CA Single Sign-On

Integration of CA Single Sign-On with Amazon Alexa

technologies

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Integrate CA Single Sign-On with Amazon Alexa

This document describes how to integrate CA Single Sign-On (CA SSO) with Amazon Alexa services using its account linking capability.

A knowledge of CA SSO, Amazon Alexa, and OpenID Connect is required to understand this integration.

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Overview of Amazon Alexa Account Linking

The account linking capability of Amazon Alexa allows voice-controlled devices like Amazon Echo to establish an identity with third-party systems and to consume its services with ease.

A user's Amazon Alexa account is connected to his/her corresponding user account in CA SSO through OIDC **Access Token**. Access Token identifies the user uniquely in CA SSO. The Amazon Alexa service stores this token and includes it in requests that are sent to the Amazon Alexa skills service. The skill uses the token to authenticate with CA SSO on behalf of the user.

As an example, let us see how this feature works in a financial institution.

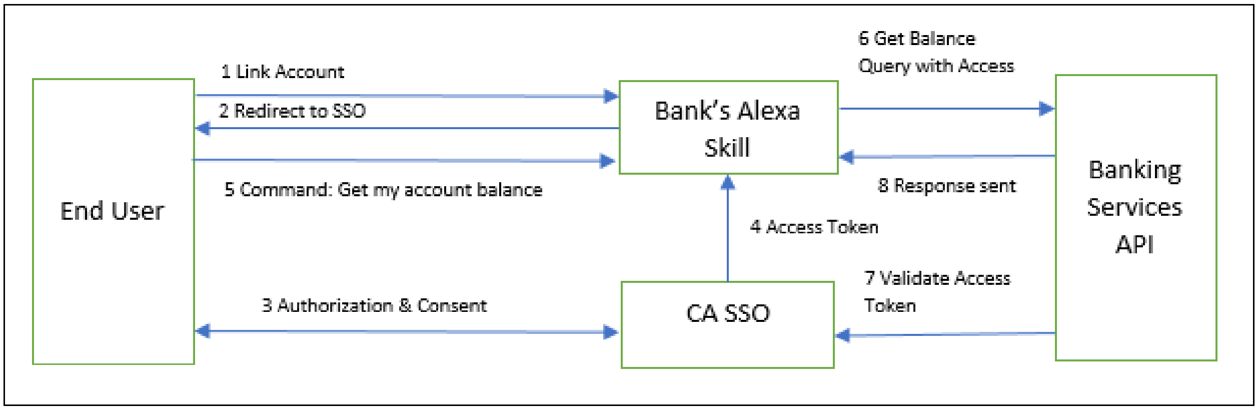
Account Linking in Financial Institution

A financial institution such as a bank can use Amazon Alexa to enhance the digital experience of its customers. Building specific Amazon Alexa skills allows users to check account balances, pay bills, and find information such as interest rates. These services provide the bank an opportunity to connect with users to complete bank transactions at home, and thus simplifying the banking experience of customers.

However, the question is how to trust an Amazon Alexa end user account, allow it to connect and utilize secured banking services. The answer is the account linking capability of Amazon Alexa. It allows secure linking of an Amazon Alexa end user account with an enterprise account.

A financial institution or a bank that secures its environment using CA SSO can leverage CA SSO's OIDC capabilities to establish account linking with an Amazon Alexa end user account. Amazon Alexa end users authenticate with CA SSO to link with their corresponding user account in CA SSO, which is deployed at the bank.

The following diagram details how CA SSO can work with Amazon Alexa:



The following process explains how CA SSO works with Amazon Alexa:

1. User initiates the Amazon Alexa Account to Bank Account linking process.
2. Bank's Amazon Alexa skill redirects the user to CA SSO authorization page that is deployed at Bank.
3. User authenticates with his/her credentials and provides the consent to allow the Bank's Amazon Alexa skill to use Bank's account information on his/her behalf.
4. CA SSO generates and sends an access token with the consented scopes to Bank's Amazon Alexa Skill.
5. End user asks Amazon Alexa to fetch the account balance.
6. Amazon Alexa skill provides the access token to Banking Services API and triggers a request to fetch the account balance.
7. Banking Services API validates the access token with CA SSO that is deployed at Bank.
8. If the access token is valid, Banking Services API provides an appropriate response to Amazon Alexa skill, which delivers an audio message to the end user with the information received.

Configure CA SSO

Configure CA SSO as an OIDC Provider using Authorization Code Flow.

Follow these steps:

1. Open Administrative UI.
2. Create an Authorization Provider.

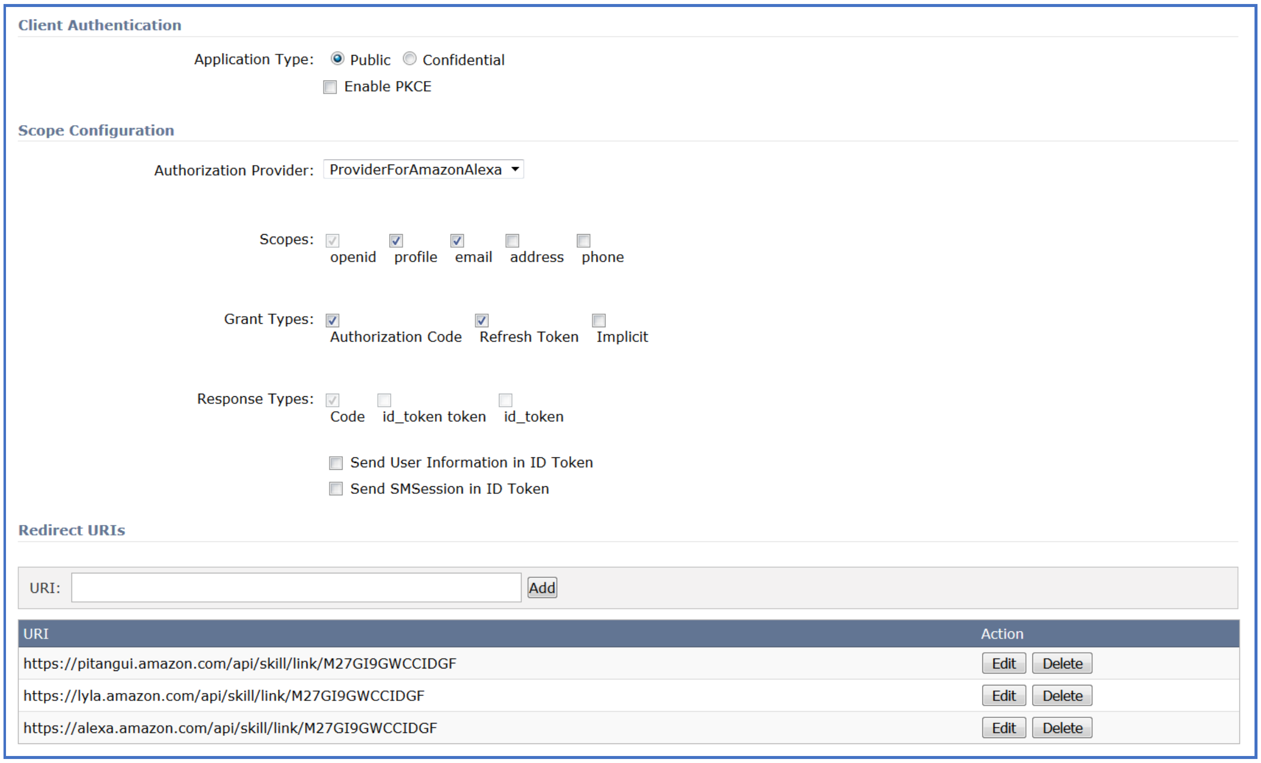
   Define all the necessary fields such as scopes, authorization URL, minimum authentication level, and so on.

   For information, see Configure CA Single Sign-On as OpenID Connect Provider.
3. Create an OIDC Client.

   Define all the necessary fields.

   Select **Authorization Code flow**.

   Enable **Refresh Token**.



Client Authentication

Application Type: ● Public ○ Confidential

□ Enable PKCE

Scope Configuration

Authorization Provider: ProviderForAmazonAlexa

Scopes: ☑ openid ☑ profile ☑ email □ address □ phone

Grant Types: ☑ Authorization Code ☑ Refresh Token □ Implicit

Response Types: ☑ Code □ id_token token □ id_token

□ Send User Information in ID Token

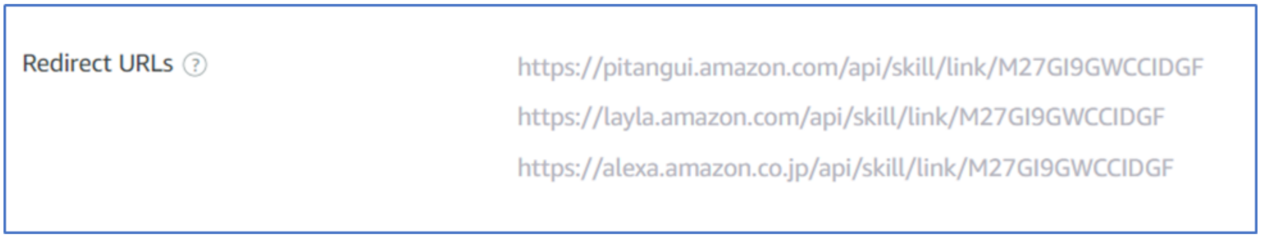
□ Send SMSession in ID Token

Redirect URIs

URI: Add

URI	Action
https://pitangui.amazon.com/api/skill/link/M27GI9GWCCIDGF	Edit Delete
https://lyla.amazon.com/api/skill/link/M27GI9GWCCIDGF	Edit Delete
https://alexa.amazon.com/api/skill/link/M27GI9GWCCIDGF	Edit Delete

Specify Redirect URLs that are provided in the respective Amazon Alexa Skill's Developer page as shown in the following example:



Redirect URLs ?

https://pitangui.amazon.com/api/skill/link/M27GI9GWCCIDGF

https://layla.amazon.com/api/skill/link/M27GI9GWCCIDGF

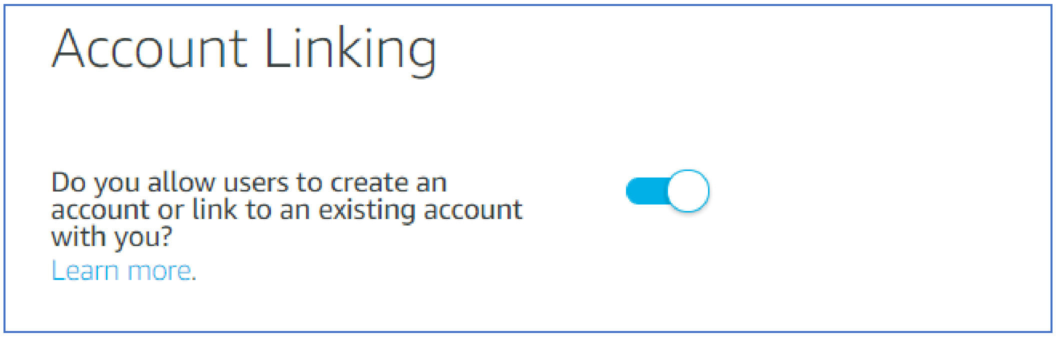
https://alexa.amazon.co.jp/api/skill/link/M27GI9GWCCIDGF

For information, see Configure CA Single Sign-On as OpenID Connect Provider.

Configure Amazon Alexa Skill

Follow these steps:

1. Navigate to https://developer.amazon.com/alexa/console/.
2. Enable Account Linking.

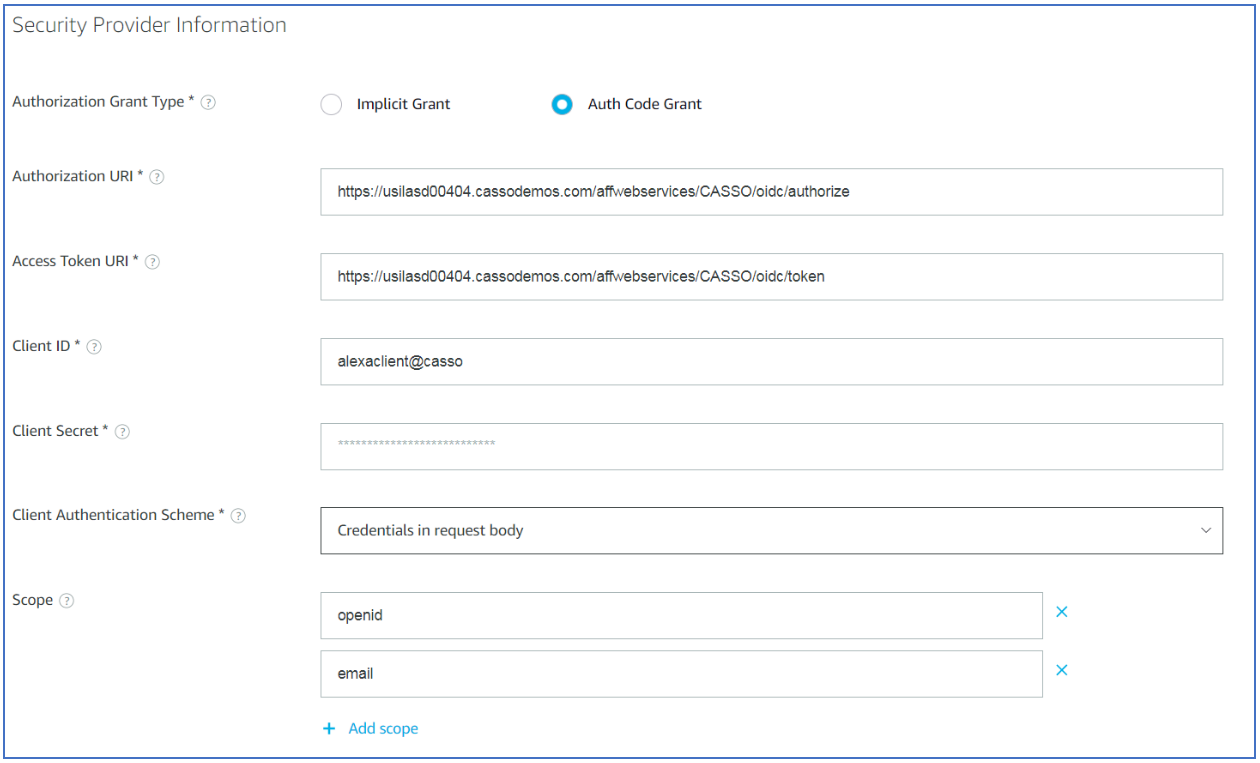


Account Linking

Do you allow users to create an account or link to an existing account with you?

Learn more.

3. Gather the following values from the Clients dialog CA SSO Administrative UI, and fill them in the Security Provider Information:
   - Authorization URL
   - Access Token URL
   - Client ID
   - Client Secret
   - Scopes



Security Provider Information

Authorization Grant Type * ○ Implicit Grant ● Auth Code Grant

Authorization URI * https://usilasd00404.cassodemos.com/affwebservices/CASSO/oidc/authorize

Access Token URI * https://usilasd00404.cassodemos.com/affwebservices/CASSO/oidc/token

Client ID * alexaclient@casso

Client Secret * ****************************

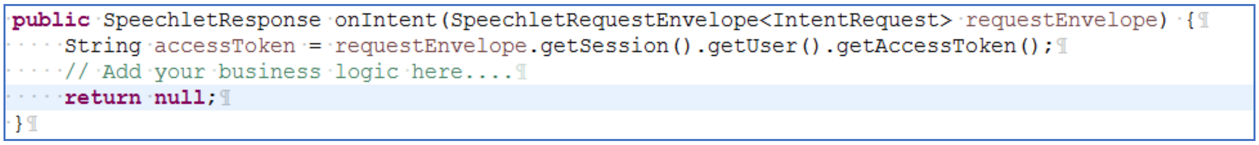
Client Authentication Scheme * Credentials in request body

Scope openid, email

4. Add the domain of the CA SSO OIDC Authorization URL to the **Domain White List** to enable the communication between Amazon Alexa Service and CA SSO.

Retrieve Access Token Programmatically in the Amazon Alexa Skill

Access token can be obtained from the user session as shown:



```
public SpeechletResponse onIntent(SpeechletRequestEnvelope<IntentRequest> requestEnvelope) {
    String accessToken = requestEnvelope.getSession().getUser().getAccessToken();
    // Add your business logic here....
    return null;
}
```

Additional Resources

For further information on Amazon Alexa Skills and Amazon Alexa Account Linking, see the following URLs:

- https://developer.amazon.com/docs/custom-skills/link-an-alexa-user-with-a-user-in-your-system.html
- https://developer.amazon.com/post/Tx3CX1ETRZZ2NPC/Alexa-Account-Linking-5-Steps-to-Seamlessly-Link-Your-Alexa-Skill-with-Login-wit