



Foglight® 5.9.3

Integration with SAML 2.0 in PingFederate



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Legend

 **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death

 **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

 **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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Foglight and SAML 2.0 Integration in PingFederate

Starting with release 5.9.3, Foglight® Management Server supports Active Directory Federation Services (ADFS) 2.0 and PingFederate 8.x (and later) using the Security Assertion Markup Language (SAML) 2.0 protocol. Follow the below steps in sequence to completely integrate SAML SSO with the Foglight Management Server on the PingFederate server.



NOTE: PingFederate supports both http protocol and https protocol. Foglight SAML login on PingFederate could be using either IP address or the host name. For detailed configurations about IP or host name logon, refer to Before you begin.

- Before you begin
- Step 1: Configuring the SP Connection
- Step 2: Configuring Browser SSO
- Step 3: Configuring Assertion Creation
- Step 4: Configuring Protocol Settings
- Step 5: Configuring Credentials
- Step 6: Setting up SAML in Foglight

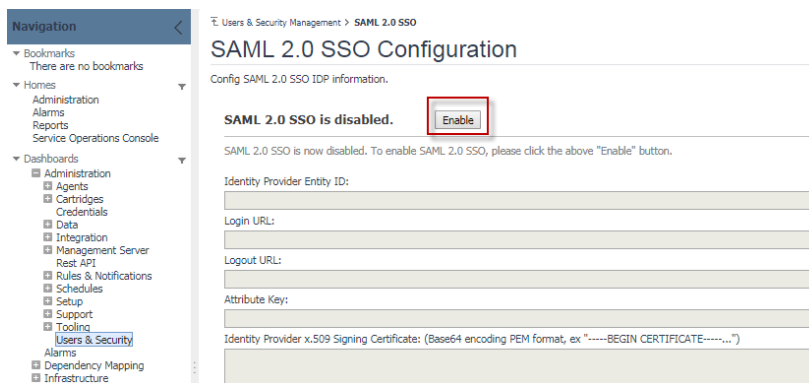
Before you begin

i NOTE:

- If you are about to use SAML IP login, make sure to run the following command:
`"-Dquest.saml.hostname=<foglight-server-ip>"` to start up your Foglight Management Server.
- When logging into your Foglight Management Server, make sure to keep using the same approach as what you configured during the SAML integrations. For example, if you set up the HTTPS SAML login using the IP address, you must log into your Management Server with `https://<foglight-server-ip>:<foglight-server-port>`.

You need to enable SAML 2.0 SSO Configuration in your Foglight Management Server prior to setting up the SAML integration. Follow the steps below to enable SAML 2.0 SSO Configuration:

- 1 Log into the Foglight Management Server as the Administrator.
- 2 Under **Dashboards**, click **Administration > Users & Security**, and then click **SAML 2.0 Integration Settings**. The *SAML 2.0 SSO Configuration* dashboard appears.
- 3 Click **Enable**.

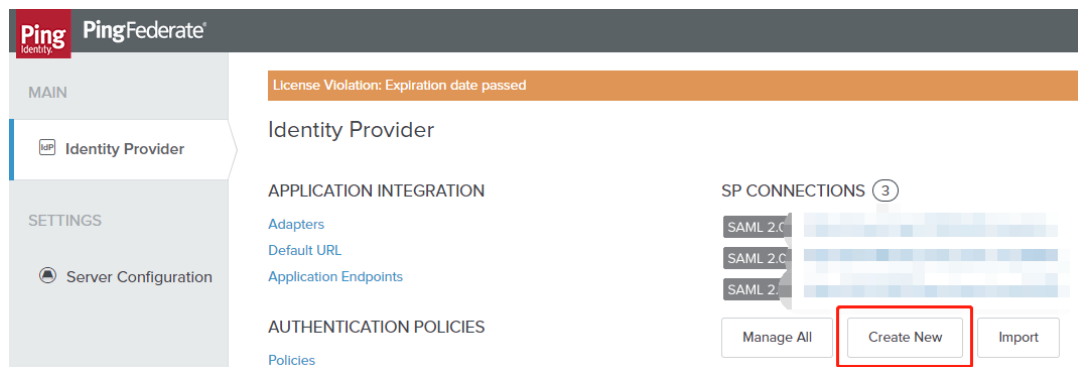


- 4 Download the metadata file that is to be imported to the PingFederate server later. Foglight supports both HTTP and HTTPS login:
 - For HTTP login: Get the metafile from the Foglight server URL:
 - IP login: http://<foglight_server-ip>:<port>/console/saml2/metadata.xml
 - Host name login: http://<foglight_server-host-name>:<port>/console/saml2/metadata.xml
 - For HTTPS login: Get the metafile from the Foglight server URL:
 - IP login: https://<foglight_server-ip>:<port>/console/saml2/metadata.xml
 - Host name login: https://<foglight_server-host-name>:<port>/console/saml2/metadata.xml

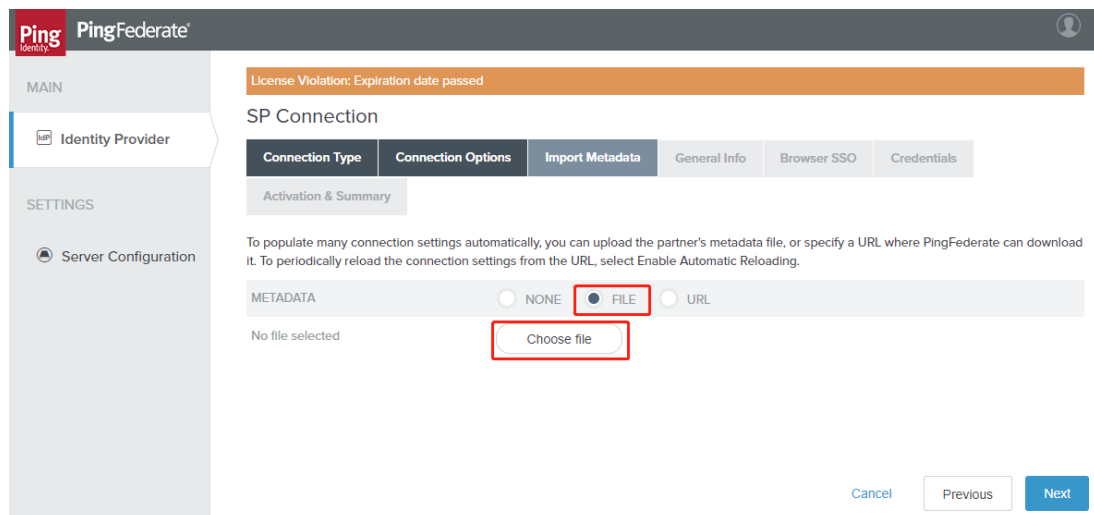
Step 1: Configuring the SP Connection

To configure the Service Provider (SP) connection:

- 1 Sign in PingFederate as an administrator.
- 2 Click **Identity Provider** and navigate to **Identity Provider** configurations.
- 3 Under **SP CONNECTIONS**, click **Create New**.



- 4 On the **Connection Type** tab, select the **BROWSER SSO PROFILES** connection template and click **Next**.
- 5 On the **Connection Options** tab, select **BROWSER SSO** and click **Next**.
- 6 On the **Import Metadata** tab, select **FILE** as the type of importing metadata, and then click **Choose file** to select the Foglight SSO metadata file. Click **Next**.



- 7 On the **Metadata Summary** tab, review the information and click **Next**.
- 8 On the **General Info** tab, ensure that the **PARTNER'S ENTITY ID**, **CONNECTION NAME**, and **BASE URL** fields pre-populate based on the metadata, and then click **Next**.

Step 2: Configuring Browser SSO

To configure the browser SSO:

- 1 On the **Browser SSO** tab, click **Configure Browser SSO**.

- 2 On the **SAML Profiles** tab, select all of the options and click **Next**.

- 3 On **Assertion Lifetime** tab, enter your desired assertion validity time (default is 5) and click **Next**.

Step 3: Configuring Assertion Creation

To configure assertion creation:

- 1 On the **Assertion Creation** tab, click **Configure Assertion Creation**.

- 2 On the **Identity Mapping** tab, choose the **STANDARD** option and click **Next**.
- 3 On the **Attribute Contract** tab, select the **Subject Name Format** for the **SAM_SUBJECT** and extend the contract as below, and then click **Next**.

PingFederate

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SP Connection | Browser SSO | Assertion Creation

Identity Mapping | Attribute Contract | **Authentication Source Mapping** | Summary

An Attribute Contract is a set of user attributes that this server will send in the assertion.

Attribute Contract	Subject Name Format
SAML_SUBJECT	urn:oasis:names:tc:SAML:1:nameld-format:unspecified

Extend the Contract	Attribute Name Format	Action
mail	urn:oasis:names:tc:SAML:2.0:attrname-format:basic	Edit Delete
SAML_AUTHN_CTX	urn:oasis:names:tc:SAML:2.0:attrname-format:basic	Edit Delete
SAML_NAME_FORMAT	urn:oasis:names:tc:SAML:2.0:attrname-format:basic	Edit Delete
uid	urn:oasis:names:tc:SAML:2.0:attrname-format:basic	Edit Delete
user_principal	urn:oasis:names:tc:SAML:2.0:attrname-format:basic	Edit Delete

Attribute Contract	Attribute Name Format	Action
<input type="text"/>	urn:oasis:names:tc:SAML:2.0:attrname-format:basic	Add

[Cancel](#) [Save Draft](#) [Previous](#) [Next](#)

- 4 On the **Authentication Source Mapping** tab, click **Map New Adapter Instance**.

PingFederate

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SP Connection | Browser SSO | Assertion Creation

Identity Mapping | Attribute Contract | **Authentication Source Mapping** | Summary

PingFederate uses IdP adapters, partner IdPs or Authentication Policies to authenticate users to your SP. Users may be authenticated by one of several different adapters or authentication policy contracts, so map an adapter instance for each IDM system or a authentication policy contract for each policy.

Adapter Instance Name	Virtual Server IDs	Action
<input type="text"/>	<input type="text"/>	Add

Authentication Policy Contract Name	Virtual Server IDs	Action
<input type="text"/>	<input type="text"/>	Add

[Map New Adapter Instance](#) [Map New Authentication Policy](#)

[Cancel](#) [Save Draft](#) [Previous](#) [Next](#)

- 5 Select an **Adapter Instance** and click **Next**. The adapter must include the user's username.

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SP Connection | Browser SSO | Assertion Creation | IdP Adapter Mapping

Adapter Instance Mapping Method Attribute Contract Fulfillment Issuance Criteria Summary

Select an IdP adapter instance that may be used to authenticate users for this partner. Attributes returned by the adapter instance you choose (the Adapter Contract) may be used to fulfill the Attribute Contract with your partner.

ADAPTER INSTANCE HTML Form IdP Adapter

Adapter Contract

displayName

email

mail

policy.action

uid

user_principal

username

☐ OVERRIDE INSTANCE SETTINGS

Manage Adapter Instances

Cancel Save Draft Next

- On the **Mapping Method** tab, select **USE ONLY THE ADAPTER CONTRACT VALUES IN THE SAML ASSERTION** and click **Next**.

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SP Connection | Browser SSO | Assertion Creation | IdP Adapter Mapping

Adapter Instance Mapping Method Attribute Contract Fulfillment Issuance Criteria Summary

You can choose to fulfill the Attribute Contract with your partner using either the values provided by the "HTML Form IdP Adapter" adapter, or you can use these values plus additional attributes retrieved from local data stores.

Adapter Contract

displayName

email

mail

policy.action

uid

user_principal

username

☐ RETRIEVE ADDITIONAL ATTRIBUTES FROM MULTIPLE DATA STORES USING ONE MAPPING

☐ RETRIEVE ADDITIONAL ATTRIBUTES FROM A DATA STORE – INCLUDES OPTIONS

☐ TO USE ALTERNATE DATA STORES AND/OR A FAILSAFE MAPPING

☒ USE ONLY THE ADAPTER CONTRACT VALUES IN THE SAML ASSERTION

Cancel Save Draft Previous Next

- On the **Attribute Contract Fulfillment** tab, fulfill your **Attribute Contract** as below and click **Next**.

Attribute Contract	Source	Value
SAML_AUTHN_CTX	Text	urn:oasis:names:tc:SAML:2.0:ac:classes:PasswordProtectedTransport

SAML_NAME_FORMAT	Text	urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified
------------------	------	---

PingFederate

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SP Connection | Browser SSO | Assertion Creation | IdP Adapter Mapping

Adapter Instance | Mapping Method | **Attribute Contract Fulfillment** | Issuance Criteria | Summary

Fulfill your Attribute Contract with values from the authentication adapter or with dynamic text values.

Attribute Contract	Source	Value	Actions
SAML_AUTHN_CTX	Text	urn:oasis:names:tc:SAM	None available
SAML_NAME_FORMAT	Text	urn:oasis:names:tc:SAM	None available
SAML_SUBJECT	Adapter	username	None available
mail	Adapter	mail	None available
uid	Adapter	uid	None available
user_principal	Adapter	user_principal	None available

Cancel Save Draft Previous Next

8 On the **Issuance Criteria** tab, leave the default values as is and click **Next**.

9 On the **Summary** tab, verify adapter mapping configurations and click **Done**.

PingFederate

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SP Connection | Browser SSO | Assertion Creation | IdP Adapter Mapping

Adapter Instance | Mapping Method | Attribute Contract Fulfillment | **Issuance Criteria** | Summary

Click a heading link to edit a configuration setting.

Adapter Instance

Selected adapter HTML Form IdP Adapter

Mapping Method

Adapter HTML Form IdP Adapter

Mapping Method Use only the Adapter Contract values in the mapping

Attribute Contract Fulfillment

uid uid (Adapter)

mail mail (Adapter)

SAML_AUTHN_CTX urn:oasis:names:tc:SAML:2.0:ac:classes:PasswordProtectedTransport (Text)

user_principal user_principal (Adapter)

SAML_SUBJECT username (Adapter)

SAML_NAME_FORMAT urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified (Text)

Issuance Criteria

Criterion (None)

Cancel Save Draft Previous Done

10 On the **Authentication Source Mapping** tab, click **Next**.

11 On the **Summary** tab, click **Done**.

- 12 On the **Assertion Creation** tab, click **Next**.

The screenshot shows the PingFederate web interface. On the left, there is a navigation menu with 'MAIN' and 'SETTINGS' sections. Under 'MAIN', 'Identity Provider' is selected. Under 'SETTINGS', 'Server Configuration' is selected. The main content area is titled 'SP Connection | Browser SSO'. At the top, there is a license violation warning: 'License Violation: Expiration date passed'. Below this, there are tabs for 'SAML Profiles', 'Assertion Lifetime', 'Assertion Creation' (which is active), 'Protocol Settings', and 'Summary'. A descriptive text states: 'This task provides the configuration for creating SAML assertions to enable SSO access to resources at your SP partner's site.' The 'Assertion Configuration' section contains a table with the following data:

IDENTITY MAPPING	Standard
ATTRIBUTE CONTRACT	SAML_SUBJECT, mail, SAML_AUTHN_CTX, SAML_NAME_FORMAT, uid, user_principal
ADAPTER INSTANCES	1
AUTHENTICATION POLICY MAPPINGS	0

Below the table is a 'Configure Assertion Creation' button. At the bottom right, there are four buttons: 'Cancel', 'Save Draft', 'Previous', and 'Next'.

Step 4: Configuring Protocol Settings

To configure protocol settings:

- 1 On the **Protocol Settings** tab, click **Configure Protocol Settings**.

The screenshot shows the same PingFederate web interface, but the 'Protocol Settings' tab is now active. The 'Configure Protocol Settings' button is highlighted with a red rectangle. The main content area is titled 'SP Connection | Browser SSO'. The 'Protocol Settings' section contains a table with the following data:

OUTBOUND SSO BINDINGS	POST
OUTBOUND SLO BINDINGS	Redirect
INBOUND BINDINGS	POST, Redirect, Artifact, SOAP
SIGNATURE POLICY	SAML-standard, Authn requests over POST & Redirect
ENCRYPTION POLICY	No Encryption

At the bottom right, there are four buttons: 'Cancel', 'Save Draft', 'Previous', and 'Next'.

- 2 On the **Assertion Consumer Service URL** tab, ensure the **Binding** and **Endpoint URL** are set as below and click **Next**.

PingFederate'

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SP Connection | Browser SSO | Protocol Settings

Assertion Consumer Service URL | **SLO Service URLs** | Allowable SAML Bindings | Artifact Resolver Locations | Signature Policy

Encryption Policy | Summary

As the IdP, you send SAML assertions to the SP's Assertion Consumer Service. The SP may request that the SAML assertion be sent to one of several URLs, via different bindings. Please provide the possible assertion consumer URLs below and select one to be the default.

Default	Index	Binding	Endpoint URL	Action
default	1	POST	/console/saml2/saml_assertion_consumer	Edit Delete
<input type="checkbox"/>	<input type="text"/>	- SELECT -	<input type="text"/>	Add

Cancel Save Draft Next

- 3 On the **SLO Service URLs** tab, ensure the **Binding** and **Endpoint URL** are set as below and click **Next**.

PingFederate'

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SP Connection | Browser SSO | Protocol Settings

Assertion Consumer Service URL | **SLO Service URLs** | Allowable SAML Bindings | Artifact Resolver Locations | Signature Policy

Encryption Policy | Summary

As the IdP, you may send SAML logout messages to the SP's Single Logout Service. Depending on the situation, the SP may request that messages be sent to one of several URLs, via different bindings. Please provide the endpoints that you would like to use.

Binding	Endpoint URL	Response URL	Action
Redirect	/console/saml2/slo		Edit Delete
- SELECT -	<input type="text"/>	<input type="text"/>	Add

Cancel Save Draft Previous Next

- 4 On the **Allowable SAML Bindings** tab, select **POST** and **REDIRECT** and click **Next**.

PingFederate'

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SP Connection | Browser SSO | Protocol Settings

Assertion Consumer Service URL | SLO Service URLs | **Allowable SAML Bindings** | Signature Policy | Encryption Policy | Summary

When the SP sends messages, what SAML bindings do you want to allow?

☐ ARTIFACT

☒ POST

☒ REDIRECT

☐ SOAP

Cancel Save Draft Previous Next

- 5 On the **Signature Policy** tab, select the **REQUIRE AUTHN REQUESTS TO BE SIGNED WHEN RECEIVED VIA THE POST OR REDIRECT BINDINGS** option and click **Next**.

PingFederate

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SP Connection | Browser SSO | Protocol Settings

Assertion Consumer Service URL | SLO Service URLs | Allowable SAML Bindings | **Signature Policy** | Encryption Policy | Summary

Additional guarantees of authenticity may be agreed upon between you and your partner. For SP-initiated SSO, you can choose to require signed authentication requests sent via the POST or redirect bindings. You can also choose to sign assertions sent to this partner, regardless of the binding used.

☒ REQUIRE AUTHN REQUESTS TO BE SIGNED WHEN RECEIVED VIA THE POST OR REDIRECT BINDINGS

☐ ALWAYS SIGN THE SAML ASSERTION

Cancel Save Draft Previous Next

- On the **Encryption Policy** tab, select the **NONE** option and click **Next**.

PingFederate

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SP Connection | Browser SSO | Protocol Settings

Assertion Consumer Service URL | SLO Service URLs | Allowable SAML Bindings | Signature Policy | **Encryption Policy** | Summary

Additional guarantees of privacy may be used between you and your partner. Specify an encryption policy for the exchange of SAML messages.

☒ NONE

☐ THE ENTIRE ASSERTION

☐ ONE OR MORE ATTRIBUTES

☐ SAML_SUBJECT

☐ MAIL

☐ SAML_AUTHN_CTX

☐ SAML_NAME_FORMAT

☐ UID

☐ USER_PRINCIPAL

Cancel Save Draft Previous Next

- On the **Summary** tab, verify the summary and click **Done**.

PingFederate

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SP Connection | Browser SSO | Protocol Settings

Assertion Consumer Service URL | SLO Service URLs | Allowable SAML Bindings | Signature Policy | Encryption Policy | Summary

Summary information for your Protocol Settings configuration. Click a heading link to edit a configuration setting.

Protocol Settings

Assertion Consumer Service URL

Endpoint	URL: /console/saml2/saml_assertion_consumer (POST)
----------	--

SLO Service URLs

Endpoint	URL: /console/saml2/slo (Redirect)
----------	------------------------------------

Allowable SAML Bindings

Artifact	false
POST	true
Redirect	true
SOAP	false

Signature Policy

Require digitally signed AuthN requests	true
Always sign the SAML Assertion	false

Encryption Policy

Status	Inactive
--------	----------

Cancel Save Draft Previous Done

- 8 On the **Protocol Settings** tab, click **Next**.
- 9 On the **Browser SSO Summary** tab, click **Done**.
- 10 On the **Browser SSO** tab, click **Next**.

PingFederate

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SP Connection

Connection Type | Connection Options | Import Metadata | Metadata Summary | General Info | Browser SSO | Credentials

Activation & Summary

This task provides connection-endpoint and other configuration information enabling secure browser-based SSO, to resources at your partner's site. Click the button below to create or revise this configuration.

BROWSER SSO CONFIGURATION

Configure Browser SSO

Cancel Save Draft Previous Next

Step 5: Configuring Credentials

To configure credentials:

- 1 On the **Credentials** tab, click **Configure Credentials**.

PingFederate

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SP Connection

Connection Type | Connection Options | Import Metadata | Metadata Summary | General Info | Browser SSO | Credentials

Activation & Summary

For each credential shown here, configure the necessary settings.

Credential Requirement	
DIGITAL SIGNATURE	Not Configured
SIGNATURE VERIFICATION SETTINGS	Unanchored Certificate (Primary CN=Foglight, Secondary Not Configured)

Configure Credentials

Cancel Save Draft Previous Next

- 2 On the **Digital Signature Settings** tab, select the Signing Certificate to use the SSO service and click **Next**.

PingFederate

License Violation: Expiration date passed

SP Connection | Credentials

Digital Signature Settings | Signature Verification Settings | Summary

You may need to digitally sign SAML messages or security tokens to protect against tampering. Please select a key/certificate to use from the list below.

SIGNING CERTIFICATE 0162.D71B:C4:A7 (cn=SSO)

☐ INCLUDE THE CERTIFICATE IN THE SIGNATURE <KEYINFO> ELEMENT.

SIGNING ALGORITHM RSA SHA256

Manage Certificates

Cancel Save Draft Next Done

- 3 On the **Signature Verification Settings** tab, click **Manage Signature Verification Settings**.

PingFederate

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SP Connection | Credentials

Digital Signature Settings | Signature Verification Settings | Summary

Incoming SAML messages or security tokens may be digitally signed. This configuration task provides options for verifying signatures.

Manage Signature Verification Settings

Cancel Save Draft Previous Next Done

- 4 On the **Trust Model** tab, select the **UNANCHORED** option and click **Next**.

PingFederate

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SP Connection | Credentials | Signature Verification

Trust Model | Signature Verification Certificate | Summary

Select the Trust Model to be used for verifying digital signatures received from this partner.

☐ ANCHORED The verification certificate must be signed by a Trusted CA and included in the incoming message.

☒ UNANCHORED The verification certificate is self-signed, or you wish to trust a specific certificate.

Cancel Save Draft Next

- 5 On the **Signature Verification Certificate** tab, select the Foglight certificate that should have been imported, and then click **Next**.

PingFederate

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SP Connection | Credentials | Signature Verification

Trust Model | Signature Verification Certificate | Summary

Please select the certificate(s) to use when verifying these digital signatures. When multiple certificates are chosen, each certificate is tried from the top of the list down until the signature is verified.

PRIMARY 8B:30:CD:B9:6A:CF:34:B5 (cn=Foglight) ▼

SECONDARY - SELECT - ▼

Manage Certificates

Cancel Save Draft Previous Next

- 6 On the **Summary** tab, click **Done**.
- 7 On the **Signature Verification Settings** tab, click **Next**.
- 8 On the **Credentials Summary** tab, click **Done**.
- 9 On the **Credentials** tab, click **Next**.

PingFederate

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SP Connection

Connection Type | Connection Options | Import Metadata | Metadata Summary | General Info | Browser SSO | Credentials

Activation & Summary

For each credential shown here, configure the necessary settings.

Credential Requirement

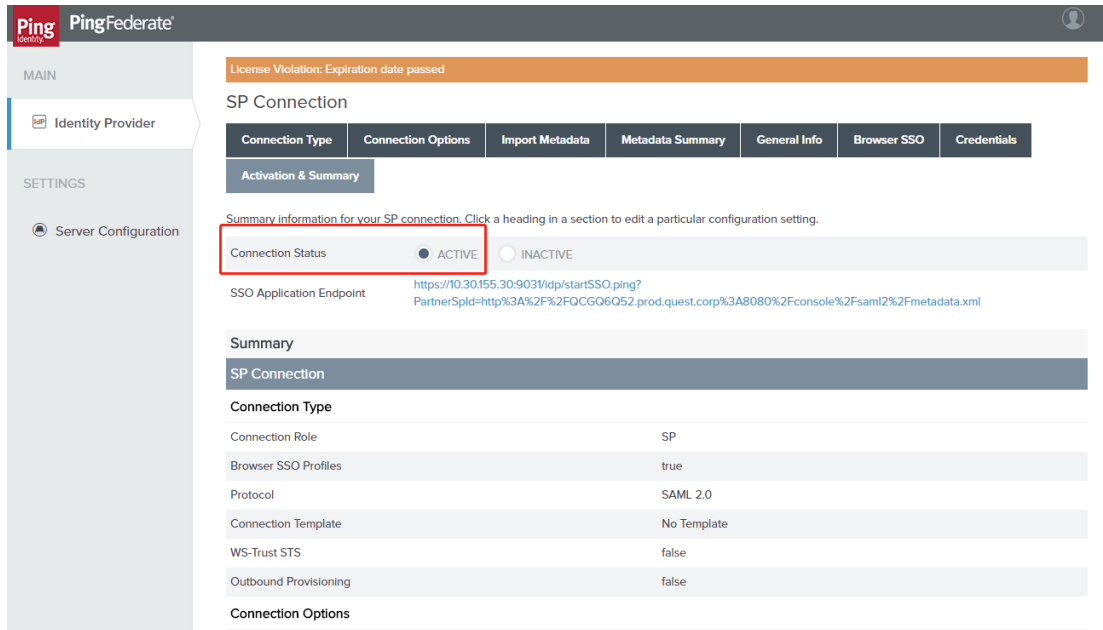
DIGITAL SIGNATURE CN-SSO

SIGNATURE VERIFICATION SETTINGS Unanchored Certificate (Primary CN=Foglight, Secondary Not Configured)

Configure Credentials

Cancel Save Draft Previous Next

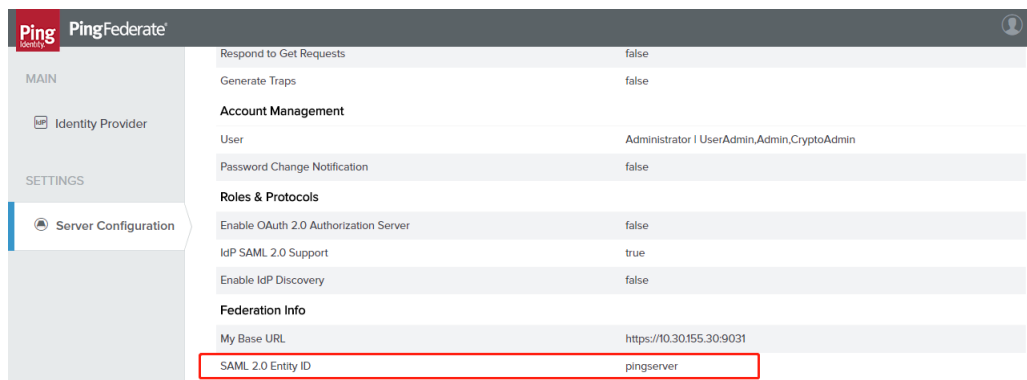
- 10 On the **Activation & Summary** tab, choose the **ACTIVE** option for the Connection Status. Verify the configurations and click **Save**.



Step 6: Setting up SAML in Foglight

To set up SAML in the Foglight Management Server:

- 1 Log into the Foglight Management Server as an administrator.
- 2 Under **Dashboards**, click **Administration > Setup > SAML 2.0 SSO**. The *SAML 2.0 SSO Configuration* dashboard appears.
- 3 Click **Edit Settings** and configure the SAML settings as below. You could get the actual values from the PingFederate server.
 - a *Identity Provider Entity ID*: You could get this value from PingFederate's **Server Settings**.



- b *Login URL*: You could get this value from the SP Connection that you have configured on the PingFederate server.

PingFederate

License Violation: Expiration date passed

SP Connection

Connection Type | Connection Options | Metadata URL | General Info | Browser SSO | Credentials | Activation & Summary

Summary information for your SP connection. Click a heading in a section to edit a particular configuration setting.

Connection Status: ☒ ACTIVE ☐ INACTIVE

SSO Application Endpoint https://10.30.155.30:9031/ldp/startSSO.ping?PartnerSpId=http%3A%2F%2FQCGQ6Q52.prod.quest.corp%3A8080%2Fconsole%2Fsam2%2Fmetadata.xml

Summary

SP Connection

Connection Type	
Connection Role	SP
Browser SSO Profiles	true
Protocol	SAML 2.0
Connection Template	No Template

- c **Logout URL:** The value is `https://<pingfederate_server>:<port>/ldp/SLO.sam2`. You could get the logout common postfix from PingFederate's **Protocol Endpoints**.

PingFederate

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Identity Provider

APPLICATION INTEGRATION

- Adapters
- Default URL
- Application Endpoints

AUTHENTICATION POLICIES

- Policies
- Selectors
- Policy Contracts
- Sessions

LOCAL IDENTITY

- Identity Profiles

FEDERATION INFO

Protocol Endpoints

SP AFFILIATIONS 0

Manage All | Create New

SP CONNECTIONS 4

SAML 2.0	URL
SAML 2.0	http://QCGQ6Q52.prod.quest.corp:8080/...
SAML 2.0	https://zhuvn-fog-2708:8443/console/s...
SAML 2.0	http://Q6Y7WD3X.prod.quest.corp:8080/...
SAML 2.0	https://Q6Y7WD3X.prod.quest.corp:8443/...

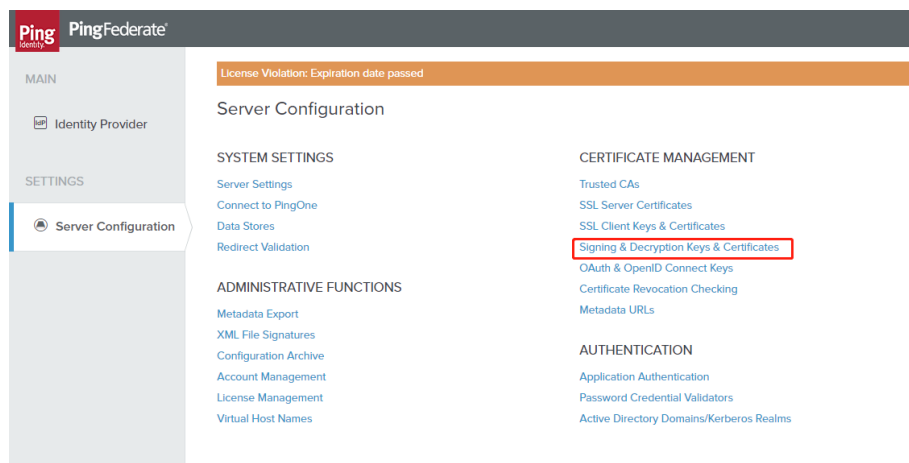
Manage All | Create New | Import

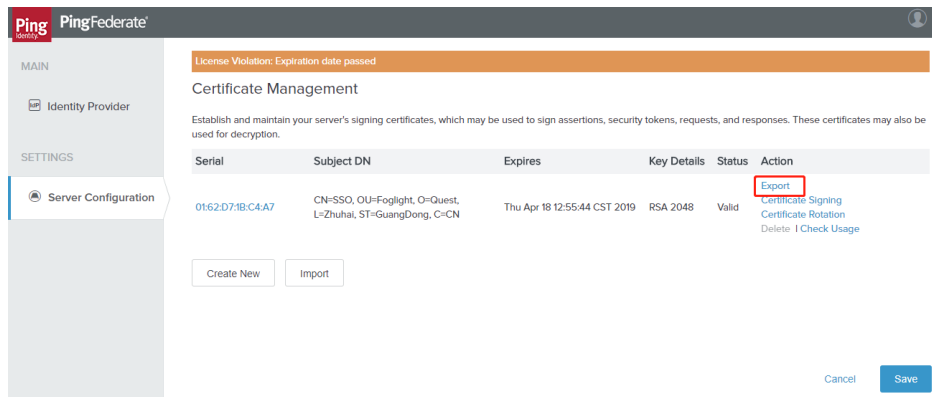
- d **Attribute Key:** This is used to identify the attribute key of the assertion response. Take the below SAML 2.0 assertion response for example:

```
<samlp:Response xmlns:samlp="urn:oasis:names:tc:SAML:2.0:protocol" xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion"
  <saml:Issuer>http://idp.example.com/metadata.php</saml:Issuer>
  <samlp:Status>
    <samlp:StatusCode Value="urn:oasis:names:tc:SAML:2.0:status:Success"/>
  </samlp:Status>
  <saml:Assertion xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xs="http://www.w3.org/2001/XMLSchema"
    <saml:Issuer>http://idp.example.com/metadata.php</saml:Issuer><ds:Signature xmlns:ds="http://www.w3.org/2000/09/
    <ds:SignedInfo><ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
    <ds:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
    <ds:Reference URI="#pfx8495b10f-2a17-5411-3a19-33bf6852f431"><ds:Transforms><ds:Transform Algorithm="http://www.w3
  <ds:KeyInfo><ds:X509Data><ds:X509Certificate>MIICajCCAdOgAwIBAgIBADANBgkqhkiG9w0BAQ0FADBSMQswCQYDVQQGEwJ1czETMBEGA1UI
  <saml:Subject>
    <saml:NameID SPNameQualifier="http://sp.example.com/demo1/metadata.php" Format="urn:oasis:names:tc:SAML:2.0:nam
    <saml:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:bearer">
      <saml:SubjectConfirmationData NotOnOrAfter="2024-01-18T06:21:48Z" Recipient="http://sp.example.com/demo1/indi
    </saml:SubjectConfirmation>
  </saml:Subject>
  <saml:Conditions NotBefore="2014-07-17T01:01:18Z" NotOnOrAfter="2024-01-18T06:21:48Z">
    <saml:AudienceRestriction>
      <saml:Audience>http://sp.example.com/demo1/metadata.php</saml:Audience>
    </saml:AudienceRestriction>
  </saml:Conditions>
  <saml:AuthnStatement AuthnInstant="2014-07-17T01:01:48Z" SessionNotOnOrAfter="2024-07-17T09:01:48Z" SessionIndex=
    <saml:AuthnContext>
      <saml:AuthnContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:Password</saml:AuthnContextClassRef>
    </saml:AuthnContext>
  </saml:AuthnStatement>
  <saml:AttributeStatement>
    <saml:Attribute Name="uid" NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic">
      <saml:AttributeValue xsi:type="xs:string">test</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute Name="mail" NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic">
      <saml:AttributeValue xsi:type="xs:string">test@example.com</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute Name="eduPersonAffiliation" NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic">
      <saml:AttributeValue xsi:type="xs:string">users</saml:AttributeValue>
      <saml:AttributeValue xsi:type="xs:string">examplerole1</saml:AttributeValue>
    </saml:Attribute>
  </saml:AttributeStatement>
</saml:Assertion>
</samlp:Response>
```

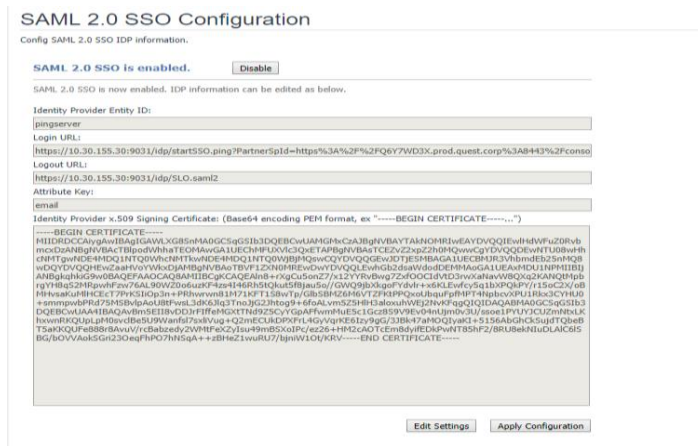
In the **saml:AttributeStatement** element, there are three **saml:Attribute** elements. Both **uid** and **mail** can be used to identify a user. In this sample response, either **uid** or **mail** can be used as the *Attribute Key*. Generally the IDP Server administrator knows details about this information. The Foglight Management Server tries to use several common keys, such as uid, email, mail, sAMAccountName and etc. Therefore if you are a Foglight administrator and have questions about this *Attribute Key*, reach out to your IDP server's administrator for detailed information.

- e *Identity Provider x.509 Signing Certificate*: You could get this value from PingFederate's **Signing & Decryption Keys & Certificates**.



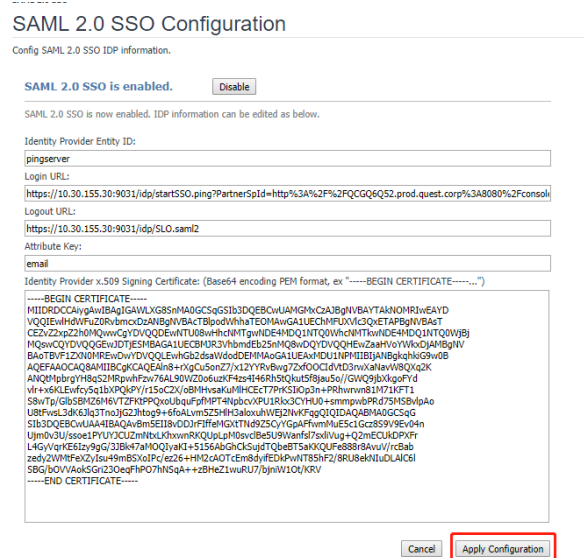


The following shows an example of SAML 2.0 SSO Configuration in PingFederate.



- 4 Click **Apply Configuration** to save the configuration.

Then configurations of integrating SAML 2.0 SSO with the Foglight Management Server in PingFederate are completed.



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