Configure SAML single sign-on with Okta

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You can configure your ExtraHop system to enable users to log in to the system through the Okta identity management service.

Before you begin

- You should be familiar with administering Okta. These procedures are based on the Okta Classic UI. If you are configuring Okta through the Developer Console, the procedure might be slightly different.
- You should be familiar with administering ExtraHop systems.

These procedures require you to copy and paste information between the ExtraHop system and the Okta Classic UI, so it is helpful to have each system open side-by-side.

Enable SAML on the ExtraHop system

1. Log in to the Administration settings on the ExtraHop system through `https://<extrahop-hostname-or-IP-address>/admin`.
2. In the Access Settings section, click **Remote Authentication**.
3. From the **Remote authentication method** drop-down menu, select **SAML**.
4. Click **Continue**.
5. Click **View SP Metadata**.
   You will need to copy the ACS URL and Entity ID to paste into the Okta configuration in the next procedure.

Configure SAML settings in Okta

This procedure requires you to copy and paste information between the ExtraHop Administration settings and the Okta Classic UI, so it is helpful to have each UI open side-by-side.

1. Log in to Okta.
2. In the upper-right corner of the page, change the view from **Developer Console** to **Classic UI**.

3. From the top menu, click **Applications**.
4. Click **Add Application**.
5. Click **Create New App**.
6. From the Platform drop-down menu, select **Web**.
7. For the Sign on method, select **SAML 2.0**.
8. Click **Create**.
9. In the General Settings section, in the App name field, type a unique name to identify the ExtraHop system.
10. Optional: Configure the App logo and App visibility fields as required for your environment.
11. Click **Next**.
12. In the SAML Settings sections, paste the Assertion Consumer Service (ACS) URL from the ExtraHop system into the Single sign on URL field in Okta.

> **Note:** You might need to manually edit the ACS URL if the URL contains an unreachable hostname, such as the default system hostname `extrahop`. We recommend that you specify the fully qualified domain name for the ExtraHop system in the URL.

13. Paste the SP Entity ID from the ExtraHop system into the Audience URI (SP Entity ID) field in Okta.

14. From the **Name ID format** drop-down menu, select **Persistent**.

15. From the **Application username** drop-down menu, select a username format.

16. In the Attribute Statements section, add the following attributes.

    These attributes identify the user throughout the ExtraHop system.

Name	Name format	Value
`urn:oid:0.9.2342.19200300.100.1.3`	URI Reference	user.email
`urn:oid:2.5.4.4`	URI Reference	user.lastName
`urn:oid:2.5.4.42`	URI Reference	user.firstName

17. In the Group Attribute Statement section, in the Name field, type a string and configure a filter.

    You will specify the group attribute name when you configure user privilege attributes on the ExtraHop system.

    The following figure shows a sample configuration.

A SAML Settings

GENERAL

Single sign on URL   https://eda.example.com/sso/saml/acs/

☑ Use this for Recipient URL and Destination URL
☐ Allow this app to request other SSO URLs

Audience URI (SP Entity ID)   urn:extrahop:saml:d52430f4e8af43b68439902b913a8cec

Default RelayState

If no value is set, a blank RelayState is sent

Name ID format   Persistent

Application username   Email

Update application username on   Create and update

Show Advanced Settings

ATTRIBUTE STATEMENTS (OPTIONAL)   LEARN MORE

Name	Name format (optional)	Value
urn:oid:0.9.2342.1920030	URI Reference	user.email
urn:oid:2.5.4.4	URI Reference	user.lastName
urn:oid:2.5.4.42	URI Reference	user.firstName

Add Another

GROUP ATTRIBUTE STATEMENTS (OPTIONAL)

Name	Name format (optional)	Filter	
groupMemberships	Unspecified	Matches regex	.*

Add Another

18. Click **Next** and then click **Finish**.
    You are returned to the Sign On settings page.
19. In the Settings section, click **View Setup Instructions**.
    A new browser window opens and displays information that is required to configure the ExtraHop system.

Assign the ExtraHop system to Okta groups

We assume that you already have users and groups configured in Okta. If you do not, refer to the Okta documentation to add new users and groups.

1. From the Directory menu, select **Groups**.
2. Click the group name.
3. Click **Manage Apps**.
4. Locate the name of the application you configured for the ExtraHop system and click **Assign**.
5. Click **Done**.

Add identity provider information on the ExtraHop system

1. Return to the Administration settings on the ExtraHop system.

   Close the Service Provider metadata window if it is still open, and then click **Add Identity Provider**.
2. In the Provider Name field, type a unique name.

   This name appears on the ExtraHop system login page.
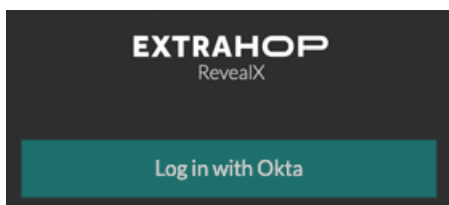
3. From Okta, copy the Identity Provider Single Sign-On URL and paste into the SSO URL field on the ExtraHop system.
4. From Okta, copy the Identity Provider Issuer URL and paste into the Entity ID field on the ExtraHop system.
5. From Okta, copy the X.509 certificate and paste into the Public Certificate field on the ExtraHop system.
6. Choose how you would like to provision users from one of the following options.

   - Select Auto-provision users to create a new remote SAML user account on the ExtraHop system when the user first logs in.
   - Clear the Auto-provision users checkbox and manually configure new remote users through the ExtraHop Administration settings or REST API. Access and privilege levels are determined by the user configuration in Okta.
7. The **Enable this identity provider** option is selected by default and allows users to log in to the ExtraHop system.

   To prevent users from logging in, clear the checkbox.
8. Configure user privilege attributes.

   You must configure the following set of user attributes before users can log in to the ExtraHop system through an identity provider. Values are user-definable; however, they must match the attribute names that are included in the SAML response from your identity provider. Values are not case sensitive and can include spaces. For more information about privilege levels, see Users and user groups ⬈.

   > ⚠ **Important:** You must specify the attribute name and configure at least one attribute value other than **No access** to enable users to log in.

In the examples below, the Attribute Name field is the group attribute configured when creating the ExtraHop application on the identity provider, and the other attribute fields are the names of your user groups. If a user is a member of more than one group, the user is granted the most permissive access privilege.

Field Name	Example Attribute Value
Attribute Name	groupMemberships
System and access administration	System Administrators
Full write privileges	Senior Analysts
Limited write privileges	Analysts
Personal write privileges	Junior Analysts
Full read-only privileges	Web Managers
Restricted read-only privileges	Contractors
No access	Interns

9. Configure NDR module access.

Field Name	Example Attribute Value
Attribute Name	groupMemberships
Full access	Security Ops
No access	Interns

10. Configure NPM module access.

Field Name	Example Attribute Value
Attribute Name	groupMemberships
Full access	Performance Ops
No access	Interns

11. Optional: Configure packets and session key access.

This step is optional and is only required when you have a connected packetstore and the Packet Forensics module.

Field Name	Example Attribute Value
Attribute Name	groupMemberships
Packets and session keys	System Administrators
Packets only	Senior Analysts
Packet slices only	Analysts
Packet headers only	Junior Analysts
No access	Interns

12. Click **Save**.
13. Save the running configuration file ⬀.

Log in to the ExtraHop system

1. Log in to the ExtraHop system through `https://<extrahop-hostname-or-IP-address>`.
2. Click **Log in with** *<provider name>*.
3. Sign in to your provider with your email address and password. You are automatically directed to the ExtraHop Overview page.