Configure SAML single sign-on with Okta

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You can configure your ExtraHop Command and Discover appliances to enable users to log into the appliance through the Okta identity management service.

Before you begin

- You should be familiar with administrating 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 administrating ExtraHop appliances.

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

Enable SAML on the ExtraHop appliance

1. Log into the Admin UI on the Discover or Command appliance.
2. In the Access Settings section, click **Remote Authentication**.
3. From the Remote authentication method drop-down list, 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 Admin UI and the Okta Classic UI, so it is helpful to have each UI open side-by-side.

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

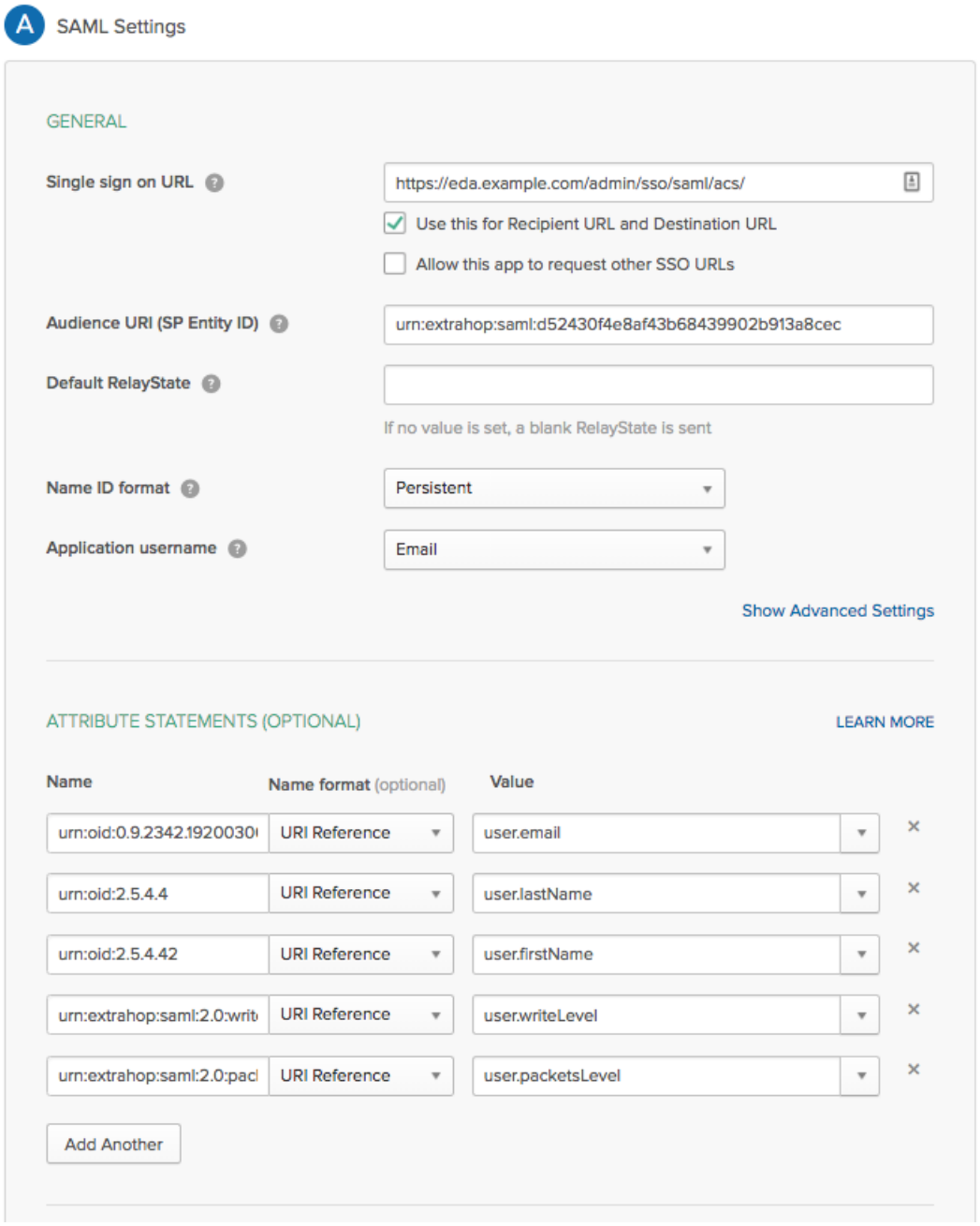
3. From the top menu, click **Applications**.
4. Click **Add Application**.
5. Click **Create New App**.
6. From the Platform drop-down list, select **Web**.
7. For the Sign on method, select **SAML 2.0**.
8. Click **Create**.
9. In the General Settings section, type a unique name in the App name field to identify the ExtraHop appliance.
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 appliance 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 appliance hostname "extrahop". We recommend that you specify the fully qualified domain name for the ExtraHop appliance in the URL.

13. Paste the SP Entity ID from the ExtraHop appliance into the Audience URI (SP Entity ID) field in Okta.
14. From the Name ID format drop-down list, select **Persistent**.
15. From the Application username drop-down list, select a username format.
16. In the Attribute Statements section, add the following statements exactly as shown. The first four attributes are required. The `user.packetsLevel` attribute is optional and is only required if you have connected Trace appliances. If you have a Trace appliance and you do not configure the `user.packetsLevel` attribute, users will be unable to view or download packet captures in the ExtraHop Web UI.

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
`urn:extrahop:saml:2.0:writeLevel`	URI Reference	user.writeLevel
`urn:extrahop:saml:2.0:packetsLevel`	URI Reference	user.packetsLevel

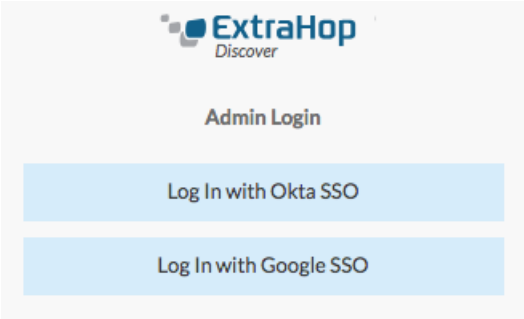
The following figure shows a completed example.



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

Add identity provider information on the ExtraHop appliance

1. Return to the Admin UI on the ExtraHop appliance. Close the Service Provider metadata window if it is still open, and then click **Add Identity Provider**.
2. Type a unique name in the Provider Name field. This name appears on the ExtraHop appliance login page.

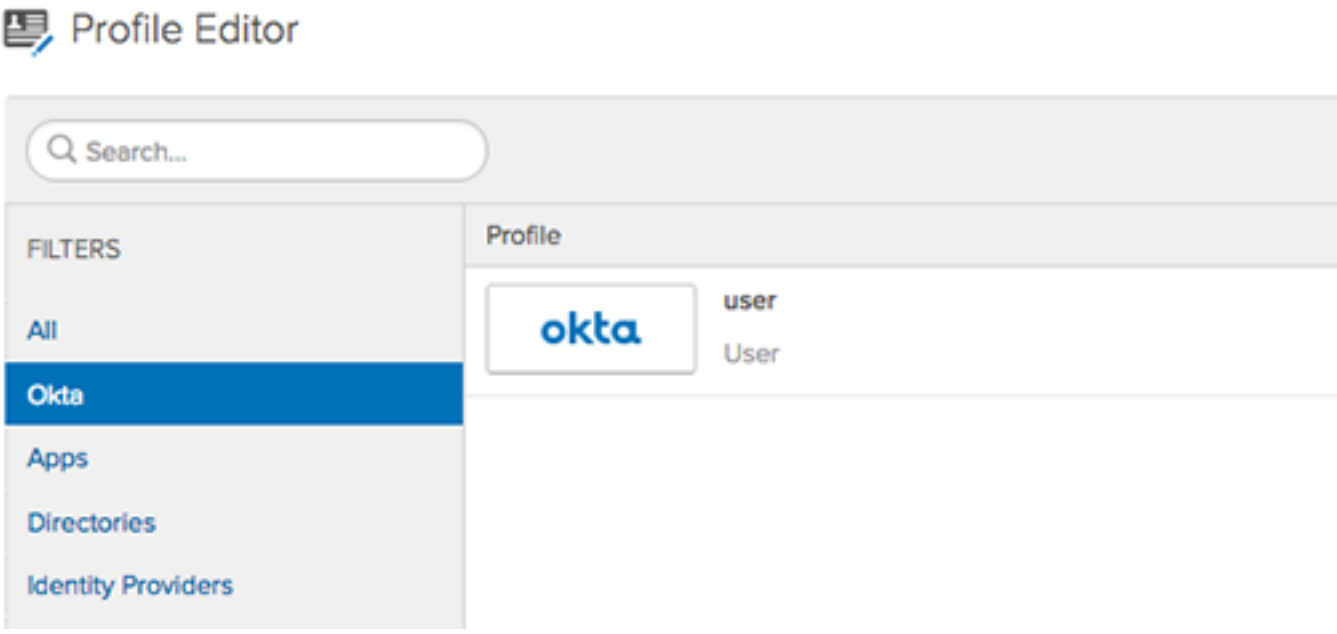


3. From Okta, copy the Identity provider single sign-on URL and paste into the SSO URL field on the ExtraHop appliance.
4. From Okta, copy the Identity Provider Issuer URL and paste into the Entity ID field on the ExtraHop appliance.
5. From Okta, copy the X.509 certificate and paste into the Signing Certificate field on the ExtraHop appliance.
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 appliance when the user first logs into the appliance.
   - Clear the Auto-provision users checkbox and manually configure new remote users through the ExtraHop Admin UI 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 into the appliance. To prevent users from logging in, clear the checkbox.
8. Click **Save**.
9. Save the Running Config.

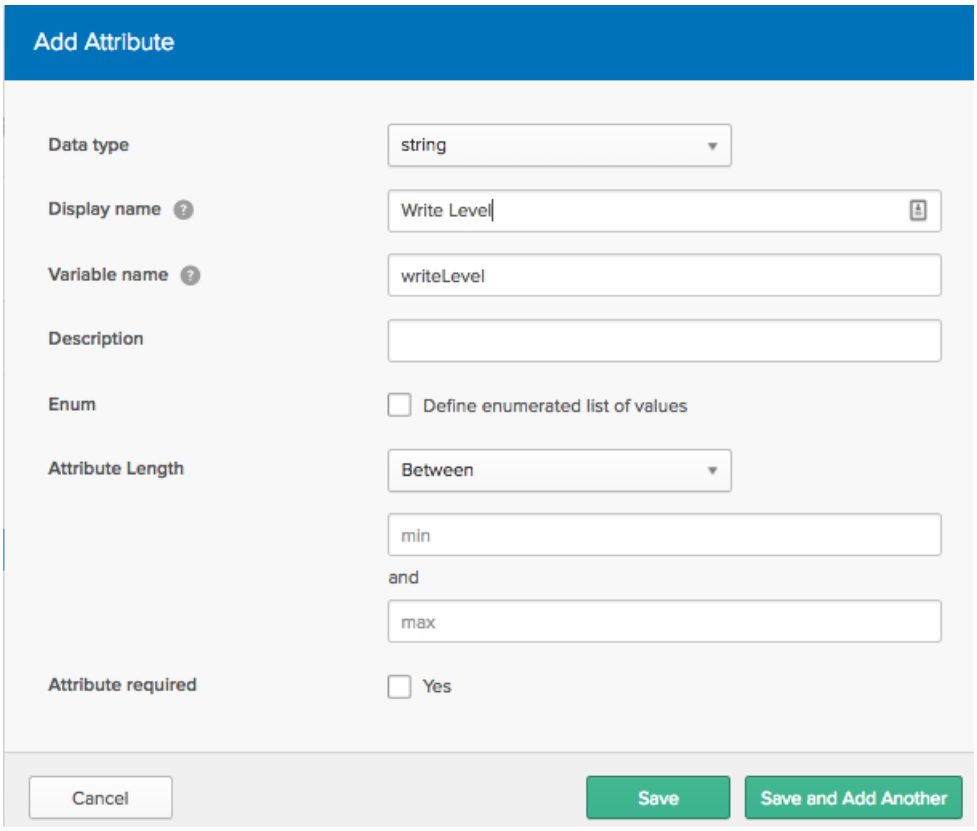
Configure user privilege attributes in Okta

You must add ExtraHop privilege attributes to Okta. These attributes enable you to assign write-level and packet-level access to your Okta users. You only need to configure user privilege attributes once in your Okta environment. These attributes can then be assigned to any Okta user profile.

1. Return to the main administration page in Okta.
2. From the Directory menu, select **Profile Editor**.
3. Click **Okta** in the left pane to locate the built-in Okta user.
4. In the Actions column, click **Profile**.

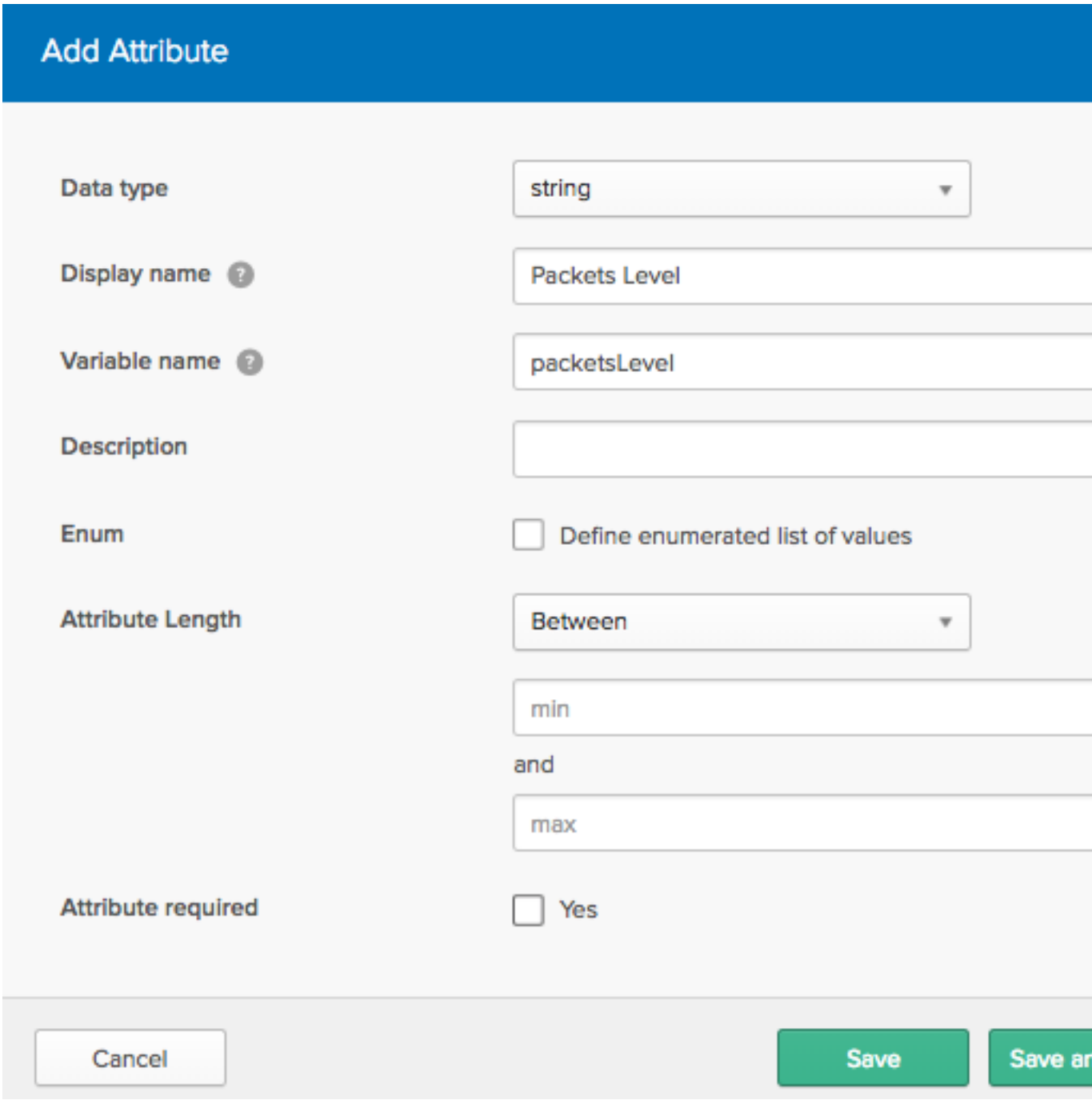


5. In the Attributes section, click **Add Attribute**.
6. From the Data type drop-down menu, select **string**.
7. In the Display Name field, type `Write Level`.
8. In the Variable name field, type `writeLevel`.



9. Optional: If you have a connected Trace appliance and want to configure the packet access attribute, click **Save and Add Another** and continue with the rest of the procedure. Otherwise, click **Save** to finish.
10. From the Data type drop-down menu, select **string**.

11. In the Display Name field, type `Packets Level`.
12. In the Variable name field, type `packetsLevel`.



13. Click **Save**.

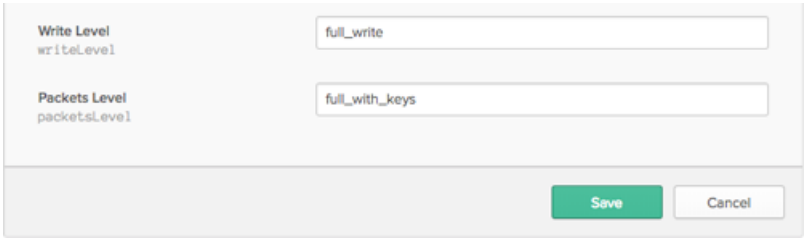
Assign the ExtraHop appliance to Okta users

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

1. From the Directory menu, select **People**.
2. Click the name of the user.

3. Click **Assign Applications**.
4. Locate the name of the application you configured for the ExtraHop appliance and click **Assign**.
5. Confirm the email address in the User Name field and then click **Save and Go Back**.
6. Click **Done**.
7. Click **Profile**.
8. Click **Edit**.
9. In the Write Level field, type one of the following user types:
   - `unlimited`
   - `full_write`
   - `limited_write`
   - `personal_write`
   - `full_readonly`
   - `restricted_readonly`

   For information about user privileges, see Users and user groups.
10. Optional: If you configured the `user.packetsLevel` attribute in the first procedure, configure the Packets Level field by typing one of the following user types:
    - `full`
    - `full_with_keys`



11. Click **Save**.

    Make sure the user is active and that they have a valid password in Okta before they log into the ExtraHop appliance.

Log into the ExtraHop appliance

1. Open a new browser window and enter the URL of the ExtraHop Web UI.
2. Click **Log in with** *<provider name>*.
3. Sign into your provider with your email address and password. You are automatically directed to the ExtraHop Dashboards page.