Configuring SAML SSO

Introduction

To manage user access securely and at scale, Neat Pulse allows you to set up SAML-based single sign-on.

Note: this feature is only available to customers on a paid Pulse plan.

Overview

All Neat Pulse customers are able to configure email/password login and OAuth-based SSO via Google or Microsoft Entra ID accounts. See here for information about Microsoft Azure AD/Entra ID federation.

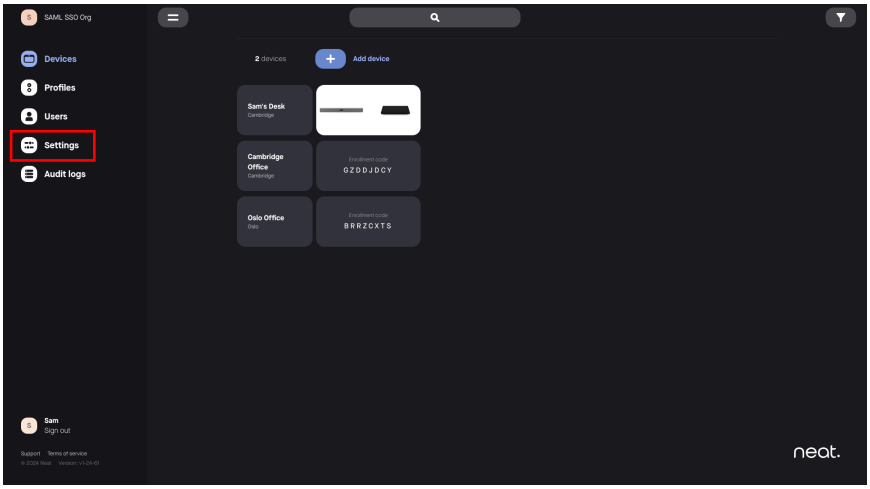
Customers on a paid Pulse plan can also configure SAML 2.0-based SSO. Role based access control can be configured per user from the Identity Provider used for the SAML SSO integration.

Prerequisites

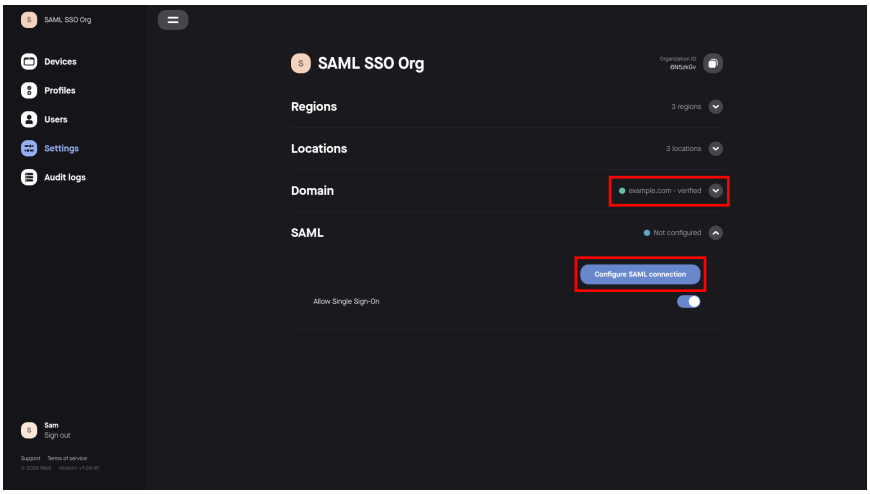
Setting up SAML SSO requires you to first verify your domain. Please see the domain verification article here:
https://support.neat.no/article/domain-verification-for-saml-sso-on-the-neat-pulse-management-platform/

Setup guide

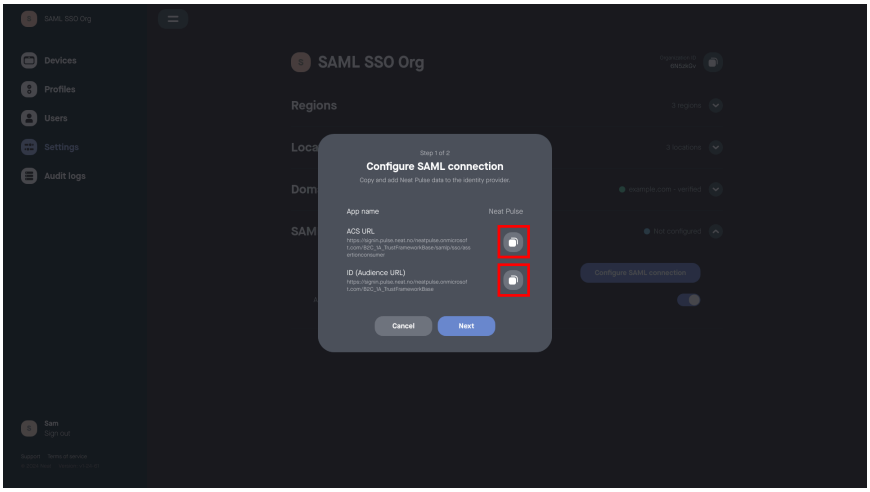
1. **Create a new app or integration in your Identity Provider (IdP)**
    - This step is specific to the IdP that you use
    - If you use **Okta**, please see https://support.neat.no/article/setting-up-saml-sso-using-okta/ for more detailed instructions
    - Create a new app or integration with SAML enabled in your IdP
2. **Connect via SAML**
    - Navigate to the settings page as a Pulse user with the Owner role



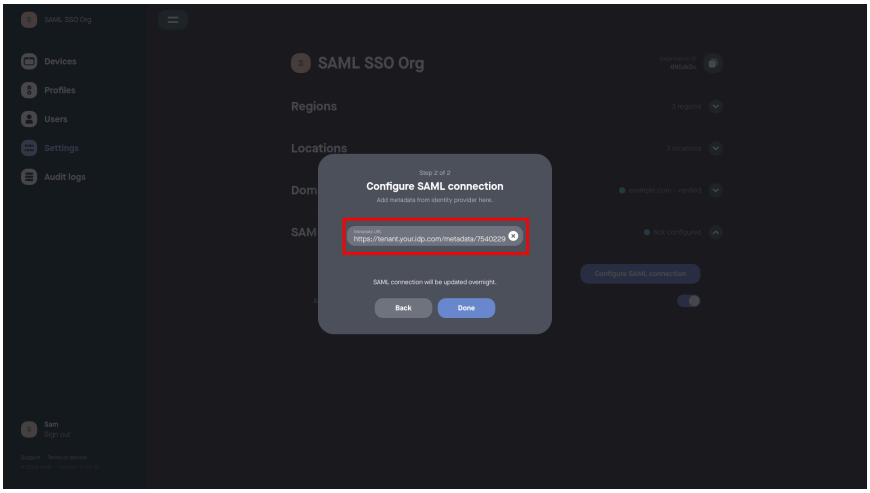
    - Select **Configure SAML connection**
        - A domain must be verified. Please see https://support.neat.no/article/domain-verification-for-saml-sso-on-the-neat-pulse-management-platform/



    - Copy the provided **ACS URL** and **Entity ID** from the popup window in Neat Pulse into your IdP

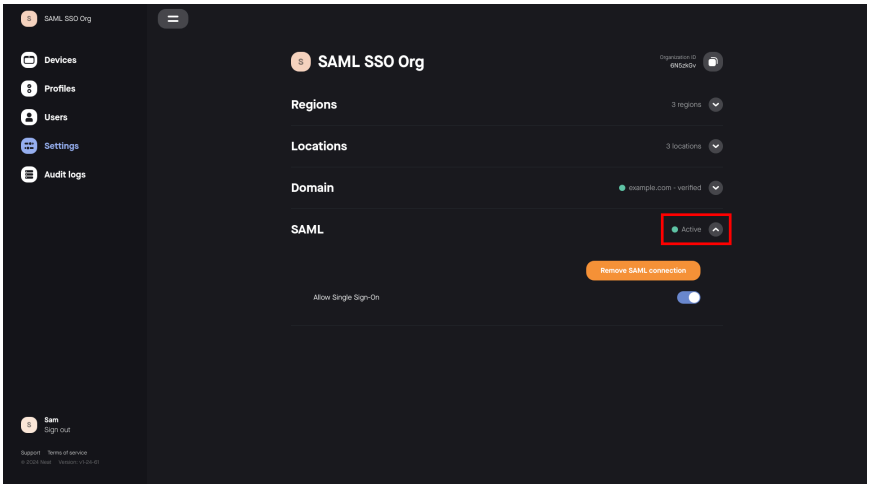


- Copy the **Metadata URL** from your IdP into Neat Pulse



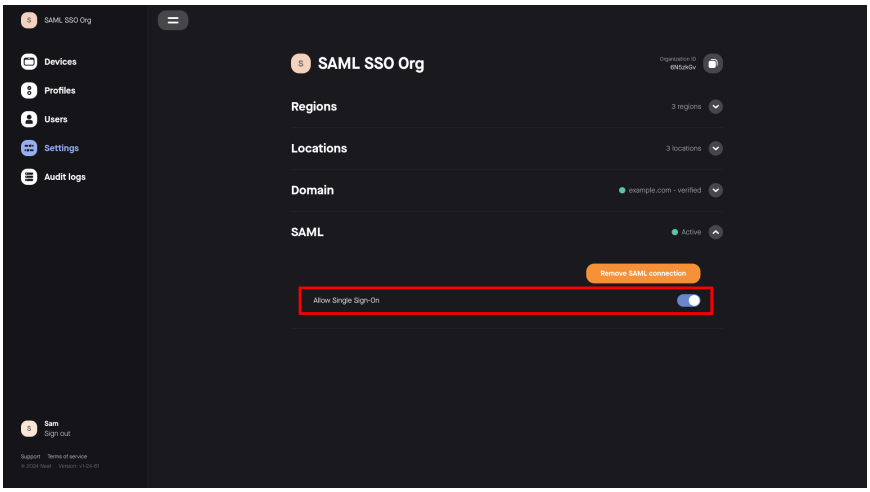
- Click Done
- Wait for Neat Pulse to configure SAML SSO for your tenant.
    - This will usually occur the following night in the GMT timezone.

3. **Assign users and roles**
    - Assign the users that should be able to access Neat Pulse to the app in your Identity Provider that was created for this integration earlier
    - Users require RBAC roles to be assigned to them and passed through as SAML attribute statements in order to control the permissions they have within NeatPulse
        - Note: If a user is assigned to the app/integration, but is not assigned any RBAC roles, they will be unable to log in to Neat Pulse
    - See the RBAC section below for more details and examples
4. **Activation**
    - When your SAML SSO configuration is complete and activated, an indication will appear.



- You can now verify that your SAML SSO integration is working by attempting to log in
    - Please see the troubleshooting section below if you are experiencing problems

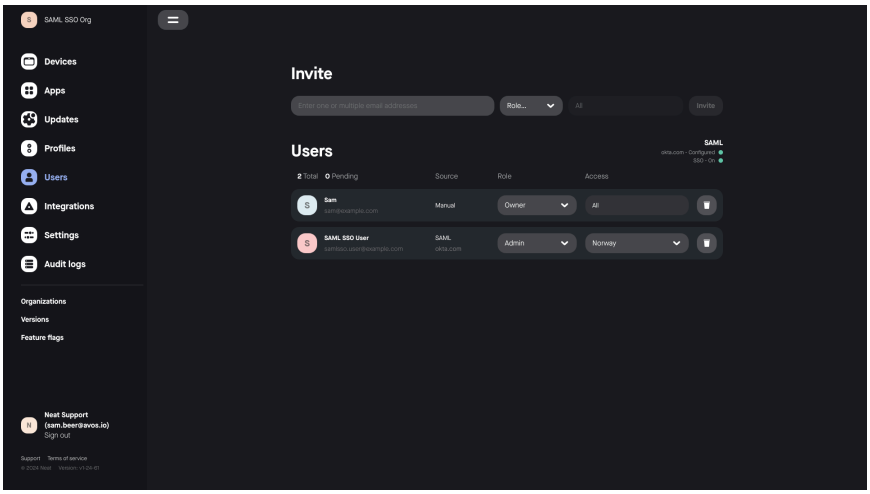
5. **Disabling SAML SSO**



- SAML SSO can be disabled by toggling the **SAML SSO Enabled** setting
    - This will immediately stop any Neat Pulse user in your tenant who is authenticated via SAML SSO from using the platform
    - This can be used to temporarily disable your SAML SSO integration in order to make changes, without needing to go through the login process again.

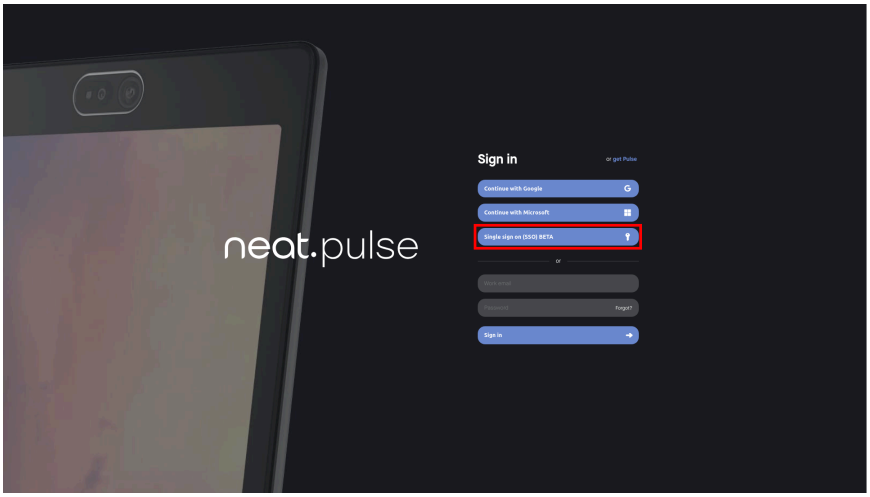
6. **Management**
    - An active SAML SSO configuration can be removed in the settings section, allowing you to reconfigure a new connection
    - A pending SAML SSO configuration can be reconfigured, allowing you to update the metadata URL
    - The Users page indicates the state of SAML SSO configuration for your Neat Pulse tenant.
        - Each user's login method is also indicated here.

- If the SAML SSO enabled is turned off in the settings menu, SAML SSO users will be unable to log in and will be grayed out in the users list.

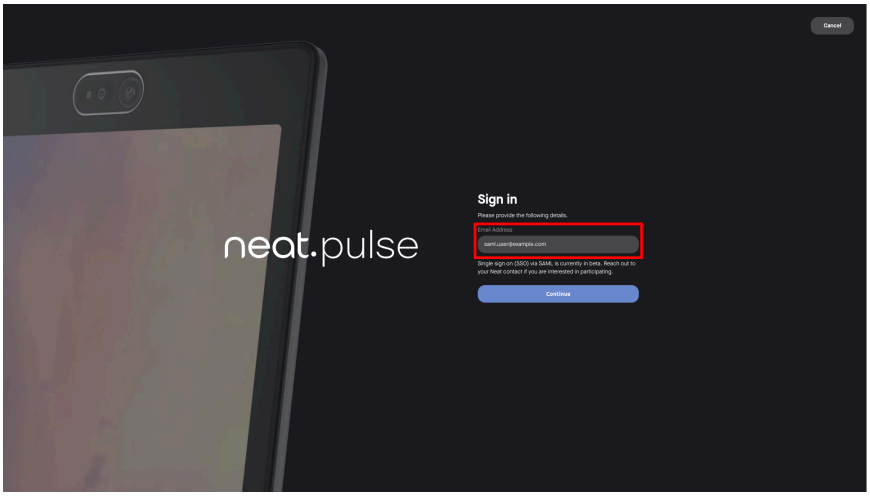


Logging in via SAML SSO

1. **Choose the SAML SSO method**
   - Go to the [Neat Pulse login page]
   - Select Single Sign on (SSO)



2. **Enter your email address**
   - Your email address will need to match the domain that has been verified for your Neat Pulse tenant
   - For example, if **example.com** is your Neat Pulse tenant's verified domain, **user@example.com** is a compatible email address for SAML SSO



3. **Sign in**
    - Click Continue. You will be redirected to your Identity Provider and prompted to log in, unless you have an active session
    - You now have access to Neat Pulse with the permissions assigned to you in your IdP
    - If the login process does not work, please see the troubleshooting section below.

User Attribute Statements

Pulse requires user details to be provided as Attribute Statements in the SAML Assertion received from your Identity Provider. Some of these required user details are relevant to RBAC, and a more complete description is given below in the Role-Based Access Control section

Claim Name	Value
displayName	Name of the user, as will be displayed in Neat Pulse
email	Email address of the user

Role-Based Access Control

Refer to this section when specifying the Neat Pulse permissions for your users.

The two relevant RBAC attribute statements are shown in the table below

Claim Name	Value
neat_pulse_roles	PulseRoleOwner / PulseRoleRegionAdmin
neat_pulse_regions	PulseRegion{Name of region in Neat Pulse}

For example:

To make a user an **owner**, they must have the **neat_pulse_roles** attribute present, and its value must be **PulseRoleOwner**.

To make a user a **region admin**, they must have the **neat_pulse_roles** attribute present, and its value must be **PulseRoleRegionAdmin**, and they must also have the **neat_pulse_regions** attribute present, with multiple attribute values. The attributes shown below would make the relevant user a region admin with permissions to manage rooms and devices within the UK and EMEA regions in Neat Pulse.

Claim Name	Value
neat_pulse_roles	PulseRoleRegionAdmin
neat_pulse_regions	PulseRegionUK, PulseRegionEMEA

Troubleshooting

To be further populated as problems are encountered.

No rooms or devices appearing after SAML SSO Sign on

This is likely the result of your new SAML SSO authenticated user having been created without correct role and/or region assignments. Check in the users page if your user is an Admin without any regions assigned. If your new user is an Admin without any regions assigned, they will be unable to view any rooms or devices that are in existing regions.

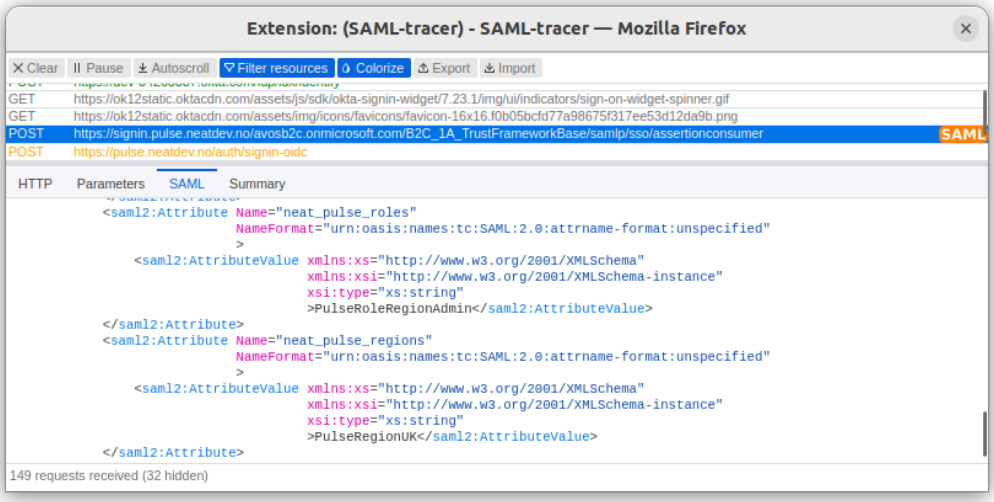
Solution: Ensure that your IdP integration is configured such that the attribute statements (as shown in the sections above) are being sent in the SAML Assertion.

Further troubleshooting:

If you believe that the attribute statements are already correctly configured, you can verify their presence in the SAML Assertion by using a SAML tracing tool, like these browser extensions:

Chrome:
https://chromewebstore.google.com/detail/saml-tracer/mpdajninpobndbfcldcmbpnnbhibjmch?hl=en
Firefox: https://addons.mozilla.org/en-GB/firefox/addon/saml-tracer/

With a SAML tracing tool running, log in to Pulse via SAML SSO again.



Two HTTP requests will be tagged as SAML - the Authentication Request and the Assertion (response). Check your assertion for the presence of the **neat_pulse_roles** and **neat_pulse_regions** attributes.

Error message on SAML SSO Sign on: **“You are not a member of this organization”**

For Pulse versions below 1.27, this error can be encountered if an initially unsuccessful SAML SSO login is followed by a successful one.

Solution: If you encounter this error message after successfully making it through your IdP’s login page, please get in touch with Pulse support so that they can resolve the issue