Deltek

Deltek Maconomy®

Microsoft Azure Setup Guide

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Contents

Overview 1
Single Sign-On with Microsoft Azure Active Directory 2
Complete Prerequisites 3
Sign Up for a Microsoft Azure AD Account 3
Add Maconomy Applications to Obtain Client IDs 4
Create New Registrations 4
Show the Tenant and Client IDs 4
Add the Redirect URLs to the Web Platform 5
Generate the Client Secret 6
Configuration 7
Set up MConfig 7
Configure Users in Maconomy 8
Prerequisites 9
Register a Touch Application 9
Update the Maconomy Application to Support Touch 9
Turn On Azure Login in the Web Service 10
Configure the Coupling Service – New Configuration 11
Third Party (Native) Apps 12

Overview

This document contains details on how to configure and use Microsoft Azure Single Sign-On (SSO) for Maconomy. Note that this document assumes you have an Azure AD account.

Single Sign-On with Microsoft Azure Active Directory

This document contains information about how to perform the following tasks:

- Complete Prerequisites for Azure implementation to obtain Tenant ID
- Register Maconomy applications within this tenant, and obtain Client ID
- Generate Client Secret
- Configure Users in Maconomy
- Register Touch (if needed)

Complete Prerequisites

Sign Up for a Microsoft Azure AD Account

If your firm does not already have a Microsoft Azure AD account, you can sign up for a free account at https://azure.microsoft.com/en-us/free.

Microsoft also offers an Azure AD Premium account for a cost at https://azure.microsoft.com/en-us/trial/get-started-active-directory.

The Premium edition is **not** required for using the single sign-on solution for Maconomy, unless you need to enable Azure multi-factor authentication and/or conditional access restrictions.

Add Maconomy Applications to Obtain Client IDs

The process requires that two applications to be set up in Azure:

- **Maconomy** – Azure Web application for Maconomy Server, Maconomy clients (including iAccess), and Touch Web application
- **Touchapp** – Azure native application for the Touch native application

> **Note:** The Touch app gets an authentication code from Azure which is sent to Maconomy to authenticate the user.

In this process, you must add Maconomy applications to Azure Active Directory and obtain Client ID.

You must add these applications:

- One (1) Maconomy
- Two (2) Touch

Tip: Open Notepad and keep it handy to copy and paste IDs.

Create New Registrations

You must register Maconomy applications within the Azure Tenant ID.

To create a new registration in Azure AD:

1. Log in to the Azure portal at https://portal.azure.com/.
2. Log in to Microsoft Azure and Click **New registration**.
3. On the **Register an application** blade, in the **Name** field, enter a descriptive name such as **Maconomy Server**.
4. In the **Supported account types** field, select **Accounts in this organizational directory only – [name] Single tenant**.
5. In the **Redirect URL field**, select Web.
6. In the related URL field, enter https://<directory>.onmicrosoft.com/maconomyserver.

   Example: For XaYbZc Engineers, enter https://xaybzc.onmicrosoft.com/maconomyserver

   Verified URLs have a green check mark beside them.
7. Click **Register**.

Show the Tenant and Client IDs

Show the Directory (tenant) and Application (client) IDs, as this information is needed later in the process. These are the values that must be put into Mconfig at a later stage.

To view the tenant and client IDs:

1. On the App registrations > Maconomy blade, take note of the IDs.

2. Copy each the Application (client) ID and the Directory (tenant) ID, and paste in Notepad.

Add the Redirect URLs to the Web Platform

Add the redirect URLs to the web platform to facilitate returning authentication tokens to authenticate users. Note that if your Maconomy system is in the Deltek Cloud, the specific system URLs will have already been supplied.

To add redirect URLs:

1. On the **Authentication** blade, in the **Redirect URLs** area, click **Add URL**. A new URL line displays.
2. Add the two redirect URLs for Touch, one for iAccess, and one for Workspace Client.

   > **Note:** Tab after entering each URL. A green check mark will appear to confirm that the format of the URL is valid.

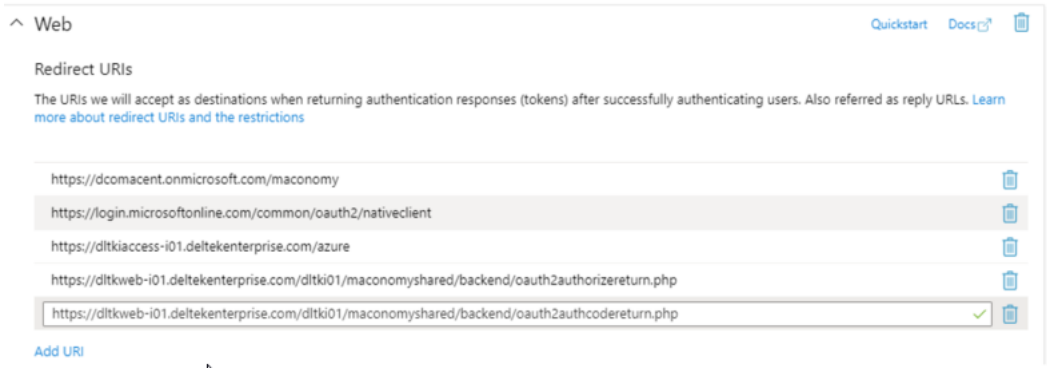
3. Add the following reply URLs for each of the client applications that will use Azure for authentication:

   - **Workspace Client:**

     https://login.microsoftonline.com/common/oauth2/nativeclient
   - **iAccess**:

     https://clientiaccess.deltekenterprise.com/oauth
   - **Touch** (link included in Touch section)

     For example:



4. Click **Save**.

Generate the Client Secret

The client secret is a secret string of text that the application uses to prove its identity, like an application password.

Note: Before you leave the screen that displays the client secret, you MUST take note of it and store it in a safe place.

After you move past this screen, you will no longer have access to the client secret. You must do this now because, after you leave this screen, you cannot return to the screen to see the value.

To generate a client secret:

1. On the **Certificates & secrets** blade, under **Client secrets**, click **New Client Secret**.

   You can right-click the key value to copy it to the clipboard and save it.

   Tip: If you input an expiration date, note that your authentication will stop working at the selected time and it will be your responsibility to generate a new client secret and provide this information to Deltek.

2. Supply to client secret to Deltek Cloud Operations.

Configuration

For cloud-based organizations, Deltek Cloud operations configures the following for the client:

- Set up MConfig

The client or a consultant configures the following:

- Configure Maconomy Users
- Configure Touch Users

For on-premises users, all of the above tasks are performed by the client or a consultant.

Set up MConfig

To set up MConfig to support a customer's Azure implementation:

1. In MConfig, go to the OSGi products screen.
2. In the **Domain login method** field, select **Azure OpenID**.
3. In the **SSO method** field, enter namematch.
4. In the **Azure Tenant ID** field, enter the tenant ID.
5. In the **Client ID** field, enter the client ID.
6. In the **Client Secret** field, enter the client secret.

Configure Users in Maconomy

All AAD users have to be associated with a corresponding Maconomy user to be able to log in. The following shows how to associate an existing Maconomy user with the sample AAD user `jimjarrett@bobedst.onmicrosoft.com`.

To configure users in Maconomy:

1. Log in to Maconomy as system administrator, or as the user whom you wish to configure. You must use traditional Maconomy username/password credentials to do this. Click **Escape** if the Azure login dialog appears.
2. Open the **Setup** » **Users** dialog and double-click on the user you want to configure.
3. Under the **Role Information** tab, find the **Network Username** group.
4. Complete the **Name** and **Domain Name** fields with the matching values of the AAD username, which has the format **`<Name>@<Domain Name>.`**

   > **Note: It is important to convert all values to UPPER CASE**.

   For example, if the AAD username is `jimjarrett@bobedst.onmicrosoft.com`, the values for **Name** and **Domain Name** are `JIMJARRETT` and `BOBEDST.ONMICROSOFT.COM`, respectively.
5. Save the settings.

   > **Note:** Maconomy may ask you to enter a password for the user.

Touch Registration

In Azure, Touch must exist as a separate application within the same tenant as the Maconomy application. You must complete the setup in this section for Touch.

To register Touch, you must:

- Complete Prerequisites
- Create Application
- Add Client to URL
- Set Permissions
- Send Client ID of Touch App to Deltek

Prerequisites

Prior to enabling the Azure setup in Deltek Touch, you must set up Azure for Maconomy, as described in this document.

Additionally, Deltek recommends testing Azure in Workspace Client prior to Touch registration.

Register a Touch Application

To register an application for Touch:

1. Go to the Azure portal at https://portal.azure.com.
2. Click the App registrations tab and click **New registration.**
3. In the Name field, enter a name, such as **Deltek Touch**.
4. In the **Supported account types** field, select **Accounts in this Directory… Single Tenant**.
5. In the **Redirect URL** field, select **Public client / native mobile**.
6. In the related URL field, enter `https://deltekmaconomyclient`. This becomes the **REDIRECT URL**.
7. Under the **properties** section of the newly created application, find the read-only field labeled **Application ID** and note its value. This is the **Touch Client ID**. Record for later purpose.
8. Go to API permissions. In the **Configured permissions** field, click **Add a permission**, and select Maconomy Server.

Update the Maconomy Application to Support Touch

The Deltek Touch Web application uses the same Azure application as the Workspace Client. If you follow the Maconomy documentation for Azure, this Azure Web app is called Maconomy Server.

To make sure that Deltek Touch can use the Maconomy Azure application, add the Touch URL to the Reply URL on the Azure application.

To add the Touch URL to the Maconomy Server:

1. Open the Azure portal at https://portal.azure.com.
2. Click the App registrations tab.

3. On the App registrations tab, find the Maconomy application.
4. Click **All Settings** » **Reply URLs**.
5. Add the Touch URLs:
   - .../maconomyshared/backend/oauth2authorizereturn.php

     For example:

     https://<yourdomain>.com/22_M20SP1/maconomyshared/backend/oauth2authorizereturn.php
   - …/maconomyshared/backend/oauth2authcodereturn.php

   Note: Since these URLs are client-specific, Deltek Cloud Operations may have to give you the first portion, represented above by the ellipses (…).

Turn On Azure Login in the Web Service

For Clients

To facilitate this process, provide Deltek Cloud Operations with the Client ID of the Touch application.

To obtain the Touch app Client ID:

1. In the Azure portal https://portal.azure.com, go to **App registrations**.
2. In the **Display name** column, find the Deltek Touch application, and in the related **Application (client) ID column**, note the information / Client ID.
3. Provide this Client ID to Deltek Cloud Operations.

For Deltek Cloud Operations

Deltek Cloud Operations performs the steps below once the client supplies the Client ID of the Touch application.

Make the following changes in the custom DeltekTouch.I file:

1. Set **UseExternalCredentials** to **true**. By default, it is set to **false**.
2. Set **ExternalCredentialsType: #K"Azure"**. By default, it is empty.
3. Set **AzureNativeClientID** to the Touch Client ID.

   For example, `AzureNativeClientID:#K"347bbd9d-15da-4564-b58f-1dfcadc7e2bf".` By default, it is empty.
4. Set **AzureRedirectURI** to the REDIRECT URL.

   For example, `AzureRedirectURI:#Khttps://deltekmaconomyclient`. By default, it is empty.
5. If Maconomy is set up to use AzureOpenID, you can specify the new server settings: **AzureResponseType, AzureWebClientID**, **AzureServerID**, **AzureTenantID.** By default these are empty, meaning the Web service tries to calculate these based on the information it gets from Maconomy. You should explicitly set this only if the default functionality fails. For **AzureResponseType,** the only value allowed is "code".

Configure the Coupling Service – New Configuration

The steps below are for Deltek Cloud Ops.

Warning: Complete the following steps only if you are configuring the Coupling Service for the first time. If you are upgrading an existing configuration, see the following section called **Configure the Coupling Service – Upgrade Azure Configuration**.

To configure the coupling service for use with Azure AD:

1. Open the security configuration file at

   `<MaconomyDir>\CouplingService\configuration\maconomy.security.config`

   where <**MaconomyDir**> is the path of the Maconomy installation.

2. Under the **Maconomy** section (inside the curly braces in `Maconomy{ … };`), insert the following login module definition. Insert it before the definition of `com.maconomy.lib.coupling.MaconomyLoginModule`, but after any other login mechanisms with higher priority:

   ```
   org.eclipse.equinox.security.auth.module.ExtensionLoginModule sufficient
   extensionId="com.maconomy.lib.coupling.MaconomyAzureADLoginModule"
   tenantId="<Tenant ID>"
   clientId="<Client ID>"
   clientSecret="<Client Secret>";
   ```

   Replace the highlighted placeholders by the appropriate values. See the previous sections for how to obtain the values of **Tenant ID**, **Client ID**, and **Client Secret**.

Third Party (Native) Apps

Third Party (native) apps can authenticate against Azure using a flow called Client Credentials Grant Flow with Certificate, described at:

https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-oauth2-client-creds-grant-flow

Previously, the OpenID Connect (OIDC) login modules (MaconomyOIDC and MaconomyAzureOIDC) were unable to consume OAuth Bearer tokens. This meant that it was not possible to use other OAuth login flows in parallel with the OIDC Client Credentials flow.

From Maconomy 2.4.7, the RESTapi accepts Bearer tokens when an OIDC login module is configured, and the OIDC login modules are able to process these tokens, if they are valid JSON Web Tokens (JWT).

For Azure, an example Curl command for obtaining a client bearer token is shown below, where the values in brackets ({…}) are system specific:

```
curl -X POST https://login.microsoftonline.com/{tenant_id}/oauth2/token
^
-F Content-Type=application/x-www-form-urlencoded ^
-F host=login.microsoftonline.com ^
-F scope=https://{sub_domain}.onmicrosoft.com/.default ^
-F client_id={client_id} ^
-F client_secret={client_secret} ^
-F grant_type=client_credentials ^
-F resource={resource_id}
```

Note: For Azure, it is important to use the ‘oauth2/token’ authorization endpoint, rather than the ‘oauth2/2.0/token’ endpoint introduced as a part of the Microsoft Identity Platform, as the ‘2.0’ endpoint is currently not compatible with Azure OIDC.

If authentication is successful, the returned JSON object has the form:

```
{"token_type":"Bearer", […], "access_token":"{access_token}"}
```

The value of ‘{access_token}’ can subsequently be used to perform a Maconomy login and obtain a session reconnect token:

```
curl -X GET http://{maconomy_host}:{port}/containers/v1/{shortname} ^
-H "Maconomy-Authentication: X-Reconnect" ^
-H "Authorization: Bearer {access_token}"
```

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