Microsoft Entra ID SSO for Grafana

> **Prerequisites:** Ability to create an app registration with delegated standard rights and access to the Grafana Docker volume. Grafana should be installed and administrator access to the web interface should be available.

These instructions describe how a Grafana Docker instance can be equipped with all the advantages of Single Sign On (SSO) using Microsoft Entra ID. Since there are different types of SSO, it is important to know that Grafana has many possibilities and offers granular, requirement-specific implementation options. For example, this means that automatic sign-up, role and user mapping, authentication scope and much more can be set.

Create App Registration

First, an app registration including client secret must be created in Microsoft Entra ID. All settings can be left at the default values. Important settings are the Redirect URIs under the Authentication tab. Set these URIs to your external or internal domain on which Grafana is available. These URIs will be used for Microsoft Entra ID to know where to redirect the user in case of successful logins.

- **Authentication Type:** Web
- **Redirect URIs:** https://grafana.yourdomain.com/ & https://grafana.yourdomain.com/login/azuread

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Web
Redirect URIs

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The URIs we will accept as destinations when returning authentication responses (tokens) after successfully authenticating or signing out users. The redirect URI you send in the request to the login server should match one listed here. Also referred to as reply URLs.
Learn more about Redirect URIs and their restrictions

⚠️ This app has implicit grant settings enabled. If you are using any of these URIs in a SPA with MSAL.js 2.0, you should migrate URIs. →

https://grafana.yourdomain.com ✓

https://grafana.yourdomain.com/login/azuread

Add URI

Front-channel logout URL

This is where we send a request to have the application clear the user's session data. This is required for single sign-out to work correctly.

e.g. https://example.com/logout ✓

Implicit grant and hybrid flows

Request a token directly from the authorization endpoint. If the application has a single-page architecture (SPA) and doesn't use the authorization code flow, or if it invokes a web API via JavaScript, select both access tokens and ID tokens. For ASP.NET Core web apps and other web apps that use hybrid authentication, select only ID tokens. Learn more about tokens.

Select the tokens you would like to be issued by the authorization endpoint:

☑ Access tokens (used for implicit flows)

☐ ID tokens (used for implicit and hybrid flows)

Add the corresponding permissions for OpenID Connect as delegated permissions and grant admin consent for your tenant.

- **Permissions:** Delegated OpenId permissions (email, offline_access, openid, profile)

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Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. Learn more about permissions and consent

+ Add a permission   ✓ Grant admin consent for LNC Freelancing

API / Permissions name	Type	Description	Admin consent req...	Status	
∨ Microsoft Graph (4)					...
email	Delegated	View users' email address	No	✓ Granted for LNC Freelancing	...
openid	Delegated	Sign users in	No	✓ Granted for LNC Freelancing	...
profile	Delegated	View users' basic profile	No	✓ Granted for LNC Freelancing	...
User.Read	Delegated	Sign in and read user profile	No	✓ Granted for LNC Freelancing	...

To view and manage consented permissions for individual apps, as well as your tenant's consent settings, try Enterprise applications.

Create a client secret for the application and save the tenant ID, application ID and client secret in your password manager. You can find instructions for this information here: Get app details and grant permissions to app registration

Enable authentication login provider

To equip Grafana with SSO options, the SSO API must be activated in the configuration file. To do this, the following file "/etc/grafana/grafana.ini" must be adapted. This file is normally saved in a persistent location. Create the document if it does not already exist and add the following

configuration line:

```
[feature_toggles]
ssoSettingsApi = true
```

You should then restart the Docker container or the application.

Check whether configuration was successful

If everything is set up correctly, you can log in with the administrator account in the webgui of your Grafana installation.

You should then be able to see the OAuth providers supported by Grafana in the "Authentication" tab.
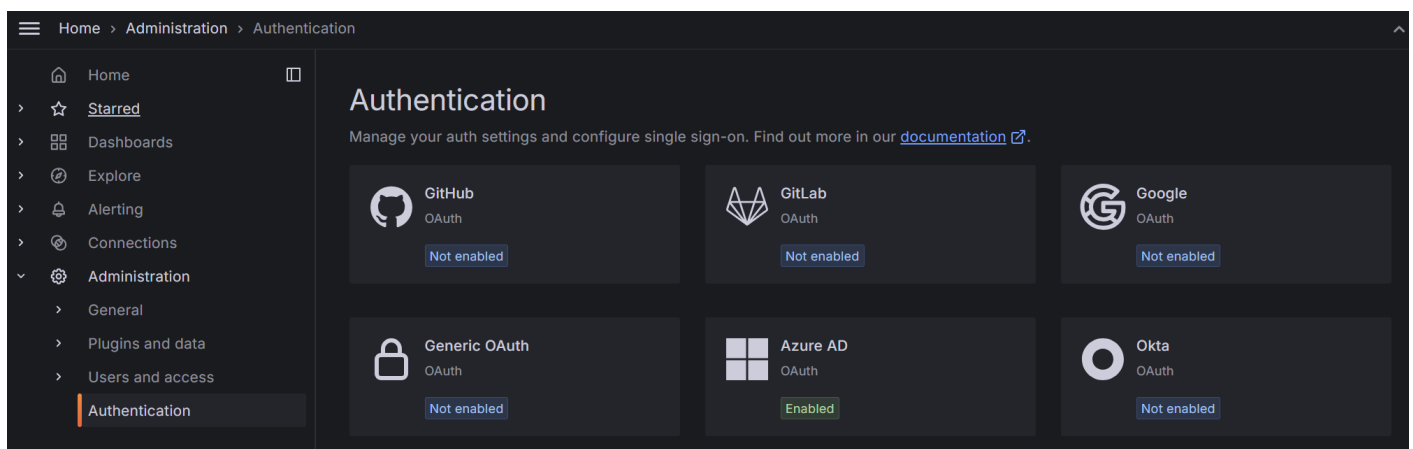
Setup Microsoft Entra ID provider

This step requires the authentication details TenantID, ClientID, Client Secret from the first step.

In the Grafana web interface select "Authentication" -> "Azure AD". There you can enter the credentials from Microsoft Entra ID. Enter the information as described here:

- **Display Name:** Enter a name that will be displayed to the end user as a button when logging in.
- **Client id:** Enter your ClientID from the App Registration of your Microsoft Entra ID.
- **Client secret:** Here you have to enter the Client Secret as passphrase.
- **Scopes:** This allows you to receive multiple parameters from the Microsoft Entra ID user object. The Access Token is requested with these scopes at login. The default values are usually sufficient.
- **Auth URL:** Enter the following URL and fill your tenant id:
  https://login.microsoftonline.com/<yourtenantid>/oauth2/v2.0/authorize
- **Token URL:** Enter the following URL and fill your tenant id:
  https://login.microsoftonline.com/<yourtenantid>/oauth2/v2.0/token

- **Allow sign up:** If this is enabled all user who have permission to sign in to your App Registration, are automatically signed up as user objects in Grafana. As you can still manage permissions within the App Registration this is usually recommended.
- **Auto login:** This logs your users automatically into Grafana if they have an Access Token for Microsoft Entra ID.

After these settings are properly configured your users should be able to sign into Grafana. For more granular settings and things like role mapping or default Grafana groups, change the settings under "User mapping" and "Extra security measures".

General settings ∧

Display name
Will be displayed on the login page as "Sign in with ...". Helpful if you use more than one identity providers or SSO protocols.

```
Microsoft Entra ID
```

Client Id *
The client Id of your OAuth2 app.

```
<yourclientid>
```

Client secret
The client secret of your OAuth2 app.

```

```

Scopes
List of comma- or space-separated OAuth2 scopes.

```
openid ✕    email ✕    profile ✕                                    ∨
```

Auth URL *
The authorization endpoint of your OAuth2 provider.

```
https://login.microsoftonline.com/<yourtenantid>/oauth2/v2.0/authorize
```

Token URL *
The token endpoint of your OAuth2 provider.

```
https://login.microsoftonline.com/<yourtenantid>/oauth2/v2.0/token
```

Allow sign up
If not enabled, only existing Grafana users can log in using OAuth.

🔵✓

Auto login
Log in automatically, skipping the login screen.

⚪

Sign out redirect URL
The URL to redirect the user to after signing out from Grafana.

```

```

User mapping ∨

Extra security measures ∨

Disable   Save   Discard   ⋮

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