AOK/vxIAAAAJcEhZcwAADsMAAA7DAcdvqGQAAAKDSURBVFhH7ZfpkoMgEISDHKuEw/
d/2u2BQWMiBrG29o+fVsKatdPMAeZxc3Nz8w+ISekzmB++sYIw/I/tjHzrPpO2Tx62EbR2PNxFac
+jVuKxRaV50IzXkUe76NOCoUuwlvnQKei02gNF0ykotOLRBq/
nboeWRxAISx2EbsHFoRhK6Igk2JJlwScfQjgt06dOaWWiTbEDAe/
iq8N9kqCw2uCbHkHlYkaXEF8EYeL9RDqT4FhC6XMIIEifdcUwCc4leNyhabadWU6OlKYJE1Oac3NSPhB5rlaXlSgmr/1lww
F0L6Q5pZiSG0SfZTSTCOUhxOCH1AdIoCpTTIjtd
+VpEjUDDytQH/0Fpc661Aisas/4qmyUItD557pSCOSQQzlx27J
+meyDGc5zZgfhWuXE1lGgmVOMwmWdeGdzhjqZV14x5vSj7vsC5JDz/Cl0Vhp56n2NQt1wQIpury1EPbwyaYm
+IhmAQKoajkH51wg4cMZ1wQ3QG9efKWWOaDhYWnU6jXjCMdRmm21PArI
+Pb5DYoH93hq0ZCPlxeGJho/DI15C6sQc/L2sTC47UFBKZGHT6k+zlXg7WebA0Nr0HTcLMfk/
Y4Rc65D3iG6WDd7YLSlVqk87bVhUwhnClrx11RsVQwlAA818Mn
+QEs71BhSFU6orsUfKhHp72XMGYXi4q9c64RXRvzkWurRfG2vI2be/VaNcNgpX0Evb/
vio7nPMmj5qujkpQgSaPd1UcVqciHFDNZpOcGlcOPyi+AamCbIL9fitxAGeFN2Dl
+3vZubm5u/4fH4Bd14HhIPdwZPAAAAAElFTkSuQmCC",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "UICustomization": {
        "ClientId": "1example23456789",
        "CSS": ".logo-customizable {\n\tmax-width: 60%;\n\tmax-height: 30%;
\n}\n.banner-customizable {\n\tpadding: 25px 0px 25px 0px;\n\tbackground-color:
 lightgray;\n}\n.label-customizable {\n\tfont-weight: 400;\n}\n.textDescription-
customizable {\n\tpadding-top: 10px;\n\tpadding-bottom: 10px;\n\tdisplay: block;\n
\tfont-size: 16px;\n}\n.idpDescription-customizable {\n\tpadding-top: 10px;\n\tpadding-
bottom: 10px;\n\tdisplay: block;\n\tfont-size: 16px;\n}\n.legalText-customizable
 {\n\tcolor: #747474;\n\tfont-size: 11px;\n}\n.submitButton-customizable {\n\tfont-
size: 11px;\n\tfont-weight: normal;\n\tmargin: 20px -15px 10px -13px;\n\theight:
 40px;\n\twidth: 108%;\n\tcolor: #fff;\n\tbackground-color: #337ab7;\n\ttext-align:
 center;\n}\n.submitButton-customizable:hover {\n\tcolor: #fff;\n\tbackground-color:
 #286090;\n}\n.errorMessage-customizable {\n\tpadding: 5px;\n\tfont-size: 14px;
\n\twidth: 100%;\n\tbackground: #F5F5F5;\n\tborder: 2px solid #D64958;\n\tcolor:
 #D64958;\n}\n.inputField-customizable {\n\twidth: 100%;\n\theight: 34px;\n\tcolor:
 #555;\n\tbackground-color: #fff;\n\tborder: 1px solid #ccc;\n\tborder-radius:
 0px;\n}\n.inputField-customizable:focus {\n\tborder-color: #66afe9;\n\toutline: 0;
\n}\n.idpButton-customizable {\n\theight: 40px;\n\twidth: 100%;\n\twidth: 100%;\n
\ttext-align: center;\n\tmargin-bottom: 15px;\n\tcolor: #fff;\n\tbackground-color:
 #5bc0de;\n\tborder-color: #46b8da;\n}\n.idpButton-customizable:hover {\n\tcolor:
 #fff;\n\tbackground-color: #31b0d5;\n}\n.socialButton-customizable {\n\tborder-radius:
 2px;\n\theight: 40px;\n\tmargin-bottom: 15px;\n\tpadding: 1px;\n\ttext-align: left;\n
\twidth: 100%;\n}\n.redirect-customizable {\n\ttext-align: center;\n}\n.passwordCheck-
notValid-customizable {\n\tcolor: #DF3312;\n}\n.passwordCheck-valid-customizable {\n
\tcolor: #19BF00;\n}\n.background-customizable {\n\tbackground-color: #fff;\n}\n",
        "CSSUrl": "https://auth.example.com/1example23456789/20250109170543/assets/CSS/
custom-css.css",
        "CSSVersion": "20250109170543",
        "ImageUrl": "https://auth.example.com/1example23456789/20250109170543/assets/
images/image.jpg",
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

SetUserMFAPreference

Set the user's multi-factor authentication (MFA) method preference, including which MFA factors are activated and if any are preferred. Only one factor can be set as preferred. The preferred MFA factor will be used to authenticate a user if multiple factors are activated. If multiple options are activated and no preference is set, a challenge to choose an MFA option will be returned during sign-in. If an MFA type is activated for a user, the user will be prompted for MFA during all sign-in attempts unless device tracking is turned on and the device has been trusted. If you want MFA to be applied selectively based on the assessed risk level of sign-in attempts, deactivate MFA for users and turn on Adaptive Authentication for the user pool.

This operation doesn't reset an existing TOTP MFA for a user. To register a new TOTP factor for a user, make an AssociateSoftwareToken request. For more information, see TOTP software token MFA.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "EmailMfaSettings": {
      "Enabled": boolean,
      "PreferredMfa": boolean
   },
   "SMSMfaSettings": {
      "Enabled": boolean,
      "PreferredMfa": boolean
   },
   "SoftwareTokenMfaSettings": {
```

```
        "Enabled": boolean,
        "PreferredMfa": boolean
    }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

EmailMfaSettings

User preferences for email message MFA. Activates or deactivates email MFA and sets it as the preferred MFA method when multiple methods are available. To activate this setting, your user pool must be in the Essentials tier or higher.

Type: EmailMfaSettingsType object

Required: No

SMSMfaSettings

User preferences for SMS message MFA. Activates or deactivates SMS MFA and sets it as the preferred MFA method when multiple methods are available.

Type: SMSMfaSettingsType object

Required: No

SoftwareTokenMfaSettings

User preferences for time-based one-time password (TOTP) MFA. Activates or deactivates TOTP MFA and sets it as the preferred MFA method when multiple methods are available. Users must register a TOTP authenticator before they set this as their preferred MFA method.

Type: SoftwareTokenMfaSettingsType object

Required: No

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request sets TOTP, SMS, and email MFA active, and TOTP MFA as preferred for the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SetUserMFAPreference
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "SMSMfaSettings": {
      "Enabled": true,
      "PreferredMfa": false
   },
   "EmailMfaSettings": {
      "Enabled": true,
      "PreferredMfa": false
   },
   "SoftwareTokenMfaSettings": {
```

```
      "Enabled": true,
      "PreferredMfa": true
   }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

SetUserPoolMfaConfig

Sets user pool multi-factor authentication (MFA) and passkey configuration. For more information about user pool MFA, see Adding MFA. For more information about WebAuthn passkeys see Authentication flows.

> **Note**
>
> This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
> If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Request Syntax

```
{
   "EmailMfaConfiguration": {
      "Message": "string",
      "Subject": "string"
   },
   "MfaConfiguration": "string",
   "SmsMfaConfiguration": {
      "SmsAuthenticationMessage": "string",
      "SmsConfiguration": {
         "ExternalId": "string",
         "SnsCallerArn": "string",
         "SnsRegion": "string"
      }
   },
   "SoftwareTokenMfaConfiguration": {
```

```
      "Enabled": boolean
   },
   "UserPoolId": "string",
   "WebAuthnConfiguration": {
      "RelyingPartyId": "string",
      "UserVerification": "string"
   }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

EmailMfaConfiguration

Sets configuration for user pool email message MFA and sign-in with one-time passwords (OTPs). Includes the subject and body of the email message template for sign-in and MFA messages. To activate this setting, your user pool must be in the Essentials tier or higher.

Type: EmailMfaConfigType object

Required: No

MfaConfiguration

Sets multi-factor authentication (MFA) to be on, off, or optional. When `ON`, all users must set up MFA before they can sign in. When `OPTIONAL`, your application must make a client-side determination of whether a user wants to register an MFA device. For user pools with adaptive authentication with threat protection, choose `OPTIONAL`.

When `MfaConfiguration` is `OPTIONAL`, managed login doesn't automatically prompt users to set up MFA. Amazon Cognito generates MFA prompts in API responses and in managed login for users who have chosen and configured a preferred MFA factor.

Type: String

Valid Values: `OFF | ON | OPTIONAL`

Required: No

SmsMfaConfiguration

Configures user pool SMS messages for MFA. Sets the message template and the SMS message sending configuration for Amazon SNS.

Type: SmsMfaConfigType object

Required: No

SoftwareTokenMfaConfiguration

Configures a user pool for time-based one-time password (TOTP) MFA. Enables or disables TOTP.

Type: SoftwareTokenMfaConfigType object

Required: No

UserPoolId

The user pool ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

WebAuthnConfiguration

The configuration of your user pool for passkey, or WebAuthn, authentication and registration. You can set this configuration independent of the MFA configuration options in this operation.

Type: WebAuthnConfigurationType object

Required: No

Response Syntax

```
{
```

```
    "EmailMfaConfiguration": {
       "Message": "string",
       "Subject": "string"
    },
    "MfaConfiguration": "string",
    "SmsMfaConfiguration": {
       "SmsAuthenticationMessage": "string",
       "SmsConfiguration": {
          "ExternalId": "string",
          "SnsCallerArn": "string",
          "SnsRegion": "string"
       }
    },
    "SoftwareTokenMfaConfiguration": {
       "Enabled": boolean
    },
    "WebAuthnConfiguration": {
       "RelyingPartyId": "string",
       "UserVerification": "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.

EmailMfaConfiguration

Shows configuration for user pool email message MFA and sign-in with one-time passwords (OTPs). Includes the subject and body of the email message template for sign-in and MFA messages. To activate this setting, your user pool must be in the Essentials tier or higher.

Type: EmailMfaConfigType object

MfaConfiguration

Displays multi-factor authentication (MFA) as on, off, or optional. When `ON`, all users must set up MFA before they can sign in. When `OPTIONAL`, your application must make a client-side determination of whether a user wants to register an MFA device. For user pools with adaptive authentication with threat protection, choose `OPTIONAL`.

When `MfaConfiguration` is `OPTIONAL`, managed login doesn't automatically prompt users to set up MFA. Amazon Cognito generates MFA prompts in API responses and in managed login for users who have chosen and configured a preferred MFA factor.

Type: String

Valid Values: `OFF | ON | OPTIONAL`

SmsMfaConfiguration

Shows user pool SMS message configuration for MFA and sign-in with SMS-message OTPs. Includes the message template and the SMS message sending configuration for Amazon SNS.

Type: SmsMfaConfigType object

SoftwareTokenMfaConfiguration

Shows user pool configuration for time-based one-time password (TOTP) MFA. Includes TOTP enabled or disabled state.

Type: SoftwareTokenMfaConfigType object

WebAuthnConfiguration

The configuration of your user pool for passkey, or WebAuthn, sign-in with authenticators like biometric and security-key devices. Includes relying-party configuration and settings for user-verification requirements.

Type: WebAuthnConfigurationType object

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

FeatureUnavailableInTierException

This exception is thrown when a feature you attempted to configure isn't available in your current feature plan.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request configures optional MFA in the user pool, message configuration and templates, and WebAuthn.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SetUserPoolMfaConfig
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "EmailMfaConfiguration": {
      "Message": "Your OTP for MFA or sign-in: use {####}",
      "Subject": "OTP test"
   },
   "MfaConfiguration": "OPTIONAL",
   "SmsMfaConfiguration": {
      "SmsAuthenticationMessage": "Your OTP for MFA or sign-in: use {####}.",
      "SmsConfiguration": {
         "ExternalId": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
         "SnsCallerArn": "arn:aws:iam::123456789012:role/service-role/test-SMS-Role",
         "SnsRegion": "us-west-2"
      }
   },
   "SoftwareTokenMfaConfiguration": {
      "Enabled": true
   },
   "UserPoolId": "us-west-2_EXAMPLE",
   "WebAuthnConfiguration": {
      "RelyingPartyId": "auth.example.com",
      "UserVerification": "preferred"
   }
```

```
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "EmailMfaConfiguration": {
        "Message": "Your OTP for MFA or sign-in: use {####}",
        "Subject": "OTP test"
    },
    "MfaConfiguration": "OPTIONAL",
    "SmsMfaConfiguration": {
        "SmsAuthenticationMessage": "Your OTP for MFA or sign-in: use {####}.",
        "SmsConfiguration": {
            "ExternalId": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
            "SnsCallerArn": "arn:aws:iam::123456789012:role/service-role/test-SMS-
Role",
            "SnsRegion": "us-west-2"
        }
    },
    "SoftwareTokenMfaConfiguration": {
        "Enabled": true
    },
    "WebAuthnConfiguration": {
        "RelyingPartyId": "auth.example.com",
        "UserVerification": "preferred"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++

- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

SetUserSettings

This action is no longer supported. You can use it to configure only SMS MFA. You can't use it to configure time-based one-time password (TOTP) software token or email MFA.

To configure any or all of the MFA methods, use SetUserMFAPreference instead.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "MFAOptions": [
      {
         "AttributeName": "string",
         "DeliveryMedium": "string"
      }
   ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

MFAOptions

You can use this parameter only to set an SMS configuration that uses SMS for delivery.

Type: Array of MFAOptionType objects

Required: Yes

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

SignUp

Registers a user with an app client and requests a user name, password, and user attributes in the user pool.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

> **Note**
>
> This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
>
> If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

You might receive a `LimitExceeded` exception in response to this request if you have exceeded a rate quota for email or SMS messages, and if your user pool automatically verifies email addresses or phone numbers. When you get this exception in the response, the user is successfully created and is in an `UNCONFIRMED` state.

You can send a new code with the ResendConfirmationCode request, or confirm the user as an administrator with an AdminConfirmSignUp request.

Request Syntax

```
{
   "AnalyticsMetadata": {
      "AnalyticsEndpointId": "string"
   },
   "ClientId": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "Password": "string",
   "SecretHash": "string",
   "UserAttributes": [
      {
         "Name": "string",
         "Value": "string"
      }
   ],
   "UserContextData": {
      "EncodedData": "string",
      "IpAddress": "string"
   },
   "Username": "string",
   "ValidationData": [
      {
         "Name": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AnalyticsMetadata

Information that supports analytics outcomes with Amazon Pinpoint, including the user's endpoint ID. The endpoint ID is a destination for Amazon Pinpoint push notifications, for example a device identifier, email address, or phone number.

Type: AnalyticsMetadataType object

Required: No

ClientId

The ID of the app client where the user wants to sign up.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action triggers.

You create custom workflows by assigning Amazon Lambda functions to user pool triggers. When you use the SignUp API action, Amazon Cognito invokes any functions that are assigned to the following triggers: *pre sign-up*, *custom message*, and *post confirmation*. When Amazon Cognito invokes any of these functions, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in your SignUp request. In your function code in Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.

- Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Password

The user's proposed password. The password must comply with the password requirements of your user pool.

Users can sign up without a password when your user pool supports passwordless sign-in with email or SMS OTPs. To create a user with no password, omit this parameter or submit a blank value. You can only create a passwordless user when passwordless sign-in is available.

For more information about passwordless options, see SignInPolicyType, a property of CreateUserPool and UpdateUserPool.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\S]+`

Required: No

SecretHash

A keyed-hash message authentication code (HMAC) calculated using the secret key of a user pool client and username plus the client ID in the message. For more information about `SecretHash`, see Computing secret hash values.

Type: String

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

Pattern: `[\w+=/]+`

Required: No

UserAttributes

An array of name-value pairs representing user attributes.

For custom attributes, include a `custom:` prefix in the attribute name, for example `custom:department`.

Type: Array of AttributeType objects

Required: No

UserContextData

Contextual data about your user session like the device fingerprint, IP address, or location. Amazon Cognito threat protection evaluates the risk of an authentication event based on the context that your app generates and passes to Amazon Cognito when it makes API requests.

For more information, see Collecting data for threat protection in applications.

Type: UserContextDataType object

Required: No

Username

The username of the user that you want to sign up. The value of this parameter is typically a username, but can be any alias attribute in your user pool.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

ValidationData

Temporary user attributes that contribute to the outcomes of your pre sign-up Lambda trigger. This set of key-value pairs are for custom validation of information that you collect from your users but don't need to retain.

Your Lambda function can analyze this additional data and act on it. Your function can automatically confirm and verify select users or perform external API operations like logging user attributes and validation data to Amazon CloudWatch Logs.

For more information about the pre sign-up Lambda trigger, see Pre sign-up Lambda trigger.

Type: Array of AttributeType objects

Required: No

Response Syntax

```
{
   "CodeDeliveryDetails": {
      "AttributeName": "string",
      "DeliveryMedium": "string",
      "Destination": "string"
   },
   "Session": "string",
   "UserConfirmed": boolean,
   "UserSub": "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.

CodeDeliveryDetails

In user pools that automatically verify and confirm new users, Amazon Cognito sends users a message with a code or link that confirms ownership of the phone number or email address that they entered. The `CodeDeliveryDetails` object is information about the delivery destination for that link or code.

Collect this code from the user and submit it in a ConfirmSignUp request.

Type: CodeDeliveryDetailsType object

Session

A session Id that you can pass to `ConfirmSignUp` when you want to immediately sign in your user with the `USER_AUTH` flow after they complete sign-up.

Type: String

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

UserConfirmed

Indicates whether the user was automatically confirmed. You can auto-confirm users with a pre sign-up Lambda trigger.

Type: Boolean

UserSub

The unique identifier of the new user, for example `a1b2c3d4-5678-90ab-cdef-EXAMPLE11111`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Errors

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

CodeDeliveryFailureException

This exception is thrown when a verification code fails to deliver successfully.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidPasswordException

This exception is thrown when Amazon Cognito encounters an invalid password.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UsernameExistsException

This exception is thrown when Amazon Cognito encounters a user name that already exists in the user pool.

HTTP Status Code: 400

Examples

Example

A sign-up request for the user `mary_major`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-east-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.SignUp
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "ClientId": "1example23456789",
    "Username": "mary_major",
    "Password": "<Password>",
    "SecretHash": "<Secret hash>",
    "UserAttributes": [
        {
            "Name": "name",
            "Value": "Mary"
        },
        {
            "Name": "email",
            "Value": "mary_major@example.com"
        },
        {
            "Name": "phone_number",
            "Value": "+12065551212"
        }
    ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

```
{
 "CodeDeliveryDetails": {
  "AttributeName": "email",
  "DeliveryMedium": "EMAIL",
  "Destination": "m***@e***"
 },
 "UserConfirmed": false,
 "UserSub": "44284a5f-66af-4888-b582-fccc213c51fd"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

StartUserImportJob

Instructs your user pool to start importing users from a CSV file that contains their usernames and attributes. For more information about importing users from a CSV file, see Importing users from a CSV file.

To create a job that you can start with this request, see CreateUserImportJob. To generate a template for your import, see GetCSVHeader.

Request Syntax

```
{
   "JobId": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

JobId

The ID of a user import job that you previously created.

To get information about jobs that you can start, see ListUserImportJobs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `import-[0-9a-zA-Z-]+`

Required: Yes

UserPoolId

The ID of the user pool that you want to start importing users into.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "UserImportJob": {
      "CloudWatchLogsRoleArn": "string",
      "CompletionDate": number,
      "CompletionMessage": "string",
      "CreationDate": number,
      "FailedUsers": number,
      "ImportedUsers": number,
      "JobId": "string",
      "JobName": "string",
      "PreSignedUrl": "string",
      "SkippedUsers": number,
      "StartDate": number,
      "Status": "string",
      "UserPoolId": "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.

UserImportJob

The details of the user import job. Includes logging destination, status, and the Amazon S3 pre-signed URL for CSV upload.

Type: UserImportJobType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PreconditionNotMetException

This exception is thrown when a precondition is not met.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request starts the requested import job.

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.StartUserImportJob
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "JobId": "import-mAgUtd8PMm",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "UserImportJob": {
        "CloudWatchLogsRoleArn": "arn:aws:iam::123456789012:role/example-cloudwatch-
logs-role",
        "CreationDate": 1736442975.904,
        "FailedUsers": 0,
        "ImportedUsers": 0,
        "JobId": "import-mAgUtd8PMm",
        "JobName": "Customer import",
        "PreSignedUrl": "https://aws-cognito-idp-user-import-pdx.s3.us-
west-2.amazonaws.com/123456789012/us-west-2_EXAMPLE/import-mAgUtd8PMm?X-Amz-Security-
Token=[token]&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20241226T193341Z&X-
Amz-SignedHeaders=host%3Bx-amz-server-side-encryption&X-Amz-Expires=899&X-Amz-
Credential=[credential]&X-Amz-Signature=[signature]",
        "SkippedUsers": 0,
        "StartDate": 1736443020.081,
        "Status": "Pending",
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

StartWebAuthnRegistration

Requests credential creation options from your user pool for the currently signed-in user. Returns information about the user pool, the user profile, and authentication requirements. Users must provide this information in their request to enroll your application with their passkey provider.

After users present this data and register with their passkey provider, return the response to your user pool in a CompleteWebAuthnRegistration API request.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

Request Syntax

```
{
   "AccessToken": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

Response Syntax

```
{
   "CredentialCreationOptions": JSON value
```

```
}
```

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.

CredentialCreationOptions

The information that a user can provide in their request to register with their passkey provider.

Type: JSON value

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

WebAuthnConfigurationMissingException

This exception is thrown when a user pool doesn't have a configured relying party id or a user pool domain.

HTTP Status Code: 400

WebAuthnNotEnabledException

This exception is thrown when the passkey feature isn't enabled for the user pool.

HTTP Status Code: 400

Examples

Example

The following example request gets passkey registration options for the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.StartWebAuthnRegistration
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
    "AccessToken":"eyJra456defEXAMPLE"
```

```
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "CredentialCreationOptions": {
        "authenticatorSelection": {
            "requireResidentKey": true,
            "residentKey": "required",
            "userVerification": "preferred"
        },
        "challenge": "wxvbDicyqQqvF2EXAMPLE",
        "excludeCredentials": [
            {
                "id": "8LApgk4-lNUFHbhm2w6Und7-uxcc8coJGsPxiogvHoItc64xWQc3r4CEXAMPLE",
                "type": "public-key"
            }
        ],
        "pubKeyCredParams": [
            {
                "alg": -7,
                "type": "public-key"
            },
            {
                "alg": -257,
                "type": "public-key"
            }
        ],
        "rp": {
            "id": "auth.example.com",
            "name": "auth.example.com"
        },
        "timeout": 60000,
        "user": {
            "displayName": "testuser",
            "id": "ZWFhZDAyMTktMjExNy00MzlmLThkNDYtNGRiMjBlNEXAMPLE",
            "name": "testuser"
```

```
        }
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

StopUserImportJob

Instructs your user pool to stop a running job that's importing users from a CSV file that contains their usernames and attributes. For more information about importing users from a CSV file, see Importing users from a CSV file.

To create a new import job, see CreateUserImportJob. To generate a template for your import, see GetCSVHeader.

Request Syntax

```
{
   "JobId": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

JobId

The ID of a running user import job.

To get information about import jobs, see ListUserImportJobs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `import-[0-9a-zA-Z-]+`

Required: Yes

UserPoolId

The ID of the user pool that you want to stop.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "UserImportJob": {
      "CloudWatchLogsRoleArn": "string",
      "CompletionDate": number,
      "CompletionMessage": "string",
      "CreationDate": number,
      "FailedUsers": number,
      "ImportedUsers": number,
      "JobId": "string",
      "JobName": "string",
      "PreSignedUrl": "string",
      "SkippedUsers": number,
      "StartDate": number,
      "Status": "string",
      "UserPoolId": "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.

UserImportJob

The details of the user import job. Includes logging destination, status, and the Amazon S3 pre-signed URL for CSV upload.

Type: UserImportJobType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PreconditionNotMetException

This exception is thrown when a precondition is not met.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request stops the requested import job.

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.StopUserImportJob
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "JobId": "import-mAgUtd8PMm",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "UserImportJob": {
        "CloudWatchLogsRoleArn": "arn:aws:iam::123456789012:role/example-cloudwatch-
logs-role",
        "CompletionDate": 1736443496.379,
        "CompletionMessage": "The Import Job was stopped by the developer.",
        "CreationDate": 1736443471.781,
        "FailedUsers": 0,
        "ImportedUsers": 0,
        "JobId": "import-mAgUtd8PMm",
        "JobName": "Customer import",
        "PreSignedUrl": "https://aws-cognito-idp-user-import-pdx.s3.us-
west-2.amazonaws.com/123456789012/us-west-2_EXAMPLE/import-mAgUtd8PMm?X-Amz-Security-
Token=[token]&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20241226T193341Z&X-
Amz-SignedHeaders=host%3Bx-amz-server-side-encryption&X-Amz-Expires=899&X-Amz-
Credential=[credential]&X-Amz-Signature=[signature]",
        "SkippedUsers": 0,
        "StartDate": 1736443494.154,
        "Status": "Stopped",
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

TagResource

Assigns a set of tags to an Amazon Cognito user pool. A tag is a label that you can use to categorize and manage user pools in different ways, such as by purpose, owner, environment, or other criteria.

Each tag consists of a key and value, both of which you define. A key is a general category for more specific values. For example, if you have two versions of a user pool, one for testing and another for production, you might assign an `Environment` tag key to both user pools. The value of this key might be `Test` for one user pool, and `Production` for the other.

Tags are useful for cost tracking and access control. You can activate your tags so that they appear on the Billing and Cost Management console, where you can track the costs associated with your user pools. In an Amazon Identity and Access Management policy, you can constrain permissions for user pools based on specific tags or tag values.

You can use this action up to 5 times per second, per account. A user pool can have as many as 50 tags.

Request Syntax

```
{
   "ResourceArn": "string",
   "Tags": {
      "string" : "string"
   }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the user pool to assign the tags to.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

Tags

An array of tag keys and values that you want to assign to the user pool.

Type: String to string map

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

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

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request adds `administrator` and `tenant` tags to the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CognitoOperation
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ResourceArn": "arn:aws:cognito-idp:us-west-2:123456789012:userpool/us-
west-2_EXAMPLE",
   "Tags": {
      "administrator": "Jie",
      "tenant": "ExampleCorp"
   }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

```
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UntagResource

Given tag IDs that you previously assigned to a user pool, removes them.

Request Syntax

```
{
   "ResourceArn": "string",
   "TagKeys": [ "string" ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the user pool that the tags are assigned to.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

TagKeys

An array of tag keys that you want to remove from the user pool.

Type: Array of strings

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

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request removes the `administrator` and `tenant` tags from the requested user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
```

```
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UntagResource
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "ResourceArn": "arn:aws:cognito-idp:us-west-2:123456789012:userpool/us-
west-2_EXAMPLE",
   "TagKeys": [
       "administrator",
       "tenant"
    ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3

- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateAuthEventFeedback

Provides the feedback for an authentication event generated by threat protection features. The user's response indicates that you think that the event either was from a valid user or was an unwanted authentication attempt. This feedback improves the risk evaluation decision for the user pool as part of Amazon Cognito threat protection. To activate this setting, your user pool must be on the Plus tier.

This operation requires a `FeedbackToken` that Amazon Cognito generates and adds to notification emails when users have potentially suspicious authentication events. Users invoke this operation when they select the link that corresponds to `{one-click-link-valid}` or `{one-click-link-invalid}` in your notification template. Because `FeedbackToken` is a required parameter, you can't make requests to `UpdateAuthEventFeedback` without the contents of the notification email message.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "EventId": "string",
   "FeedbackToken": "string",
   "FeedbackValue": "string",
   "Username": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

EventId

The ID of the authentication event that you want to submit feedback for.

Type: String

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

Pattern: `[\w+-]+`

Required: Yes

FeedbackToken

The feedback token, an encrypted object generated by Amazon Cognito and passed to your user in the notification email message from the event.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

FeedbackValue

Your feedback to the authentication event. When you provide a `FeedbackValue` value of `valid`, you tell Amazon Cognito that you trust a user session where Amazon Cognito has evaluated some level of risk. When you provide a `FeedbackValue` value of `invalid`, you tell Amazon Cognito that you don't trust a user session, or you don't believe that Amazon Cognito evaluated a high-enough risk level.

Type: String

Valid Values: `Valid | Invalid`

Required: Yes

Username

The name of the user that you want to query or modify. The value of this parameter is typically your user's username, but it can be any of their alias attributes. If `username` isn't an alias attribute in your user pool, this value must be the `sub` of a local user or the username of a user from a third-party IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

UserPoolId

The ID of the user pool where you want to update auth event feedback.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Elements

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

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

UserPoolAddOnNotEnabledException

This exception is thrown when user pool add-ons aren't enabled.

HTTP Status Code: 400

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateDeviceStatus

Updates the status of a the currently signed-in user's device so that it is marked as remembered or not remembered for the purpose of device authentication. Device authentication is a "remember me" mechanism that silently completes sign-in from trusted devices with a device key instead of a user-provided MFA code. This operation changes the status of a device without deleting it, so you can enable it again later. For more information about device authentication, see Working with devices.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "DeviceKey": "string",
   "DeviceRememberedStatus": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

DeviceKey

The device key of the device you want to update, for example `us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE11111`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: Yes

DeviceRememberedStatus

To enable device authentication with the specified device, set to `remembered`.To disable, set to `not_remembered`.

Type: String

Valid Values: `remembered | not_remembered`

Required: No

Response Elements

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

Errors

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

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request forgets a remembered device for the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UpdateDeviceStatus
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "DeviceKey": "us-west-2_a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
   "DeviceRememberedStatus": "not_remembered"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface

- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateGroup

Given the name of a user pool group, updates any of the properties for precedence, IAM role, or description. For more information about user pool groups, see Adding groups to a user pool.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Description": "string",
   "GroupName": "string",
   "Precedence": number,
   "RoleArn": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Description

A new description of the existing group.

Type: String

Length Constraints: Maximum length of 2048.

Required: No

GroupName

The name of the group that you want to update.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Precedence

A non-negative integer value that specifies the precedence of this group relative to the other groups that a user can belong to in the user pool. Zero is the highest precedence value. Groups with lower `Precedence` values take precedence over groups with higher or null `Precedence` values. If a user belongs to two or more groups, it is the group with the lowest precedence value whose role ARN is given in the user's tokens for the `cognito:roles` and `cognito:preferred_role` claims.

Two groups can have the same `Precedence` value. If this happens, neither group takes precedence over the other. If two groups with the same `Precedence` have the same role ARN, that role is used in the `cognito:preferred_role` claim in tokens for users in each group. If the two groups have different role ARNs, the `cognito:preferred_role` claim isn't set in users' tokens.

The default `Precedence` value is null. The maximum `Precedence` value is `2^31-1`.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

RoleArn

The Amazon Resource Name (ARN) of an IAM role that you want to associate with the group. The role assignment contributes to the `cognito:roles` and `cognito:preferred_role` claims in group members' tokens.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

UserPoolId

The ID of the user pool that contains the group you want to update.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "Group": {
      "CreationDate": number,
      "Description": "string",
      "GroupName": "string",
      "LastModifiedDate": number,
      "Precedence": number,
      "RoleArn": "string",
      "UserPoolId": "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.

Group

Contains the updated details of the group, including precedence, IAM role, and description.

Type: GroupType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request sets a description and IAM role for the requested group name.

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UpdateGroup
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "Description": "My example group",
   "GroupName": "testgroup",
   "Precedence": 4,
   "RoleArn": "arn:aws:iam::123456789012:role/example-group-role",
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "Group": {
        "CreationDate": 1681422900.933,
        "Description": "My example group",
        "GroupName": "testgroup",
        "LastModifiedDate": 1736443988.896,
        "Precedence": 4,
        "RoleArn": "arn:aws:iam::123456789012:role/example-group-role",
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface

- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateIdentityProvider

Modifies the configuration and trust relationship between a third-party identity provider (IdP) and a user pool. Amazon Cognito accepts sign-in with third-party identity providers through managed login and OIDC relying-party libraries. For more information, see Third-party IdP sign-in.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "AttributeMapping": {
      "string" : "string"
   },
   "IdpIdentifiers": [ "string" ],
   "ProviderDetails": {
      "string" : "string"
   },
   "ProviderName": "string",
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AttributeMapping

A mapping of IdP attributes to standard and custom user pool attributes. Specify a user pool attribute as the key of the key-value pair, and the IdP attribute claim name as the value.

Type: String to string map

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

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

IdpIdentifiers

An array of IdP identifiers, for example `"IdPIdentifiers": [ "MyIdP", "MyIdP2" ]`. Identifiers are friendly names that you can pass in the `idp_identifier` query parameter of requests to the Authorize endpoint to silently redirect to sign-in with the associated IdP. Identifiers in a domain format also enable the use of email-address matching with SAML providers.

Type: Array of strings

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

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

Pattern: `[\w\s+=.@-]+`

Required: No

ProviderDetails

The scopes, URLs, and identifiers for your external identity provider. The following examples describe the provider detail keys for each IdP type. These values and their schema are subject to change. Social IdP `authorize_scopes` values must match the values listed here.

OpenID Connect (OIDC)

Amazon Cognito accepts the following elements when it can't discover endpoint URLs from `oidc_issuer`: `attributes_url`, `authorize_url`, `jwks_uri`, `token_url`.

Create or update request: `"ProviderDetails": { "attributes_request_method": "GET", "attributes_url": "https://auth.example.com/userInfo", "authorize_scopes": "openid profile email", "authorize_url": "https://`

```
auth.example.com/authorize", "client_id": "1example23456789",
"client_secret": "provider-app-client-secret", "jwks_uri": "https://
auth.example.com/.well-known/jwks.json", "oidc_issuer": "https://
auth.example.com", "token_url": "https://example.com/token" }
```

Describe response: `"ProviderDetails": { "attributes_request_method": "GET", "attributes_url": "https://auth.example.com/userInfo", "attributes_url_add_attributes": "false", "authorize_scopes": "openid profile email", "authorize_url": "https://auth.example.com/authorize", "client_id": "1example23456789", "client_secret": "provider-app-client-secret", "jwks_uri": "https://auth.example.com/.well-known/jwks.json", "oidc_issuer": "https://auth.example.com", "token_url": "https://example.com/token" }`

SAML

Create or update request with Metadata URL: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "MetadataURL": "https://auth.example.com/sso/saml/metadata", "RequestSigningAlgorithm": "rsa-sha256" }`

Create or update request with Metadata file: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "MetadataFile": "[metadata XML]", "RequestSigningAlgorithm": "rsa-sha256" }`

The value of `MetadataFile` must be the plaintext metadata document with all quote (") characters escaped by backslashes.

Describe response: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "ActiveEncryptionCertificate": "[certificate]", "MetadataURL": "https://auth.example.com/sso/saml/metadata", "RequestSigningAlgorithm": "rsa-sha256", "SLORedirectBindingURI": "https://auth.example.com/slo/saml", "SSORedirectBindingURI": "https://auth.example.com/sso/saml" }`

LoginWithAmazon

Create or update request: `"ProviderDetails": { "authorize_scopes": "profile postal_code", "client_id": "amzn1.application-oa2-`

client.1example23456789", "client_secret": "provider-app-client-secret"

Describe response: "ProviderDetails": { "attributes_url": "https://api.amazon.com/user/profile", "attributes_url_add_attributes": "false", "authorize_scopes": "profile postal_code", "authorize_url": "https://www.amazon.com/ap/oa", "client_id": "amzn1.application-oa2-client.1example23456789", "client_secret": "provider-app-client-secret", "token_request_method": "POST", "token_url": "https://api.amazon.com/auth/o2/token" }

Google

Create or update request: "ProviderDetails": { "authorize_scopes": "email profile openid", "client_id": "1example23456789.apps.googleusercontent.com", "client_secret": "provider-app-client-secret" }

Describe response: "ProviderDetails": { "attributes_url": "https://people.googleapis.com/v1/people/me?personFields=", "attributes_url_add_attributes": "true", "authorize_scopes": "email profile openid", "authorize_url": "https://accounts.google.com/o/oauth2/v2/auth", "client_id": "1example23456789.apps.googleusercontent.com", "client_secret": "provider-app-client-secret", "oidc_issuer": "https://accounts.google.com", "token_request_method": "POST", "token_url": "https://www.googleapis.com/oauth2/v4/token" }

SignInWithApple

Create or update request: "ProviderDetails": { "authorize_scopes": "email name", "client_id": "com.example.cognito", "private_key": "1EXAMPLE", "key_id": "2EXAMPLE", "team_id": "3EXAMPLE" }

Describe response: "ProviderDetails": { "attributes_url_add_attributes": "false", "authorize_scopes": "email name", "authorize_url": "https://appleid.apple.com/auth/authorize", "client_id": "com.example.cognito", "key_id": "1EXAMPLE", "oidc_issuer": "https://appleid.apple.com", "team_id": "2EXAMPLE", "token_request_method": "POST", "token_url": "https://appleid.apple.com/auth/token" }

Facebook

Create or update request: `"ProviderDetails": { "api_version": "v17.0", "authorize_scopes": "public_profile, email", "client_id": "1example23456789", "client_secret": "provider-app-client-secret" }`

Describe response: `"ProviderDetails": { "api_version": "v17.0", "attributes_url": "https://graph.facebook.com/v17.0/me?fields=", "attributes_url_add_attributes": "true", "authorize_scopes": "public_profile, email", "authorize_url": "https://www.facebook.com/v17.0/dialog/oauth", "client_id": "1example23456789", "client_secret": "provider-app-client-secret", "token_request_method": "GET", "token_url": "https://graph.facebook.com/v17.0/oauth/access_token" }`

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ProviderName

The name of the IdP that you want to update. You can pass the identity provider name in the `identity_provider` query parameter of requests to the Authorize endpoint to silently redirect to sign-in with the associated IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: Yes

UserPoolId

The Id of the user pool where you want to update your IdP.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "IdentityProvider": {
      "AttributeMapping": {
         "string" : "string"
      },
      "CreationDate": number,
      "IdpIdentifiers": [ "string" ],
      "LastModifiedDate": number,
      "ProviderDetails": {
         "string" : "string"
      },
      "ProviderName": "string",
      "ProviderType": "string",
      "UserPoolId": "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.

IdentityProvider

The identity provider details.

Type: IdentityProviderType object

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnsupportedIdentityProviderException

This exception is thrown when the specified identifier isn't supported.

HTTP Status Code: 400

Examples

Example

The following example request updates an OIDC identity provider. Note that this request sets a manual configuration of the OIDC service endpoints. If the `oidc_issuer` URL has a `.well-known/openid-configuration` endpoint, you can specify `oidc_issuer` alone and auto-discover the remaining endpoints.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UpdateIdentityProvider
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AttributeMapping": {
            "email": "idp_email",
            "email_verified": "idp_email_verified",
            "username": "sub"
        },
        "CreationDate": 1.701129701653E9,
        "IdpIdentifiers": [
            "corp",
            "dev"
        ],
        "LastModifiedDate": 1.701129701653E9,
        "ProviderDetails": {
            "attributes_request_method": "GET",
            "attributes_url": "https://example.com/userInfo",
            "attributes_url_add_attributes": "false",
            "authorize_scopes": "openid profile",
            "authorize_url": "https://example.com/authorize",
            "client_id": "idpexampleclient123",
            "client_secret": "idpexamplesecret456",
            "jwks_uri": "https://example.com/.well-known/jwks.json",
            "oidc_issuer": "https://example.com",
            "token_url": "https://example.com/token"
        },
        "ProviderName": "MyOIDCIdP",
        "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
```

```
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "IdentityProvider": {
        "AttributeMapping": {
            "email": "idp_email",
            "email_verified": "idp_email_verified",
            "username": "sub"
        },
        "CreationDate": 1701129701.653,
        "IdpIdentifiers": [
            "corp",
            "dev"
        ],
        "LastModifiedDate": 1736444278.211,
        "ProviderDetails": {
            "attributes_request_method": "GET",
            "attributes_url": "https://example.com/userInfo",
            "attributes_url_add_attributes": "false",
            "authorize_scopes": "openid profile",
            "authorize_url": "https://example.com/authorize",
            "client_id": "idpexampleclient123",
            "client_secret": "idpexamplesecret456",
            "jwks_uri": "https://example.com/.well-known/jwks.json",
            "oidc_issuer": "https://example.com",
            "token_url": "https://example.com/token"
        },
        "ProviderName": "MyOIDCIdP",
        "ProviderType": "OIDC",
        "UserPoolId": "us-west-2_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET

- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateManagedLoginBranding

Configures the branding settings for a user pool style. This operation is the programmatic option for the configuration of a style in the branding editor.

Provides values for UI customization in a `Settings` JSON object and image files in an `Assets` array.

This operation has a 2-megabyte request-size limit and include the CSS settings and image assets for your app client. Your branding settings might exceed 2MB in size. Amazon Cognito doesn't require that you pass all parameters in one request and preserves existing style settings that you don't specify. If your request is larger than 2MB, separate it into multiple requests, each with a size smaller than the limit.

As a best practice, modify the output of DescribeManagedLoginBrandingByClient into the request parameters for this operation. To get all settings, set `ReturnMergedResources` to `true`. For more information, see API and SDK operations for managed login branding

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Assets": [
      {
         "Bytes": blob,
         "Category": "string",
         "ColorMode": "string",
```

```
            "Extension": "string",
            "ResourceId": "string"
        }
    ],
    "ManagedLoginBrandingId": "string",
    "Settings": JSON value,
    "UseCognitoProvidedValues": boolean,
    "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Assets

An array of image files that you want to apply to roles like backgrounds, logos, and icons. Each object must also indicate whether it is for dark mode, light mode, or browser-adaptive mode.

Type: Array of AssetType objects

Array Members: Minimum number of 0 items. Maximum number of 40 items.

Required: No

ManagedLoginBrandingId

The ID of the managed login branding style that you want to update.

Type: String

Pattern: `^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[4][0-9a-fA-F]{3}-[89abAB][0-9a-fA-F]{3}-[0-9a-fA-F]{12}$`

Required: No

Settings

A JSON file, encoded as a `Document` type, with the the settings that you want to apply to your style.

Type: JSON value

Required: No

UseCognitoProvidedValues

When `true`, applies the default branding style options. This option reverts to default style options that are managed by Amazon Cognito. You can modify them later in the branding editor.

When you specify `true` for this option, you must also omit values for `Settings` and `Assets` in the request.

Type: Boolean

Required: No

UserPoolId

The ID of the user pool that contains the managed login branding style that you want to update.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

Response Syntax

```
{
   "ManagedLoginBranding": {
      "Assets": [
         {
            "Bytes": blob,
            "Category": "string",
            "ColorMode": "string",
            "Extension": "string",
            "ResourceId": "string"
         }
      ],
      "CreationDate": number,
      "LastModifiedDate": number,
      "ManagedLoginBrandingId": "string",
```

```
        "Settings": JSON value,
        "UseCognitoProvidedValues": boolean,
        "UserPoolId": "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.

ManagedLoginBranding

The details of the branding style that you updated.

Type: ManagedLoginBrandingType object

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example updates the branding configuration of the branding style with ID `63f30090-6b1f-4278-b885-2bbb81f8e545`.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.ca-central-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.CreateManagedLoginBranding
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>


{
    "Assets": [
        {
            "Bytes":
 "PHN2ZyB3aWR0aD0iMjAwMDAiIGhlaWdodD0iNDAwIiB2aWV3Qm94PSIwIDAgMjAwMDAgNDAwIiBmaWxsPSJub25lIiB4b
+CjxyZWN0IHdpZHRoPSIyMDAwMCIgaGVpZ2h0PSI0MDAiIGZpbGw9InVybCgjcGFpbnQwX2xpbmVhcl8xNzI1OV8yMzY2Nz
+CjxsaW5lYXJHcmFkaWVudCBpZD0icGFpbnQwX2xpbmVhcl8xNzI1OV8yMzY2NzQiIHgxPSItODk0LjI0OSIgeTE9IjE5OS
+Cjwvc3ZnPgo=",
            "Category": "PAGE_FOOTER_BACKGROUND",
            "ColorMode": "DARK",
            "Extension": "SVG"
        }
```

```
    ],
    "ManagedLoginBrandingId": "63f30090-6b1f-4278-b885-2bbb81f8e545",
    "Settings": {
        "categories": {
            "auth": {
                "authMethodOrder": [
                    [
                        {
                            "display": "BUTTON",
                            "type": "FEDERATED"
                        },
                        {
                            "display": "INPUT",
                            "type": "USERNAME_PASSWORD"
                        }
                    ]
                ],
                "federation": {
                    "interfaceStyle": "BUTTON_LIST",
                    "order": [
                    ]
                }
            },
            "form": {
                "displayGraphics": true,
                "instructions": {
                    "enabled": false
                },
                "languageSelector": {
                    "enabled": false
                },
                "location": {
                    "horizontal": "CENTER",
                    "vertical": "CENTER"
                },
                "sessionTimerDisplay": "NONE"
            },
            "global": {
                "colorSchemeMode": "LIGHT",
                "pageFooter": {
                    "enabled": false
                },
                "pageHeader": {
                    "enabled": false
```

```
            },
            "spacingDensity": "REGULAR"
        },
        "signUp": {
            "acceptanceElements": [
                {
                    "enforcement": "NONE",
                    "textKey": "en"
                }
            ]
        }
    },
    "componentClasses": {
        "buttons": {
            "borderRadius": 8.0
        },
        "divider": {
            "darkMode": {
                "borderColor": "232b37ff"
            },
            "lightMode": {
                "borderColor": "ebebf0ff"
            }
        },
        "dropDown": {
            "borderRadius": 8.0,
            "darkMode": {
                "defaults": {
                    "itemBackgroundColor": "192534ff"
                },
                "hover": {
                    "itemBackgroundColor": "081120ff",
                    "itemBorderColor": "5f6b7aff",
                    "itemTextColor": "e9ebedff"
                },
                "match": {
                    "itemBackgroundColor": "d1d5dbff",
                    "itemTextColor": "89bdeeff"
                }
            },
            "lightMode": {
                "defaults": {
                    "itemBackgroundColor": "ffffffff"
                },
```

```
                    "hover": {
                        "itemBackgroundColor": "f4f4f4ff",
                        "itemBorderColor": "7d8998ff",
                        "itemTextColor": "000716ff"
                    },
                    "match": {
                        "itemBackgroundColor": "414d5cff",
                        "itemTextColor": "0972d3ff"
                    }
                }
            },
            "focusState": {
                "darkMode": {
                    "borderColor": "539fe5ff"
                },
                "lightMode": {
                    "borderColor": "0972d3ff"
                }
            },
            "idpButtons": {
                "icons": {
                    "enabled": true
                }
            },
            "input": {
                "borderRadius": 8.0,
                "darkMode": {
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "5f6b7aff"
                    },
                    "placeholderColor": "8d99a8ff"
                },
                "lightMode": {
                    "defaults": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "7d8998ff"
                    },
                    "placeholderColor": "5f6b7aff"
                }
            },
            "inputDescription": {
                "darkMode": {
                    "textColor": "8d99a8ff"
```

```
                },
                "lightMode": {
                    "textColor": "5f6b7aff"
                }
            },
            "inputLabel": {
                "darkMode": {
                    "textColor": "d1d5dbff"
                },
                "lightMode": {
                    "textColor": "000716ff"
                }
            },
            "link": {
                "darkMode": {
                    "defaults": {
                        "textColor": "539fe5ff"
                    },
                    "hover": {
                        "textColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "defaults": {
                        "textColor": "0972d3ff"
                    },
                    "hover": {
                        "textColor": "033160ff"
                    }
                }
            },
            "optionControls": {
                "darkMode": {
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "7d8998ff"
                    },
                    "selected": {
                        "backgroundColor": "539fe5ff",
                        "foregroundColor": "000716ff"
                    }
                },
                "lightMode": {
                    "defaults": {
```

```
                    "backgroundColor": "ffffffff",
                    "borderColor": "7d8998ff"
                },
                "selected": {
                    "backgroundColor": "0972d3ff",
                    "foregroundColor": "ffffffff"
                }
            }
        },
        "statusIndicator": {
            "darkMode": {
                "error": {
                    "backgroundColor": "1a0000ff",
                    "borderColor": "eb6f6fff",
                    "indicatorColor": "eb6f6fff"
                },
                "pending": {
                    "indicatorColor": "AAAAAAAA"
                },
                "success": {
                    "backgroundColor": "001a02ff",
                    "borderColor": "29ad32ff",
                    "indicatorColor": "29ad32ff"
                },
                "warning": {
                    "backgroundColor": "1d1906ff",
                    "borderColor": "e0ca57ff",
                    "indicatorColor": "e0ca57ff"
                }
            },
            "lightMode": {
                "error": {
                    "backgroundColor": "fff7f7ff",
                    "borderColor": "d91515ff",
                    "indicatorColor": "d91515ff"
                },
                "pending": {
                    "indicatorColor": "AAAAAAAA"
                },
                "success": {
                    "backgroundColor": "f2fcf3ff",
                    "borderColor": "037f0cff",
                    "indicatorColor": "037f0cff"
                },
```

```
                    "warning": {
                        "backgroundColor": "fffce9ff",
                        "borderColor": "8d6605ff",
                        "indicatorColor": "8d6605ff"
                    }
                }
            }
        },
        "components": {
            "alert": {
                "borderRadius": 12.0,
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff"
                    }
                },
                "lightMode": {
                    "error": {
                        "backgroundColor": "fff7f7ff",
                        "borderColor": "d91515ff"
                    }
                }
            },
            "favicon": {
                "enabledTypes": [
                    "ICO",
                    "SVG"
                ]
            },
            "form": {
                "backgroundImage": {
                    "enabled": false
                },
                "borderRadius": 8.0,
                "darkMode": {
                    "backgroundColor": "0f1b2aff",
                    "borderColor": "424650ff"
                },
                "lightMode": {
                    "backgroundColor": "ffffffff",
                    "borderColor": "c6c6cdff"
                },
                "logo": {
```

```
                    "enabled": false,
                    "formInclusion": "IN",
                    "location": "CENTER",
                    "position": "TOP"
                }
            },
            "idpButton": {
                "custom": {
                },
                "standard": {
                    "darkMode": {
                        "active": {
                            "backgroundColor": "354150ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        },
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "c6c6cdff",
                            "textColor": "c6c6cdff"
                        },
                        "hover": {
                            "backgroundColor": "192534ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "d3e7f9ff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        },
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "424650ff",
                            "textColor": "424650ff"
                        },
                        "hover": {
                            "backgroundColor": "f2f8fdff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        }
                    }
```

```
            }
        },
        "pageBackground": {
            "darkMode": {
                "color": "0f1b2aff"
            },
            "image": {
                "enabled": true
            },
            "lightMode": {
                "color": "ffffffff"
            }
        },
        "pageFooter": {
            "backgroundImage": {
                "enabled": false
            },
            "darkMode": {
                "background": {
                    "color": "0f141aff"
                },
                "borderColor": "424650ff"
            },
            "lightMode": {
                "background": {
                    "color": "fafafaff"
                },
                "borderColor": "d5dbdbff"
            },
            "logo": {
                "enabled": false,
                "location": "START"
            }
        },
        "pageHeader": {
            "backgroundImage": {
                "enabled": false
            },
            "darkMode": {
                "background": {
                    "color": "0f141aff"
                },
                "borderColor": "424650ff"
            },
```

```
                "lightMode": {
                    "background": {
                        "color": "fafafaff"
                    },
                    "borderColor": "d5dbdbff"
                },
                "logo": {
                    "enabled": false,
                    "location": "START"
                }
            },
            "pageText": {
                "darkMode": {
                    "bodyColor": "b6bec9ff",
                    "descriptionColor": "b6bec9ff",
                    "headingColor": "d1d5dbff"
                },
                "lightMode": {
                    "bodyColor": "414d5cff",
                    "descriptionColor": "414d5cff",
                    "headingColor": "000716ff"
                }
            },
            "phoneNumberSelector": {
                "displayType": "TEXT"
            },
            "primaryButton": {
                "darkMode": {
                    "active": {
                        "backgroundColor": "539fe5ff",
                        "textColor": "000716ff"
                    },
                    "defaults": {
                        "backgroundColor": "539fe5ff",
                        "textColor": "000716ff"
                    },
                    "disabled": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "ffffffff"
                    },
                    "hover": {
                        "backgroundColor": "89bdeeff",
                        "textColor": "000716ff"
                    }
```

```
                },
                "lightMode": {
                    "active": {
                        "backgroundColor": "033160ff",
                        "textColor": "ffffffff"
                    },
                    "defaults": {
                        "backgroundColor": "0972d3ff",
                        "textColor": "ffffffff"
                    },
                    "disabled": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "ffffffff"
                    },
                    "hover": {
                        "backgroundColor": "033160ff",
                        "textColor": "ffffffff"
                    }
                }
            },
            "secondaryButton": {
                "darkMode": {
                    "active": {
                        "backgroundColor": "354150ff",
                        "borderColor": "89bdeeff",
                        "textColor": "89bdeeff"
                    },
                    "defaults": {
                        "backgroundColor": "0f1b2aff",
                        "borderColor": "539fe5ff",
                        "textColor": "539fe5ff"
                    },
                    "hover": {
                        "backgroundColor": "192534ff",
                        "borderColor": "89bdeeff",
                        "textColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "active": {
                        "backgroundColor": "d3e7f9ff",
                        "borderColor": "033160ff",
                        "textColor": "033160ff"
                    },
```

```
                    "defaults": {
                        "backgroundColor": "ffffffff",
                        "borderColor": "0972d3ff",
                        "textColor": "0972d3ff"
                    },
                    "hover": {
                        "backgroundColor": "f2f8fdff",
                        "borderColor": "033160ff",
                        "textColor": "033160ff"
                    }
                }
            }
        },
    },
    "UseCognitoProvidedValues": false,
    "UserPoolId": "ca-central-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive


{
    "ManagedLoginBranding": {
        "Assets": [
            {
                "Bytes":
 "PHN2ZyB3aWR0aD0iMjAwMDAiIGhlaWdodD0iNDAwIiB2aWV3Qm94PSIwIDAgMjAwMDAgNDAwIiBmaWxsPSJub25lIiB4b
+CjxyZWN0IHdpZHRoPSIyMDAwMCIgaGVpZ2h0PSI0MDAiIGZpbGw9InVybCgjcGFpbnQwX2xpbmVhcl8xNzI1OV8yMzY2Nz
+CjxsaW5lYXJHcmFkaWVudCBpZD0icGFpbnQwX2xpbmVhcl8xNzI1OV8yMzY2NzQiIHgxPSItODk0LjI0OSIgeTE9IjE5OS
+Cjwvc3ZnPgo=",
                "Category": "PAGE_FOOTER_BACKGROUND",
                "ColorMode": "DARK",
                "Extension": "SVG"
            }
        ],
        "CreationDate": 1732138490.642,
```

```
        "LastModifiedDate": 1732140420.301,
        "ManagedLoginBrandingId": "a1b2c3d4-5678-90ab-cdef-EXAMPLE11111",
        "Settings": {
            "categories": {
                "auth": {
                    "authMethodOrder": [
                        [
                            {
                                "display": "BUTTON",
                                "type": "FEDERATED"
                            },
                            {
                                "display": "INPUT",
                                "type": "USERNAME_PASSWORD"
                            }
                        ]
                    ],
                    "federation": {
                        "interfaceStyle": "BUTTON_LIST",
                        "order": [
                        ]
                    }
                },
                "form": {
                    "displayGraphics": true,
                    "instructions": {
                        "enabled": false
                    },
                    "languageSelector": {
                        "enabled": false
                    },
                    "location": {
                        "horizontal": "CENTER",
                        "vertical": "CENTER"
                    },
                    "sessionTimerDisplay": "NONE"
                },
                "global": {
                    "colorSchemeMode": "LIGHT",
                    "pageFooter": {
                        "enabled": false
                    },
                    "pageHeader": {
                        "enabled": false
```

```
                },
                "spacingDensity": "REGULAR"
            },
            "signUp": {
                "acceptanceElements": [
                    {
                        "enforcement": "NONE",
                        "textKey": "en"
                    }
                ]
            }
        },
        "componentClasses": {
            "buttons": {
                "borderRadius": 8.0
            },
            "divider": {
                "darkMode": {
                    "borderColor": "232b37ff"
                },
                "lightMode": {
                    "borderColor": "ebebf0ff"
                }
            },
            "dropDown": {
                "borderRadius": 8.0,
                "darkMode": {
                    "defaults": {
                        "itemBackgroundColor": "192534ff"
                    },
                    "hover": {
                        "itemBackgroundColor": "081120ff",
                        "itemBorderColor": "5f6b7aff",
                        "itemTextColor": "e9ebedff"
                    },
                    "match": {
                        "itemBackgroundColor": "d1d5dbff",
                        "itemTextColor": "89bdeeff"
                    }
                },
                "lightMode": {
                    "defaults": {
                        "itemBackgroundColor": "ffffffff"
                    },
```

```
                        "hover": {
                            "itemBackgroundColor": "f4f4f4ff",
                            "itemBorderColor": "7d8998ff",
                            "itemTextColor": "000716ff"
                        },
                        "match": {
                            "itemBackgroundColor": "414d5cff",
                            "itemTextColor": "0972d3ff"
                        }
                    }
                },
                "focusState": {
                    "darkMode": {
                        "borderColor": "539fe5ff"
                    },
                    "lightMode": {
                        "borderColor": "0972d3ff"
                    }
                },
                "idpButtons": {
                    "icons": {
                        "enabled": true
                    }
                },
                "input": {
                    "borderRadius": 8.0,
                    "darkMode": {
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "5f6b7aff"
                        },
                        "placeholderColor": "8d99a8ff"
                    },
                    "lightMode": {
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "7d8998ff"
                        },
                        "placeholderColor": "5f6b7aff"
                    }
                },
                "inputDescription": {
                    "darkMode": {
                        "textColor": "8d99a8ff"
```

```
                    },
                    "lightMode": {
                        "textColor": "5f6b7aff"
                    }
                },
                "inputLabel": {
                    "darkMode": {
                        "textColor": "d1d5dbff"
                    },
                    "lightMode": {
                        "textColor": "000716ff"
                    }
                },
                "link": {
                    "darkMode": {
                        "defaults": {
                            "textColor": "539fe5ff"
                        },
                        "hover": {
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "defaults": {
                            "textColor": "0972d3ff"
                        },
                        "hover": {
                            "textColor": "033160ff"
                        }
                    }
                },
                "optionControls": {
                    "darkMode": {
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "7d8998ff"
                        },
                        "selected": {
                            "backgroundColor": "539fe5ff",
                            "foregroundColor": "000716ff"
                        }
                    },
                    "lightMode": {
                        "defaults": {
```

```
                        "backgroundColor": "ffffffff",
                        "borderColor": "7d8998ff"
                    },
                    "selected": {
                        "backgroundColor": "0972d3ff",
                        "foregroundColor": "ffffffff"
                    }
                }
            },
            "statusIndicator": {
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff",
                        "indicatorColor": "eb6f6fff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
                    "success": {
                        "backgroundColor": "001a02ff",
                        "borderColor": "29ad32ff",
                        "indicatorColor": "29ad32ff"
                    },
                    "warning": {
                        "backgroundColor": "1d1906ff",
                        "borderColor": "e0ca57ff",
                        "indicatorColor": "e0ca57ff"
                    }
                },
                "lightMode": {
                    "error": {
                        "backgroundColor": "fff7f7ff",
                        "borderColor": "d91515ff",
                        "indicatorColor": "d91515ff"
                    },
                    "pending": {
                        "indicatorColor": "AAAAAAAA"
                    },
                    "success": {
                        "backgroundColor": "f2fcf3ff",
                        "borderColor": "037f0cff",
                        "indicatorColor": "037f0cff"
                    },
```

```
                    "warning": {
                        "backgroundColor": "fffce9ff",
                        "borderColor": "8d6605ff",
                        "indicatorColor": "8d6605ff"
                    }
                }
            }
        },
        "components": {
            "alert": {
                "borderRadius": 12.0,
                "darkMode": {
                    "error": {
                        "backgroundColor": "1a0000ff",
                        "borderColor": "eb6f6fff"
                    }
                },
                "lightMode": {
                    "error": {
                        "backgroundColor": "fff7f7ff",
                        "borderColor": "d91515ff"
                    }
                }
            },
            "favicon": {
                "enabledTypes": [
                    "ICO",
                    "SVG"
                ]
            },
            "form": {
                "backgroundImage": {
                    "enabled": false
                },
                "borderRadius": 8.0,
                "darkMode": {
                    "backgroundColor": "0f1b2aff",
                    "borderColor": "424650ff"
                },
                "lightMode": {
                    "backgroundColor": "ffffffff",
                    "borderColor": "c6c6cdff"
                },
                "logo": {
```

```
                        "enabled": false,
                        "formInclusion": "IN",
                        "location": "CENTER",
                        "position": "TOP"
                    }
                },
                "idpButton": {
                    "custom": {
                    },
                    "standard": {
                        "darkMode": {
                            "active": {
                                "backgroundColor": "354150ff",
                                "borderColor": "89bdeeff",
                                "textColor": "89bdeeff"
                            },
                            "defaults": {
                                "backgroundColor": "0f1b2aff",
                                "borderColor": "c6c6cdff",
                                "textColor": "c6c6cdff"
                            },
                            "hover": {
                                "backgroundColor": "192534ff",
                                "borderColor": "89bdeeff",
                                "textColor": "89bdeeff"
                            }
                        },
                        "lightMode": {
                            "active": {
                                "backgroundColor": "d3e7f9ff",
                                "borderColor": "033160ff",
                                "textColor": "033160ff"
                            },
                            "defaults": {
                                "backgroundColor": "ffffffff",
                                "borderColor": "424650ff",
                                "textColor": "424650ff"
                            },
                            "hover": {
                                "backgroundColor": "f2f8fdff",
                                "borderColor": "033160ff",
                                "textColor": "033160ff"
                            }
                        }
```

```
                    }
                },
                "pageBackground": {
                    "darkMode": {
                        "color": "0f1b2aff"
                    },
                    "image": {
                        "enabled": true
                    },
                    "lightMode": {
                        "color": "ffffffff"
                    }
                },
                "pageFooter": {
                    "backgroundImage": {
                        "enabled": false
                    },
                    "darkMode": {
                        "background": {
                            "color": "0f141aff"
                        },
                        "borderColor": "424650ff"
                    },
                    "lightMode": {
                        "background": {
                            "color": "fafafaff"
                        },
                        "borderColor": "d5dbdbff"
                    },
                    "logo": {
                        "enabled": false,
                        "location": "START"
                    }
                },
                "pageHeader": {
                    "backgroundImage": {
                        "enabled": false
                    },
                    "darkMode": {
                        "background": {
                            "color": "0f141aff"
                        },
                        "borderColor": "424650ff"
                    },
```

```
                    "lightMode": {
                        "background": {
                            "color": "fafafaff"
                        },
                        "borderColor": "d5dbdbff"
                    },
                    "logo": {
                        "enabled": false,
                        "location": "START"
                    }
                },
                "pageText": {
                    "darkMode": {
                        "bodyColor": "b6bec9ff",
                        "descriptionColor": "b6bec9ff",
                        "headingColor": "d1d5dbff"
                    },
                    "lightMode": {
                        "bodyColor": "414d5cff",
                        "descriptionColor": "414d5cff",
                        "headingColor": "000716ff"
                    }
                },
                "phoneNumberSelector": {
                    "displayType": "TEXT"
                },
                "primaryButton": {
                    "darkMode": {
                        "active": {
                            "backgroundColor": "539fe5ff",
                            "textColor": "000716ff"
                        },
                        "defaults": {
                            "backgroundColor": "539fe5ff",
                            "textColor": "000716ff"
                        },
                        "disabled": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "ffffffff"
                        },
                        "hover": {
                            "backgroundColor": "89bdeeff",
                            "textColor": "000716ff"
                        }
```

```
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "033160ff",
                            "textColor": "ffffffff"
                        },
                        "defaults": {
                            "backgroundColor": "0972d3ff",
                            "textColor": "ffffffff"
                        },
                        "disabled": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "ffffffff"
                        },
                        "hover": {
                            "backgroundColor": "033160ff",
                            "textColor": "ffffffff"
                        }
                    }
                },
                "secondaryButton": {
                    "darkMode": {
                        "active": {
                            "backgroundColor": "354150ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        },
                        "defaults": {
                            "backgroundColor": "0f1b2aff",
                            "borderColor": "539fe5ff",
                            "textColor": "539fe5ff"
                        },
                        "hover": {
                            "backgroundColor": "192534ff",
                            "borderColor": "89bdeeff",
                            "textColor": "89bdeeff"
                        }
                    },
                    "lightMode": {
                        "active": {
                            "backgroundColor": "d3e7f9ff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        },
```

```
                        "defaults": {
                            "backgroundColor": "ffffffff",
                            "borderColor": "0972d3ff",
                            "textColor": "0972d3ff"
                        },
                        "hover": {
                            "backgroundColor": "f2f8fdff",
                            "borderColor": "033160ff",
                            "textColor": "033160ff"
                        }
                    }
                }
            }
        },
        "UseCognitoProvidedValues": false,
        "UserPoolId": "ca-central-1_EXAMPLE"
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateResourceServer

Updates the name and scopes of a resource server. All other fields are read-only. For more information about resource servers, see Access control with resource servers.

Important

If you don't provide a value for an attribute, it is set to the default value.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "Identifier": "string",
   "Name": "string",
   "Scopes": [
      {
         "ScopeDescription": "string",
         "ScopeName": "string"
      }
   ],
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Identifier

A unique resource server identifier for the resource server. The identifier can be an API friendly name like `solar-system-data`. You can also set an API URL like `https://solar-system-data-api.example.com` as your identifier.

Amazon Cognito represents scopes in the access token in the format `$resource-server-identifier/$scope`. Longer scope-identifier strings increase the size of your access tokens.

Type: String

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

Pattern: `[\x21\x23-\x5B\x5D-\x7E]+`

Required: Yes

Name

The updated name of the resource server.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: Yes

Scopes

An array of updated custom scope names and descriptions that you want to associate with your resource server.

Type: Array of ResourceServerScopeType objects

Array Members: Maximum number of 100 items.

Required: No

UserPoolId

The ID of the user pool that contains the resource server that you want to update.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "ResourceServer": {
      "Identifier": "string",
      "Name": "string",
      "Scopes": [
         {
            "ScopeDescription": "string",
            "ScopeName": "string"
         }
      ],
      "UserPoolId": "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.

ResourceServer

The updated details of the requested resource server.

Type: ResourceServerType object

Errors

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

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request adds two scopes to the requested resource server.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
```

```
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UpdateResourceServer
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "Identifier": "myapi.example.com",
   "Name": "Example API with custom access control scopes",
   "Scopes": [
      {
         "ScopeDescription": "International customers",
         "ScopeName": "international.read"
      },
      {
         "ScopeDescription": "Domestic customers",
         "ScopeName": "domestic.read"
      }
   ],
   "UserPoolId": "us-west-2_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "ResourceServer": {
  "Identifier": "myapi.example.com",
  "Name": "Example API with custom access control scopes",
  "Scopes": [
   {
    "ScopeDescription": "International customers",
    "ScopeName": "international.read"
   },
   {
    "ScopeDescription": "Domestic customers",
    "ScopeName": "domestic.read"
```

```
    }
   ],
   "UserPoolId": "us-west-2_EXAMPLE"
  }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateUserAttributes

Updates the currently signed-in user's attributes. To delete an attribute from the user, submit the attribute in your API request with a blank value.

For custom attributes, you must add a `custom:` prefix to the attribute name, for example `custom:department`.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

Note

Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Request Syntax

```
{
   "AccessToken": "string",
   "ClientMetadata": {
      "string" : "string"
   },
   "UserAttributes": [
      {
         "Name": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

ClientMetadata

A map of custom key-value pairs that you can provide as input for any custom workflows that this action initiates.

You create custom workflows by assigning Lambda functions to user pool triggers. When you use the UpdateUserAttributes API action, Amazon Cognito invokes the function that is assigned to the *custom message* trigger. When Amazon Cognito invokes this function, it passes a JSON payload, which the function receives as input. This payload contains a `clientMetadata` attribute, which provides the data that you assigned to the ClientMetadata parameter in

your UpdateUserAttributes request. In your function code in Lambda, you can process the `clientMetadata` value to enhance your workflow for your specific needs.

For more information, see Using Lambda triggers in the *Amazon Cognito Developer Guide*.

> **Note**
>
> When you use the `ClientMetadata` parameter, note that Amazon Cognito won't do the following:
>
> - Store the `ClientMetadata` value. This data is available only to Amazon Lambda triggers that are assigned to a user pool to support custom workflows. If your user pool configuration doesn't include triggers, the `ClientMetadata` parameter serves no purpose.
> - Validate the `ClientMetadata` value.
> - Encrypt the `ClientMetadata` value. Don't send sensitive information in this parameter.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

UserAttributes

An array of name-value pairs representing user attributes.

For custom attributes, you must add a `custom:` prefix to the attribute name.

If you have set an attribute to require verification before Amazon Cognito updates its value, this request doesn’t immediately update the value of that attribute. After your user receives and responds to a verification message to verify the new value, Amazon Cognito updates the attribute value. Your user can sign in and receive messages with the original attribute value until they verify the new value.

Type: Array of AttributeType objects

Required: Yes

Response Syntax

```
{
   "CodeDeliveryDetailsList": [
      {
         "AttributeName": "string",
         "DeliveryMedium": "string",
         "Destination": "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.

CodeDeliveryDetailsList

When the attribute-update request includes an email address or phone number attribute, Amazon Cognito sends a message to users with a code that confirms ownership of the new value that they entered. The `CodeDeliveryDetails` object is information about the delivery destination for that link or code. This behavior happens in user pools configured to automatically verify changes to those attributes. For more information, see Verifying when users change their email or phone number.

Type: Array of CodeDeliveryDetailsType objects

Errors

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

AliasExistsException

This exception is thrown when a user tries to confirm the account with an email address or phone number that has already been supplied as an alias for a different user profile. This exception indicates that an account with this email address or phone already exists in a user pool that you've configured to use email address or phone number as a sign-in alias.

HTTP Status Code: 400

CodeDeliveryFailureException

This exception is thrown when a verification code fails to deliver successfully.

HTTP Status Code: 400

CodeMismatchException

This exception is thrown if the provided code doesn't match what the server was expecting.

HTTP Status Code: 400

ExpiredCodeException

This exception is thrown if a code has expired.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidLambdaResponseException

This exception is thrown when Amazon Cognito encounters an invalid Amazon Lambda response.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UnexpectedLambdaException

This exception is thrown when Amazon Cognito encounters an unexpected exception with Amazon Lambda.

HTTP Status Code: 400

UserLambdaValidationException

This exception is thrown when the Amazon Cognito service encounters a user validation exception with the Amazon Lambda service.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request updates several attributes for the current user. The change to the user's email address generates a verification code that the user can provide in a `VerifyUserAttributes` request.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UpdateUserAttributes
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "UserAttributes": [
      {
```

```
         "Name": "email",
         "Value": "johndoe@example.com"
      },
      {
         "Name": "birthdate",
         "Value": "01/01/2025"
      },
      {
         "Name": "custom:costcenter",
         "Value": "mycustomvalue"
      }
   ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "CodeDeliveryDetailsList": [
        {
            "AttributeName": "email",
            "DeliveryMedium": "EMAIL",
            "Destination": "j***@e***"
        }
    ]
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2

- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateUserPool

Updates the configuration of a user pool. To avoid setting parameters to Amazon Cognito defaults, construct this API request to pass the existing configuration of your user pool, modified to include the changes that you want to make.

Important

If you don't provide a value for an attribute, Amazon Cognito sets it to its default value.

You can get a list of the current user pool settings using DescribeUserPool.

Note

This action might generate an SMS text message. Starting June 1, 2021, US telecom carriers require you to register an origination phone number before you can send SMS messages to US phone numbers. If you use SMS text messages in Amazon Cognito, you must register a phone number with Amazon Pinpoint. Amazon Cognito uses the registered number automatically. Otherwise, Amazon Cognito users who must receive SMS messages might not be able to sign up, activate their accounts, or sign in.
If you have never used SMS text messages with Amazon Cognito or any other Amazon Web Services service, Amazon Simple Notification Service might place your account in the SMS sandbox. In *sandbox mode* , you can send messages only to verified phone numbers. After you test your app while in the sandbox environment, you can move out of the sandbox and into production. For more information, see SMS message settings for Amazon Cognito user pools in the *Amazon Cognito Developer Guide*.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "AccountRecoverySetting": {
      "RecoveryMechanisms": [
         {
            "Name": "string",
            "Priority": number
         }
      ]
   },
   "AdminCreateUserConfig": {
      "AllowAdminCreateUserOnly": boolean,
      "InviteMessageTemplate": {
         "EmailMessage": "string",
         "EmailSubject": "string",
         "SMSMessage": "string"
      },
      "UnusedAccountValidityDays": number
   },
   "AutoVerifiedAttributes": [ "string" ],
   "DeletionProtection": "string",
   "DeviceConfiguration": {
      "ChallengeRequiredOnNewDevice": boolean,
      "DeviceOnlyRememberedOnUserPrompt": boolean
   },
   "EmailConfiguration": {
      "ConfigurationSet": "string",
      "EmailSendingAccount": "string",
      "From": "string",
      "ReplyToEmailAddress": "string",
      "SourceArn": "string"
   },
   "EmailVerificationMessage": "string",
   "EmailVerificationSubject": "string",
```

```
   "LambdaConfig": {
      "CreateAuthChallenge": "string",
      "CustomEmailSender": {
         "LambdaArn": "string",
         "LambdaVersion": "string"
      },
      "CustomMessage": "string",
      "CustomSMSSender": {
         "LambdaArn": "string",
         "LambdaVersion": "string"
      },
      "DefineAuthChallenge": "string",
      "KMSKeyID": "string",
      "PostAuthentication": "string",
      "PostConfirmation": "string",
      "PreAuthentication": "string",
      "PreSignUp": "string",
      "PreTokenGeneration": "string",
      "PreTokenGenerationConfig": {
         "LambdaArn": "string",
         "LambdaVersion": "string"
      },
      "UserMigration": "string",
      "VerifyAuthChallengeResponse": "string"
   },
   "MfaConfiguration": "string",
   "Policies": {
      "PasswordPolicy": {
         "MinimumLength": number,
         "PasswordHistorySize": number,
         "RequireLowercase": boolean,
         "RequireNumbers": boolean,
         "RequireSymbols": boolean,
         "RequireUppercase": boolean,
         "TemporaryPasswordValidityDays": number
      },
      "SignInPolicy": {
         "AllowedFirstAuthFactors": [ "string" ]
      }
   },
   "PoolName": "string",
   "SmsAuthenticationMessage": "string",
   "SmsConfiguration": {
      "ExternalId": "string",
```

```
      "SnsCallerArn": "string",
      "SnsRegion": "string"
   },
   "SmsVerificationMessage": "string",
   "UserAttributeUpdateSettings": {
      "AttributesRequireVerificationBeforeUpdate": [ "string" ]
   },
   "UserPoolAddOns": {
      "AdvancedSecurityAdditionalFlows": {
         "CustomAuthMode": "string"
      },
      "AdvancedSecurityMode": "string"
   },
   "UserPoolId": "string",
   "UserPoolTags": {
      "string" : "string"
   },
   "UserPoolTier": "string",
   "VerificationMessageTemplate": {
      "DefaultEmailOption": "string",
      "EmailMessage": "string",
      "EmailMessageByLink": "string",
      "EmailSubject": "string",
      "EmailSubjectByLink": "string",
      "SmsMessage": "string"
   }
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccountRecoverySetting

The available verified method a user can use to recover their password when they call `ForgotPassword`. You can use this setting to define a preferred method when a user has more than one method available. With this setting, SMS doesn't qualify for a valid password recovery mechanism if the user also has SMS multi-factor authentication (MFA) activated. In the absence of this setting, Amazon Cognito uses the legacy behavior to determine the recovery method where SMS is preferred through email.

Type: AccountRecoverySettingType object

Required: No

AdminCreateUserConfig

The configuration for administrative creation of users. Includes the template for the invitation message for new users, the duration of temporary passwords, and permitting self-service sign-up.

Type: AdminCreateUserConfigType object

Required: No

AutoVerifiedAttributes

The attributes that you want your user pool to automatically verify. Possible values: **email**, **phone_number**. For more information see Verifying contact information at sign-up.

Type: Array of strings

Valid Values: `phone_number | email`

Required: No

DeletionProtection

When active, `DeletionProtection` prevents accidental deletion of your user pool. Before you can delete a user pool that you have protected against deletion, you must deactivate this feature.

When you try to delete a protected user pool in a `DeleteUserPool` API request, Amazon Cognito returns an `InvalidParameterException` error. To delete a protected user pool, send a new `DeleteUserPool` request after you deactivate deletion protection in an `UpdateUserPool` API request.

Type: String

Valid Values: `ACTIVE | INACTIVE`

Required: No

DeviceConfiguration

The device-remembering configuration for a user pool. Device remembering or device tracking is a "Remember me on this device" option for user pools that perform authentication with the

device key of a trusted device in the back end, instead of a user-provided MFA code. For more information about device authentication, see Working with user devices in your user pool. A null value indicates that you have deactivated device remembering in your user pool.

> **Note**
>
> When you provide a value for any `DeviceConfiguration` field, you activate the Amazon Cognito device-remembering feature. For more information, see Working with devices.

Type: DeviceConfigurationType object

Required: No

EmailConfiguration

The email configuration of your user pool. The email configuration type sets your preferred sending method, Amazon Region, and sender for email invitation and verification messages from your user pool.

Type: EmailConfigurationType object

Required: No

EmailVerificationMessage

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*\{####\}[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*`

Required: No

EmailVerificationSubject

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s]+`

Required: No

LambdaConfig

A collection of user pool Lambda triggers. Amazon Cognito invokes triggers at several possible stages of authentication operations. Triggers can modify the outcome of the operations that invoked them.

Type: LambdaConfigType object

Required: No

MfaConfiguration

Sets multi-factor authentication (MFA) to be on, off, or optional. When `ON`, all users must set up MFA before they can sign in. When `OPTIONAL`, your application must make a client-side determination of whether a user wants to register an MFA device. For user pools with adaptive authentication with threat protection, choose `OPTIONAL`.

When `MfaConfiguration` is `OPTIONAL`, managed login doesn't automatically prompt users to set up MFA. Amazon Cognito generates MFA prompts in API responses and in managed login for users who have chosen and configured a preferred MFA factor.

Type: String

Valid Values: `OFF | ON | OPTIONAL`

Required: No

Policies

The password policy and sign-in policy in the user pool. The password policy sets options like password complexity requirements and password history. The sign-in policy sets the options available to applications in choice-based authentication.

Type: UserPoolPolicyType object

Required: No

PoolName

The updated name of your user pool.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: No

SmsAuthenticationMessage

The contents of the SMS message that your user pool sends to users in SMS authentication.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `.*\{####\}.*`

Required: No

SmsConfiguration

The SMS configuration with the settings for your Amazon Cognito user pool to send SMS message with Amazon Simple Notification Service. To send SMS messages with Amazon SNS in the Amazon Region that you want, the Amazon Cognito user pool uses an Amazon Identity and Access Management (IAM) role in your Amazon Web Services account. For more information see SMS message settings.

Type: SmsConfigurationType object

Required: No

SmsVerificationMessage

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `.*\{####\}.*`

Required: No

UserAttributeUpdateSettings

The settings for updates to user attributes. These settings include the property `AttributesRequireVerificationBeforeUpdate`, a user-pool setting that tells Amazon Cognito how to handle changes to the value of your users' email address and phone number attributes. For more information, see Verifying updates to email addresses and phone numbers.

Type: UserAttributeUpdateSettingsType object

Required: No

UserPoolAddOns

Contains settings for activation of threat protection, including the operating mode and additional authentication types. To log user security information but take no action, set to `AUDIT`. To configure automatic security responses to potentially unwanted traffic to your user pool, set to `ENFORCED`.

For more information, see Adding advanced security to a user pool. To activate this setting, your user pool must be on the Plus tier.

Type: UserPoolAddOnsType object

Required: No

UserPoolId

The ID of the user pool you want to update.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

UserPoolTags

The tag keys and values to assign to the user pool. A tag is a label that you can use to categorize and manage user pools in different ways, such as by purpose, owner, environment, or other criteria.

Type: String to string map

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

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

Required: No

UserPoolTier

The user pool feature plan, or tier. This parameter determines the eligibility of the user pool for features like managed login, access-token customization, and threat protection. Defaults to `ESSENTIALS`.

Type: String

Valid Values: `LITE | ESSENTIALS | PLUS`

Required: No

VerificationMessageTemplate

The template for the verification message that your user pool delivers to users who set an email address or phone number attribute.

Set the email message type that corresponds to your `DefaultEmailOption` selection. For `CONFIRM_WITH_LINK`, specify an `EmailMessageByLink` and leave `EmailMessage` blank. For `CONFIRM_WITH_CODE`, specify an `EmailMessage` and leave `EmailMessageByLink` blank. When you supply both parameters with either choice, Amazon Cognito returns an error.

Type: VerificationMessageTemplateType object

Required: No

Response Elements

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

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

FeatureUnavailableInTierException

This exception is thrown when a feature you attempted to configure isn't available in your current feature plan.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidEmailRoleAccessPolicyException

This exception is thrown when Amazon Cognito isn't allowed to use your email identity. HTTP status code: 400.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidSmsRoleAccessPolicyException

This exception is returned when the role provided for SMS configuration doesn't have permission to publish using Amazon SNS.

HTTP Status Code: 400

InvalidSmsRoleTrustRelationshipException

This exception is thrown when the trust relationship is not valid for the role provided for SMS configuration. This can happen if you don't trust `cognito-idp.amazonaws.com` or the external ID provided in the role does not match what is provided in the SMS configuration for the user pool.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TierChangeNotAllowedException

This exception is thrown when you've attempted to change your feature plan but the operation isn't permitted.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserImportInProgressException

This exception is thrown when you're trying to modify a user pool while a user import job is in progress for that pool.

HTTP Status Code: 400

UserPoolTaggingException

This exception is thrown when a user pool tag can't be set or updated.

HTTP Status Code: 400

Examples

Example

The following `UpdateUserPool` request updates some common features of the target user pool.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.ca-central-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UpdateUserPool
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>


{
    "AccountRecoverySetting": {
        "RecoveryMechanisms": [
            {
                "Name": "verified_email",
                "Priority": 1
            },
            {
                "Name": "verified_phone_number",
                "Priority": 2
            }
        ]
    },
    "AdminCreateUserConfig": {
        "AllowAdminCreateUserOnly": false,
        "UnusedAccountValidityDays": 7
    },
    "AliasAttributes": [
        "email",
        "phone_number",
        "preferred_username"
    ],
    "Arn": "arn:aws:cognito-idp:ca-central-1:123456789012:userpool/ca-
central-1_EXAMPLE",
    "AutoVerifiedAttributes": [
        "email"
    ],
    "DeletionProtection": "ACTIVE",
    "Domain": "cognitoexample",
    "EmailConfiguration": {
        "ConfigurationSet": "my-sesconfigset",
```

```
        "EmailSendingAccount": "DEVELOPER",
        "SourceArn": "arn:aws:ses:us-east-1:123456789012:identity/admin@example.com"
    },
    "LambdaConfig": {
        "PreSignUp": "arn:aws:lambda:ca-central-1:123456789012:function:my-function"
    },
    "MfaConfiguration": "OPTIONAL",
    "Name": "my-test-user-pool",
    "Policies": {
        "PasswordPolicy": {
            "MinimumLength": 8,
            "RequireLowercase": true,
            "RequireNumbers": true,
            "RequireSymbols": true,
            "RequireUppercase": true,
            "TemporaryPasswordValidityDays": 7
        },
        "SignInPolicy": {
            "AllowedFirstAuthFactors": [
                "PASSWORD",
                "EMAIL_OTP",
                "WEB_AUTHN"
            ]
        }
    },
    "SmsConfiguration": {
        "ExternalId": "ALPHA-BRAVO",
        "SnsCallerArn": "arn:aws:iam::123456789012:role/My-SMS-Role",
        "SnsRegion": "us-east-1"
    },
    "UserAttributeUpdateSettings": {
        "AttributesRequireVerificationBeforeUpdate": [
            "email"
        ]
    },
    "UsernameConfiguration": {
        "CaseSensitive": false
    },
    "UserPoolAddOns": {
        "AdvancedSecurityAdditionalFlows": {
        },
        "AdvancedSecurityMode": "OFF"
    },
    "UserPoolId": "ca-central-1_EXAMPLE",
```

```
    "UserPoolTags": {
    },
    "UserPoolTier": "PLUS",
    "VerificationMessageTemplate": {
        "DefaultEmailOption": "CONFIRM_WITH_CODE"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateUserPoolClient

Given a user pool app client ID, updates the configuration. To avoid setting parameters to Amazon Cognito defaults, construct this API request to pass the existing configuration of your app client, modified to include the changes that you want to make.

> **Important**
>
> If you don't provide a value for an attribute, Amazon Cognito sets it to its default value.

You can get a list of the current app client settings with DescribeUserPoolClient.

Unlike app clients created in the console, Amazon Cognito doesn't automatically assign a branding style to app clients that you configure with this API operation. Managed login and classic hosted UI pages aren't available for your client until after you apply a branding style.

Apply a branding style with the CreateManagedLoginBranding operation. For more information, see Managed login branding.

You can also use this operation to enable token revocation for user pool clients. For more information about revoking tokens, see RevokeToken.

> **Note**
>
> Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.
>
> **Learn more**
>
> - Signing Amazon API Requests
> - Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
```

```
    "AccessTokenValidity": number,
    "AllowedOAuthFlows": [ "string" ],
    "AllowedOAuthFlowsUserPoolClient": boolean,
    "AllowedOAuthScopes": [ "string" ],
    "AnalyticsConfiguration": {
       "ApplicationArn": "string",
       "ApplicationId": "string",
       "ExternalId": "string",
       "RoleArn": "string",
       "UserDataShared": boolean
    },
    "AuthSessionValidity": number,
    "CallbackURLs": [ "string" ],
    "ClientId": "string",
    "ClientName": "string",
    "DefaultRedirectURI": "string",
    "EnablePropagateAdditionalUserContextData": boolean,
    "EnableTokenRevocation": boolean,
    "ExplicitAuthFlows": [ "string" ],
    "IdTokenValidity": number,
    "LogoutURLs": [ "string" ],
    "PreventUserExistenceErrors": "string",
    "ReadAttributes": [ "string" ],
    "RefreshTokenRotation": {
       "Feature": "string",
       "RetryGracePeriodSeconds": number
    },
    "RefreshTokenValidity": number,
    "SupportedIdentityProviders": [ "string" ],
    "TokenValidityUnits": {
       "AccessToken": "string",
       "IdToken": "string",
       "RefreshToken": "string"
    },
    "UserPoolId": "string",
    "WriteAttributes": [ "string" ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessTokenValidity

The access token time limit. After this limit expires, your user can't use their access token. To specify the time unit for `AccessTokenValidity` as `seconds`, `minutes`, `hours`, or `days`, set a `TokenValidityUnits` value in your API request.

For example, when you set `AccessTokenValidity` to `10` and `TokenValidityUnits` to `hours`, your user can authorize access with their access token for 10 hours.

The default time unit for `AccessTokenValidity` in an API request is hours. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your access tokens are valid for one hour.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

Required: No

AllowedOAuthFlows

The OAuth grant types that you want your app client to generate. To create an app client that generates client credentials grants, you must add `client_credentials` as the only allowed OAuth flow.

code

Use a code grant flow, which provides an authorization code as the response. This code can be exchanged for access tokens with the `/oauth2/token` endpoint.

implicit

Issue the access token (and, optionally, ID token, based on scopes) directly to your user.

client_credentials

Issue the access token from the `/oauth2/token` endpoint directly to a non-person user using a combination of the client ID and client secret.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 3 items.

Valid Values: `code | implicit | client_credentials`

Required: No

AllowedOAuthFlowsUserPoolClient

Set to `true` to use OAuth 2.0 authorization server features in your app client.

This parameter must have a value of `true` before you can configure the following features in your app client.

- `CallBackURLs`: Callback URLs.
- `LogoutURLs`: Sign-out redirect URLs.
- `AllowedOAuthScopes`: OAuth 2.0 scopes.
- `AllowedOAuthFlows`: Support for authorization code, implicit, and client credentials OAuth 2.0 grants.

To use authorization server features, configure one of these features in the Amazon Cognito console or set `AllowedOAuthFlowsUserPoolClient` to `true` in a `CreateUserPoolClient` or `UpdateUserPoolClient` API request. If you don't set a value for `AllowedOAuthFlowsUserPoolClient` in a request with the Amazon CLI or SDKs, it defaults to `false`. When `false`, only SDK-based API sign-in is permitted.

Type: Boolean

Required: No

AllowedOAuthScopes

The OAuth, OpenID Connect (OIDC), and custom scopes that you want to permit your app client to authorize access with. Scopes govern access control to user pool self-service API operations, user data from the `userInfo` endpoint, and third-party APIs. Scope values include `phone`, `email`, `openid`, and `profile`. The `aws.cognito.signin.user.admin` scope authorizes user self-service operations. Custom scopes with resource servers authorize access to external APIs.

Type: Array of strings

Array Members: Maximum number of 50 items.

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

Pattern: `[\x21\x23-\x5B\x5D-\x7E]+`

Required: No

AnalyticsConfiguration

The user pool analytics configuration for collecting metrics and sending them to your Amazon Pinpoint campaign.

In Amazon Regions where Amazon Pinpoint isn't available, user pools might not have access to analytics or might be configurable with campaigns in the US East (N. Virginia) Region. For more information, see Using Amazon Pinpoint analytics.

Type: AnalyticsConfigurationType object

Required: No

AuthSessionValidity

Amazon Cognito creates a session token for each API request in an authentication flow. `AuthSessionValidity` is the duration, in minutes, of that session token. Your user pool native user must respond to each authentication challenge before the session expires.

Type: Integer

Valid Range: Minimum value of 3. Maximum value of 15.

Required: No

CallbackURLs

A list of allowed redirect, or callback, URLs for managed login authentication. These URLs are the paths where you want to send your users' browsers after they complete authentication with managed login or a third-party IdP. Typically, callback URLs are the home of an application that uses OAuth or OIDC libraries to process authentication outcomes.

A redirect URI must meet the following requirements:

- Be an absolute URI.
- Be registered with the authorization server. Amazon Cognito doesn't accept authorization requests with `redirect_uri` values that aren't in the list of `CallbackURLs` that you provide in this parameter.
- Not include a fragment component.

See OAuth 2.0 - Redirection Endpoint.

Amazon Cognito requires HTTPS over HTTP except for http://localhost for testing purposes only.

App callback URLs such as `myapp://example` are also supported.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

ClientId

The ID of the app client that you want to update.

Type: String

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

Pattern: `[\w+]+`

Required: Yes

ClientName

A friendly name for the app client.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: No

DefaultRedirectURI

The default redirect URI. In app clients with one assigned IdP, replaces `redirect_uri` in authentication requests. Must be in the `CallbackURLs` list.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

EnablePropagateAdditionalUserContextData

When `true`, your application can include additional `UserContextData` in authentication requests. This data includes the IP address, and contributes to analysis by threat protection features. For more information about propagation of user context data, see Adding session data to API requests. If you don't include this parameter, you can't send the source IP address to Amazon Cognito threat protection features. You can only activate `EnablePropagateAdditionalUserContextData` in an app client that has a client secret.

Type: Boolean

Required: No

EnableTokenRevocation

Activates or deactivates token revocation in the target app client.

Revoke tokens with RevokeToken.

Type: Boolean

Required: No

ExplicitAuthFlows

The authentication flows that you want your user pool client to support. For each app client in your user pool, you can sign in your users with any combination of one or more flows, including with a user name and Secure Remote Password (SRP), a user name and password, or a custom authentication process that you define with Lambda functions.

> **Note**
>
> If you don't specify a value for `ExplicitAuthFlows`, your app client supports `ALLOW_REFRESH_TOKEN_AUTH`, `ALLOW_USER_SRP_AUTH`, and `ALLOW_CUSTOM_AUTH`.

The values for authentication flow options include the following.

- ALLOW_USER_AUTH: Enable selection-based sign-in with USER_AUTH. This setting covers username-password, secure remote password (SRP), passwordless, and passkey authentication. This authentiation flow can do username-password and SRP authentication without other ExplicitAuthFlows permitting them. For example users can complete an SRP challenge through USER_AUTH without the flow USER_SRP_AUTH being active for the app client. This flow doesn't include CUSTOM_AUTH.

  To activate this setting, your user pool must be in the Essentials tier or higher.
- ALLOW_ADMIN_USER_PASSWORD_AUTH: Enable admin based user password authentication flow ADMIN_USER_PASSWORD_AUTH. This setting replaces the ADMIN_NO_SRP_AUTH setting. With this authentication flow, your app passes a user name and password to Amazon Cognito in the request, instead of using the Secure Remote Password (SRP) protocol to securely transmit the password.
- ALLOW_CUSTOM_AUTH: Enable Lambda trigger based authentication.
- ALLOW_USER_PASSWORD_AUTH: Enable user password-based authentication. In this flow, Amazon Cognito receives the password in the request instead of using the SRP protocol to verify passwords.
- ALLOW_USER_SRP_AUTH: Enable SRP-based authentication.
- ALLOW_REFRESH_TOKEN_AUTH: Enable authflow to refresh tokens.

In some environments, you will see the values ADMIN_NO_SRP_AUTH, CUSTOM_AUTH_FLOW_ONLY, or USER_PASSWORD_AUTH. You can't assign these legacy ExplicitAuthFlows values to user pool clients at the same time as values that begin with ALLOW_, like ALLOW_USER_SRP_AUTH.

Type: Array of strings

Valid Values: ADMIN_NO_SRP_AUTH | CUSTOM_AUTH_FLOW_ONLY | USER_PASSWORD_AUTH | ALLOW_ADMIN_USER_PASSWORD_AUTH | ALLOW_CUSTOM_AUTH | ALLOW_USER_PASSWORD_AUTH | ALLOW_USER_SRP_AUTH | ALLOW_REFRESH_TOKEN_AUTH | ALLOW_USER_AUTH

Required: No

IdTokenValidity

The ID token time limit. After this limit expires, your user can't use their ID token. To specify the time unit for IdTokenValidity as seconds, minutes, hours, or days, set a TokenValidityUnits value in your API request.

For example, when you set `IdTokenValidity` as `10` and `TokenValidityUnits` as `hours`, your user can authenticate their session with their ID token for 10 hours.

The default time unit for `IdTokenValidity` in an API request is hours. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your ID tokens are valid for one hour.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

Required: No

LogoutURLs

A list of allowed logout URLs for managed login authentication. When you pass `logout_uri` and `client_id` parameters to `/logout`, Amazon Cognito signs out your user and redirects them to the logout URL. This parameter describes the URLs that you want to be the permitted targets of `logout_uri`. A typical use of these URLs is when a user selects "Sign out" and you redirect them to your public homepage. For more information, see Logout endpoint.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

PreventUserExistenceErrors

When `ENABLED`, suppresses messages that might indicate a valid user exists when someone attempts sign-in. This parameters sets your preference for the errors and responses that you want Amazon Cognito APIs to return during authentication, account confirmation, and password recovery when the user doesn't exist in the user pool. When set to `ENABLED` and the user doesn't exist, authentication returns an error indicating either the username or password was incorrect. Account confirmation and password recovery return a response indicating a code was sent to a simulated destination. When set to `LEGACY`, those APIs return a `UserNotFoundException` exception if the user doesn't exist in the user pool.

Defaults to LEGACY.

This setting affects the behavior of the following API operations.

- AdminInitiateAuth
- AdminRespondToAuthChallenge
- InitiateAuth
- RespondToAuthChallenge
- ForgotPassword
- ConfirmForgotPassword
- ConfirmSignUp
- ResendConfirmationCode

Type: String

Valid Values: `LEGACY` | `ENABLED`

Required: No

ReadAttributes

The list of user attributes that you want your app client to have read access to. After your user authenticates in your app, their access token authorizes them to read their own attribute value for any attribute in this list.

An example of this kind of activity is when your user selects a link to view their profile information. Your app makes a GetUser API request to retrieve and display your user's profile data.

When you don't specify the `ReadAttributes` for your app client, your app can read the values of `email_verified`, `phone_number_verified`, and the standard attributes of your user pool. When your user pool app client has read access to these default attributes, `ReadAttributes` doesn't return any information. Amazon Cognito only populates `ReadAttributes` in the API response if you have specified your own custom set of read attributes.

Type: Array of strings

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

Required: No

RefreshTokenRotation

The configuration of your app client for refresh token rotation. When enabled, your app client issues new ID, access, and refresh tokens when users renew their sessions with refresh tokens. When disabled, token refresh issues only ID and access tokens.

Refresh token rotation must be completed with GetTokensFromRefreshToken. With refresh token rotation disabled, you can complete token refresh with `GetTokensFromRefreshToken` and with `REFRESH_TOKEN_AUTH` in InitiateAuth:AuthFlow and AdminInitiateAuth:AuthFlow.

Type: RefreshTokenRotationType object

Required: No

RefreshTokenValidity

The refresh token time limit. After this limit expires, your user can't use their refresh token. To specify the time unit for `RefreshTokenValidity` as `seconds`, `minutes`, `hours`, or `days`, set a `TokenValidityUnits` value in your API request.

For example, when you set `RefreshTokenValidity` as `10` and `TokenValidityUnits` as `days`, your user can refresh their session and retrieve new access and ID tokens for 10 days.

The default time unit for `RefreshTokenValidity` in an API request is days. You can't set `RefreshTokenValidity` to 0. If you do, Amazon Cognito overrides the value with the default value of 30 days. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your refresh tokens are valid for 30 days.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 315360000.

Required: No

SupportedIdentityProviders

A list of provider names for the identity providers (IdPs) that are supported on this client. The following are supported: `COGNITO`, `Facebook`, `Google`, `SignInWithApple`, and `LoginWithAmazon`. You can also specify the names that you configured for the SAML and OIDC IdPs in your user pool, for example `MySAMLIdP` or `MyOIDCIdP`.

This parameter sets the IdPs that managed login will display on the login page for your app client. The removal of `COGNITO` from this list doesn't prevent authentication operations for local users with the user pools API in an Amazon SDK. The only way to prevent SDK-based authentication is to block access with a Amazon WAF rule.

Type: Array of strings

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: No

TokenValidityUnits

The units that validity times are represented in. The default unit for refresh tokens is days, and the default for ID and access tokens are hours.

Type: TokenValidityUnitsType object

Required: No

UserPoolId

The ID of the user pool where you want to update the app client.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

WriteAttributes

The list of user attributes that you want your app client to have write access to. After your user authenticates in your app, their access token authorizes them to set or modify their own attribute value for any attribute in this list.

An example of this kind of activity is when you present your user with a form to update their profile information and they change their last name. Your app then makes an UpdateUserAttributes API request and sets `family_name` to the new value.

When you don't specify the `WriteAttributes` for your app client, your app can write the values of the Standard attributes of your user pool. When your user pool has write access to these default attributes, `WriteAttributes` doesn't return any information. Amazon Cognito only populates `WriteAttributes` in the API response if you have specified your own custom set of write attributes.

If your app client allows users to sign in through an IdP, this array must include all attributes that you have mapped to IdP attributes. Amazon Cognito updates mapped attributes when users sign in to your application through an IdP. If your app client does not have write access to a mapped attribute, Amazon Cognito throws an error when it tries to update the attribute. For more information, see Specifying IdP Attribute Mappings for Your user pool.

Type: Array of strings

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

Required: No

Response Syntax

```
{
   "UserPoolClient": {
      "AccessTokenValidity": number,
      "AllowedOAuthFlows": [ "string" ],
      "AllowedOAuthFlowsUserPoolClient": boolean,
      "AllowedOAuthScopes": [ "string" ],
      "AnalyticsConfiguration": {
         "ApplicationArn": "string",
         "ApplicationId": "string",
         "ExternalId": "string",
         "RoleArn": "string",
         "UserDataShared": boolean
      },
      "AuthSessionValidity": number,
      "CallbackURLs": [ "string" ],
      "ClientId": "string",
      "ClientName": "string",
      "ClientSecret": "string",
      "CreationDate": number,
      "DefaultRedirectURI": "string",
      "EnablePropagateAdditionalUserContextData": boolean,
```

```
      "EnableTokenRevocation": boolean,
      "ExplicitAuthFlows": [ "string" ],
      "IdTokenValidity": number,
      "LastModifiedDate": number,
      "LogoutURLs": [ "string" ],
      "PreventUserExistenceErrors": "string",
      "ReadAttributes": [ "string" ],
      "RefreshTokenRotation": {
         "Feature": "string",
         "RetryGracePeriodSeconds": number
      },
      "RefreshTokenValidity": number,
      "SupportedIdentityProviders": [ "string" ],
      "TokenValidityUnits": {
         "AccessToken": "string",
         "IdToken": "string",
         "RefreshToken": "string"
      },
      "UserPoolId": "string",
      "WriteAttributes": [ "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.

UserPoolClient

The updated details of your app client.

Type: UserPoolClientType object

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

FeatureUnavailableInTierException

This exception is thrown when a feature you attempted to configure isn't available in your current feature plan.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidOAuthFlowException

This exception is thrown when the specified OAuth flow is not valid.

HTTP Status Code: 400

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

ScopeDoesNotExistException

This exception is thrown when the specified scope doesn't exist.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request updates an app client.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UpdateUserPoolClient
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
        "UserPoolId": "us-west-2_EXAMPLE",
        "ClientName": "my-test-app",
        "ClientId": "1example23456789",
        "RefreshTokenValidity": 30,
        "AccessTokenValidity": 60,
        "IdTokenValidity": 60,
        "TokenValidityUnits": {
            "AccessToken": "minutes",
            "IdToken": "minutes",
            "RefreshToken": "days"
        },
        "ReadAttributes": [
            "address",
            "birthdate",
            "custom:state",
            "custom:accesstoken",
            "custom:idtoken",
            "email",
            "email_verified",
            "family_name",
            "gender",
            "locale",
            "middle_name",
            "name",
            "nickname",
```

```
            "phone_number",
            "phone_number_verified",
            "picture",
            "preferred_username",
            "profile",
            "updated_at",
            "website",
            "zoneinfo"
        ],
        "WriteAttributes": [
            "address",
            "birthdate",
            "custom:state",
            "custom:accesstoken",
            "custom:idtoken",
            "email",
            "family_name",
            "gender",
            "locale",
            "middle_name",
            "name",
            "nickname",
            "phone_number",
            "picture",
            "preferred_username",
            "profile",
            "updated_at",
            "website",
            "zoneinfo"
        ],
        "ExplicitAuthFlows": [
            "ALLOW_ADMIN_USER_PASSWORD_AUTH",
            "ALLOW_CUSTOM_AUTH",
            "ALLOW_REFRESH_TOKEN_AUTH",
            "ALLOW_USER_PASSWORD_AUTH",
            "ALLOW_USER_SRP_AUTH"
        ],
        "SupportedIdentityProviders": [
            "MYSSO",
            "COGNITO",
            "Google"
        ],
        "CallbackURLs": [
            "https://www.example.com",
```

```
            "https://app2.example.com"
        ],
        "LogoutURLs": [
            "https://auth.example.com/login?
client_id=1example23456789&response_type=code&redirect_uri=https%3A%2F
%2Fwww.example.com",
            "https://example.com/logout"
        ],
        "AllowedOAuthFlows": [
            "code",
            "implicit"
        ],
        "AllowedOAuthScopes": [
            "aws.cognito.signin.user.admin",
            "email",
            "openid",
            "phone",
            "profile"
        ],
        "AllowedOAuthFlowsUserPoolClient": true,
        "AnalyticsConfiguration": {
            "ApplicationArn": "arn:aws:mobiletargeting:us-
west-2:123456789012:apps/555666example",
            "UserDataShared": true
        },
        "PreventUserExistenceErrors": "LEGACY",
        "EnableTokenRevocation": true,
        "EnablePropagateAdditionalUserContextData": false,
        "AuthSessionValidity": 3
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "UserPoolClient": {
        "AccessTokenValidity": 60,
        "AllowedOAuthFlows": [
```

```
            "implicit",
            "code"
        ],
        "AllowedOAuthFlowsUserPoolClient": true,
        "AllowedOAuthScopes": [
            "aws.cognito.signin.user.admin",
            "phone",
            "openid",
            "profile",
            "email"
        ],
        "AnalyticsConfiguration": {
            "ApplicationArn": "arn:aws:mobiletargeting:us-
west-2:123456789012:apps/555666example",
            "RoleArn": "arn:aws:iam::123456789012:role/aws-service-role/cognito-
idp.amazonaws.com/AWSServiceRoleForAmazonCognitoIdp",
            "UserDataShared": true
        },
        "AuthSessionValidity": 3,
        "CallbackURLs": [
            "https://www.example.com",
            "https://app2.example.com"
        ],
        "ClientId": "1example23456789",
        "ClientName": "my-test-app",
        "CreationDate": 1603840085.621,
        "EnablePropagateAdditionalUserContextData": false,
        "EnableTokenRevocation": true,
        "ExplicitAuthFlows": [
            "ALLOW_CUSTOM_AUTH",
            "ALLOW_USER_PASSWORD_AUTH",
            "ALLOW_ADMIN_USER_PASSWORD_AUTH",
            "ALLOW_USER_SRP_AUTH",
            "ALLOW_REFRESH_TOKEN_AUTH"
        ],
        "IdTokenValidity": 60,
        "LastModifiedDate": 1736445292.513,
        "LogoutURLs": [
            "https://auth.example.com/login?
client_id=1example23456789&response_type=code&redirect_uri=https%3A%2F
%2Fwww.example.com",
            "https://example.com/logout"
        ],
        "PreventUserExistenceErrors": "LEGACY",
```

```
        "ReadAttributes": [
            "address",
            "birthdate",
            "custom:state",
            "custom:accesstoken",
            "custom:idtoken",
            "email",
            "email_verified",
            "family_name",
            "gender",
            "locale",
            "middle_name",
            "name",
            "nickname",
            "phone_number",
            "phone_number_verified",
            "picture",
            "preferred_username",
            "profile",
            "updated_at",
            "website",
            "zoneinfo"
        ],
        "RefreshTokenValidity": 30,
        "SupportedIdentityProviders": [
            "MYSSO",
            "COGNITO",
            "Google"
        ],
        "TokenValidityUnits": {
            "AccessToken": "minutes",
            "IdToken": "minutes",
            "RefreshToken": "days"
        },
        "UserPoolId": "us-west-2_EXAMPLE",
        "WriteAttributes": [
            "address",
            "birthdate",
            "custom:state",
            "custom:accesstoken",
            "custom:idtoken",
            "email",
            "family_name",
            "gender",
```

```
            "locale",
            "middle_name",
            "name",
            "nickname",
            "phone_number",
            "picture",
            "preferred_username",
            "profile",
            "updated_at",
            "website",
            "zoneinfo"
        ]
    }
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

UpdateUserPoolDomain

A user pool domain hosts managed login, an authorization server and web server for authentication in your application. This operation updates the branding version for user pool domains between 1 for hosted UI (classic) and 2 for managed login. It also updates the SSL certificate for user pool custom domains.

Changes to the domain branding version take up to one minute to take effect for a prefix domain and up to five minutes for a custom domain.

This operation doesn't change the name of your user pool domain. To change your domain, delete it with `DeleteUserPoolDomain` and create a new domain with `CreateUserPoolDomain`.

You can pass the ARN of a new Amazon Certificate Manager certificate in this request. Typically, ACM certificates automatically renew and you user pool can continue to use the same ARN. But if you generate a new certificate for your custom domain name, replace the original configuration with the new ARN in this request.

ACM certificates for custom domains must be in the US East (N. Virginia) Amazon Region. After you submit your request, Amazon Cognito requires up to 1 hour to distribute your new certificate to your custom domain.

For more information about adding a custom domain to your user pool, see Configuring a user pool domain.

Note

Amazon Cognito evaluates Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you must use IAM credentials to authorize requests, and you must grant yourself the corresponding IAM permission in a policy.

Learn more

- Signing Amazon API Requests
- Using the Amazon Cognito user pools API and user pool endpoints

Request Syntax

```
{
   "CustomDomainConfig": {
      "CertificateArn": "string"
   },
   "Domain": "string",
   "ManagedLoginVersion": number,
   "UserPoolId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

CustomDomainConfig

The configuration for a custom domain that hosts managed login for your application. In an `UpdateUserPoolDomain` request, this parameter specifies an SSL certificate for the managed login hosted webserver. The certificate must be an ACM ARN in `us-east-1`.

When you create a custom domain, the passkey RP ID defaults to the custom domain. If you had a prefix domain active, this will cause passkey integration for your prefix domain to stop working due to a mismatch in RP ID. To keep the prefix domain passkey integration working, you can explicitly set RP ID to the prefix domain.

Update the RP ID in a SetUserPoolMfaConfig request.

Type: CustomDomainConfigType object

Required: No

Domain

The name of the domain that you want to update. For custom domains, this is the fully-qualified domain name, for example `auth.example.com`. For prefix domains, this is the prefix alone, such as `myprefix`.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

Required: Yes

ManagedLoginVersion

A version number that indicates the state of managed login for your domain. Version 1 is hosted UI (classic). Version 2 is the newer managed login with the branding editor. For more information, see Managed login.

Type: Integer

Required: No

UserPoolId

The ID of the user pool that is associated with the domain you're updating.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

Response Syntax

```
{
   "CloudFrontDomain": "string",
   "ManagedLoginVersion": number
}
```

Response Elements

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

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

CloudFrontDomain

The fully-qualified domain name (FQDN) of the Amazon CloudFront distribution that hosts your managed login or classic hosted UI pages. You domain-name authority must have an alias

record that points requests for your custom domain to this FQDN. Amazon Cognito returns this value if you set a custom domain with `CustomDomainConfig`. If you set an Amazon Cognito prefix domain, this operation returns a blank response.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

ManagedLoginVersion

A version number that indicates the state of managed login for your domain. Version 1 is hosted UI (classic). Version 2 is the newer managed login with the branding editor. For more information, see Managed login.

Type: Integer

Errors

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

ConcurrentModificationException

This exception is thrown if two or more modifications are happening concurrently.

HTTP Status Code: 400

FeatureUnavailableInTierException

This exception is thrown when a feature you attempted to configure isn't available in your current feature plan.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

Examples

Example

The following example request configures an ACM certificate and sets the managed login branding version to 2 for a custom domain.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.ca-central-1.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.UpdateUserPoolDomain
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "CustomDomainConfig": {
      "CertificateArn": "arn:aws:acm:us-east-1:123456789012:certificate/
a1b2c3d4-5678-90ab-cdef-EXAMPLE11111"
   },
   "Domain": "auth.example.com",
```

```
   "ManagedLoginVersion": 2,
   "UserPoolId": "ca-central-1_EXAMPLE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
    "CloudFrontDomain": "example.cloudfront.net",
    "ManagedLoginVersion": 2
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

VerifySoftwareToken

Registers the current user's time-based one-time password (TOTP) authenticator with a code generated in their authenticator app from a private key that's supplied by your user pool. Marks the user's software token MFA status as "verified" if successful. The request takes an access token or a session string, but not both.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "FriendlyDeviceName": "string",
   "Session": "string",
   "UserCode": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: No

FriendlyDeviceName

A friendly name for the device that's running the TOTP authenticator.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Session

The session ID from an `AssociateSoftwareToken` request.

Type: String

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

Required: No

UserCode

A TOTP that the user generated in their configured authenticator app.

Type: String

Length Constraints: Fixed length of 6.

Pattern: `[0-9]+`

Required: Yes

Response Syntax

```
{
   "Session": "string",
   "Status": "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.

Session

This session ID satisfies an `MFA_SETUP` challenge. Supply the session ID in your challenge response.

Operations that can return an `MFA_SETUP` challenge include InitiateAuth, AdminInitiateAuth, RespondToAuthChallenge, and AdminRespondToAuthChallenge.

Type: String

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

Status

Amazon Cognito can accept or reject the code that you provide. This response parameter indicates the success of TOTP verification. Some reasons that this operation might return an error are clock skew on the user's device and excessive retries.

Type: String

Valid Values: `SUCCESS | ERROR`

Errors

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

CodeMismatchException

This exception is thrown if the provided code doesn't match what the server was expecting.

HTTP Status Code: 400

EnableSoftwareTokenMFAException

This exception is thrown when there is a code mismatch and the service fails to configure the software token TOTP multi-factor authentication (MFA).

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

InvalidUserPoolConfigurationException

This exception is thrown when the user pool configuration is not valid.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

SoftwareTokenMFANotFoundException

This exception is thrown when the software token time-based one-time password (TOTP) multi-factor authentication (MFA) isn't activated for the user pool.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request activates TOTP MFA for the current user.

Sample Request

```
POST HTTP/1.1
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.VerifySoftwareToken
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "FriendlyDeviceName": "MyAuthenticatorApp",
   "UserCode": "123456"
}
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{
 "Status": "SUCCESS"
}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python
- Amazon SDK for Ruby V3

VerifyUserAttribute

Submits a verification code for a signed-in user who has added or changed a value of an auto-verified attribute. When successful, the user's attribute becomes verified and the attribute `email_verified` or phone_number_verified becomes `true`.

If your user pool requires verification before Amazon Cognito updates the attribute value, this operation updates the affected attribute to its pending value.

See also UserAttributeUpdateSettingsType.

Authorize this action with a signed-in user's access token. It must include the scope `aws.cognito.signin.user.admin`.

> **Note**
>
> Amazon Cognito doesn't evaluate Amazon Identity and Access Management (IAM) policies in requests for this API operation. For this operation, you can't use IAM credentials to authorize requests, and you can't grant IAM permissions in policies. For more information about authorization models in Amazon Cognito, see Using the Amazon Cognito user pools API and user pool endpoints.

Request Syntax

```
{
   "AccessToken": "string",
   "AttributeName": "string",
   "Code": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AccessToken

A valid access token that Amazon Cognito issued to the currently signed-in user. Must include a scope claim for `aws.cognito.signin.user.admin`.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: Yes

AttributeName

The name of the attribute that you want to verify.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Code

The verification code that your user pool sent to the added or changed attribute, for example the user's email address.

Type: String

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

Pattern: `[\S]+`

Required: Yes

Response Elements

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

Errors

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

AliasExistsException

This exception is thrown when a user tries to confirm the account with an email address or phone number that has already been supplied as an alias for a different user profile. This exception indicates that an account with this email address or phone already exists in a user pool that you've configured to use email address or phone number as a sign-in alias.

HTTP Status Code: 400

CodeMismatchException

This exception is thrown if the provided code doesn't match what the server was expecting.

HTTP Status Code: 400

ExpiredCodeException

This exception is thrown if a code has expired.

HTTP Status Code: 400

ForbiddenException

This exception is thrown when Amazon WAF doesn't allow your request based on a web ACL that's associated with your user pool.

HTTP Status Code: 400

InternalErrorException

This exception is thrown when Amazon Cognito encounters an internal error.

HTTP Status Code: 500

InvalidParameterException

This exception is thrown when the Amazon Cognito service encounters an invalid parameter.

HTTP Status Code: 400

LimitExceededException

This exception is thrown when a user exceeds the limit for a requested Amazon resource.

HTTP Status Code: 400

NotAuthorizedException

This exception is thrown when a user isn't authorized.

HTTP Status Code: 400

PasswordResetRequiredException

This exception is thrown when a password reset is required.

HTTP Status Code: 400

ResourceNotFoundException

This exception is thrown when the Amazon Cognito service can't find the requested resource.

HTTP Status Code: 400

TooManyRequestsException

This exception is thrown when the user has made too many requests for a given operation.

HTTP Status Code: 400

UserNotConfirmedException

This exception is thrown when a user isn't confirmed successfully.

HTTP Status Code: 400

UserNotFoundException

This exception is thrown when a user isn't found.

HTTP Status Code: 400

Examples

Example

The following example request verifies the email attribute for the current user with a code that was sent in an email message to them.

Sample Request

```
POST HTTP/1.1
```

```
Host: cognito-idp.us-west-2.amazonaws.com
X-Amz-Date: 20230613T200059Z
Accept-Encoding: gzip, deflate, br
X-Amz-Target: AWSCognitoIdentityProviderService.VerifyUserAttribute
User-Agent: <UserAgentString>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
 Signature=<Signature>
Content-Length: <PayloadSizeBytes>
{
   "AccessToken": "eyJra456defEXAMPLE",
   "AttributeName": "email",
   "Code": "123456"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 13 Jun 2023 20:00:59 GMT
Content-Type: application/x-amz-json-1.0
Content-Length: <PayloadSizeBytes>
x-amzn-requestid: a1b2c3d4-e5f6-a1b2-c3d4-EXAMPLE11111
Connection: keep-alive
{}
```

See Also

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

- Amazon Command Line Interface
- Amazon SDK for .NET
- Amazon SDK for C++
- Amazon SDK for Go v2
- Amazon SDK for Java V2
- Amazon SDK for JavaScript V3
- Amazon SDK for Kotlin
- Amazon SDK for PHP V3
- Amazon SDK for Python

- Amazon SDK for Ruby V3

Data Types

The Amazon Cognito Identity Provider 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:

- AccountRecoverySettingType
- AccountTakeoverActionsType
- AccountTakeoverActionType
- AccountTakeoverRiskConfigurationType
- AdminCreateUserConfigType
- AdvancedSecurityAdditionalFlowsType
- AnalyticsConfigurationType
- AnalyticsMetadataType
- AssetType
- AttributeType
- AuthenticationResultType
- AuthEventType
- ChallengeResponseType
- CloudWatchLogsConfigurationType
- CodeDeliveryDetailsType
- CompromisedCredentialsActionsType
- CompromisedCredentialsRiskConfigurationType
- ContextDataType
- CustomDomainConfigType
- CustomEmailLambdaVersionConfigType

- CustomSMSLambdaVersionConfigType
- DeviceConfigurationType
- DeviceSecretVerifierConfigType
- DeviceType
- DomainDescriptionType
- EmailConfigurationType
- EmailMfaConfigType
- EmailMfaSettingsType
- EventContextDataType
- EventFeedbackType
- EventRiskType
- FirehoseConfigurationType
- GroupType
- HttpHeader
- IdentityProviderType
- LambdaConfigType
- LogConfigurationType
- LogDeliveryConfigurationType
- ManagedLoginBrandingType
- MessageTemplateType
- MFAOptionType
- NewDeviceMetadataType
- NotifyConfigurationType
- NotifyEmailType
- NumberAttributeConstraintsType
- PasswordPolicyType
- PreTokenGenerationVersionConfigType
- ProviderDescription
- ProviderUserIdentifierType
- RecoveryOptionType

- RefreshTokenRotationType
- ResourceServerScopeType
- ResourceServerType
- RiskConfigurationType
- RiskExceptionConfigurationType
- S3ConfigurationType
- SchemaAttributeType
- SignInPolicyType
- SmsConfigurationType
- SmsMfaConfigType
- SMSMfaSettingsType
- SoftwareTokenMfaConfigType
- SoftwareTokenMfaSettingsType
- StringAttributeConstraintsType
- TokenValidityUnitsType
- UICustomizationType
- UserAttributeUpdateSettingsType
- UserContextDataType
- UserImportJobType
- UsernameConfigurationType
- UserPoolAddOnsType
- UserPoolClientDescription
- UserPoolClientType
- UserPoolDescriptionType
- UserPoolPolicyType
- UserPoolType
- UserType
- VerificationMessageTemplateType
- WebAuthnConfigurationType
- WebAuthnCredentialDescription

AccountRecoverySettingType

The settings for user message delivery in forgot-password operations. Contains preference for email or SMS message delivery of password reset codes, or for admin-only password reset.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

RecoveryMechanisms

The list of options and priorities for user message delivery in forgot-password operations. Sets or displays user pool preferences for email or SMS message priority, whether users should fall back to a second delivery method, and whether passwords should only be reset by administrators.

Type: Array of RecoveryOptionType objects

Array Members: Minimum number of 1 item. Maximum number of 2 items.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AccountTakeoverActionsType

A list of account-takeover actions for each level of risk that Amazon Cognito might assess with threat protection features.

This data type is a request parameter of SetRiskConfiguration and a response parameter of DescribeRiskConfiguration.

Contents

HighAction

The action that you assign to a high-risk assessment by threat protection.

Type: AccountTakeoverActionType object

Required: No

LowAction

The action that you assign to a low-risk assessment by threat protection.

Type: AccountTakeoverActionType object

Required: No

MediumAction

The action that you assign to a medium-risk assessment by threat protection.

Type: AccountTakeoverActionType object

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AccountTakeoverActionType

The automated response to a risk level for adaptive authentication in full-function, or `ENFORCED`, mode. You can assign an action to each risk level that threat protection evaluates.

This data type is a request parameter of SetRiskConfiguration and a response parameter of DescribeRiskConfiguration.

Contents

EventAction

The action to take for the attempted account takeover action for the associated risk level. Valid values are as follows:

- `BLOCK`: Block the request.
- `MFA_IF_CONFIGURED`: Present an MFA challenge if possible. MFA is possible if the user pool has active MFA methods that the user can set up. For example, if the user pool only supports SMS message MFA but the user doesn't have a phone number attribute, MFA setup isn't possible. If MFA setup isn't possible, allow the request.
- `MFA_REQUIRED`: Present an MFA challenge if possible. Block the request if a user hasn't set up MFA. To sign in with required MFA, users must have an email address or phone number attribute, or a registered TOTP factor.
- `NO_ACTION`: Take no action. Permit sign-in.

Type: String

Valid Values: `BLOCK | MFA_IF_CONFIGURED | MFA_REQUIRED | NO_ACTION`

Required: Yes

Notify

Determines whether Amazon Cognito sends a user a notification message when your user pools assesses a user's session at the associated risk level.

Type: Boolean

Required: Yes

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AccountTakeoverRiskConfigurationType

The settings for automated responses and notification templates for adaptive authentication with threat protection features.

This data type is a request parameter of SetRiskConfiguration and a response parameter of DescribeRiskConfiguration.

Contents

Actions

A list of account-takeover actions for each level of risk that Amazon Cognito might assess with threat protection.

Type: AccountTakeoverActionsType object

Required: Yes

NotifyConfiguration

The settings for composing and sending an email message when threat protection assesses a risk level with adaptive authentication. When you choose to notify users in `AccountTakeoverRiskConfiguration`, Amazon Cognito sends an email message using the method and template that you set with this data type.

Type: NotifyConfigurationType object

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AdminCreateUserConfigType

The settings for administrator creation of users in a user pool. Contains settings for allowing user sign-up, customizing invitation messages to new users, and the amount of time before temporary passwords expire.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

AllowAdminCreateUserOnly

The setting for allowing self-service sign-up. When `true`, only administrators can create new user profiles. When `false`, users can register themselves and create a new user profile with the `SignUp` operation.

Type: Boolean

Required: No

InviteMessageTemplate

The template for the welcome message to new users. This template must include the `{####}` temporary password placeholder if you are creating users with passwords. If your users don't have passwords, you can omit the placeholder.

See also Customizing User Invitation Messages.

Type: MessageTemplateType object

Required: No

UnusedAccountValidityDays

This parameter is no longer in use.

Configure the duration of temporary passwords with the `TemporaryPasswordValidityDays` parameter of PasswordPolicyType. For older user pools that have a `UnusedAccountValidityDays` configuration, that value is effective until you set a value for `TemporaryPasswordValidityDays`.

The password expiration limit in days for administrator-created users. When this time expires, the user can't sign in with their temporary password. To reset the account after that time limit, you must call `AdminCreateUser` again, specifying `RESEND` for the `MessageAction` parameter.

The default value for this parameter is 7.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 365.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AdvancedSecurityAdditionalFlowsType

Threat protection configuration options for additional authentication types in your user pool, including custom authentication.

Contents

CustomAuthMode

The operating mode of threat protection in custom authentication with Custom authentication challenge Lambda triggers.

Type: String

Valid Values: `AUDIT | ENFORCED`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AnalyticsConfigurationType

The settings for Amazon Pinpoint analytics configuration. With an analytics configuration, your application can collect user-activity metrics for user notifications with a Amazon Pinpoint campaign.

Amazon Pinpoint isn't available in all Amazon Regions. For a list of available Regions, see Amazon Cognito and Amazon Pinpoint Region availability.

This data type is a request parameter of CreateUserPoolClient and UpdateUserPoolClient, and a response parameter of DescribeUserPoolClient.

Contents

ApplicationArn

The Amazon Resource Name (ARN) of an Amazon Pinpoint project that you want to connect to your user pool app client. Amazon Cognito publishes events to the Amazon Pinpoint project that `ApplicationArn` declares. You can also configure your application to pass an endpoint ID in the `AnalyticsMetadata` parameter of sign-in operations. The endpoint ID is information about the destination for push notifications

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

ApplicationId

Your Amazon Pinpoint project ID.

Type: String

Pattern: `^[0-9a-fA-F]+$`

Required: No

ExternalId

The external ID of the role that Amazon Cognito assumes to send analytics data to Amazon Pinpoint.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

RoleArn

The ARN of an Amazon Identity and Access Management role that has the permissions required for Amazon Cognito to publish events to Amazon Pinpoint analytics.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

UserDataShared

If `UserDataShared` is `true`, Amazon Cognito includes user data in the events that it publishes to Amazon Pinpoint analytics.

Type: Boolean

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AnalyticsMetadataType

Information that your application adds to authentication requests. Applies an endpoint ID to the analytics data that your user pool sends to Amazon Pinpoint.

An endpoint ID uniquely identifies a mobile device, email address or phone number that can receive messages from Amazon Pinpoint analytics. For more information about Amazon Regions that can contain Amazon Pinpoint resources for use with Amazon Cognito user pools, see Using Amazon Pinpoint analytics with Amazon Cognito user pools.

This data type is a request parameter of authentication operations like InitiateAuth, AdminInitiateAuth, RespondToAuthChallenge, and AdminRespondToAuthChallenge.

Contents

AnalyticsEndpointId

The endpoint ID. Information that you want to pass to Amazon Pinpoint about where to send notifications.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AssetType

An image file from a managed login branding style in a user pool.

This data type is a request parameter of CreateManagedLoginBranding and UpdateManagedLoginBranding, and a response parameter of DescribeManagedLoginBranding.

Contents

Category

The category that the image corresponds to in your managed login configuration. Managed login has asset categories for different types of logos, backgrounds, and icons.

Type: String

Valid Values: `FAVICON_ICO | FAVICON_SVG | EMAIL_GRAPHIC | SMS_GRAPHIC | AUTH_APP_GRAPHIC | PASSWORD_GRAPHIC | PASSKEY_GRAPHIC | PAGE_HEADER_LOGO | PAGE_HEADER_BACKGROUND | PAGE_FOOTER_LOGO | PAGE_FOOTER_BACKGROUND | PAGE_BACKGROUND | FORM_BACKGROUND | FORM_LOGO | IDP_BUTTON_ICON`

Required: Yes

ColorMode

The display-mode target of the asset: light, dark, or browser-adaptive. For example, Amazon Cognito displays a dark-mode image only when the browser or application is in dark mode, but displays a browser-adaptive file in all contexts.

Type: String

Valid Values: `LIGHT | DARK | DYNAMIC`

Required: Yes

Extension

The file type of the image file.

Type: String

Valid Values: `ICO | JPEG | PNG | SVG | WEBP`

Required: Yes

Bytes

The image file, in Base64-encoded binary.

Type: Base64-encoded binary data object

Length Constraints: Maximum length of 1000000.

Required: No

ResourceId

The ID of the asset.

Type: String

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

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

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AttributeType

The name and value of a user attribute.

This data type is a request parameter of AdminUpdateUserAttributes and UpdateUserAttributes.

Contents

Name

The name of the attribute.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: Yes

Value

The value of the attribute.

Type: String

Length Constraints: Maximum length of 2048.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AuthenticationResultType

The object that your application receives after authentication. Contains tokens and information for device authentication.

This data type is a response parameter of authentication operations like InitiateAuth, AdminInitiateAuth, RespondToAuthChallenge, AdminRespondToAuthChallenge, and GetTokensFromRefreshToken. `GetTokensFromRefreshToken` doesn't return `NewDeviceMetadata`.

Contents

AccessToken

Your user's access token.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: No

ExpiresIn

The expiration period of the authentication result in seconds.

Type: Integer

Required: No

IdToken

Your user's ID token.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: No

NewDeviceMetadata

The new device metadata from an authentication result.

Type: NewDeviceMetadataType object

Required: No

RefreshToken

Your user's refresh token.

Type: String

Pattern: `[A-Za-z0-9-_=.]+`

Required: No

TokenType

The intended use of the token, for example `Bearer`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

AuthEventType

One authentication event that Amazon Cognito logged in a user pool with threat protection active. Contains user and device metadata and a risk assessment from your user pool.

This data type is a response parameter of AdminListUserAuthEvents.

Contents

ChallengeResponses

A list of the challenges that the user was requested to answer, for example `Password`, and the result, for example `Success`.

Type: Array of ChallengeResponseType objects

Required: No

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

EventContextData

The user context data captured at the time of an event request. This value provides additional information about the client from which event the request is received.

Type: EventContextDataType object

Required: No

EventFeedback

The `UpdateAuthEventFeedback` or `AdminUpdateAuthEventFeedback` feedback that you or your user provided in response to the event. A value of `Valid` indicates that you disagreed with the level of risk that your user pool assigned, and evaluated a session to be valid, or likely

safe. A value of `Invalid` indicates that you agreed with the user pool risk level and evaluated a session to be invalid, or likely malicious.

Type: EventFeedbackType object

Required: No

EventId

The event ID.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

EventResponse

The event response.

Type: String

Valid Values: `Pass | Fail | InProgress`

Required: No

EventRisk

The threat evaluation from your user pool about an event. Contains information about whether your user pool detected compromised credentials, whether the event triggered an automated response, and the level of risk.

Type: EventRiskType object

Required: No

EventType

The type of authentication event.

Type: String

Valid Values: `SignIn | SignUp | ForgotPassword | PasswordChange | ResendCode`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

ChallengeResponseType

The responses to the challenge that you received in the previous request. Each challenge has its own required response parameters. The following examples are partial JSON request bodies that highlight challenge-response parameters.

> **Important**
>
> You must provide a SECRET_HASH parameter in all challenge responses to an app client that has a client secret. Include a DEVICE_KEY for device authentication.

SELECT_CHALLENGE

```
"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "USERNAME": "[username]", "ANSWER": "[Challenge name]"}
```

Available challenges are PASSWORD, PASSWORD_SRP, EMAIL_OTP, SMS_OTP, and WEB_AUTHN.

Complete authentication in the SELECT_CHALLENGE response for PASSWORD, PASSWORD_SRP, and WEB_AUTHN:

- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "WEB_AUTHN", "USERNAME": "[username]", "CREDENTIAL": "[AuthenticationResponseJSON]"}`

  See AuthenticationResponseJSON.
- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "PASSWORD", "USERNAME": "[username]", "PASSWORD": "[password]"}`
- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "PASSWORD_SRP", "USERNAME": "[username]", "SRP_A": "[SRP_A]"}`

For SMS_OTP and EMAIL_OTP, respond with the username and answer. Your user pool will send a code for the user to submit in the next challenge response.

- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "SMS_OTP", "USERNAME": "[username]"}`
- `"ChallengeName": "SELECT_CHALLENGE", "ChallengeResponses": { "ANSWER": "EMAIL_OTP", "USERNAME": "[username]"}`

SMS_OTP

```
"ChallengeName": "SMS_OTP", "ChallengeResponses": {"SMS_OTP_CODE":
"[code]", "USERNAME": "[username]"}
```

EMAIL_OTP

```
"ChallengeName": "EMAIL_OTP", "ChallengeResponses": {"EMAIL_OTP_CODE":
"[code]", "USERNAME": "[username]"}
```

SMS_MFA

```
"ChallengeName": "SMS_MFA", "ChallengeResponses": {"SMS_MFA_CODE":
"[code]", "USERNAME": "[username]"}
```

PASSWORD_VERIFIER

This challenge response is part of the SRP flow. Amazon Cognito requires that your application respond to this challenge within a few seconds. When the response time exceeds this period, your user pool returns a `NotAuthorizedException` error.

```
"ChallengeName": "PASSWORD_VERIFIER", "ChallengeResponses":
{"PASSWORD_CLAIM_SIGNATURE": "[claim_signature]",
"PASSWORD_CLAIM_SECRET_BLOCK": "[secret_block]", "TIMESTAMP":
[timestamp], "USERNAME": "[username]"}
```

Add `"DEVICE_KEY"` when you sign in with a remembered device.

CUSTOM_CHALLENGE

```
"ChallengeName": "CUSTOM_CHALLENGE", "ChallengeResponses": {"USERNAME":
"[username]", "ANSWER": "[challenge_answer]"}
```

Add `"DEVICE_KEY"` when you sign in with a remembered device.

NEW_PASSWORD_REQUIRED

```
"ChallengeName": "NEW_PASSWORD_REQUIRED", "ChallengeResponses":
{"NEW_PASSWORD": "[new_password]", "USERNAME": "[username]"}
```

To set any required attributes that `InitiateAuth` returned in an `requiredAttributes` parameter, add `"userAttributes.[attribute_name]": "[attribute_value]"`. This parameter can also set values for writable attributes that aren't required by your user pool.

> **Note**
>
> In a NEW_PASSWORD_REQUIRED challenge response, you can't modify a required attribute that already has a value. In AdminRespondToAuthChallenge or RespondToAuthChallenge, set a value for any keys that Amazon Cognito returned in the requiredAttributes parameter, then use the AdminUpdateUserAttributes or UpdateUserAttributes API operation to modify the value of any additional attributes.

SOFTWARE_TOKEN_MFA

```
"ChallengeName": "SOFTWARE_TOKEN_MFA", "ChallengeResponses":
{"USERNAME": "[username]", "SOFTWARE_TOKEN_MFA_CODE":
[authenticator_code]}
```

DEVICE_SRP_AUTH

```
"ChallengeName": "DEVICE_SRP_AUTH", "ChallengeResponses": {"USERNAME":
"[username]", "DEVICE_KEY": "[device_key]", "SRP_A": "[srp_a]"}
```

DEVICE_PASSWORD_VERIFIER

```
"ChallengeName": "DEVICE_PASSWORD_VERIFIER", "ChallengeResponses":
{"DEVICE_KEY": "[device_key]", "PASSWORD_CLAIM_SIGNATURE":
"[claim_signature]", "PASSWORD_CLAIM_SECRET_BLOCK": "[secret_block]",
"TIMESTAMP": [timestamp], "USERNAME": "[username]"}
```

MFA_SETUP

```
"ChallengeName": "MFA_SETUP", "ChallengeResponses": {"USERNAME":
"[username]"}, "SESSION": "[Session ID from VerifySoftwareToken]"
```

SELECT_MFA_TYPE

```
"ChallengeName": "SELECT_MFA_TYPE", "ChallengeResponses": {"USERNAME":
"[username]", "ANSWER": "[SMS_MFA or SOFTWARE_TOKEN_MFA]"}
```

For more information about SECRET_HASH, see Computing secret hash values. For information about DEVICE_KEY, see Working with user devices in your user pool.

This data type is a request parameter of RespondToAuthChallenge and AdminRespondToAuthChallenge.

Contents

ChallengeName

The type of challenge that your previous authentication request returned in the parameter `ChallengeName`, for example `SMS_MFA`.

Type: String

Valid Values: `Password | Mfa`

Required: No

ChallengeResponse

The set of key-value pairs that provides a response to the requested challenge.

Type: String

Valid Values: `Success | Failure`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

CloudWatchLogsConfigurationType

Configuration for the CloudWatch log group destination of user pool detailed activity logging, or of user activity log export with threat protection.

This data type is a request parameter of SetLogDeliveryConfiguration and a response parameter of GetLogDeliveryConfiguration.

Contents

LogGroupArn

The Amazon Resource Name (arn) of a CloudWatch Logs log group where your user pool sends logs. The log group must not be encrypted with Amazon Key Management Service and must be in the same Amazon account as your user pool.

To send logs to log groups with a resource policy of a size greater than 5120 characters, configure a log group with a path that starts with `/aws/vendedlogs`. For more information, see Enabling logging from certain Amazon services.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

CodeDeliveryDetailsType

The delivery details for an email or SMS message that Amazon Cognito sent for authentication or verification.

This data type is a response parameter of operations that send a code for user profile confirmation, verification, or management, for example ForgotPassword and SignUp.

Contents

AttributeName

The name of the attribute that Amazon Cognito verifies with the code.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

DeliveryMedium

The method that Amazon Cognito used to send the code.

Type: String

Valid Values: `SMS | EMAIL`

Required: No

Destination

The email address or phone number destination where Amazon Cognito sent the code.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

CompromisedCredentialsActionsType

Settings for user pool actions when Amazon Cognito detects compromised credentials with threat protection in full-function `ENFORCED` mode.

This data type is a request parameter of SetRiskConfiguration and a response parameter of DescribeRiskConfiguration.

Contents

EventAction

The action that Amazon Cognito takes when it detects compromised credentials.

Type: String

Valid Values: `BLOCK | NO_ACTION`

Required: Yes

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

CompromisedCredentialsRiskConfigurationType

Settings for compromised-credentials actions and authentication-event sources with threat protection in full-function `ENFORCED` mode.

This data type is a request parameter of SetRiskConfiguration and a response parameter of DescribeRiskConfiguration.

Contents

Actions

Settings for the actions that you want your user pool to take when Amazon Cognito detects compromised credentials.

Type: CompromisedCredentialsActionsType object

Required: Yes

EventFilter

Settings for the sign-in activity where you want to configure compromised-credentials actions. Defaults to all events.

Type: Array of strings

Valid Values: `SIGN_IN | PASSWORD_CHANGE | SIGN_UP`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

ContextDataType

Contextual user data used for evaluating the risk of an authentication event by user pool threat protection.

This data type is a request parameter of server-side authentication operations like AdminInitiateAuth and AdminRespondToAuthChallenge.

Contents

HttpHeaders

The HTTP headers from your user's authentication request.

Type: Array of HttpHeader objects

Required: Yes

IpAddress

The source IP address of your user's device.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

ServerName

The name of your application's service endpoint.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

ServerPath

The path of your application's service endpoint.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

EncodedData

Encoded device-fingerprint details that your app collected with the Amazon Cognito context data collection library. For more information, see Adding user device and session data to API requests.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

CustomDomainConfigType

The configuration for a hosted UI custom domain.

This data type is a request parameter of CreateUserPoolDomain and UpdateUserPoolDomain.

Contents

CertificateArn

The Amazon Resource Name (ARN) of an Amazon Certificate Manager SSL certificate. You use this certificate for the subdomain of your custom domain.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

CustomEmailLambdaVersionConfigType

The properties of a custom email sender Lambda trigger.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

LambdaArn

The Amazon Resource Name (ARN) of the function that you want to assign to your Lambda trigger.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

LambdaVersion

The user pool trigger version of the request that Amazon Cognito sends to your Lambda function. Higher-numbered versions add fields that support new features.

You must use a `LambdaVersion` of `V1_0` with a custom sender function.

Type: String

Valid Values: `V1_0`

Required: Yes

See Also

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

- Amazon SDK for C++

- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

CustomSMSLambdaVersionConfigType

The properties of a custom SMS sender Lambda trigger.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

LambdaArn

The Amazon Resource Name (ARN) of the function that you want to assign to your Lambda trigger.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

LambdaVersion

The user pool trigger version of the request that Amazon Cognito sends to your Lambda function. Higher-numbered versions add fields that support new features.

You must use a `LambdaVersion` of `V1_0` with a custom sender function.

Type: String

Valid Values: `V1_0`

Required: Yes

See Also

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

- Amazon SDK for C++

- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

DeviceConfigurationType

The device-remembering configuration for a user pool.

A DescribeUserPool request returns a null value for this object when the user pool isn't configured to remember devices. When device remembering is active, you can remember a user's device with a ConfirmDevice API request. Additionally. when the property `DeviceOnlyRememberedOnUserPrompt` is `true`, you must follow `ConfirmDevice` with an UpdateDeviceStatus API request that sets the user's device to `remembered` or `not_remembered`.

To sign in with a remembered device, include `DEVICE_KEY` in the authentication parameters in your user's InitiateAuth request. If your app doesn't include a `DEVICE_KEY` parameter, the InitiateAuth from Amazon Cognito includes newly-generated `DEVICE_KEY` and `DEVICE_GROUP_KEY` values under `NewDeviceMetadata`. Store these values to use in future device-authentication requests.

> **Note**
>
> When you provide a value for any property of `DeviceConfiguration`, you activate the device remembering for the user pool.
> This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

ChallengeRequiredOnNewDevice

When true, a remembered device can sign in with device authentication instead of SMS and time-based one-time password (TOTP) factors for multi-factor authentication (MFA).

> **Note**
>
> Whether or not `ChallengeRequiredOnNewDevice` is true, users who sign in with devices that have not been confirmed or remembered must still provide a second factor in a user pool that requires MFA.

Type: Boolean

Required: No

DeviceOnlyRememberedOnUserPrompt

When true, Amazon Cognito doesn't automatically remember a user's device when your app sends a `ConfirmDevice` API request. In your app, create a prompt for your user to choose whether they want to remember their device. Return the user's choice in an `UpdateDeviceStatus` API request.

When `DeviceOnlyRememberedOnUserPrompt` is `false`, Amazon Cognito immediately remembers devices that you register in a `ConfirmDevice` API request.

Type: Boolean

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

DeviceSecretVerifierConfigType

A Secure Remote Password (SRP) value that your application generates when you register a user's device. For more information, see Getting a device key.

This data type is a request parameter of ConfirmDevice.

Contents

PasswordVerifier

A password verifier for a user's device. Used in SRP authentication.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Salt

The salt that you want to use in SRP authentication with the user's device.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

DeviceType

Information about a user's device that they've registered for device SRP authentication in your application. For more information, see Working with user devices in your user pool.

This data type is a response parameter of AdminGetDevice, AdminListDevices, and GetDevice.

Contents

DeviceAttributes

Metadata about a user's device, like name and last-access source IP.

Type: Array of AttributeType objects

Required: No

DeviceCreateDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

DeviceKey

The device key, for example `us-west-2_EXAMPLE-a1b2c3d4-5678-90ab-cdef-EXAMPLE22222`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: No

DeviceLastAuthenticatedDate

The date when the user last signed in with the device.

Type: Timestamp

Required: No

DeviceLastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

DomainDescriptionType

A container for information about the user pool domain associated with the hosted UI and OAuth endpoints.

This data type is a response parameter of DescribeUserPoolDomain.

Contents

AWSAccountId

The Amazon account that you created the user pool in.

Type: String

Length Constraints: Maximum length of 12.

Pattern: `[0-9]+`

Required: No

CloudFrontDistribution

The Amazon CloudFront endpoint that hosts your custom domain.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

CustomDomainConfig

The configuration for a custom domain that hosts the sign-up and sign-in webpages for your application.

Type: CustomDomainConfigType object

Required: No

Domain

The domain string. For custom domains, this is the fully-qualified domain name, such as `auth.example.com`. For Amazon Cognito prefix domains, this is the prefix alone, such as `auth`.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

Required: No

ManagedLoginVersion

The version of managed login branding that you want to apply to your domain. A value of 1 indicates hosted UI (classic) branding and a version of 2 indicates managed login branding.

Managed login requires that your user pool be configured for any feature plan other than `Lite`.

Type: Integer

Required: No

S3Bucket

The Amazon S3 bucket where the static files for this domain are stored.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 1024.

Pattern: `^[0-9A-Za-z\.\-_]*(?<!\.)$`

Required: No

Status

The domain status.

Type: String

Valid Values: `CREATING | DELETING | UPDATING | ACTIVE | FAILED`

Required: No

UserPoolId

The ID of the user pool that the domain is attached to.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

Version

The app version.

Type: String

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

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

EmailConfigurationType

The email configuration of your user pool. The email configuration type sets your preferred sending method, Amazon Region, and sender for messages from your user pool.

> **Note**
>
> Amazon Cognito can send email messages with Amazon Simple Email Service resources in the Amazon Region where you created your user pool, and in alternate Regions in some cases. For more information on the supported Regions, see Email settings for Amazon Cognito user pools.

This data type is a request parameter of CreateUserPool, UpdateUserPool, and SetUserPoolMfaConfig, and a response parameter of CreateUserPool, UpdateUserPool, and GetUserPoolMfaConfig.

Contents

ConfigurationSet

The set of configuration rules that can be applied to emails sent using Amazon Simple Email Service. A configuration set is applied to an email by including a reference to the configuration set in the headers of the email. Once applied, all of the rules in that configuration set are applied to the email. Configuration sets can be used to apply the following types of rules to emails:

Event publishing

Amazon Simple Email Service can track the number of send, delivery, open, click, bounce, and complaint events for each email sent. Use event publishing to send information about these events to other Amazon services such as and Amazon CloudWatch

IP pool management

When leasing dedicated IP addresses with Amazon Simple Email Service, you can create groups of IP addresses, called dedicated IP pools. You can then associate the dedicated IP pools with configuration sets.

Type: String

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

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

Required: No

EmailSendingAccount

Specifies whether Amazon Cognito uses its built-in functionality to send your users email messages, or uses your Amazon Simple Email Service email configuration. Specify one of the following values:

COGNITO_DEFAULT

When Amazon Cognito emails your users, it uses its built-in email functionality. When you use the default option, Amazon Cognito allows only a limited number of emails each day for your user pool. For typical production environments, the default email limit is less than the required delivery volume. To achieve a higher delivery volume, specify DEVELOPER to use your Amazon SES email configuration.

To look up the email delivery limit for the default option, see Limits in the *Amazon Cognito Developer Guide*.

The default FROM address is `no-reply@verificationemail.com`. To customize the FROM address, provide the Amazon Resource Name (ARN) of an Amazon SES verified email address for the `SourceArn` parameter.

DEVELOPER

When Amazon Cognito emails your users, it uses your Amazon SES configuration. Amazon Cognito calls Amazon SES on your behalf to send email from your verified email address. When you use this option, the email delivery limits are the same limits that apply to your Amazon SES verified email address in your Amazon Web Services account.

If you use this option, provide the ARN of an Amazon SES verified email address for the `SourceArn` parameter.

Before Amazon Cognito can email your users, it requires additional permissions to call Amazon SES on your behalf. When you update your user pool with this option, Amazon Cognito creates a *service-linked role*, which is a type of role in your Amazon Web Services account. This role contains the permissions that allow you to access Amazon SES and send email messages from your email address. For more information about the service-linked role

that Amazon Cognito creates, see Using Service-Linked Roles for Amazon Cognito in the *Amazon Cognito Developer Guide*.

Type: String

Valid Values: `COGNITO_DEFAULT | DEVELOPER`

Required: No

From

Either the sender's email address or the sender's name with their email address. For example, `testuser@example.com` or `Test User <testuser@example.com>`. This address appears before the body of the email.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ReplyToEmailAddress

The destination to which the receiver of the email should reply.

Type: String

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+@[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

SourceArn

The ARN of a verified email address or an address from a verified domain in Amazon SES. You can set a `SourceArn` email from a verified domain only with an API request. You can set a verified email address, but not an address in a verified domain, in the Amazon Cognito console. Amazon Cognito uses the email address that you provide in one of the following ways, depending on the value that you specify for the `EmailSendingAccount` parameter:

- If you specify `COGNITO_DEFAULT`, Amazon Cognito uses this address as the custom FROM address when it emails your users using its built-in email account.
- If you specify `DEVELOPER`, Amazon Cognito emails your users with this address by calling Amazon SES on your behalf.

The Region value of the `SourceArn` parameter must indicate a supported Amazon Region of your user pool. Typically, the Region in the `SourceArn` and the user pool Region are the same. For more information, see Amazon SES email configuration regions in the Amazon Cognito Developer Guide.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

EmailMfaConfigType

Sets or shows configuration for user pool email message MFA and sign-in with one-time passwords (OTPs). Includes the subject and body of the email message template for sign-in and MFA messages. To activate this setting, your user pool must be in the Essentials tier or higher.

This data type is a request parameter of SetUserPoolMfaConfig and a response parameter of GetUserPoolMfaConfig.

Contents

Message

The template for the email messages that your user pool sends to users with codes for MFA and sign-in with email OTPs. The message must contain the `{####}` placeholder. In the message, Amazon Cognito replaces this placeholder with the code. If you don't provide this parameter, Amazon Cognito sends messages in the default format.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*\{####\}[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*`

Required: No

Subject

The subject of the email messages that your user pool sends to users with codes for MFA and email OTP sign-in.

Type: String

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

EmailMfaSettingsType

User preferences for multi-factor authentication with email messages. Activates or deactivates email MFA and sets it as the preferred MFA method when multiple methods are available. To activate this setting, your user pool must be in the Essentials tier or higher.

This data type is a request parameter of SetUserMFAPreference and AdminSetUserMFAPreference.

Contents

Enabled

Specifies whether email message MFA is active for a user. When the value of this parameter is `Enabled`, the user will be prompted for MFA during all sign-in attempts, unless device tracking is turned on and the device has been trusted.

Type: Boolean

Required: No

PreferredMfa

Specifies whether email message MFA is the user's preferred method.

Type: Boolean

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

EventContextDataType

The context data that your application submitted in an authentication request with threat protection, as displayed in an `AdminListUserAuthEvents` response.

Contents

City

The user's city.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Country

The user's country.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

DeviceName

The user's device name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

IpAddress

The source IP address of your user's device.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

Timezone

The user's time zone.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

EventFeedbackType

The feedback that your application submitted to a threat protection event log, as displayed in an `AdminListUserAuthEvents` response.

Contents

FeedbackValue

Your feedback to the authentication event. When you provide a `FeedbackValue` value of `valid`, you tell Amazon Cognito that you trust a user session where Amazon Cognito has evaluated some level of risk. When you provide a `FeedbackValue` value of `invalid`, you tell Amazon Cognito that you don't trust a user session, or you don't believe that Amazon Cognito evaluated a high-enough risk level.

Type: String

Valid Values: `Valid | Invalid`

Required: Yes

Provider

The submitter of the event feedback. For example, if you submit event feedback in the Amazon Cognito console, this value is `Admin`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

FeedbackDate

The date that you or your user submitted the feedback.

Type: Timestamp

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

EventRiskType

The risk evaluation by adaptive authentication, as displayed in an `AdminListUserAuthEvents` response. Contains evaluations of compromised-credentials detection and assessed risk level and action taken by adaptive authentication.

Contents

CompromisedCredentialsDetected

Indicates whether compromised credentials were detected during an authentication event.

Type: Boolean

Required: No

RiskDecision

The action taken by adaptive authentication. If `NoRisk`, your user pool took no action. If `AccountTakeover`, your user pool applied the adaptive authentication automated response that you configured. If `Block`, your user pool prevented the attempt.

Type: String

Valid Values: `NoRisk | AccountTakeover | Block`

Required: No

RiskLevel

The risk level that adaptive authentication assessed for the authentication event.

Type: String

Valid Values: `Low | Medium | High`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

FirehoseConfigurationType

Configuration for the Amazon Data Firehose stream destination of user activity log export with threat protection.

Contents

StreamArn

The ARN of an Amazon Data Firehose stream that's the destination for threat protection log export.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

GroupType

A user pool group. Contains details about the group and the way that it contributes to IAM role decisions with identity pools. Identity pools can make decisions about the IAM role to assign based on groups: users get credentials for the role associated with their highest-priority group.

This data type is a response parameter of AdminListGroupsForUser, CreateGroup, GetGroup, ListGroups, and UpdateGroup.

Contents

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

Description

A friendly description of the group.

Type: String

Length Constraints: Maximum length of 2048.

Required: No

GroupName

The name of the group.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

Precedence

A non-negative integer value that specifies the precedence of this group relative to the other groups that a user can belong to in the user pool. Zero is the highest precedence value. Groups with lower `Precedence` values take precedence over groups with higher ornull `Precedence` values. If a user belongs to two or more groups, it is the group with the lowest precedence value whose role ARN is given in the user's tokens for the `cognito:roles` and `cognito:preferred_role` claims.

Two groups can have the same `Precedence` value. If this happens, neither group takes precedence over the other. If two groups with the same `Precedence` have the same role ARN, that role is used in the `cognito:preferred_role` claim in tokens for users in each group. If the two groups have different role ARNs, the `cognito:preferred_role` claim isn't set in users' tokens.

The default `Precedence` value is `null`.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

RoleArn

The ARN of the IAM role associated with the group. If a group has the highest priority of a user's groups, users who authenticate with an identity pool get credentials for the `RoleArn` that's associated with the group.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

UserPoolId

The ID of the user pool that contains the group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

HttpHeader

The HTTP header in the `ContextData` parameter.

This data type is a request parameter of server-side authentication operations like AdminInitiateAuth and AdminRespondToAuthChallenge.

Contents

headerName

The header name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

headerValue

The header value.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

IdentityProviderType

A user pool identity provider (IdP). Contains information about a third-party IdP to a user pool, the attributes that it populates to user profiles, and the trust relationship between the IdP and your user pool.

This data type is a response parameter of CreateIdentityProvider, DescribeIdentityProvider, GetIdentityProviderByIdentifier, and UpdateIdentityProvider.

Contents

AttributeMapping

A mapping of IdP attributes to standard and custom user pool attributes.

Type: String to string map

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

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

IdpIdentifiers

A list of IdP identifiers. IdP identifiers are strings that represent friendly names or domain names of IdPs, for example `MyIdP` or `auth.example.com`. You can choose to route user authorization requests to the right IdP with either IdP identifiers or IdP names. For more information, see `identity_provider` and `idp_identifier` at Authorize endpoint.

Type: Array of strings

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

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

Pattern: `[\w\s+=.@-]+`

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

ProviderDetails

The scopes, URLs, and identifiers for your external identity provider. The following examples describe the provider detail keys for each IdP type. These values and their schema are subject to change. Social IdP `authorize_scopes` values must match the values listed here.

OpenID Connect (OIDC)

Amazon Cognito accepts the following elements when it can't discover endpoint URLs from `oidc_issuer`: `attributes_url`, `authorize_url`, `jwks_uri`, `token_url`.

Create or update request: `"ProviderDetails": { "attributes_request_method": "GET", "attributes_url": "https://auth.example.com/userInfo", "authorize_scopes": "openid profile email", "authorize_url": "https://auth.example.com/authorize", "client_id": "1example23456789", "client_secret": "provider-app-client-secret", "jwks_uri": "https://auth.example.com/.well-known/jwks.json", "oidc_issuer": "https://auth.example.com", "token_url": "https://example.com/token" }`

Describe response: `"ProviderDetails": { "attributes_request_method": "GET", "attributes_url": "https://auth.example.com/userInfo", "attributes_url_add_attributes": "false", "authorize_scopes": "openid profile email", "authorize_url": "https://auth.example.com/authorize", "client_id": "1example23456789", "client_secret": "provider-app-`

```
client-secret", "jwks_uri": "https://auth.example.com/.well-known/
jwks.json", "oidc_issuer": "https://auth.example.com", "token_url":
"https://example.com/token" }
```

SAML

Create or update request with Metadata URL: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "MetadataURL": "https://auth.example.com/sso/saml/metadata", "RequestSigningAlgorithm": "rsa-sha256" }`

Create or update request with Metadata file: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "MetadataFile": "[metadata XML]", "RequestSigningAlgorithm": "rsa-sha256" }`

The value of `MetadataFile` must be the plaintext metadata document with all quote (") characters escaped by backslashes.

Describe response: `"ProviderDetails": { "IDPInit": "true", "IDPSignout": "true", "EncryptedResponses" : "true", "ActiveEncryptionCertificate": "[certificate]", "MetadataURL": "https://auth.example.com/sso/saml/metadata", "RequestSigningAlgorithm": "rsa-sha256", "SLORedirectBindingURI": "https://auth.example.com/slo/saml", "SSORedirectBindingURI": "https://auth.example.com/sso/saml" }`

LoginWithAmazon

Create or update request: `"ProviderDetails": { "authorize_scopes": "profile postal_code", "client_id": "amzn1.application-oa2-client.1example23456789", "client_secret": "provider-app-client-secret"`

Describe response: `"ProviderDetails": { "attributes_url": "https://api.amazon.com/user/profile", "attributes_url_add_attributes": "false", "authorize_scopes": "profile postal_code", "authorize_url": "https://www.amazon.com/ap/oa", "client_id": "amzn1.application-oa2-client.1example23456789", "client_secret": "provider-app-client-secret", "token_request_method": "POST", "token_url": "https://api.amazon.com/auth/o2/token" }`

Google

Create or update request: `"ProviderDetails": { "authorize_scopes": "email profile openid", "client_id": "1example23456789.apps.googleusercontent.com", "client_secret": "provider-app-client-secret" }`

Describe response: `"ProviderDetails": { "attributes_url": "https://people.googleapis.com/v1/people/me?personFields=", "attributes_url_add_attributes": "true", "authorize_scopes": "email profile openid", "authorize_url": "https://accounts.google.com/o/oauth2/v2/auth", "client_id": "1example23456789.apps.googleusercontent.com", "client_secret": "provider-app-client-secret", "oidc_issuer": "https://accounts.google.com", "token_request_method": "POST", "token_url": "https://www.googleapis.com/oauth2/v4/token" }`

SignInWithApple

Create or update request: `"ProviderDetails": { "authorize_scopes": "email name", "client_id": "com.example.cognito", "private_key": "1EXAMPLE", "key_id": "2EXAMPLE", "team_id": "3EXAMPLE" }`

Describe response: `"ProviderDetails": { "attributes_url_add_attributes": "false", "authorize_scopes": "email name", "authorize_url": "https://appleid.apple.com/auth/authorize", "client_id": "com.example.cognito", "key_id": "1EXAMPLE", "oidc_issuer": "https://appleid.apple.com", "team_id": "2EXAMPLE", "token_request_method": "POST", "token_url": "https://appleid.apple.com/auth/token" }`

Facebook

Create or update request: `"ProviderDetails": { "api_version": "v17.0", "authorize_scopes": "public_profile, email", "client_id": "1example23456789", "client_secret": "provider-app-client-secret" }`

Describe response: `"ProviderDetails": { "api_version": "v17.0", "attributes_url": "https://graph.facebook.com/v17.0/me?fields=", "attributes_url_add_attributes": "true", "authorize_scopes": "public_profile, email", "authorize_url": "https://www.facebook.com/`

```
v17.0/dialog/oauth", "client_id": "1example23456789", "client_secret":
"provider-app-client-secret", "token_request_method": "GET",
"token_url": "https://graph.facebook.com/v17.0/oauth/access_token" }
```

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 131072.

Value Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ProviderName

A friendly name for the IdP.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: No

ProviderType

The type of IdP. Either SAML, OIDC, or a named social identity provider.

Type: String

Valid Values: `SAML | Facebook | Google | LoginWithAmazon | SignInWithApple | OIDC`

Required: No

UserPoolId

The ID of the user pool associated with the IdP.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

LambdaConfigType

A collection of user pool Lambda triggers. Amazon Cognito invokes triggers at several possible stages of user pool operations. Triggers can modify the outcome of the operations that invoked them.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

CreateAuthChallenge

The configuration of a create auth challenge Lambda trigger, one of three triggers in the sequence of the custom authentication challenge triggers.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

CustomEmailSender

The configuration of a custom email sender Lambda trigger. This trigger routes all email notifications from a user pool to a Lambda function that delivers the message using custom logic.

Type: CustomEmailLambdaVersionConfigType object

Required: No

CustomMessage

A custom message Lambda trigger. This trigger is an opportunity to customize all SMS and email messages from your user pool. When a custom message trigger is active, your user pool routes all messages to a Lambda function that returns a runtime-customized message subject and body for your user pool to deliver to a user.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

CustomSMSSender

The configuration of a custom SMS sender Lambda trigger. This trigger routes all SMS notifications from a user pool to a Lambda function that delivers the message using custom logic.

Type: CustomSMSLambdaVersionConfigType object

Required: No

DefineAuthChallenge

The configuration of a define auth challenge Lambda trigger, one of three triggers in the sequence of the custom authentication challenge triggers.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

KMSKeyID

The ARN of an KMS key. Amazon Cognito uses the key to encrypt codes and temporary passwords sent to custom sender Lambda triggers.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

PostAuthentication

The configuration of a post authentication Lambda trigger in a user pool. This trigger can take custom actions after a user signs in.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

PostConfirmation

The configuration of a post confirmation Lambda trigger in a user pool. This trigger can take custom actions after a user confirms their user account and their email address or phone number.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

PreAuthentication

The configuration of a pre authentication trigger in a user pool. This trigger can evaluate and modify user sign-in events.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

PreSignUp

The configuration of a pre sign-up Lambda trigger in a user pool. This trigger evaluates new users and can bypass confirmation, link a federated user profile, or block sign-up requests.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

PreTokenGeneration

The legacy configuration of a pre token generation Lambda trigger in a user pool.

Set this parameter for legacy purposes. If you also set an ARN in `PreTokenGenerationConfig`, its value must be identical to `PreTokenGeneration`. For new instances of pre token generation triggers, set the `LambdaArn` of `PreTokenGenerationConfig`.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

PreTokenGenerationConfig

The detailed configuration of a pre token generation Lambda trigger in a user pool. If you also set an ARN in `PreTokenGeneration`, its value must be identical to `PreTokenGenerationConfig`.

Type: PreTokenGenerationVersionConfigType object

Required: No

UserMigration

The configuration of a migrate user Lambda trigger in a user pool. This trigger can create user profiles when users sign in or attempt to reset their password with credentials that don't exist yet.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

VerifyAuthChallengeResponse

The configuration of a verify auth challenge Lambda trigger, one of three triggers in the sequence of the custom authentication challenge triggers.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

LogConfigurationType

The configuration of user event logs to an external Amazon Web Services service like Amazon Data Firehose, Amazon S3, or Amazon CloudWatch Logs.

This data type is a request parameter of SetLogDeliveryConfiguration and a response parameter of GetLogDeliveryConfiguration.

Contents

EventSource

The source of events that your user pool sends for logging. To send error-level logs about user notification activity, set to `userNotification`. To send info-level logs about threat-protection user activity in user pools with the Plus feature plan, set to `userAuthEvents`.

Type: String

Valid Values: `userNotification | userAuthEvents`

Required: Yes

LogLevel

The `errorlevel` selection of logs that a user pool sends for detailed activity logging. To send `userNotification` activity with information about message delivery, choose `ERROR` with `CloudWatchLogsConfiguration`. To send `userAuthEvents` activity with user logs from threat protection with the Plus feature plan, choose `INFO` with one of `CloudWatchLogsConfiguration`, `FirehoseConfiguration`, or `S3Configuration`.

Type: String

Valid Values: `ERROR | INFO`

Required: Yes

CloudWatchLogsConfiguration

The CloudWatch log group destination of user pool detailed activity logs, or of user activity log export with threat protection.

Type: CloudWatchLogsConfigurationType object

Required: No

FirehoseConfiguration

The Amazon Data Firehose stream destination of user activity log export with threat protection. To activate this setting, your user pool must be on the Plus tier.

Type: FirehoseConfigurationType object

Required: No

S3Configuration

The Amazon S3 bucket destination of user activity log export with threat protection. To activate this setting, your user pool must be on the Plus tier.

Type: S3ConfigurationType object

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

LogDeliveryConfigurationType

The logging parameters of a user pool, as returned in the response to a `GetLogDeliveryConfiguration` request.

Contents

LogConfigurations

A logging destination of a user pool. User pools can have multiple logging destinations for message-delivery and user-activity logs.

Type: Array of LogConfigurationType objects

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Required: Yes

UserPoolId

The ID of the user pool where you configured logging.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: Yes

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

ManagedLoginBrandingType

A managed login branding style that's assigned to a user pool app client.

This data type is a response parameter of CreateManagedLoginBranding, UpdateManagedLoginBranding, DescribeManagedLoginBranding, and DescribeManagedLoginBrandingByClient.

Contents

Assets

An array of image files that you want to apply to roles like backgrounds, logos, and icons. Each object must also indicate whether it is for dark mode, light mode, or browser-adaptive mode.

Type: Array of AssetType objects

Array Members: Minimum number of 0 items. Maximum number of 40 items.

Required: No

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

ManagedLoginBrandingId

The ID of the managed login branding style.

Type: String

Pattern: `^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[4][0-9a-fA-F]{3}-[89abAB][0-9a-fA-F]{3}-[0-9a-fA-F]{12}$`

Required: No

Settings

A JSON file, encoded as a `Document` type, with the the settings that you want to apply to your style.

Type: JSON value

Required: No

UseCognitoProvidedValues

When true, applies the default branding style options. This option reverts to default style options that are managed by Amazon Cognito. You can modify them later in the branding editor.

When you specify `true` for this option, you must also omit values for `Settings` and `Assets` in the request.

Type: Boolean

Required: No

UserPoolId

The user pool where the branding style is assigned.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

MessageTemplateType

The message template structure.

Contents

EmailMessage

The message template for email messages. EmailMessage is allowed only if EmailSendingAccount is DEVELOPER.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*`

Required: No

EmailSubject

The subject line for email messages. EmailSubject is allowed only if EmailSendingAccount is DEVELOPER.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s]+`

Required: No

SMSMessage

The message template for SMS messages.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `(?s).*`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

MFAOptionType

This data type is no longer supported. Applies only to SMS multi-factor authentication (MFA) configurations. Does not apply to time-based one-time password (TOTP) software token MFA configurations.

To set either type of MFA configuration, use the AdminSetUserMFAPreference or SetUserMFAPreference actions.

To look up information about either type of MFA configuration, use the AdminGetUser:UserMFASettingList or GetUser:UserMFASettingList responses.

Contents

AttributeName

The attribute name of the MFA option type. The only valid value is `phone_number`.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

DeliveryMedium

The delivery medium to send the MFA code. You can use this parameter to set only the `SMS` delivery medium value.

Type: String

Valid Values: `SMS | EMAIL`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

NewDeviceMetadataType

Information that your user pool responds with in `AuthenticationResult`when you configure it to remember devices and a user signs in with an unrecognized device. Amazon Cognito presents a new device key that you can use to set up device authentication in a "Remember me on this device" authentication model.

This data type is a response parameter of authentication operations like InitiateAuth, AdminInitiateAuth, RespondToAuthChallenge, and AdminRespondToAuthChallenge.

Contents

DeviceGroupKey

The device group key, an identifier used in generating the `DEVICE_PASSWORD_VERIFIER` for device SRP authentication.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

DeviceKey

The device key, an identifier used in generating the `DEVICE_PASSWORD_VERIFIER` for device SRP authentication.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

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

Required: No

See Also

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

- Amazon SDK for C++

- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

NotifyConfigurationType

The configuration for Amazon SES email messages that threat protection sends to a user when your adaptive authentication automated response has a *Notify* action.

This data type is a request parameter of SetRiskConfiguration and a response parameter of DescribeRiskConfiguration.

Contents

SourceArn

The Amazon Resource Name (ARN) of the identity that is associated with the sending authorization policy. This identity permits Amazon Cognito to send for the email address specified in the `From` parameter.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

BlockEmail

The template for the email message that your user pool sends when a detected risk event is blocked.

Type: NotifyEmailType object

Required: No

From

The email address that sends the email message. The address must be either individually verified with Amazon Simple Email Service, or from a domain that has been verified with Amazon SES.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

MfaEmail

The template for the email message that your user pool sends when MFA is challenged in response to a detected risk.

Type: NotifyEmailType object

Required: No

NoActionEmail

The template for the email message that your user pool sends when no action is taken in response to a detected risk.

Type: NotifyEmailType object

Required: No

ReplyTo

The reply-to email address of an email template.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

NotifyEmailType

The template for email messages that threat protection sends to a user when your threat protection automated response has a *Notify* action.

This data type is a request parameter of SetRiskConfiguration and a response parameter of DescribeRiskConfiguration.

Contents

Subject

The subject of the threat protection email notification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s]+`

Required: Yes

HtmlBody

The body of an email notification formatted in HTML. Choose an `HtmlBody` or a `TextBody` to send an HTML-formatted or plaintext message, respectively.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]+`

Required: No

TextBody

The body of an email notification formatted in plaintext. Choose an `HtmlBody` or a `TextBody` to send an HTML-formatted or plaintext message, respectively.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

NumberAttributeConstraintsType

The minimum and maximum values of an attribute that is of the number type, for example `custom:age`.

This data type is part of SchemaAttributeType. It defines the length constraints on number-type attributes that you configure in CreateUserPool and UpdateUserPool, and displays the length constraints of all number-type attributes in the response to DescribeUserPool

Contents

MaxValue

The maximum length of a number attribute value. Must be a number less than or equal to `2^1023`, represented as a string with a length of 131072 characters or fewer.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

MinValue

The minimum value of an attribute that is of the number data type.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

PasswordPolicyType

The password policy settings for a user pool, including complexity, history, and length requirements.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

MinimumLength

The minimum length of the password in the policy that you have set. This value can't be less than 6.

Type: Integer

Valid Range: Minimum value of 6. Maximum value of 99.

Required: No

PasswordHistorySize

The number of previous passwords that you want Amazon Cognito to restrict each user from reusing. Users can't set a password that matches any of n previous passwords, where n is the value of `PasswordHistorySize`.

Password history isn't enforced and isn't displayed in DescribeUserPool responses when you set this value to `0` or don't provide it. To activate this setting, your user pool must be in the Essentials tier or higher.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 24.

Required: No

RequireLowercase

The requirement in a password policy that users must include at least one lowercase letter in their password.

Type: Boolean

Required: No

RequireNumbers

The requirement in a password policy that users must include at least one number in their password.

Type: Boolean

Required: No

RequireSymbols

The requirement in a password policy that users must include at least one symbol in their password.

Type: Boolean

Required: No

RequireUppercase

The requirement in a password policy that users must include at least one uppercase letter in their password.

Type: Boolean

Required: No

TemporaryPasswordValidityDays

The number of days a temporary password is valid in the password policy. If the user doesn't sign in during this time, an administrator must reset their password. Defaults to 7. If you submit a value of `0`, Amazon Cognito treats it as a null value and sets `TemporaryPasswordValidityDays` to its default value.

> **Note**
>
> When you set `TemporaryPasswordValidityDays` for a user pool, you can no longer set a value for the legacy `UnusedAccountValidityDays` parameter in that user pool.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 365.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

PreTokenGenerationVersionConfigType

The properties of a pre token generation Lambda trigger.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

LambdaArn

The Amazon Resource Name (ARN) of the function that you want to assign to your Lambda trigger.

This parameter and the `PreTokenGeneration` property of `LambdaConfig` have the same value. For new instances of pre token generation triggers, set `LambdaArn`.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

LambdaVersion

The user pool trigger version of the request that Amazon Cognito sends to your Lambda function. Higher-numbered versions add fields that support new features.

Type: String

Valid Values: `V1_0 | V2_0 | V3_0`

Required: Yes

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

ProviderDescription

The details of a user pool identity provider (IdP), including name and type.

This data type is a response parameter of ListIdentityProviders.

Contents

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

ProviderName

The name of the IdP, for example `MySAMLProvider`.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: No

ProviderType

The type of the provider, for example `SAML`. Amazon Cognito supports SAML 2.0, OIDC, and social IdPs. User pools list supported social IdPs by name in this response parameter: Facebook, Google, Login with Amazon, and Sign in with Apple.

Type: String

Valid Values: `SAML | Facebook | Google | LoginWithAmazon | SignInWithApple | OIDC`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

ProviderUserIdentifierType

The characteristics of a source or destination user for linking a federated user profile to a local user profile.

This data type is a request parameter of AdminLinkProviderForUser and AdminDisableProviderForUser.

Contents

ProviderAttributeName

The name of the provider attribute to link to, such as `NameID`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ProviderAttributeValue

The value of the provider attribute to link to, such as `xxxxx_account`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

ProviderName

The name of the provider, such as Facebook, Google, or Login with Amazon.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

RecoveryOptionType

A recovery option for a user. The `AccountRecoverySettingType` data type is an array of this object. Each `RecoveryOptionType` has a priority property that determines whether it is a primary or secondary option.

For example, if `verified_email` has a priority of `1` and `verified_phone_number` has a priority of 2, your user pool sends account-recovery messages to a verified email address but falls back to an SMS message if the user has a verified phone number. The `admin_only` option prevents self-service account recovery.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

Name

The recovery method that this object sets a recovery option for.

Type: String

Valid Values: `verified_email | verified_phone_number | admin_only`

Required: Yes

Priority

Your priority preference for using the specified attribute in account recovery. The highest priority is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 2.

Required: Yes

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

RefreshTokenRotationType

The configuration of your app client for refresh token rotation. When enabled, your app client issues new ID, access, and refresh tokens when users renew their sessions with refresh tokens. When disabled, token refresh issues only ID and access tokens.

Refresh token rotation must be completed with GetTokensFromRefreshToken. With refresh token rotation disabled, you can complete token refresh with `GetTokensFromRefreshToken` and with `REFRESH_TOKEN_AUTH` in InitiateAuth:AuthFlow and AdminInitiateAuth:AuthFlow.

This data type is a request parameter of CreateUserPoolClient and UpdateUserPoolClient, and a response parameter of DescribeUserPoolClient.

Contents

Feature

The state of refresh token rotation for the current app client.

Type: String

Valid Values: `ENABLED | DISABLED`

Required: Yes

RetryGracePeriodSeconds

When you request a token refresh with `GetTokensFromRefreshToken`, the original refresh token that you're rotating out can remain valid for a period of time of up to 60 seconds. This allows for client-side retries. When `RetryGracePeriodSeconds` is `0`, the grace period is disabled and a successful request immediately invalidates the submitted refresh token.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 60.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

ResourceServerScopeType

One custom scope associated with a user pool resource server. This data type is a member of `ResourceServerScopeType`. For more information, see Scopes, M2M, and API authorization with resource servers.

This data type is a request parameter of CreateResourceServer and a response parameter of DescribeResourceServer.

Contents

ScopeDescription

A friendly description of a custom scope.

Type: String

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

Required: Yes

ScopeName

The name of the scope. Amazon Cognito renders custom scopes in the format `resourceServerIdentifier/ScopeName`. For example, if this parameter is `exampleScope` in the resource server with the identifier `exampleResourceServer`, you request and receive the scope `exampleResourceServer/exampleScope`.

Type: String

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

Pattern: `[\x21\x23-\x2E\x30-\x5B\x5D-\x7E]+`

Required: Yes

See Also

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

- Amazon SDK for C++

- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

ResourceServerType

The details of a resource server configuration and associated custom scopes in a user pool.

This data type is a request parameter of CreateResourceServer and a response parameter of DescribeResourceServer.

Contents

Identifier

A unique resource server identifier for the resource server. The identifier can be an API friendly name like `solar-system-data`. You can also set an API URL like `https://solar-system-data-api.example.com` as your identifier.

Amazon Cognito represents scopes in the access token in the format `$resource-server-identifier/$scope`. Longer scope-identifier strings increase the size of your access tokens.

Type: String

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

Pattern: `[\x21\x23-\x5B\x5D-\x7E]+`

Required: No

Name

The name of the resource server.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: No

Scopes

A list of scopes that are defined for the resource server.

Type: Array of ResourceServerScopeType objects

Array Members: Maximum number of 100 items.

Required: No

UserPoolId

The ID of the user pool that contains the resource server configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

RiskConfigurationType

The settings of risk configuration for threat protection with threat protection in a user pool.

This data type is a response parameter of DescribeRiskConfiguration and SetRiskConfiguration.

Contents

AccountTakeoverRiskConfiguration

The settings for automated responses and notification templates for adaptive authentication with threat protection.

Type: AccountTakeoverRiskConfigurationType object

Required: No

ClientId

The app client where this configuration is applied. When this parameter isn't present, the risk configuration applies to all user pool app clients that don't have client-level settings.

Type: String

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

Pattern: `[\w+]+`

Required: No

CompromisedCredentialsRiskConfiguration

Settings for compromised-credentials actions and authentication types with threat protection in full-function `ENFORCED` mode.

Type: CompromisedCredentialsRiskConfigurationType object

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

RiskExceptionConfiguration

Exceptions to the risk evaluation configuration, including always-allow and always-block IP address ranges.

Type: RiskExceptionConfigurationType object

Required: No

UserPoolId

The ID of the user pool that has the risk configuration applied.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

RiskExceptionConfigurationType

Exceptions to the risk evaluation configuration, including always-allow and always-block IP address ranges.

This data type is a request parameter of SetRiskConfiguration and a response parameter of DescribeRiskConfiguration.

Contents

BlockedIPRangeList

An always-block IP address list. Overrides the risk decision and always blocks authentication requests. This parameter is displayed and set in CIDR notation.

Type: Array of strings

Array Members: Maximum number of 200 items.

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

SkippedIPRangeList

An always-allow IP address list. Risk detection isn't performed on the IP addresses in this range list. This parameter is displayed and set in CIDR notation.

Type: Array of strings

Array Members: Maximum number of 200 items.

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++

- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

S3ConfigurationType

Configuration for the Amazon S3 bucket destination of user activity log export with threat protection.

Contents

BucketArn

The ARN of an Amazon S3 bucket that's the destination for threat protection log export.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 1024.

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:::[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

SchemaAttributeType

A list of the user attributes and their properties in your user pool. The attribute schema contains standard attributes, custom attributes with a `custom:` prefix, and developer attributes with a `dev:` prefix. For more information, see User pool attributes.

Developer-only `dev:` attributes are a legacy feature of user pools, and are read-only to all app clients. You can create and update developer-only attributes only with IAM-authenticated API operations. Use app client read/write permissions instead.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

AttributeDataType

The data format of the values for your attribute. When you choose an `AttributeDataType`, Amazon Cognito validates the input against the data type. A custom attribute value in your user's ID token is always a string, for example `"custom:isMember" : "true"` or `"custom:YearsAsMember" : "12"`.

Type: String

Valid Values: `String | Number | DateTime | Boolean`

Required: No

DeveloperOnlyAttribute

> **Note**
>
> You should use WriteAttributes in the user pool client to control how attributes can be mutated for new use cases instead of using `DeveloperOnlyAttribute`.

Specifies whether the attribute type is developer only. This attribute can only be modified by an administrator. Users won't be able to modify this attribute using their access token. For example, `DeveloperOnlyAttribute` can be modified using AdminUpdateUserAttributes but can't be updated using UpdateUserAttributes.

Type: Boolean

Required: No

Mutable

Specifies whether the value of the attribute can be changed.

Any user pool attribute whose value you map from an IdP attribute must be mutable, with a parameter value of `true`. Amazon Cognito updates mapped attributes when users sign in to your application through an IdP. If an attribute is immutable, Amazon Cognito throws an error when it attempts to update the attribute. For more information, see Specifying Identity Provider Attribute Mappings for Your User Pool.

Type: Boolean

Required: No

Name

The name of your user pool attribute. When you create or update a user pool, adding a schema attribute creates a custom or developer-only attribute. When you add an attribute with a `Name` value of `MyAttribute`, Amazon Cognito creates the custom attribute `custom:MyAttribute`. When `DeveloperOnlyAttribute` is `true`, Amazon Cognito creates your attribute as `dev:MyAttribute`. In an operation that describes a user pool, Amazon Cognito returns this value as `value` for standard attributes, `custom:value` for custom attributes, and `dev:value` for developer-only attributes..

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

NumberAttributeConstraints

Specifies the constraints for an attribute of the number type.

Type: NumberAttributeConstraintsType object

Required: No

Required

Specifies whether a user pool attribute is required. If the attribute is required and the user doesn't provide a value, registration or sign-in will fail.

Type: Boolean

Required: No

StringAttributeConstraints

Specifies the constraints for an attribute of the string type.

Type: StringAttributeConstraintsType object

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

SignInPolicyType

The policy for allowed types of authentication in a user pool. To activate this setting, your user pool must be in the Essentials tier or higher.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

AllowedFirstAuthFactors

The sign-in methods that a user pool supports as the first factor. You can permit users to start authentication with a standard username and password, or with other one-time password and hardware factors.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 4 items.

Valid Values: `PASSWORD | EMAIL_OTP | SMS_OTP | WEB_AUTHN`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

SmsConfigurationType

User pool configuration for delivery of SMS messages with Amazon Simple Notification Service. To send SMS messages with Amazon SNS in the Amazon Region that you want, the Amazon Cognito user pool uses an Amazon Identity and Access Management (IAM) role in your Amazon Web Services account.

This data type is a request parameter of CreateUserPool, UpdateUserPool, and SetUserPoolMfaConfig, and a response parameter of CreateUserPool, UpdateUserPool, and GetUserPoolMfaConfig.

Contents

SnsCallerArn

The Amazon Resource Name (ARN) of the Amazon SNS caller. This is the ARN of the IAM role in your Amazon Web Services account that Amazon Cognito will use to send SMS messages. SMS messages are subject to a spending limit.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: Yes

ExternalId

The external ID provides additional security for your IAM role. You can use an `ExternalId` with the IAM role that you use with Amazon SNS to send SMS messages for your user pool. If you provide an `ExternalId`, your Amazon Cognito user pool includes it in the request to assume your IAM role. You can configure the role trust policy to require that Amazon Cognito, and any principal, provide the `ExternalID`. If you use the Amazon Cognito Management Console to create a role for SMS multi-factor authentication (MFA), Amazon Cognito creates a role with the required permissions and a trust policy that demonstrates use of the `ExternalId`.

For more information about the `ExternalId` of a role, see How to use an external ID when granting access to your Amazon resources to a third party.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

SnsRegion

The Amazon Region to use with Amazon SNS integration. You can choose the same Region as your user pool, or a supported **Legacy Amazon SNS alternate Region**.

Amazon Cognito resources in the Asia Pacific (Seoul) Amazon Region must use your Amazon SNS configuration in the Asia Pacific (Tokyo) Region. For more information, see SMS message settings for Amazon Cognito user pools.

Type: String

Length Constraints: Minimum length of 5. Maximum length of 32.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

SmsMfaConfigType

The configuration of multi-factor authentication (MFA) with SMS messages in a user pool.

This data type is a request parameter of SetUserPoolMfaConfig and a response parameter of GetUserPoolMfaConfig.

Contents

SmsAuthenticationMessage

The SMS authentication message that will be sent to users with the code they must sign in with. The message must contain the `{####}` placeholder. Your user pool replaces the placeholder with the MFA code. If this parameter isn't provided, your user pool sends a default message.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `.*\{####\}.*`

Required: No

SmsConfiguration

User pool configuration for delivery of SMS messages with Amazon Simple Notification Service. To send SMS messages with Amazon SNS in the Amazon Region that you want, the Amazon Cognito user pool uses an Amazon Identity and Access Management (IAM) role in your Amazon Web Services account.

You can set `SmsConfiguration` in `CreateUserPool` and `UpdateUserPool`, or in `SetUserPoolMfaConfig`.

Type: SmsConfigurationType object

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

SMSMfaSettingsType

A user's preference for using SMS message multi-factor authentication (MFA). Turns SMS MFA on and off, and can set SMS as preferred when other MFA options are available. You can't turn off SMS MFA for any of your users when MFA is required in your user pool; you can only set the type that your user prefers.

This data type is a request parameter of SetUserMFAPreference and AdminSetUserMFAPreference.

Contents

Enabled

Specifies whether SMS message MFA is activated. If an MFA type is activated for a user, the user will be prompted for MFA during all sign-in attempts, unless device tracking is turned on and the device has been trusted.

Type: Boolean

Required: No

PreferredMfa

Specifies whether SMS is the preferred MFA method. If true, your user pool prompts the specified user for a code delivered by SMS message after username-password sign-in succeeds.

Type: Boolean

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

SoftwareTokenMfaConfigType

Settings for time-based one-time password (TOTP) multi-factor authentication (MFA) in a user pool. Enables and disables availability of this feature.

This data type is a request parameter of SetUserPoolMfaConfig and a response parameter of GetUserPoolMfaConfig.

Contents

Enabled

The activation state of TOTP MFA.

Type: Boolean

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

SoftwareTokenMfaSettingsType

A user's preference for using time-based one-time password (TOTP) multi-factor authentication (MFA). Turns TOTP MFA on and off, and can set TOTP as preferred when other MFA options are available. You can't turn off TOTP MFA for any of your users when MFA is required in your user pool; you can only set the type that your user prefers.

This data type is a request parameter of SetUserMFAPreference and AdminSetUserMFAPreference.

Contents

Enabled

Specifies whether software token MFA is activated. If an MFA type is activated for a user, the user will be prompted for MFA during all sign-in attempts, unless device tracking is turned on and the device has been trusted.

Type: Boolean

Required: No

PreferredMfa

Specifies whether software token MFA is the preferred MFA method.

Type: Boolean

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

StringAttributeConstraintsType

The minimum and maximum length values of an attribute that is of the string type, for example `custom:department`.

This data type is part of SchemaAttributeType. It defines the length constraints on string-type attributes that you configure in CreateUserPool and UpdateUserPool, and displays the length constraints of all string-type attributes in the response to DescribeUserPool

Contents

MaxLength

The maximum length of a string attribute value. Must be a number less than or equal to `2^1023`, represented as a string with a length of 131072 characters or fewer.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

MinLength

The minimum length of a string attribute value.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

TokenValidityUnitsType

The time units that, with `IdTokenValidity`, `AccessTokenValidity`, and `RefreshTokenValidity`, set and display the duration of ID, access, and refresh tokens for an app client. You can assign a separate token validity unit to each type of token.

This data type is a request parameter of CreateUserPoolClient and UpdateUserPoolClient, and a response parameter of DescribeUserPoolClient.

Contents

AccessToken

A time unit for the value that you set in the `AccessTokenValidity` parameter. The default `AccessTokenValidity` time unit is `hours`. `AccessTokenValidity` duration can range from five minutes to one day.

Type: String

Valid Values: `seconds | minutes | hours | days`

Required: No

IdToken

A time unit for the value that you set in the `IdTokenValidity` parameter. The default `IdTokenValidity` time unit is `hours`. `IdTokenValidity` duration can range from five minutes to one day.

Type: String

Valid Values: `seconds | minutes | hours | days`

Required: No

RefreshToken

A time unit for the value that you set in the `RefreshTokenValidity` parameter. The default `RefreshTokenValidity` time unit is `days`. `RefreshTokenValidity` duration can range from 60 minutes to 10 years.

Type: String

Valid Values: `seconds | minutes | hours | days`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UICustomizationType

A container for the UI customization information for the hosted UI in a user pool.

This data type is a response parameter of DescribeUserPoolClient.

Contents

ClientId

The app client ID for your UI customization. When this value isn't present, the customization applies to all user pool app clients that don't have client-level settings..

Type: String

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

Pattern: `[\w+]+`

Required: No

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

CSS

The CSS values in the UI customization.

To get a template with your UI customization options, make a GetUICustomization request.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

CSSVersion

The CSS version number.

Type: String

Required: No

ImageUrl

A URL path to the hosted logo image of your UI customization.

Type: String

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

UserPoolId

The ID of the user pool with hosted UI customizations.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

See Also

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

- Amazon SDK for C++

- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserAttributeUpdateSettingsType

The settings for updates to user attributes. These settings include the property `AttributesRequireVerificationBeforeUpdate`, a user-pool setting that tells Amazon Cognito how to handle changes to the value of your users' email address and phone number attributes. For more information, see Verifying updates to email addresses and phone numbers.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

AttributesRequireVerificationBeforeUpdate

Requires that your user verifies their email address, phone number, or both before Amazon Cognito updates the value of that attribute. When you update a user attribute that has this option activated, Amazon Cognito sends a verification message to the new phone number or email address. Amazon Cognito doesn't change the value of the attribute until your user responds to the verification message and confirms the new value.

You can verify an updated email address or phone number with a VerifyUserAttribute API request. You can also call the AdminUpdateUserAttributes API and set `email_verified` or `phone_number_verified` to true.

When `AttributesRequireVerificationBeforeUpdate` is false, your user pool doesn't require that your users verify attribute changes before Amazon Cognito updates them. In a user pool where `AttributesRequireVerificationBeforeUpdate` is false, API operations that change attribute values can immediately update a user's `email` or `phone_number` attribute.

Type: Array of strings

Valid Values: `phone_number | email`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserContextDataType

Contextual data, such as the user's device fingerprint, IP address, or location, used for evaluating the risk of an unexpected event by Amazon Cognito threat protection.

This data type is a request parameter of public-client authentication operations like InitiateAuth and RespondToAuthChallenge.

Contents

EncodedData

Encoded device-fingerprint details that your app collected with the Amazon Cognito context data collection library. For more information, see Adding user device and session data to API requests.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

IpAddress

The source IP address of your user's device.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserImportJobType

A user import job in a user pool. Describes the status of user import with a CSV file. For more information, see Importing users into user pools from a CSV file.

This data type is a request parameter of CreateUserImportJob, DescribeUserImportJob, ListUserImportJobs, StartUserImportJob, and StopUserImportJob.

Contents

CloudWatchLogsRoleArn

The role Amazon Resource Name (ARN) for the Amazon CloudWatch Logging role for the user import job. For more information, see "Creating the CloudWatch Logs IAM Role" in the Amazon Cognito Developer Guide.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

CompletionDate

The date when the user import job was completed.

Type: Timestamp

Required: No

CompletionMessage

The message returned when the user import job is completed.

Type: String

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

Pattern: `[\w]+`

Required: No

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

FailedUsers

The number of users that couldn't be imported.

Type: Long

Required: No

ImportedUsers

The number of users that were successfully imported.

Type: Long

Required: No

JobId

The ID of the user import job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `import-[0-9a-zA-Z-]+`

Required: No

JobName

The friendly name of the user import job.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: No

PreSignedUrl

The pre-signed URL target for uploading the CSV file.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

Required: No

SkippedUsers

The number of users that were skipped.

Type: Long

Required: No

StartDate

The date when the user import job was started.

Type: Timestamp

Required: No

Status

The status of the user import job. One of the following:

- `Created` - The job was created but not started.
- `Pending` - A transition state. You have started the job, but it has not begun importing users yet.
- `InProgress` - The job has started, and users are being imported.
- `Stopping` - You have stopped the job, but the job has not stopped importing users yet.
- `Stopped` - You have stopped the job, and the job has stopped importing users.
- `Succeeded` - The job has completed successfully.
- `Failed` - The job has stopped due to an error.
- `Expired` - You created a job, but did not start the job within 24-48 hours. All data associated with the job was deleted, and the job can't be started.

Type: String

Valid Values: `Created | Pending | InProgress | Stopping | Expired | Stopped | Failed | Succeeded`

Required: No

UserPoolId

The ID of the user pool that the users are being imported into.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UsernameConfigurationType

The configuration of a user pool for username case sensitivity.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

CaseSensitive

Specifies whether user name case sensitivity will be applied for all users in the user pool through Amazon Cognito APIs. For most use cases, set case sensitivity to `False` (case insensitive) as a best practice. When usernames and email addresses are case insensitive, users can sign in as the same user when they enter a different capitalization of their user name.

Valid values include:

true

Enables case sensitivity for all username input. When this option is set to `true`, users must sign in using the exact capitalization of their given username, such as “UserName”. This is the default value.

false

Enables case insensitivity for all username input. For example, when this option is set to `false`, users can sign in using `username`, `USERNAME`, or `UserName`. This option also enables both `preferred_username` and `email` alias to be case insensitive, in addition to the `username` attribute.

Type: Boolean

Required: Yes

See Also

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

- Amazon SDK for C++

- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserPoolAddOnsType

Contains settings for activation of threat protection, including the operating mode and additional authentication types. To log user security information but take no action, set to `AUDIT`. To configure automatic security responses to potentially unwanted traffic to your user pool, set to `ENFORCED`.

For more information, see Adding advanced security to a user pool. To activate this setting, your user pool must be on the Plus tier.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

AdvancedSecurityMode

The operating mode of threat protection for standard authentication types in your user pool, including username-password and secure remote password (SRP) authentication.

Type: String

Valid Values: `OFF | AUDIT | ENFORCED`

Required: Yes

AdvancedSecurityAdditionalFlows

Threat protection configuration options for additional authentication types in your user pool, including custom authentication.

Type: AdvancedSecurityAdditionalFlowsType object

Required: No

See Also

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

- Amazon SDK for C++

- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserPoolClientDescription

A short description of a user pool app client.

This data type is a response parameter of ListUserPoolClients.

Contents

ClientId

The app client ID.

Type: String

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

Pattern: `[\w+]+`

Required: No

ClientName

The app client name.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: No

UserPoolId

The ID of the user pool that's associated with the app client.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserPoolClientType

The configuration of a user pool client.

This data type is a request parameter of CreateUserPoolClient and UpdateUserPoolClient, and a response parameter of DescribeUserPoolClient.

Contents

AccessTokenValidity

The access token time limit. After this limit expires, your user can't use their access token. To specify the time unit for `AccessTokenValidity` as `seconds`, `minutes`, `hours`, or `days`, set a `TokenValidityUnits` value in your API request.

For example, when you set `AccessTokenValidity` to `10` and `TokenValidityUnits` to `hours`, your user can authorize access with their access token for 10 hours.

The default time unit for `AccessTokenValidity` in an API request is hours. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your access tokens are valid for one hour.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

Required: No

AllowedOAuthFlows

The OAuth grant types that you want your app client to generate. To create an app client that generates client credentials grants, you must add `client_credentials` as the only allowed OAuth flow.

code

Use a code grant flow, which provides an authorization code as the response. This code can be exchanged for access tokens with the `/oauth2/token` endpoint.

implicit

Issue the access token (and, optionally, ID token, based on scopes) directly to your user.

client_credentials

Issue the access token from the `/oauth2/token` endpoint directly to a non-person user using a combination of the client ID and client secret.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 3 items.

Valid Values: `code | implicit | client_credentials`

Required: No

AllowedOAuthFlowsUserPoolClient

Set to `true` to use OAuth 2.0 authorization server features in your app client.

This parameter must have a value of `true` before you can configure the following features in your app client.

- `CallBackURLs`: Callback URLs.
- `LogoutURLs`: Sign-out redirect URLs.
- `AllowedOAuthScopes`: OAuth 2.0 scopes.
- `AllowedOAuthFlows`: Support for authorization code, implicit, and client credentials OAuth 2.0 grants.

To use authorization server features, configure one of these features in the Amazon Cognito console or set `AllowedOAuthFlowsUserPoolClient` to `true` in a `CreateUserPoolClient` or `UpdateUserPoolClient` API request. If you don't set a value for `AllowedOAuthFlowsUserPoolClient` in a request with the Amazon CLI or SDKs, it defaults to `false`. When `false`, only SDK-based API sign-in is permitted.

Type: Boolean

Required: No

AllowedOAuthScopes

The OAuth 2.0 scopes that you want your app client to support. Can include standard OAuth scopes like phone, `email`, `openid`, and `profile`. Can also include the `aws.cognito.signin.user.admin` scope that authorizes user profile self-service operations and custom scopes from resource servers.

Type: Array of strings

Array Members: Maximum number of 50 items.

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

Pattern: `[\x21\x23-\x5B\x5D-\x7E]+`

Required: No

AnalyticsConfiguration

The user pool analytics configuration for collecting metrics and sending them to your Amazon Pinpoint campaign.

> **Note**
>
> In Amazon Regions where Amazon Pinpoint isn't available, user pools only support sending events to Amazon Pinpoint projects in Amazon Region us-east-1. In Regions where Amazon Pinpoint is available, user pools support sending events to Amazon Pinpoint projects within that same Region.

Type: AnalyticsConfigurationType object

Required: No

AuthSessionValidity

Amazon Cognito creates a session token for each API request in an authentication flow. `AuthSessionValidity` is the duration, in minutes, of that session token. Your user pool native user must respond to each authentication challenge before the session expires.

Type: Integer

Valid Range: Minimum value of 3. Maximum value of 15.

Required: No

CallbackURLs

A list of allowed redirect (callback) URLs for the IdPs.

A redirect URI must:

- Be an absolute URI.
- Be registered with the authorization server.
- Not include a fragment component.

See OAuth 2.0 - Redirection Endpoint.

Amazon Cognito requires HTTPS over HTTP except for http://localhost for testing purposes only.

App callback URLs such as myapp://example are also supported.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

ClientId

The ID of the app client.

Type: String

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

Pattern: `[\w+]+`

Required: No

ClientName

The name of the app client.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: No

ClientSecret

The app client secret.

Type: String

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

Pattern: `[\w+]+`

Required: No

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

DefaultRedirectURI

The default redirect URI. Must be in the `CallbackURLs` list.

A redirect URI must:

- Be an absolute URI.
- Be registered with the authorization server.
- Not include a fragment component.

See OAuth 2.0 - Redirection Endpoint.

Amazon Cognito requires HTTPS over HTTP except for http://localhost for testing purposes only.

App callback URLs such as myapp://example are also supported.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

EnablePropagateAdditionalUserContextData

When `EnablePropagateAdditionalUserContextData` is true, Amazon Cognito accepts an `IpAddress` value that you send in the `UserContextData` parameter. The `UserContextData` parameter sends information to Amazon Cognito threat protection for risk analysis. You can send `UserContextData` when you sign in Amazon Cognito native users with the `InitiateAuth` and `RespondToAuthChallenge` API operations.

When `EnablePropagateAdditionalUserContextData` is false, you can't send your user's source IP address to Amazon Cognito threat protection with unauthenticated API operations. `EnablePropagateAdditionalUserContextData` doesn't affect whether you can send a source IP address in a `ContextData` parameter with the authenticated API operations `AdminInitiateAuth` and `AdminRespondToAuthChallenge`.

You can only activate `EnablePropagateAdditionalUserContextData` in an app client that has a client secret. For more information about propagation of user context data, see Adding user device and session data to API requests.

Type: Boolean

Required: No

EnableTokenRevocation

Indicates whether token revocation is activated for the user pool client. When you create a new user pool client, token revocation is activated by default.

For more information about revoking tokens, see RevokeToken.

Type: Boolean

Required: No

ExplicitAuthFlows

The authentication flows that you want your user pool client to support. For each app client in your user pool, you can sign in your users with any combination of one or more flows, including with a user name and Secure Remote Password (SRP), a user name and password, or a custom authentication process that you define with Lambda functions.

> **Note**
>
> If you don't specify a value for `ExplicitAuthFlows`, your app client supports `ALLOW_REFRESH_TOKEN_AUTH`, `ALLOW_USER_SRP_AUTH`, and `ALLOW_CUSTOM_AUTH`.

The values for authentication flow options include the following.

- `ALLOW_USER_AUTH`: Enable selection-based sign-in with `USER_AUTH`. This setting covers username-password, secure remote password (SRP), passwordless, and passkey authentication. This authentiation flow can do username-password and SRP authentication without other `ExplicitAuthFlows` permitting them. For example users can complete an SRP challenge through `USER_AUTH` without the flow `USER_SRP_AUTH` being active for the app client. This flow doesn't include `CUSTOM_AUTH`.

  To activate this setting, your user pool must be in the Essentials tier or higher.
- `ALLOW_ADMIN_USER_PASSWORD_AUTH`: Enable admin based user password authentication flow `ADMIN_USER_PASSWORD_AUTH`. This setting replaces the `ADMIN_NO_SRP_AUTH` setting. With this authentication flow, your app passes a user name and password to Amazon Cognito in the request, instead of using the Secure Remote Password (SRP) protocol to securely transmit the password.
- `ALLOW_CUSTOM_AUTH`: Enable Lambda trigger based authentication.
- `ALLOW_USER_PASSWORD_AUTH`: Enable user password-based authentication. In this flow, Amazon Cognito receives the password in the request instead of using the SRP protocol to verify passwords.
- `ALLOW_USER_SRP_AUTH`: Enable SRP-based authentication.
- `ALLOW_REFRESH_TOKEN_AUTH`: Enable authflow to refresh tokens.

In some environments, you will see the values `ADMIN_NO_SRP_AUTH`, `CUSTOM_AUTH_FLOW_ONLY`, or `USER_PASSWORD_AUTH`. You can't assign these legacy `ExplicitAuthFlows` values to user pool clients at the same time as values that begin with `ALLOW_`, like `ALLOW_USER_SRP_AUTH`.

Type: Array of strings

Valid Values: `ADMIN_NO_SRP_AUTH | CUSTOM_AUTH_FLOW_ONLY | USER_PASSWORD_AUTH | ALLOW_ADMIN_USER_PASSWORD_AUTH |`

ALLOW_CUSTOM_AUTH | ALLOW_USER_PASSWORD_AUTH | ALLOW_USER_SRP_AUTH | ALLOW_REFRESH_TOKEN_AUTH | ALLOW_USER_AUTH

Required: No

IdTokenValidity

The ID token time limit. After this limit expires, your user can't use their ID token. To specify the time unit for `IdTokenValidity` as `seconds`, `minutes`, `hours`, or `days`, set a `TokenValidityUnits` value in your API request.

For example, when you set `IdTokenValidity` as `10` and `TokenValidityUnits` as `hours`, your user can authenticate their session with their ID token for 10 hours.

The default time unit for `IdTokenValidity` in an API request is hours. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your ID tokens are valid for one hour.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

LogoutURLs

A list of allowed logout URLs for the IdPs.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

PreventUserExistenceErrors

When `ENABLED`, suppresses messages that might indicate a valid user exists when someone attempts sign-in. This parameters sets your preference for the errors and responses that you want Amazon Cognito APIs to return during authentication, account confirmation, and password recovery when the user doesn't exist in the user pool. When set to `ENABLED` and the user doesn't exist, authentication returns an error indicating either the username or password was incorrect. Account confirmation and password recovery return a response indicating a code was sent to a simulated destination. When set to `LEGACY`, those APIs return a `UserNotFoundException` exception if the user doesn't exist in the user pool.

Defaults to `LEGACY`.

This setting affects the behavior of the following API operations.

- AdminInitiateAuth
- AdminRespondToAuthChallenge
- InitiateAuth
- RespondToAuthChallenge
- ForgotPassword
- ConfirmForgotPassword
- ConfirmSignUp
- ResendConfirmationCode

Type: String

Valid Values: `LEGACY` | `ENABLED`

Required: No

ReadAttributes

The list of user attributes that you want your app client to have read access to. After your user authenticates in your app, their access token authorizes them to read their own attribute value for any attribute in this list.

An example of this kind of activity is when your user selects a link to view their profile information. Your app makes a GetUser API request to retrieve and display your user's profile data.

When you don't specify the `ReadAttributes` for your app client, your app can read the values of `email_verified`, `phone_number_verified`, and the standard attributes of your user pool. When your user pool app client has read access to these default attributes, `ReadAttributes` doesn't return any information. Amazon Cognito only populates `ReadAttributes` in the API response if you have specified your own custom set of read attributes.

Type: Array of strings

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

Required: No

RefreshTokenRotation

The configuration of your app client for refresh token rotation. When enabled, your app client issues new ID, access, and refresh tokens when users renew their sessions with refresh tokens. When disabled, token refresh issues only ID and access tokens.

Refresh token rotation must be completed with GetTokensFromRefreshToken. With refresh token rotation disabled, you can complete token refresh with `GetTokensFromRefreshToken` and with `REFRESH_TOKEN_AUTH` in InitiateAuth:AuthFlow and AdminInitiateAuth:AuthFlow.

Type: RefreshTokenRotationType object

Required: No

RefreshTokenValidity

The refresh token time limit. After this limit expires, your user can't use their refresh token. To specify the time unit for `RefreshTokenValidity` as `seconds`, `minutes`, `hours`, or `days`, set a `TokenValidityUnits` value in your API request.

For example, when you set `RefreshTokenValidity` as `10` and `TokenValidityUnits` as `days`, your user can refresh their session and retrieve new access and ID tokens for 10 days.

The default time unit for `RefreshTokenValidity` in an API request is days. You can't set `RefreshTokenValidity` to 0. If you do, Amazon Cognito overrides the value with the default value of 30 days. *Valid range* is displayed below in seconds.

If you don't specify otherwise in the configuration of your app client, your refresh tokens are valid for 30 days.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 315360000.

Required: No

SupportedIdentityProviders

A list of provider names for the identity providers (IdPs) that are supported on this client. The following are supported: `COGNITO`, `Facebook`, `Google`, `SignInWithApple`, and `LoginWithAmazon`. You can also specify the names that you configured for the SAML and OIDC IdPs in your user pool, for example `MySAMLIdP` or `MyOIDCIdP`.

This parameter sets the IdPs that managed login will display on the login page for your app client. The removal of `COGNITO` from this list doesn't prevent authentication operations for local users with the user pools API in an Amazon SDK. The only way to prevent SDK-based authentication is to block access with a Amazon WAF rule.

Type: Array of strings

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\p{Z}]+`

Required: No

TokenValidityUnits

The time units that, with `IdTokenValidity`, `AccessTokenValidity`, and `RefreshTokenValidity`, set and display the duration of ID, access, and refresh tokens for an app client. You can assign a separate token validity unit to each type of token.

Type: TokenValidityUnitsType object

Required: No

UserPoolId

The ID of the user pool associated with the app client.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

WriteAttributes

The list of user attributes that you want your app client to have write access to. After your user authenticates in your app, their access token authorizes them to set or modify their own attribute value for any attribute in this list.

An example of this kind of activity is when you present your user with a form to update their profile information and they change their last name. Your app then makes an UpdateUserAttributes API request and sets `family_name` to the new value.

When you don't specify the `WriteAttributes` for your app client, your app can write the values of the Standard attributes of your user pool. When your user pool has write access to these default attributes, `WriteAttributes` doesn't return any information. Amazon Cognito only populates `WriteAttributes` in the API response if you have specified your own custom set of write attributes.

If your app client allows users to sign in through an IdP, this array must include all attributes that you have mapped to IdP attributes. Amazon Cognito updates mapped attributes when users sign in to your application through an IdP. If your app client does not have write access to a mapped attribute, Amazon Cognito throws an error when it tries to update the attribute. For more information, see Specifying IdP Attribute Mappings for Your user pool.

Type: Array of strings

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

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2

- Amazon SDK for Ruby V3

UserPoolDescriptionType

A short description of a user pool.

This data type is a response parameter of ListUserPools.

Contents

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

Id

The user pool ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

LambdaConfig

A collection of user pool Lambda triggers. Amazon Cognito invokes triggers at several possible stages of user pool operations. Triggers can modify the outcome of the operations that invoked them.

Type: LambdaConfigType object

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

Name

The user pool name.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: No

Status

This member has been deprecated.

The user pool status.

Type: String

Valid Values: `Enabled | Disabled`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserPoolPolicyType

A list of user pool policies. Contains the policy that sets password-complexity requirements.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

PasswordPolicy

The password policy settings for a user pool, including complexity, history, and length requirements.

Type: PasswordPolicyType object

Required: No

SignInPolicy

The policy for allowed types of authentication in a user pool.

Type: SignInPolicyType object

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserPoolType

The configuration of a user pool.

This data type is a response parameter of CreateUserPool, UpdateUserPool, and DescribeUserPool.

Contents

AccountRecoverySetting

The available verified method a user can use to recover their password when they call `ForgotPassword`. You can use this setting to define a preferred method when a user has more than one method available. With this setting, SMS doesn't qualify for a valid password recovery mechanism if the user also has SMS multi-factor authentication (MFA) activated. In the absence of this setting, Amazon Cognito uses the legacy behavior to determine the recovery method where SMS is preferred through email.

Type: AccountRecoverySettingType object

Required: No

AdminCreateUserConfig

The configuration for `AdminCreateUser` requests.

Type: AdminCreateUserConfigType object

Required: No

AliasAttributes

Attributes supported as an alias for this user pool. An alias is an attribute that users can enter as an alternative username. Possible values: **phone_number**, **email**, or **preferred_username**.

Type: Array of strings

Valid Values: `phone_number | email | preferred_username`

Required: No

Arn

The Amazon Resource Name (ARN) of the user pool.

Type: String

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

Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:([\w+=/,.@-]*)?:[0-9]+:[\w+=/,.@-]+(:[\w+=/,.@-]+)?(:[\w+=/,.@-]+)?`

Required: No

AutoVerifiedAttributes

The attributes that are auto-verified in a user pool.

Type: Array of strings

Valid Values: `phone_number | email`

Required: No

CreationDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

CustomDomain

A custom domain name that you provide to Amazon Cognito. This parameter applies only if you use a custom domain to host the sign-up and sign-in pages for your application. An example of a custom domain name might be `auth.example.com`.

For more information about adding a custom domain to your user pool, see Using Your Own Domain for the Hosted UI.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

Required: No

DeletionProtection

When active, `DeletionProtection` prevents accidental deletion of your user pool. Before you can delete a user pool that you have protected against deletion, you must deactivate this feature.

When you try to delete a protected user pool in a `DeleteUserPool` API request, Amazon Cognito returns an `InvalidParameterException` error. To delete a protected user pool, send a new `DeleteUserPool` request after you deactivate deletion protection in an `UpdateUserPool` API request.

Type: String

Valid Values: `ACTIVE | INACTIVE`

Required: No

DeviceConfiguration

The device-remembering configuration for a user pool. A null value indicates that you have deactivated device remembering in your user pool.

> **Note**
>
> When you provide a value for any `DeviceConfiguration` field, you activate the Amazon Cognito device-remembering feature.

Type: DeviceConfigurationType object

Required: No

Domain

The domain prefix, if the user pool has a domain associated with it.

Type: String

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

Pattern: `^[a-z0-9](?:[a-z0-9\-]{0,61}[a-z0-9])?$`

Required: No

EmailConfiguration

The email configuration of your user pool. The email configuration type sets your preferred sending method, Amazon Region, and sender for messages from your user pool.

Type: EmailConfigurationType object

Required: No

EmailConfigurationFailure

Deprecated. Review error codes from API requests with `EventSource:cognito-idp.amazonaws.com` in Amazon CloudTrail for information about problems with user pool email configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

EmailVerificationMessage

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*\{####\}[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*`

Required: No

EmailVerificationSubject

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s]+`

Required: No

EstimatedNumberOfUsers

A number estimating the size of the user pool.

Type: Integer

Required: No

Id

The ID of the user pool.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+_[0-9a-zA-Z]+`

Required: No

LambdaConfig

A collection of user pool Lambda triggers. Amazon Cognito invokes triggers at several possible stages of user pool operations. Triggers can modify the outcome of the operations that invoked them.

Type: LambdaConfigType object

Required: No

LastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

MfaConfiguration

Can be one of the following values:

- `OFF` - MFA tokens aren't required and can't be specified during user registration.
- `ON` - MFA tokens are required for all user registrations. You can only specify required when you're initially creating a user pool.
- `OPTIONAL` - Users have the option when registering to create an MFA token.

Type: String

Valid Values: `OFF | ON | OPTIONAL`

Required: No

Name

The name of the user pool.

Type: String

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

Pattern: `[\w\s+=,.@-]+`

Required: No

Policies

A list of user pool policies. Contains the policy that sets password-complexity requirements.

Type: UserPoolPolicyType object

Required: No

SchemaAttributes

A list of the user attributes and their properties in your user pool. The attribute schema contains standard attributes, custom attributes with a `custom:` prefix, and developer attributes with a `dev:` prefix. For more information, see User pool attributes.

Developer-only attributes are a legacy feature of user pools, and are read-only to all app clients. You can create and update developer-only attributes only with IAM-authenticated API operations. Use app client read/write permissions instead.

Type: Array of SchemaAttributeType objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: No

SmsAuthenticationMessage

The contents of the SMS authentication message.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `.*\{####\}.*`

Required: No

SmsConfiguration

User pool configuration for delivery of SMS messages with Amazon Simple Notification Service. To send SMS messages with Amazon SNS in the Amazon Region that you want, the Amazon Cognito user pool uses an Amazon Identity and Access Management (IAM) role in your Amazon Web Services account.

Type: SmsConfigurationType object

Required: No

SmsConfigurationFailure

The reason why the SMS configuration can't send the messages to your users.

This message might include comma-separated values to describe why your SMS configuration can't send messages to user pool end users.

InvalidSmsRoleAccessPolicyException

The Amazon Identity and Access Management role that Amazon Cognito uses to send SMS messages isn't properly configured. For more information, see SmsConfigurationType.

SNSSandbox

The Amazon Web Services account is in the SNS SMS Sandbox and messages will only reach verified end users. This parameter won't get populated with SNSSandbox if the user creating the user pool doesn't have SNS permissions. To learn how to move your Amazon Web Services account out of the sandbox, see Moving out of the SMS sandbox.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: No

SmsVerificationMessage

This parameter is no longer used. See VerificationMessageTemplateType.

This parameter is no longer used.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `.*\{####\}.*`

Required: No

Status

This member has been deprecated.

This parameter is no longer used.

Type: String

Valid Values: `Enabled | Disabled`

Required: No

UserAttributeUpdateSettings

The settings for updates to user attributes. These settings include the property `AttributesRequireVerificationBeforeUpdate`, a user-pool setting that tells Amazon Cognito how to handle changes to the value of your users' email address and phone number attributes. For more information, see Verifying updates to email addresses and phone numbers.

Type: UserAttributeUpdateSettingsType object

Required: No

UsernameAttributes

Specifies whether a user can use an email address or phone number as a username when they sign up.

Type: Array of strings

Valid Values: `phone_number | email`

Required: No

UsernameConfiguration

Case sensitivity of the username input for the selected sign-in option. When case sensitivity is set to `False` (case insensitive), users can sign in with any combination of capital and lowercase letters. For example, `username`, `USERNAME`, or `UserName`, or for email, `email@example.com` or `EMaiL@eXamplE.Com`. For most use cases, set case sensitivity to `False` (case insensitive) as a best practice. When usernames and email addresses are case insensitive, Amazon Cognito treats any variation in case as the same user, and prevents a case variation from being assigned to the same attribute for a different user.

This configuration is immutable after you set it. For more information, see UsernameConfigurationType.

Type: UsernameConfigurationType object

Required: No

UserPoolAddOns

Contains settings for activation of threat protection, including the operating mode and additional authentication types. To log user security information but take no action, set to `AUDIT`. To configure automatic security responses to potentially unwanted traffic to your user pool, set to `ENFORCED`.

For more information, see Adding advanced security to a user pool. To activate this setting, your user pool must be on the Plus tier.

Type: UserPoolAddOnsType object

Required: No

UserPoolTags

The tags that are assigned to the user pool. A tag is a label that you can apply to user pools to categorize and manage them in different ways, such as by purpose, owner, environment, or other criteria.

Type: String to string map

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

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

Required: No

UserPoolTier

The user pool feature plan, or tier. This parameter determines the eligibility of the user pool for features like managed login, access-token customization, and threat protection. Defaults to `ESSENTIALS`.

Type: String

Valid Values: `LITE | ESSENTIALS | PLUS`

Required: No

VerificationMessageTemplate

The template for the verification message that your user pool delivers to users who set an email address or phone number attribute.

Type: VerificationMessageTemplateType object

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

UserType

A user profile in a Amazon Cognito user pool.

This data type is a response parameter to AdminCreateUser and ListUsers.

Contents

Attributes

Names and values of a user's attributes, for example `email`.

Type: Array of AttributeType objects

Required: No

Enabled

Indicates whether the user's account is enabled or disabled.

Type: Boolean

Required: No

MFAOptions

The user's MFA configuration.

Type: Array of MFAOptionType objects

Required: No

UserCreateDate

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

UserLastModifiedDate

The date and time when the item was modified. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: No

Username

The user's username.

Type: String

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

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}]+`

Required: No

UserStatus

The user status. This can be one of the following:

- `UNCONFIRMED`: User has been created but not confirmed.
- `CONFIRMED`: User has been confirmed.
- `EXTERNAL_PROVIDER`: User signed in with a third-party IdP.
- `RESET_REQUIRED`: User is confirmed, but the user must request a code and reset their password before they can sign in.
- `FORCE_CHANGE_PASSWORD`: The user is confirmed and the user can sign in using a temporary password, but on first sign-in, the user must change their password to a new value before doing anything else.

The statuses `ARCHIVED`, `UNKNOWN`, and `COMPROMISED` are no longer used.

Type: String

Valid Values: `UNCONFIRMED | CONFIRMED | ARCHIVED | COMPROMISED | UNKNOWN | RESET_REQUIRED | FORCE_CHANGE_PASSWORD | EXTERNAL_PROVIDER`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

VerificationMessageTemplateType

The template for the verification message that your user pool delivers to users who set an email address or phone number attribute.

This data type is a request and response parameter of CreateUserPool and UpdateUserPool, and a response parameter of DescribeUserPool.

Contents

DefaultEmailOption

The configuration of verification emails to contain a clickable link or a verification code.

For link, your template body must contain link text in the format `{##Click here##}`. "Click here" in the example is a customizable string. For code, your template body must contain a code placeholder in the format `{####}`.

Type: String

Valid Values: `CONFIRM_WITH_LINK | CONFIRM_WITH_CODE`

Required: No

EmailMessage

The template for email messages that Amazon Cognito sends to your users. You can set an `EmailMessage` template only if the value of EmailSendingAccount is `DEVELOPER`. When your EmailSendingAccount is `DEVELOPER`, your user pool sends email messages with your own Amazon SES configuration.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*\{####\}[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*`

Required: No

EmailMessageByLink

The email message template for sending a confirmation link to the user. You can set an `EmailMessageByLink` template only if the value of EmailSendingAccount is `DEVELOPER`.

When your EmailSendingAccount is DEVELOPER, your user pool sends email messages with your own Amazon SES configuration.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 20000.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*\{##[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*##\}[\p{L}\p{M}\p{S}\p{N}\p{P}\s*]*`

Required: No

EmailSubject

The subject line for the email message template. You can set an `EmailSubject` template only if the value of EmailSendingAccount is DEVELOPER. When your EmailSendingAccount is DEVELOPER, your user pool sends email messages with your own Amazon SES configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s]+`

Required: No

EmailSubjectByLink

The subject line for the email message template for sending a confirmation link to the user. You can set an `EmailSubjectByLink` template only if the value of EmailSendingAccount is DEVELOPER. When your EmailSendingAccount is DEVELOPER, your user pool sends email messages with your own Amazon SES configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `[\p{L}\p{M}\p{S}\p{N}\p{P}\s]+`

Required: No

SmsMessage

The template for SMS messages that Amazon Cognito sends to your users.

Type: String

Length Constraints: Minimum length of 6. Maximum length of 140.

Pattern: `.*\{####\}.*`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

WebAuthnConfigurationType

Settings for authentication (MFA) with passkey, or webauthN, biometric and security-key devices in a user pool. Configures the following:

- Configuration for requiring user-verification support in passkeys.
- The user pool relying-party ID. This is the domain, typically your user pool domain, that user's passkey providers should trust as a receiver of passkey authentication.
- The providers that you want to allow as origins for passkey authentication.

This data type is a request parameter of SetUserPoolMfaConfig and a response parameter of GetUserPoolMfaConfig. To activate this setting, your user pool must be in the Essentials tier or higher.

Contents

RelyingPartyId

Sets or displays the authentication domain, typically your user pool domain, that passkey providers must use as a relying party (RP) in their configuration.

Under the following conditions, the passkey relying party ID must be the fully-qualified domain name of your custom domain:

- The user pool is configured for passkey authentication.
- The user pool has a custom domain, whether or not it also has a prefix domain.
- Your application performs authentication with managed login or the classic hosted UI.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Required: No

UserVerification

When `required`, users can only register and sign in users with passkeys that are capable of user verification. When `preferred`, your user pool doesn't require the use of authenticators with user verification but encourages it.

Type: String

Valid Values: `required | preferred`

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon SDK for Ruby V3

WebAuthnCredentialDescription

The details of a passkey, or webauthN, biometric or security-key authentication factor for a user.

This data type is a response parameter of ListWebAuthnCredentials. To activate this setting, your user pool must be in the Essentials tier or higher.

Contents

AuthenticatorTransports

Information about the transport methods of the passkey credential, for example USB or Bluetooth Low Energy.

Type: Array of strings

Required: Yes

CreatedAt

The date and time when the item was created. Amazon Cognito returns this timestamp in UNIX epoch time format. Your SDK might render the output in a human-readable format like ISO 8601 or a Java `Date` object.

Type: Timestamp

Required: Yes

CredentialId

The unique identifier of the passkey credential.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

FriendlyCredentialName

An automatically-generated friendly name for the passkey credential.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

RelyingPartyId

The relying-party ID of the provider for the passkey credential.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131072.

Required: Yes

AuthenticatorAttachment

The general category of the passkey authenticator. Can be a platform, or on-device authenticator like a built-in fingerprint scanner, or a cross-platform device that's not attached to the device like a Bluetooth security key.

Type: String

Required: No

See Also

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

- Amazon SDK for C++
- Amazon SDK for Java V2
- Amazon 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 Amazon API requests in the *IAM User Guide*.

Action

The action to be performed.

Type: string

Required: Yes

Version

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

Type: string

Required: Yes

X-Amz-Algorithm

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

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

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

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

For more information, see Create a signed Amazon 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 Amazon 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 Amazon Security Token Service (Amazon STS). For a list of services that support temporary security credentials from Amazon STS, see Amazon Web Services services that work with IAM in the *IAM User Guide*.

Condition: If you're using temporary security credentials from Amazon 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 Amazon 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 Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to Amazon standards.

HTTP Status Code: 400

InternalFailure

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

HTTP Status Code: 500

InvalidAction

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

HTTP Status Code: 400

InvalidClientTokenId

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

HTTP Status Code: 403

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

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

HTTP Status Code: 403

RequestExpired

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

HTTP Status Code: 400

ServiceUnavailable

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

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

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

HTTP Status Code: 400