

Example: Setup of Aras Innovator SAML 2.0 Authentication with Azure as Identity Provider

This section provides an example of configuring a deployment to log in to Aras Innovator using an external user and the SAML2 protocol. For this Deployment, logging in using a Google account will be configured.

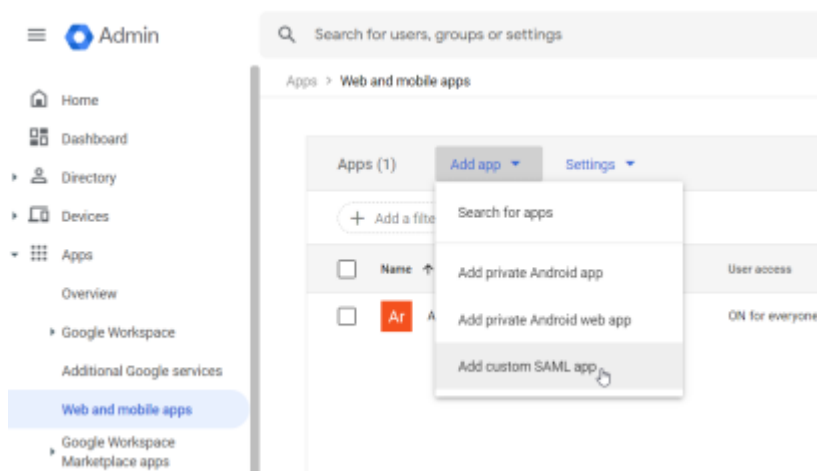
The following sections outline the process of configuring external authentication.

Configure external identity provider (e.g. add app registry)

For more details, refer to the manual: <https://support.google.com/a/answer/6087519> .

The following steps outline the process of configuring the external identity provider:

1. Ensure there is a Google admin account on admin.google.com . The e-mail should be of the domain which will be used as the Service provider (Aras Innovator). For example, if the instance is https://domain.com/instance/, the e-mail should be username@domain.com.
2. Log into <https://admin.google.com/> .
3. From the left pane, Go to **Apps** and click **Web and mobile apps**.
4. Click **Add app**, then select **Add custom SAML Apps**.



5. Fill in the **App** details.

Add custom SAML app

To configure single sign-on (SSO) for SAML apps, follow your service provider's instructions. [Learn more](#)

Option 1: Download IDP metadata

DOWNLOAD METADATA

OR

Option 2: Copy the SSO URL, entity ID, and certificate

SSO URL

<https://accounts.google.com/o/saml2/http?idpid=C02cd4dive>

Entity ID

<https://accounts.google.com/o/saml2/httpid+C02cd4dive>

Certificate

Google_2029-5-53622_SAML2_8

Expires Mar 5, 2029

-----BEGIN CERTIFICATE-----
MIIDEDCCAggAwEAgglSjMwCgYIKoZIeHkwGQYKIAUwFQ4DghvBkCFR08wcmZlbnU
bmhhbmRhcnVkdGVzODIwMDZyuzp0bWVudVNBQ2hwOC01ZWQ3QDEwZmZlc3R5b2N1
SDIwZSB0b29keGRyZmlyc2UsMAA6SA1t0T0R0CVM4ZAMhghvBkCFR08wcmZlbnUuNAqzwPTAJ

SHA-256 fingerprint

D6:F9:D3:A9:E9:2C:BD:B7:A3:5E:66:9A:61:44:E1:57:BE:4A:DE:96:43:7E:P5:A1:ED:BD:35:AD:A5:C3:D3:BD

BACK

CANCEL

CONTINUE

6. Click the **Continue** button.
7. Download metadata on the computer and copy **EntityId** (download the signing certificate, if required).

Service provider details
To configure single sign on, add service provider details such as ACS URL and entity ID. [Learn more](#)

ACS URL
`https://{OAuthServerURL}/Saml2-AzureAD/Acs`

Entity ID
`https://{OAuthServerURL}/Saml2-AzureAD/`

Start URL (optional)

☐ Signed response

Name ID
Defines the naming format supported by the identity provider. [Learn more](#)

Name ID format
EMAIL

Name ID
Basic Information > Primary email

BACK CANCEL CONTINUE

11. Click the **Continue** button and save.
12. Click **Apps**, click on **Web and mobile apps**, and check if user access is **ON for everyone**.

SAML

Te TestApp

TEST SAML LOGIN

DOWNLOAD METADATA

EDIT DETAILS

DELETE APP

User access
To make the managed app available to select users, choose a group or organizational unit. [Learn more](#)

[View details](#)

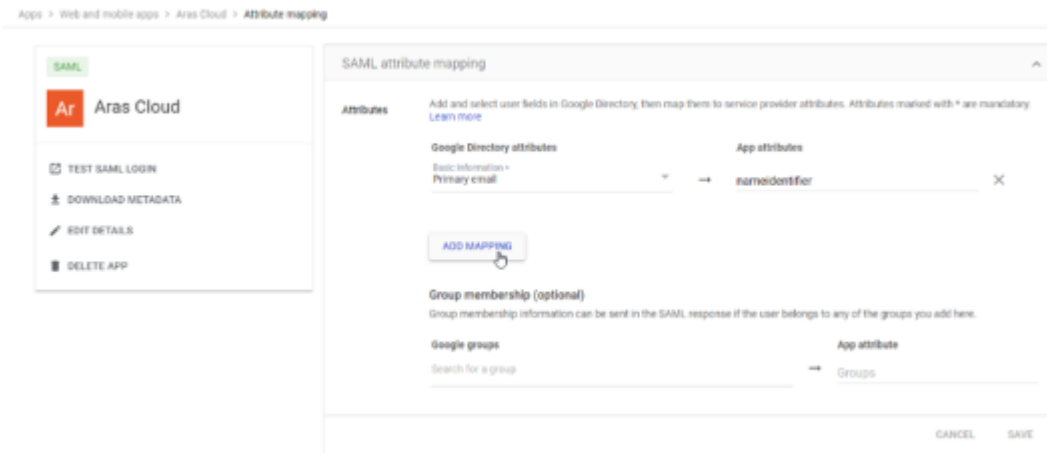
ON for everyone

Service provider details

Certificate	ACS URL	Entity ID
Google_2029-5-5-33622_SAML2.0 (Expires May 5, 2029)	https://devsaas214-nprd-01.gcs.arasqa.com/instance/OAuthServer/Saml2-AzureAD/Acs	https://devsaas214-nprd-01.gcs.arasqa.com/instance/OAuthServer/Saml2-AzureAD/

SAML attribute mapping
SAML attribute mapping isn't configured
Map Google directory user profile fields to SAML service provider attributes.
[Configure SAML attribute mapping](#)

13. Click **Add Mapping** and change mapping options to receive the correct claim after logging into Google.



14. Go to the **Home** Tab, and in the **Users** section, assign users to log in.

Refer to the following Microsoft link about configuring Azure as an identity provider:

<https://learn.microsoft.com/en-us/entra/identity/enterprise-apps/add-application-portal-setup-sso> .

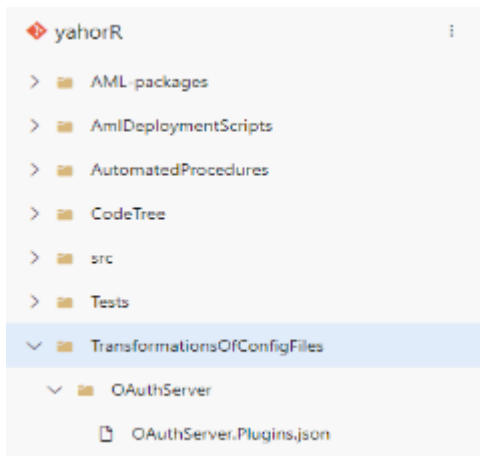
Add transformation for Aras.OAuth.Server.Plugins.Saml2Authentication plugin and for Aras.OAuth.Server.Plugins.GenericUserMapper plugin.

To turn on Aras Innovator SAML 2.0 Authentication, update the **OAuthServer.Plugins.json** settings with the Transformation mechanism using JDT Transformation.

The readme file in the TransformationsOfConfigFiles folder of the Work Repository in Azure DevOps contains more information.

The values of the required parameters can be obtained from the Configure external identity provider section.

The OAuthServer.Plugins.json file must be added to TransformationsOfConfigFiles/OAuthServer of the Repository.



The file should contain the JDT Transformation of the configuration of **Aras.OAuth.Server.Plugins.Saml2Authentication** and **Aras.OAuth.Server.Plugins.GenericUserMapper** plugins.

The following is an example of JDT Transformation using OAuthServer.Plugins.json file:

```

{
  "@jdt.merge": {
    "@jdt.path": "$.['OAuthServer.Plugins']",
    "@jdt.value": [
      {
        "Name": "Aras.OAuth.Server.Plugins.Saml2Authentication",
        "Enabled": true,
        "Options": [
          {
            "AuthenticationType": "Saml2-AzureAD",
            "DisplayName": "Saml2 Google",
            "ServiceProviderOptions": {
              "EntityId": "https://{OAuthServerURL}/Saml2-AzureAD/"
            },
            "IdentityProviderOptions": {
              "EntityId": "https://accounts.google.com/o/saml2?idpid=C02c0u5vx",
              "MetadataSource": "MetadataLocation",
              "MetadataLocation": "/secure_files/sit_GoogleIDPMetadata.xml"
            }
          }
        ]
      },
      {
        "Name": "Aras.OAuth.Server.Plugins.GenericUserMapper",
        "Enabled": true,
        "Options": [
          {
            "AuthenticationType": "Saml2-AzureAD",

```



```
"InnovatorUserNameFormat": "{username}",  
  "ClaimActions": [  
    {  
      "ActionName": "CreateFrom",  
      "ActionOptions": {  
        "ClaimType": "username",  
        "SourceClaimType": "http://schemas.xmlsoap.org/ws/2005/05/identity/claims",  
        "ReplacePattern": "@.+",  
        "Replacement": "",  
        "PatternOptions": [ "IgnoreCase", "Singleline" ]  
      }  
    },  
    {  
      "ActionName": "Validate",  
      "ActionOptions": {  
        "ClaimType": "username",  
        "AllowPattern": ".+",  
        "DenyPattern": "^admin$|^root$|^vadmin$|^authadmin$|^esadmin$",  
        "PatternOptions": [ "IgnoreCase", "Singleline" ]  
      }  
    }  
  ]  
}  
]  
}  
]
```

This Transformation of the **Saml2Authentication** plugin describes the basic minimum flow with metadata as a file and EntityId as a URL. The EntityId of the ServiceProviderOptions should contain a URL to the Saml2-AzureAD endpoint of OAuthServer. The EntityId and metadata file should be configured based on information provided by **identityProvider**.

More information about SAML configuration can be found in the SAML2 Authentication Plugin Configuration section.

This Transformation of the **Generic User Mapper** plugin signifies that the value received from the Identity provider (in this case, e-mail) will be transformed in the **CreateFrom** action, cutting out everything after and including the @ symbol. The Validate section will check if the resulting value equals the username that exists in Aras Innovator and pass the user to the Authentication plugin to authenticate.

1. **Important**

Since the username field in Aras Innovator is limited by the number of symbols, mapping should consider this limitation.

Refer to the Generic User Mapper section for more information about **Generic User Mapper** configuration.

The above example demonstrates one of the basic SAML2 flows using a file configuration of EntityId and Metadata.

Following SAML2 flows are also supported:

- Configuration with URLs to an external provider.
- Configuration with external files, such as certificates and metadata files.

For more details about configuration with external files, refer to the Configuring Secure Files section.

Commit Changes and Run Pipeline

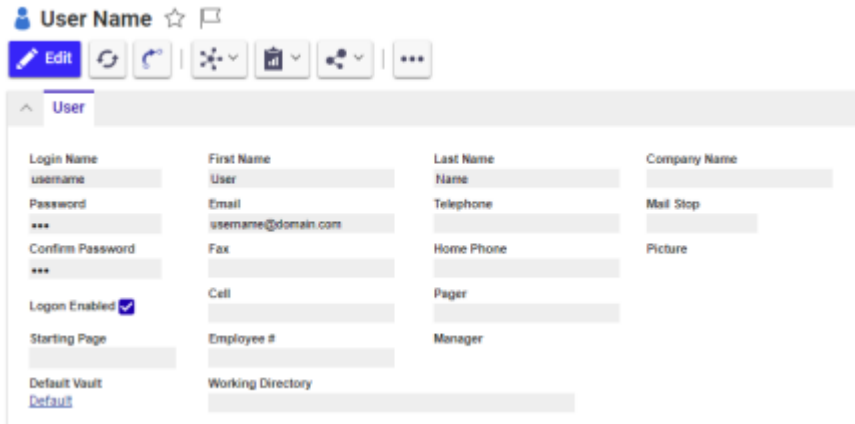
Once all the changes are complete, commit the changes, run the CI Pipeline, and deploy the Pipeline.



Create a User for Corresponding Mapping

Login to the Aras Innovator instance as an administrator and create a user according to the mapping strategy. For example:

The Login Name will be the username of the e-mail address, which is the prefix of @.



The screenshot shows the 'User Name' form in the Aras Innovator interface. At the top, there is a header with a user icon, the text 'User Name', and a star icon. Below the header is a toolbar with buttons for 'Edit', 'Refresh', 'Back', 'Save', 'Cancel', and a menu icon. The form itself is titled 'User' and contains several input fields organized in a grid. The fields are: Login Name (username), First Name (User), Last Name (Name), Company Name, Password (masked with ***), Email (username@domain.com), Telephone, Mail Stop, Confirm Password (masked with ***), Fax, Home Phone, Picture, Logon Enabled (checked), Cell, Pager, Starting Page, Employee #, Manager, and Default Vault (Default). The 'Default Vault' field has a link to 'Default'.

Configure access to the external identity provider (e.g., DNS settings)

If Google requests domain verification, please follow the provided instructions.

The following steps outline the process of configuring the communication between Google and the domain:

1. Open domain settings in admin.google.com and fill in the required properties. For more details, see the Configure External Identity Provider section.
2. Open the Azure portal DNS settings and follow the Google instructions about adding MX records for the domain to make the domain verified. Two records were added to DNS settings.



devsaas214-nprd-01

gcs.arasqa.com

Save

Discard

Delete

Users

Metadata

devsaas214-nprd-01.gcs.arasqa.com

Type

MX

TTL *

1

TTL unit

Hours

Preference	Mail exchange
1	SMTP.GOOGLE.COM ***
15	VNGALAG4QJPXSCZERROPRTJMABYEWK424ZVBRKMNHL7EKO6A53ZQ.MX-VERIFICATIO... ***

mail.contoso.com

3. Continue verification in admin.google.com .

After following all the above steps, the login should be successful. For more details, refer to the SAML2 Authentication Plugin Configuration section.

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The logo of Aras Corporation, featuring a stylized red 'A' composed of several overlapping, slightly curved lines.

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