Microsoft Azure Active Directory as SAML IdP with Pulse Connect Secure Deployment Guide
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Introduction

This document describes how to set up Pulse Connect Secure for SP-initiated SAML authentication using the Microsoft Azure Active Directory as the SAML IdP. It also describes the user experience with Web browser and Pulse Secure Client access methods.

Prerequisites

Ensure you have the following:

- Administrative access to the Azure Management Portal
  - Azure subscription that includes Active Directory
- Pulse Connect Secure appliance running 8.2R1 or later

Configurations

The setup includes the following process steps:

- Microsoft Azure Active Directory Configuration
- Pulse Connect Secure Configuration

Microsoft Azure Active Directory Configuration

This section covers the configurations required on Microsoft Azure AD. Microsoft Azure AD configurations include:

- Setting Up PCS as Enterprise Application
- Configuring Single Sign-on Settings
- Assigning User to Application

Setting Up PCS as Enterprise Application

Perform the following steps:

1. Log into the Azure Management Portal.
2. On the Azure Services page, select Azure Active Directory.

Figure 1: Azure Services - Enterprise applications
3. On the left pane, select **Enterprise applications**.
4. In the Enterprise applications page, click **New application**.

**Figure 2: Azure AD - Enterprise applications**

5. In the Browse Azure AD Gallery page, search with keyword **Pulse Secure**, and then select **Pulse Secure PCS** from the search result.

**Figure 3: Azure AD - Select Pulse Secure Application**
6. In the window that is displayed, enter a unique name, and click **Create**.

**Figure 4: Azure AD – Create Pulse Secure Application**

This completes setting up of enterprise application.
Configuring Single Sign-on Settings

After successfully configuring the enterprise application, the Getting Started page is displayed. Perform the following steps:

1. In the Getting Started page, select Single sign-on.

   **Figure 5: Azure AD - Single Sign-on settings**

2. Select Single sign-on method as SAML

   **Figure 6: Single Sign-on method**

3. The Entity ID of Pulse Connect Secure is: https://[FQDN of PCS]/dana-na/auth/saml-endpoint.cgi?p=sp1

   **NOTE:** SP1 in the above Entity Id indicates that this is the first SAML Service Provider. If there are any existing SPs, then this number changes. Please check PCS configurations for exact number.

4. Reply URL of Pulse Connect Secure is https://[FQDN of PCS]/dana-na/auth/saml-consumer.cgi

5. Configure Sign on URL as https://[FQDN of PCS]/dana-na/auth/saml-consumer.cgi
6. Select **User Identifier** from the drop-down list.

**NOTE:** User Identifier value is sent as Subject Name in SAML response. Please choose appropriate one of your choice.

7. Click **Metadata XML** to download Azure AD IdP metadata. This will be uploaded to Pulse Connect Secure to retrieve Azure AD SAML IdP configurations.
Assigning User to Application

1. In the Getting Starting page, select Assign users and groups.

Figure 9: Azure AD - Assign user to application
2. Select the user who needs access to PCS.
3. Click **Add User**.

**Figure 10: Azure AD - Add user**

4. Microsoft MFA is then set on the user in Azure AD.

---

**Multi-factor authentication**

**users service settings**

Before you begin, take a look at the multi-factor auth deployment guide.

- **View**  
  - Sign-in allowed users
  - Multi-Factor Auth status: Enforced

- **MULTI-FACTOR AUTH STATUS**
  - Enforced
Pulse Connect Secure Configuration

This section covers the SAML configurations required to configure PCS as SAML SP. The other basic configurations like creating Realms and Roles are not covered.

Pulse Connect Secure configuration includes:

- Configuring Azure Active Directory as SAML Metadata Provider
- Configuring SAML Authentication Server

Configuring Azure Active Directory as SAML Metadata Provider

Perform the following steps:

1. Log into the Pulse Connect Secure admin console.
2. Navigate to System > Configuration > SAML.
3. Click New Metadata Provider.

Figure 11: PCS: SAML Configuration

4. Provide a name for the new metadata provider.
5. Select Location as Local.

NOTE: Azure AD metadata is the XML file that should be downloaded from Azure portal. For details, see the ‘Microsoft Azure AD Configurations’ section above.
7. Select **Accept Unsigned Metadata**.
8. Select **Roles** as **Identity Provider**.
9. Click **Save Changes**.

Figure 12: PCS: Azure AD as SAML IdP in PCS

Figure 13: PCS: Select Identity Provider role
Configuring SAML Authentication Server

To create a SAML authentication server:

1. Navigate to Authentication > Auth Servers.

**Figure 14: PCS: Authentication server selection**

3. Provide Server Name.
4. Select SAML Version as 2.0, and Configuration Mode as Metadata.
5. Select Azure AD Entity Id from the Identity Provider Entity Id drop-down list.

**Figure 15: PCS: SAML Server settings**

6. Single Logout is an optional setting. If this option is selected, it prompts for a new authentication after logout. If this option is not selected and you have not closed the browser, you can reconnect without authentication.
7. Select Requested Authn Context Class as Password, and Comparison Method as exact.
8. Set the Metadata Validity in terms of number of days.
9. Click Save Changes.

**NOTE:** Azure AD Metadata automatically sets various parameters for the SAML authentication server.
Figure 16: PCS: SSO Method settings
End-User Flow

Access through Browser (SP Initiated SSO)

1. Open web browser and access Pulse Connect Secure URL (Example: https://vpn.pulsesecure.net)
   It automatically redirects to Microsoft login page.
2. Provide Email Id.
3. When prompted for password, provide password.
4. Click Sign In.
   After successful authentication, user gets redirected to Pulse Connect Secure portal giving access to corporate resources.

Troubleshooting

For any issues with Pulse Connect Secure, submit a request with Pulse Secure support team and provide following PCS logs:

- Navigate to System > Log/Monitoring. Click Save All Logs and save the logs.
- Provide server debug logs with event codes “saml, auth, soap, dsdash, cloudsecure” at level 50.
- Provide Policy tracing for the specific user session with proper realm.
References

Microsoft Azure documentation: https://docs.microsoft.com/en-us/azure/

Requesting Technical Support

Technical product support is available through the Pulse Secure Global Support Center (PSGSC). If you have a support contract, then file a ticket with PSGSC.

- Product warranties—for product warranty information, visit https://www.pulsesecure.net.