Foglight® 6.0.0

Integration with SAML 2.0 in PingFederate

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Foglight® 6.0.0 – Integration with SAML 2.0 in PingFederate
Updated – May 19, 2021
Version – 6.0.0

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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

NOTE:

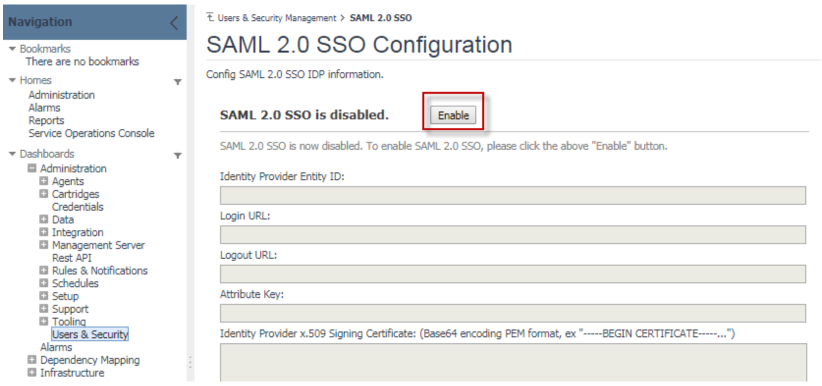
- If you are about to use SAML IP login, make sure to run the following command: "`-Dquest.saml.hostname=<foglight-server-ip>`" to start up your Foglight Management Server.
- When logging into your Foglight Management Server, make sure to keep using the same approach as what you configured during the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



SAML 2.0 SSO Configuration

Config SAML 2.0 SSO IDP information.

SAML 2.0 SSO is disabled.

SAML 2.0 SSO is now disabled. To enable SAML 2.0 SSO, please click the above "Enable" button.

Identity Provider Entity ID:

Login URL:

Logout URL:

Attribute Key:

Identity Provider x.509 Signing Certificate: (Base64 encoding PEM format, ex "-----BEGIN CERTIFICATE-----...")

4 Download the metadata file that is to be imported to the PingFederate server later. Foglight supports both HTTP and HTTPS logon:

- For HTTP logon: Get the metafile from the Foglight server URL:
  - IP logon: http://<foglight_server-ip>:<port>/console/saml2/metadata.xml
  - Host name logon: http://<foglight_server-host-name>:<port>/console/saml2/metadata.xml
- For HTTPS logon: Get the metafile from the Foglight server URL:
  - IP logon: https://<foglight_server-ip>:<port>/console/saml2/metadata.xml
  - Host name logon: https://<foglight_server-host-name>:<port>/console/saml2/metadata.xml

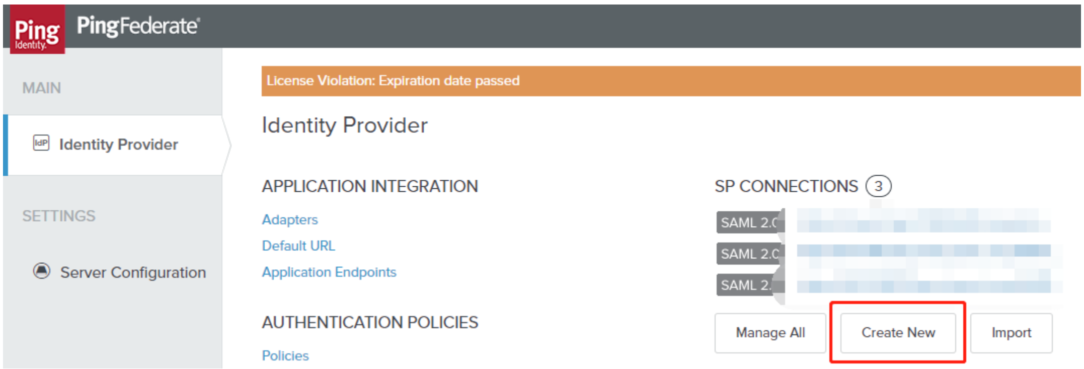
Step 1: Configuring the SP Connection

To configure the Service Provider (SP) connection:

1 Sign in PingFederate as an administrator.

2 Click **Identity Provider** and navigate to **Identity Provider** configurations.

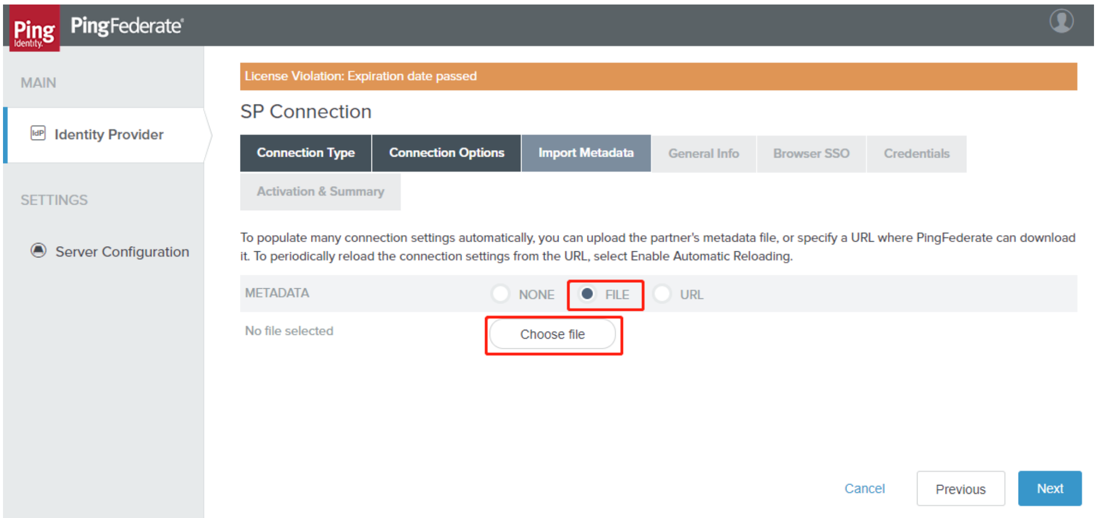
3 Under **SP CONNECTIONS**, click **Create New**.



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**.



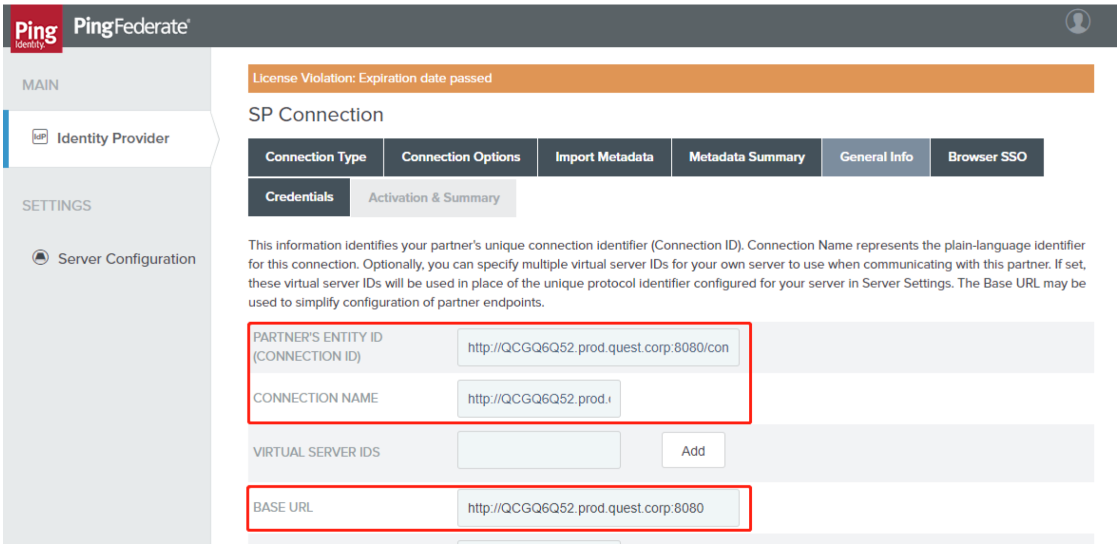
To populate many connection settings automatically, you can upload the partner's metadata file, or specify a URL where PingFederate can download it. To periodically reload the connection settings from the URL, select Enable Automatic Reloading.

METADATA ○ NONE ● FILE ○ URL

No file selected Choose file

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**.



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This information identifies your partner's unique connection identifier (Connection ID). Connection Name represents the plain-language identifier for this connection. Optionally, you can specify multiple virtual server IDs for your own server to use when communicating with this partner. If set, these virtual server IDs will be used in place of the unique protocol identifier configured for your server in Server Settings. The Base URL may be used to simplify configuration of partner endpoints.

PARTNER'S ENTITY ID (CONNECTION ID): http://QCGQ6Q52.prod.quest.corp:8080/con

CONNECTION NAME: http://QCGQ6Q52.prod.

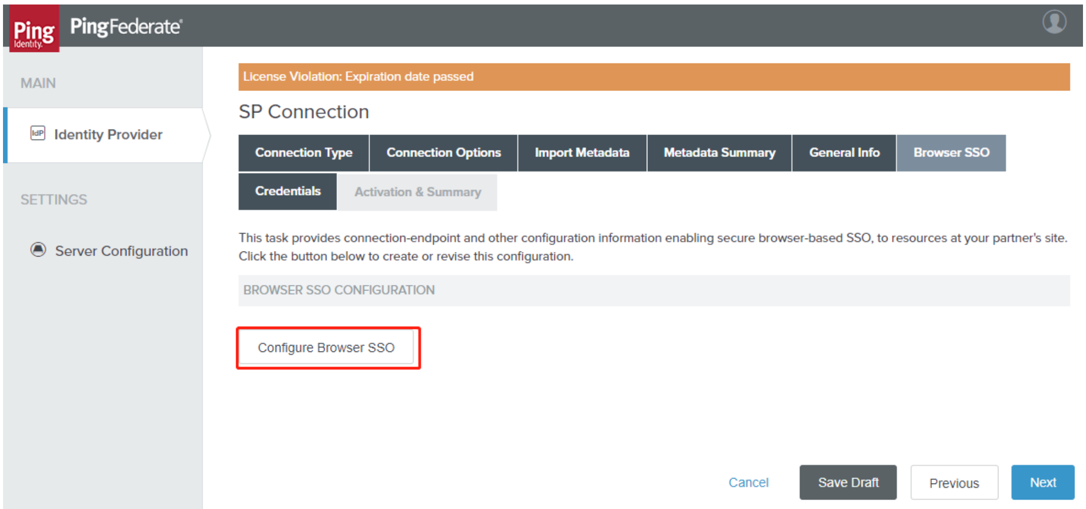
VIRTUAL SERVER IDS:

BASE URL: http://QCGQ6Q52.prod.quest.corp:8080

Step 2: Configuring Browser SSO

To configure the browser SSO:

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



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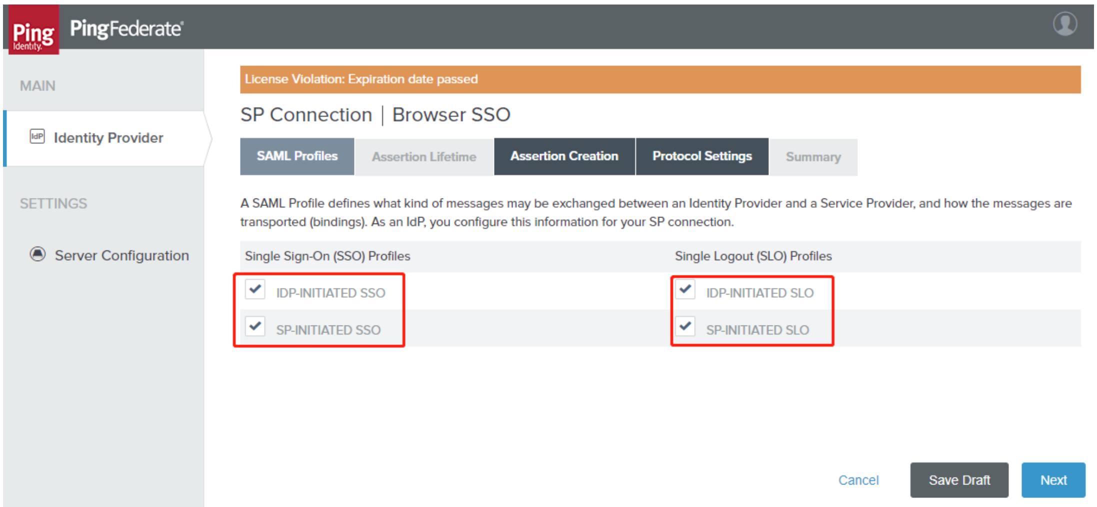
This task provides connection-endpoint and other configuration information enabling secure browser-based SSO, to resources at your partner's site. Click the button below to create or revise this configuration.

BROWSER SSO CONFIGURATION

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



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SP Connection | Browser SSO

A SAML Profile defines what kind of messages may be exchanged between an Identity Provider and a Service Provider, and how the messages are transported (bindings). As an IdP, you configure this information for your SP connection.

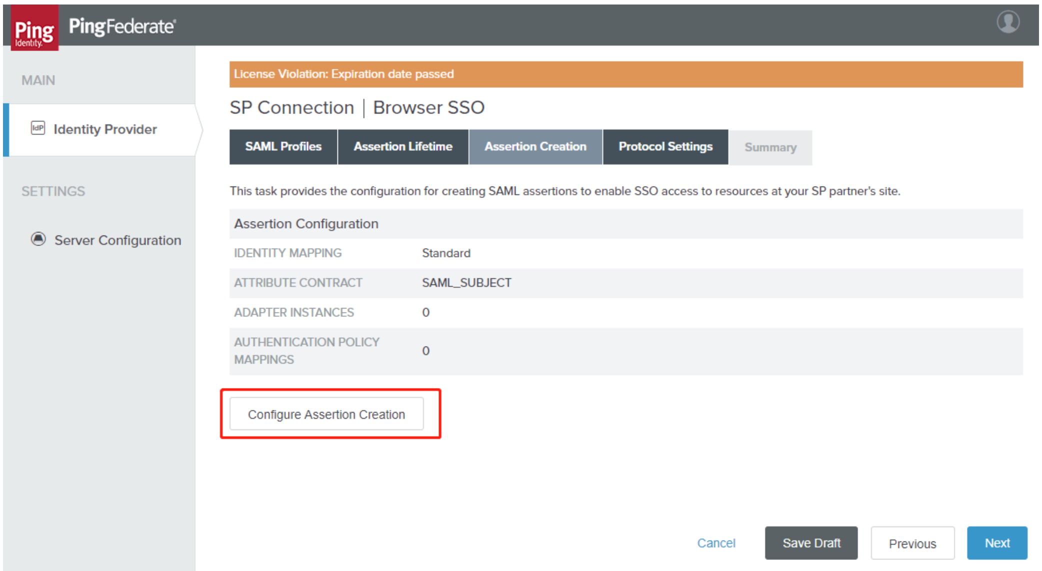
Single Sign-On (SSO) Profiles	Single Logout (SLO) Profiles
☑ IDP-INITIATED SSO	☑ IDP-INITIATED SLO
☑ SP-INITIATED SSO	☑ SP-INITIATED SLO

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**.



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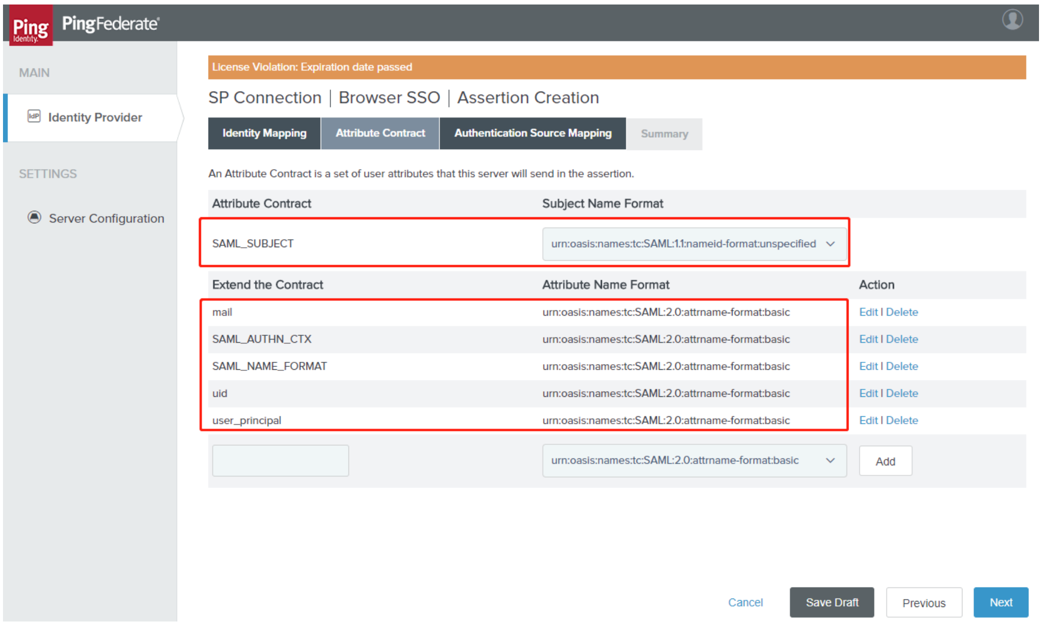
SP Connection | Browser SSO

This task provides the configuration for creating SAML assertions to enable SSO access to resources at your SP partner's site.

Assertion Configuration	
IDENTITY MAPPING	Standard
ATTRIBUTE CONTRACT	SAML_SUBJECT
ADAPTER INSTANCES	0
AUTHENTICATION POLICY MAPPINGS	0

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**.



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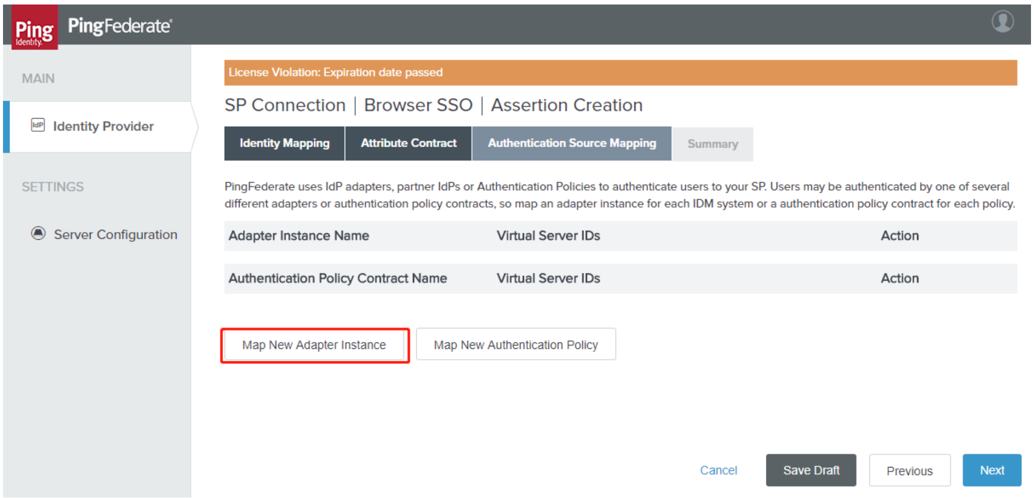
SP Connection | Browser SSO | Assertion Creation

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:1.1:nameid-format:unspecified

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

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



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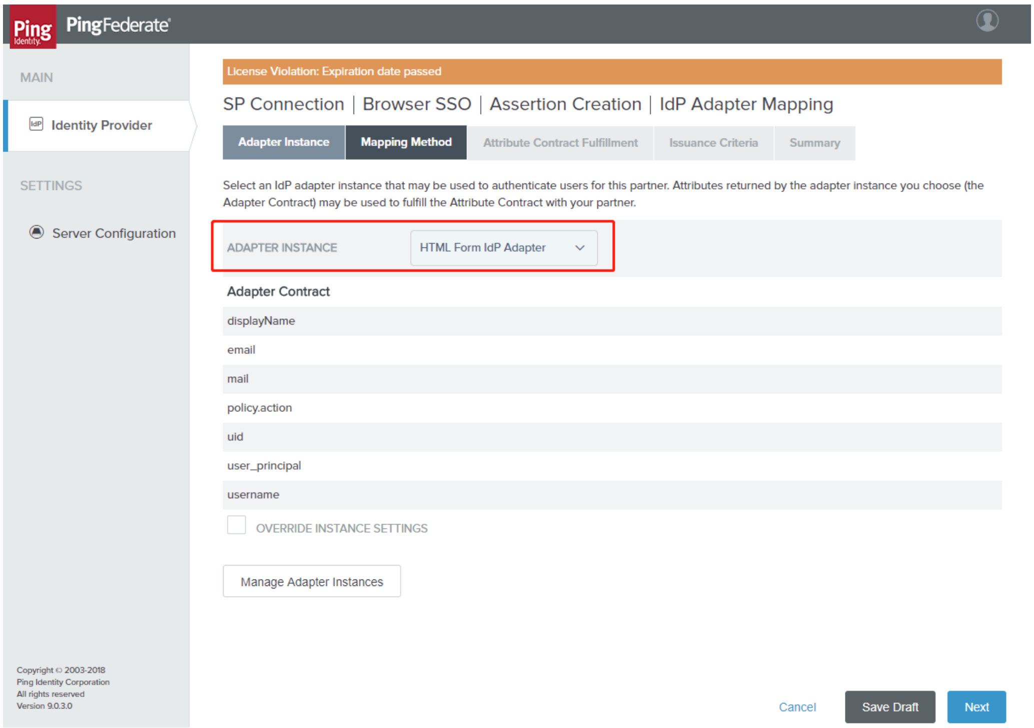
SP Connection | Browser SSO | Assertion Creation

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

Authentication Policy Contract Name	Virtual Server IDs	Action

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

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

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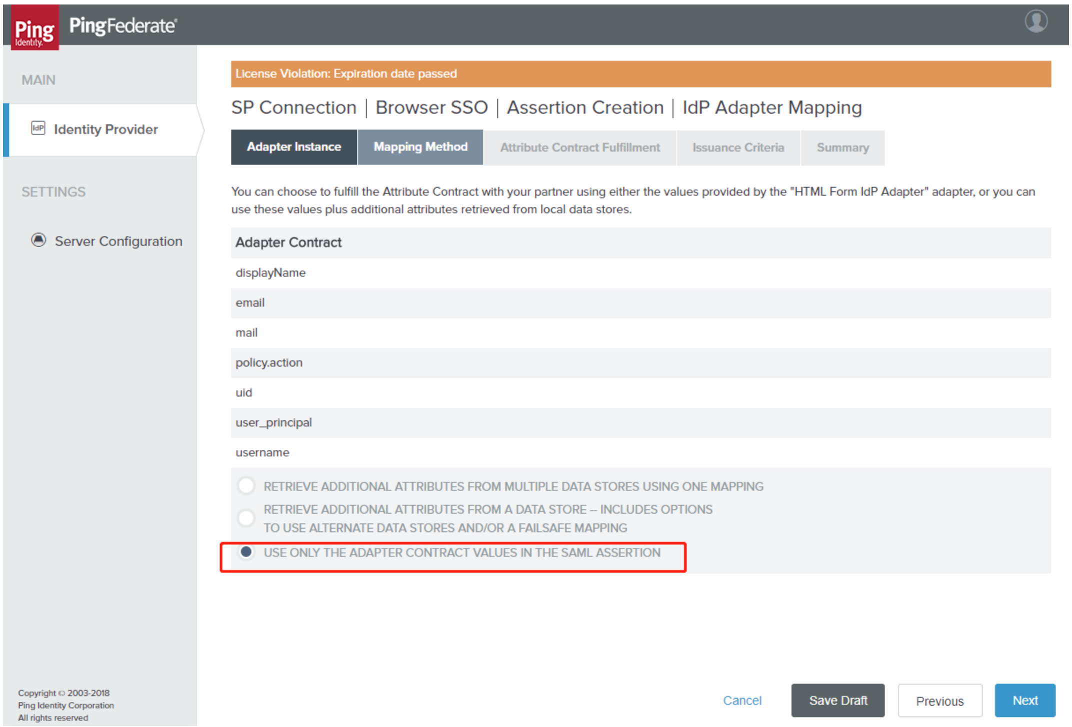
6 On the **Mapping Method** tab, select **USE ONLY THE ADAPTER CONTRACT VALUES IN THE SAML ASSERTION** and click **Next**.



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

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

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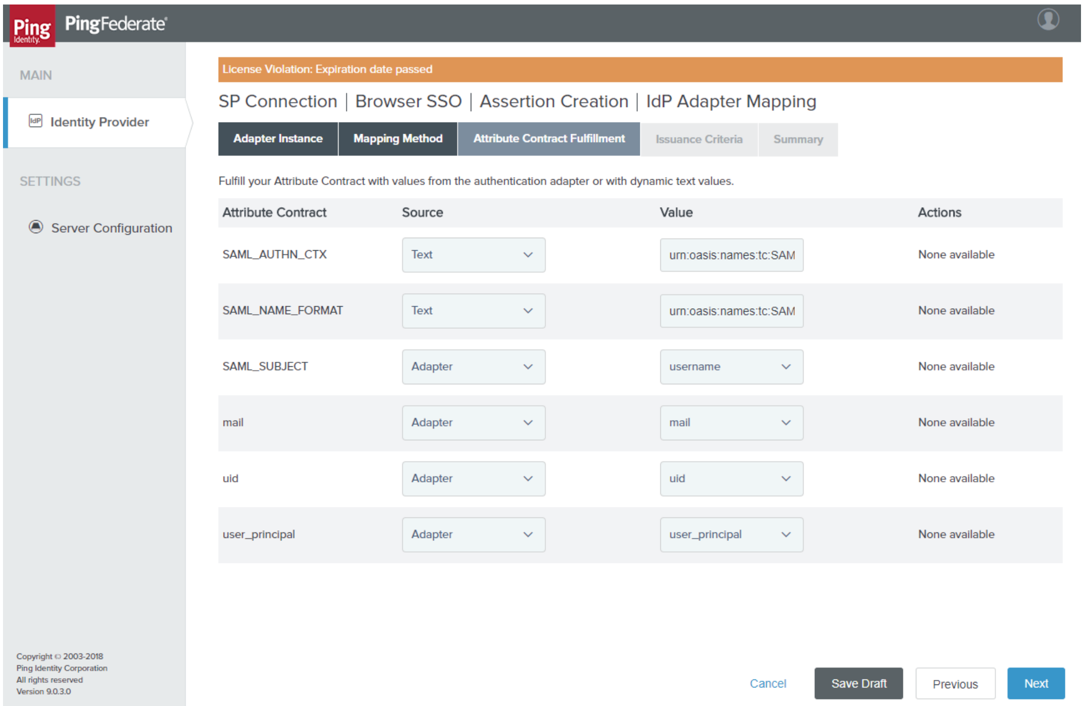
7 On the **Attribute Contract Fulfillment** tab, fulfill your **Attribute Contract** as below and click **Next**.

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



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

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

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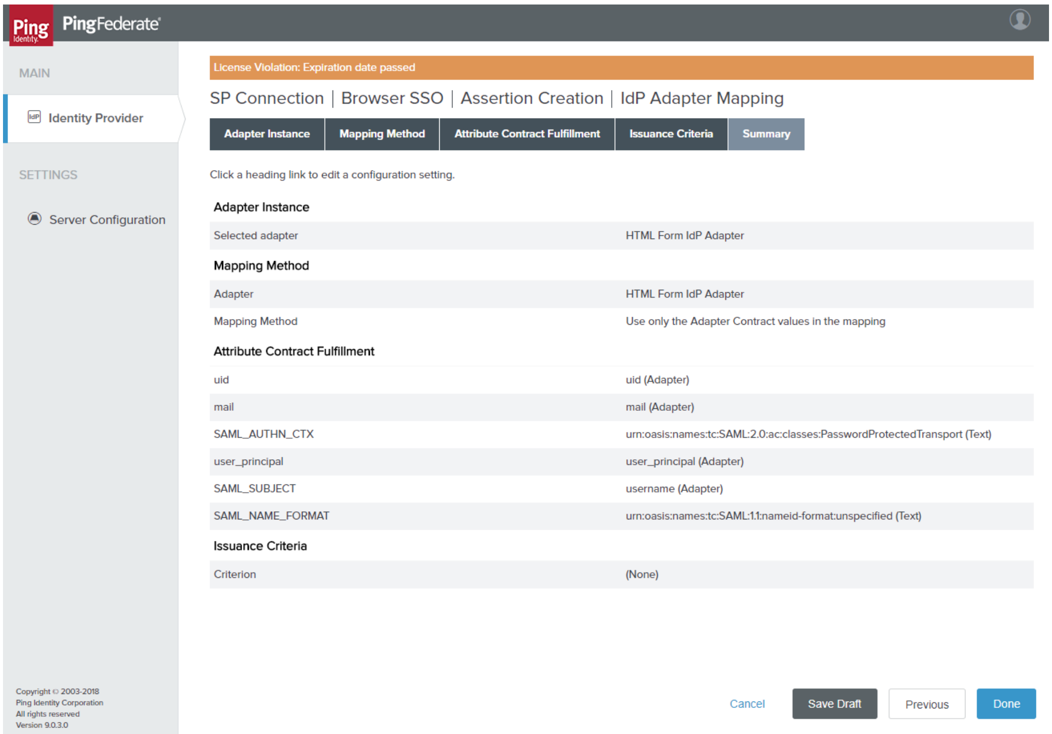
8 On the **Issuance Criteria** tab, leave the default values as is and click **Next**.

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



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

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)

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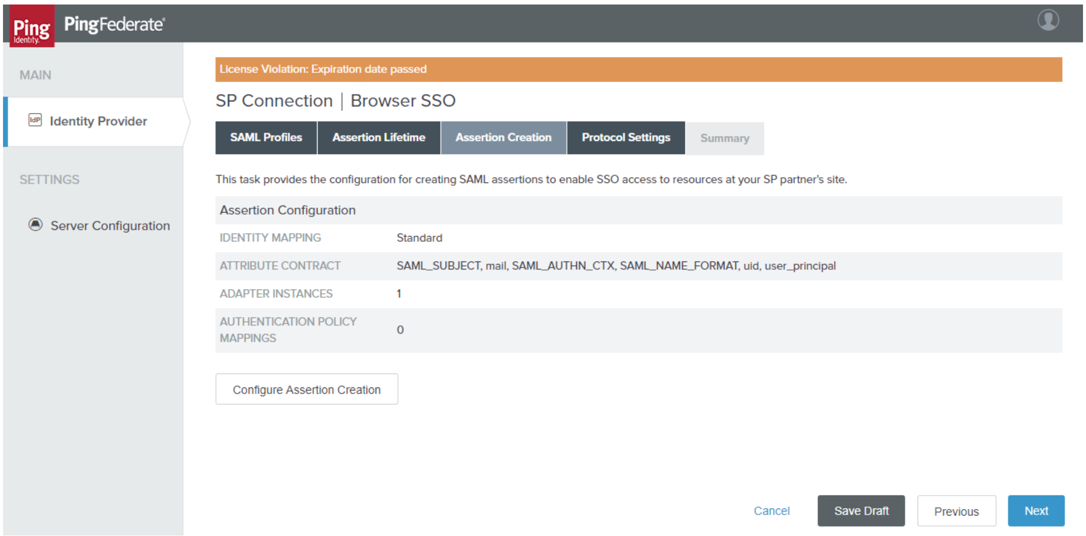
10 On the **Authentication Source Mapping** tab, click **Next**.

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

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



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SP Connection | Browser SSO

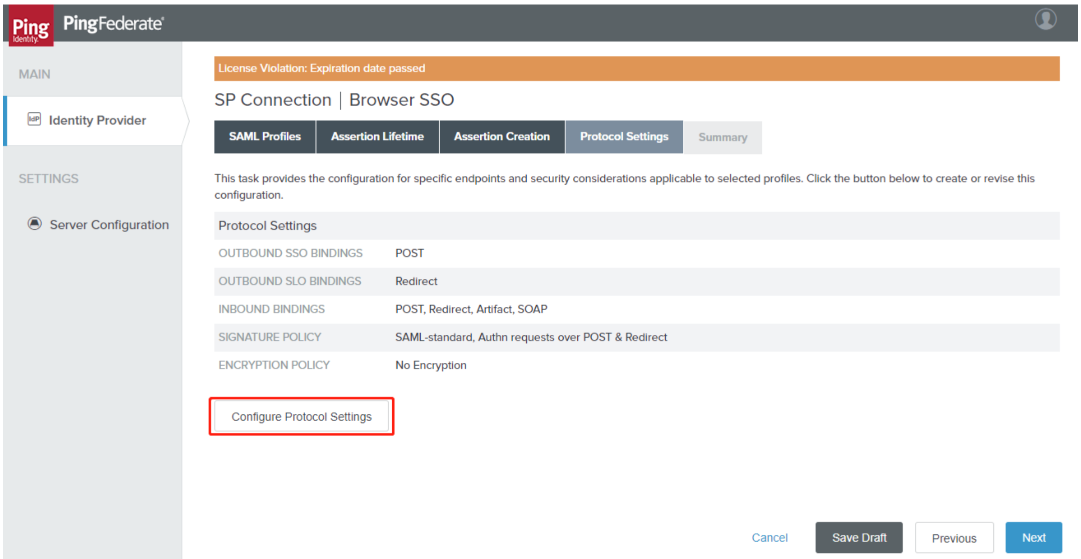
This task provides the configuration for creating SAML assertions to enable SSO access to resources at your SP partner's site.

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

Step 4: Configuring Protocol Settings

To configure protocol settings:

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



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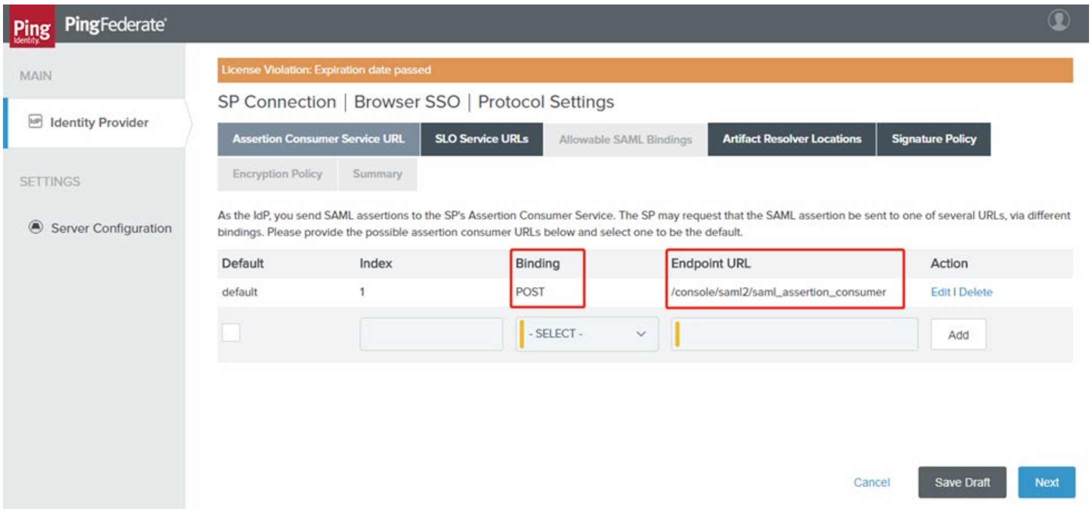
SP Connection | Browser SSO

This task provides the configuration for specific endpoints and security considerations applicable to selected profiles. Click the button below to create or revise this configuration.

Protocol Settings	
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

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



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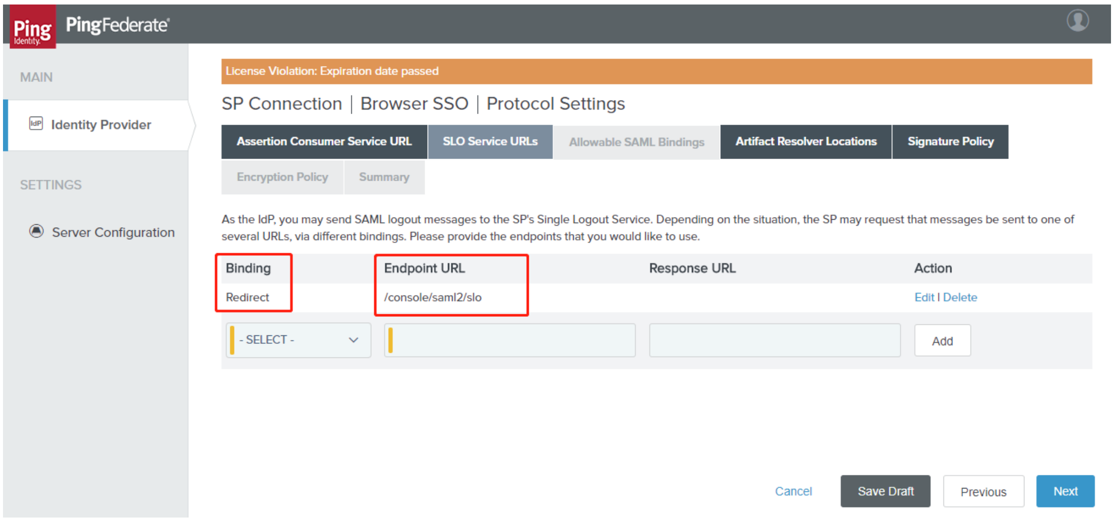
SP Connection | Browser SSO | Protocol Settings

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 I Delete
□		- SELECT -		Add

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



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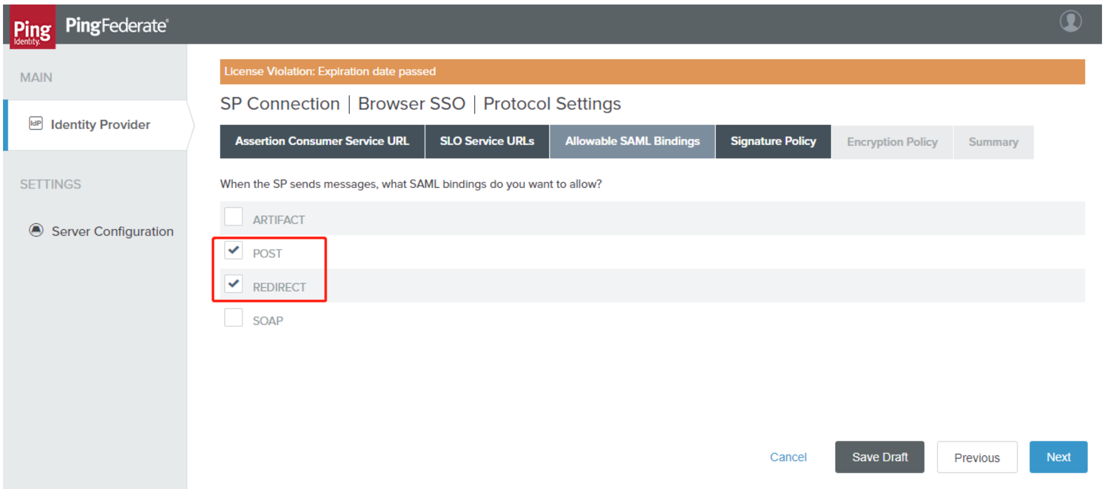
SP Connection | Browser SSO | Protocol Settings

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 I Delete
- SELECT -			Add

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



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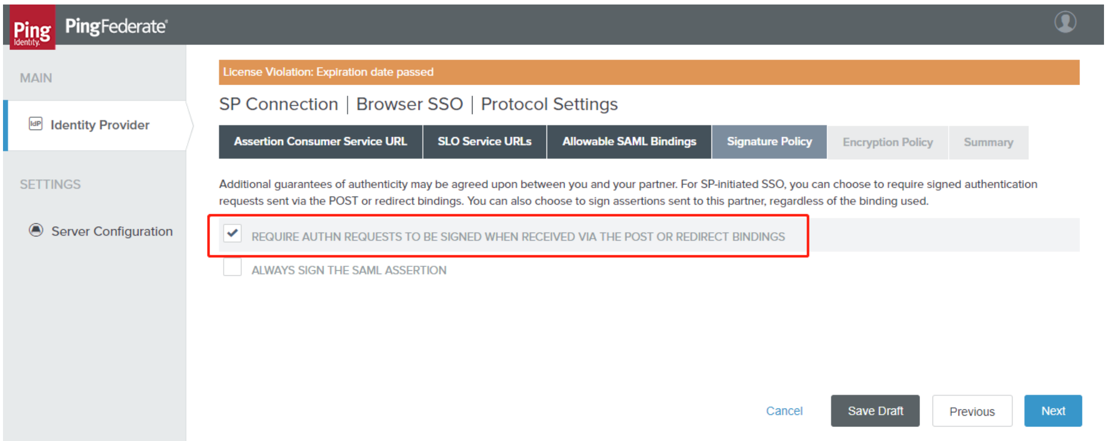
SP Connection | Browser SSO | Protocol Settings

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

□ ARTIFACT
☑ POST
☑ REDIRECT
□ SOAP

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**.



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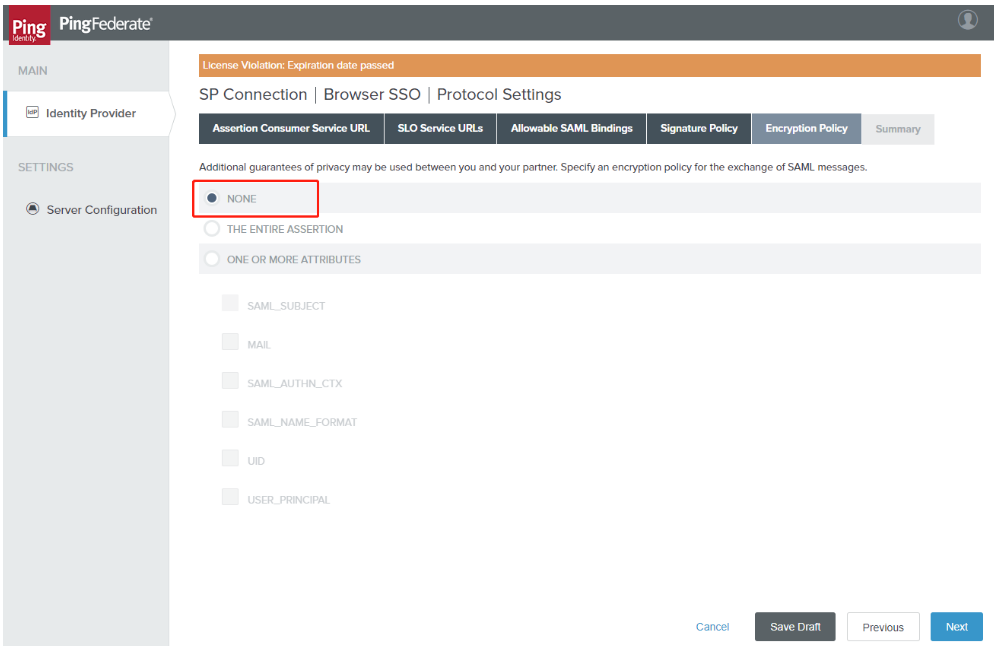
SP Connection | Browser SSO | Protocol Settings

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

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



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SP Connection | Browser SSO | Protocol Settings

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

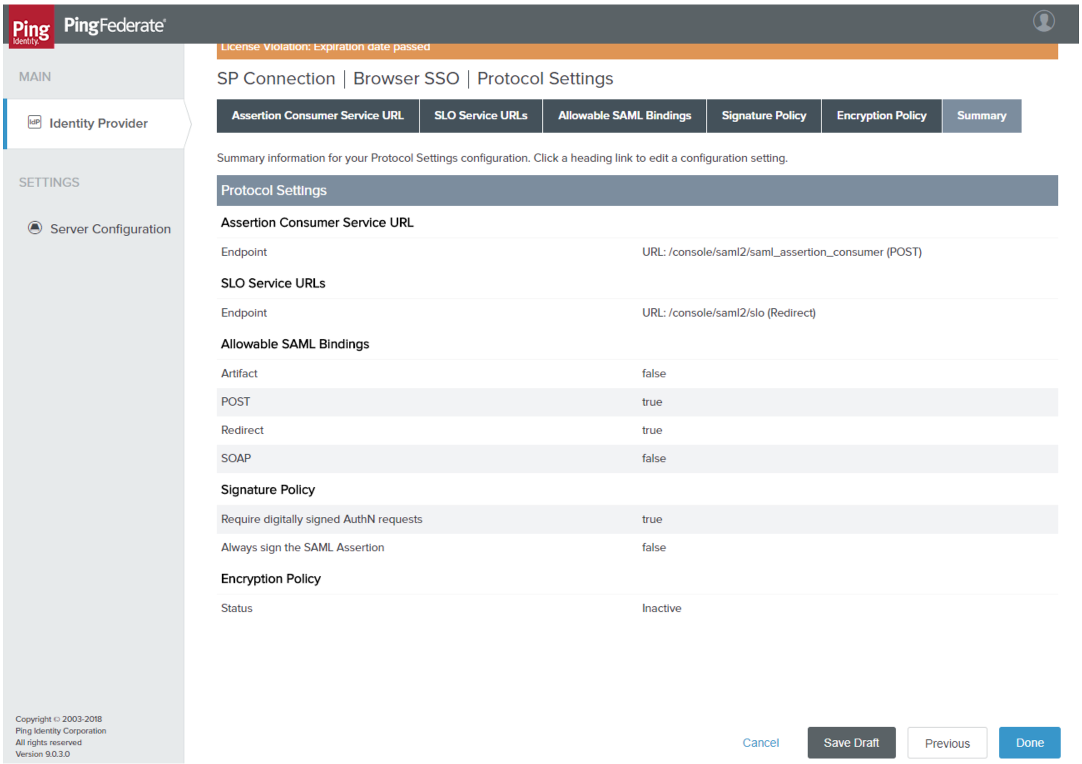
☐ SAML_AUTHN_CTX

☐ SAML_NAME_FORMAT

☐ UID

☐ USER_PRINCIPAL

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



SP Connection | Browser SSO | Protocol Settings

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

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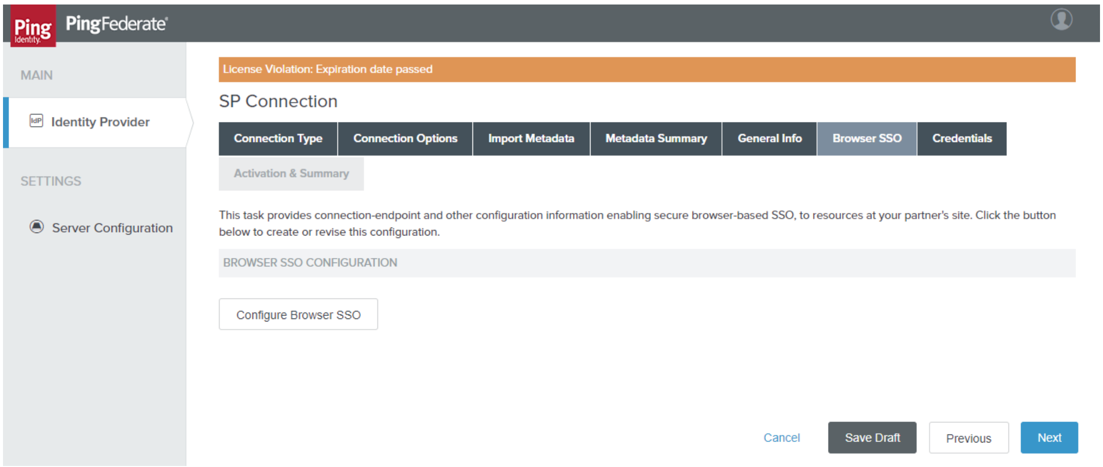
8 On the **Protocol Settings** tab, click **Next**.

9 On the **Browser SSO Summary** tab, click **Done**.

10 On the **Browser SSO** tab, click **Next**.



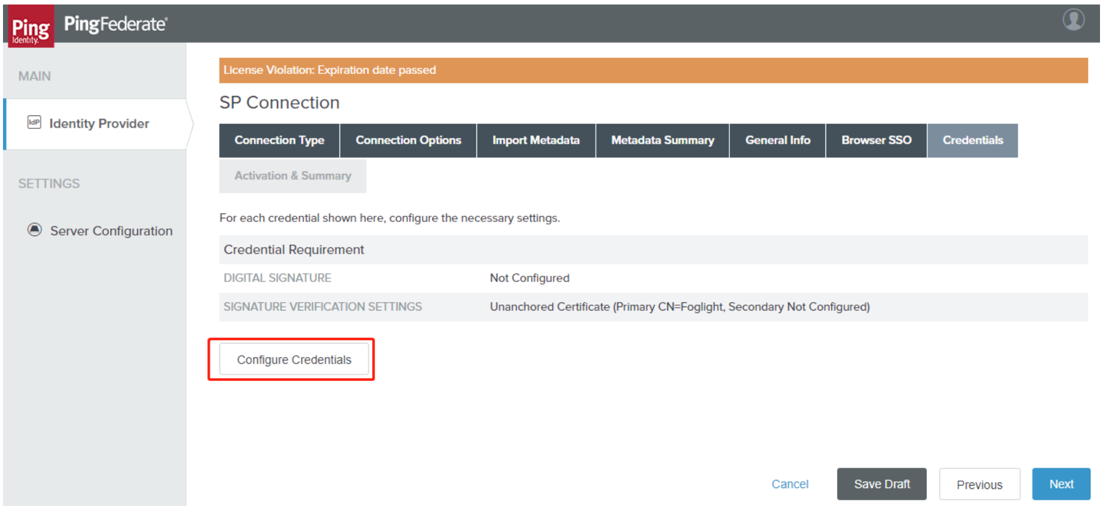
SP Connection

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.

Step 5: Configuring Credentials

To configure credentials:

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



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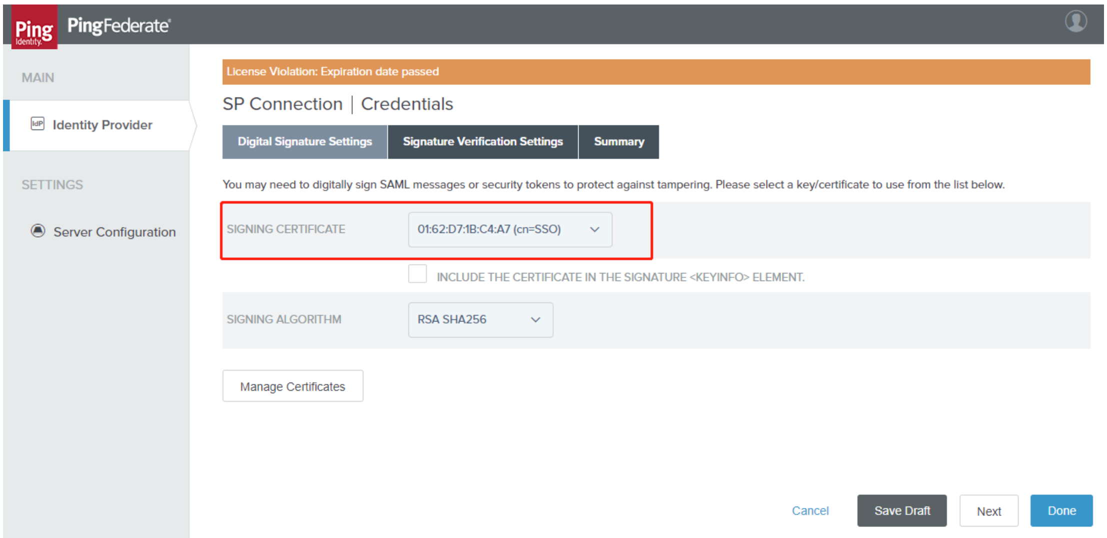
SP Connection

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)

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



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SP Connection | Credentials

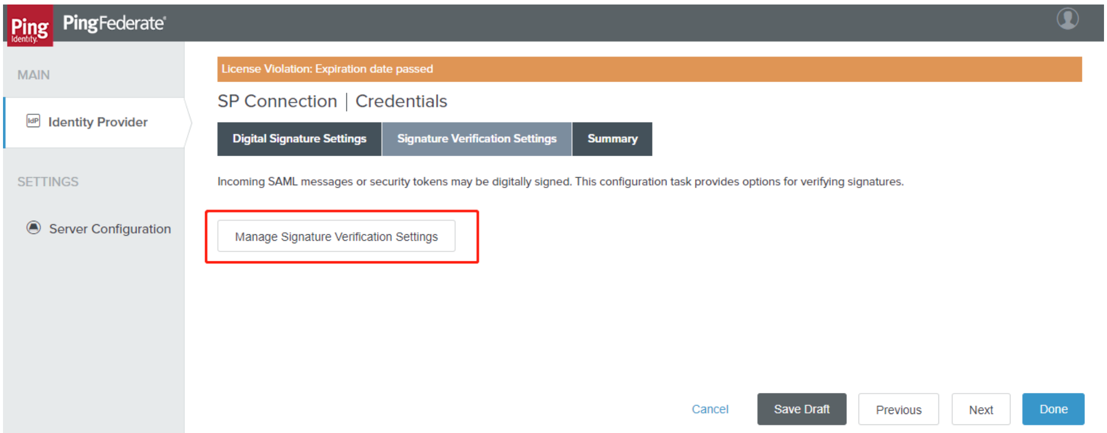
You may need to digitally sign SAML messages or security tokens to protect against tampering. Please select a key/certificate to use from the list below.

SIGNING CERTIFICATE: 01:62:D7:1B:C4:A7 (cn=SSO)

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

SIGNING ALGORITHM: RSA SHA256

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



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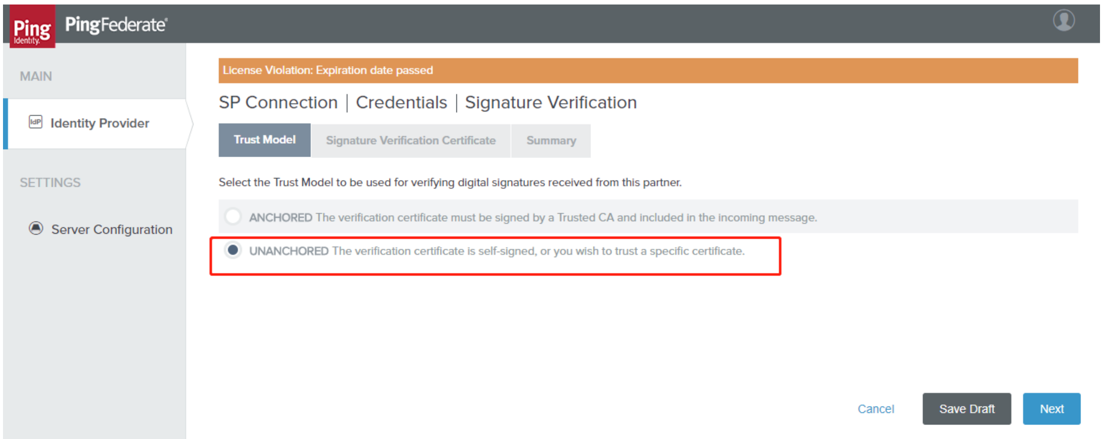
SP Connection | Credentials

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

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



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SP Connection | Credentials | Signature Verification

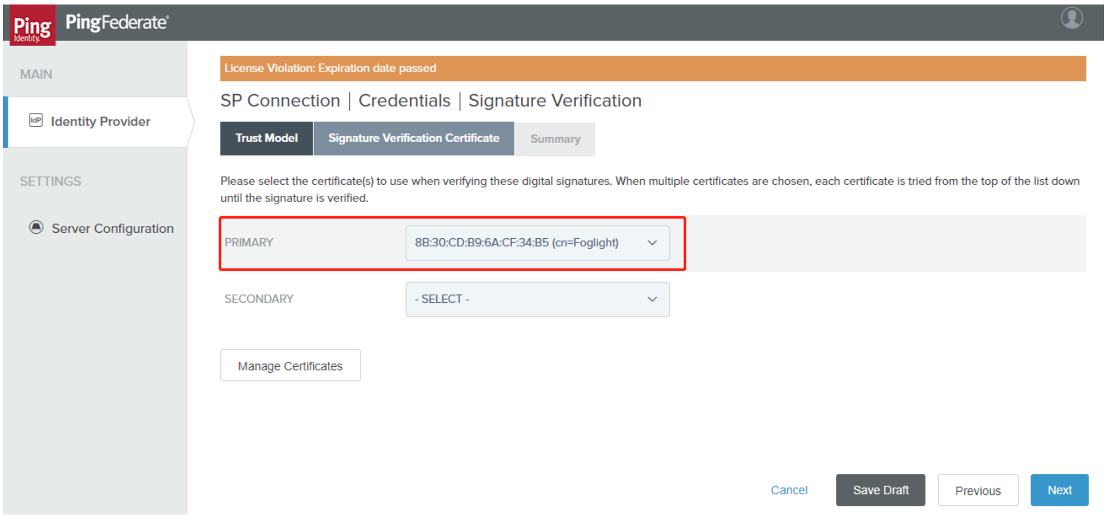
Trust Model | Signature Verification Certificate | Summary

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.

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



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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.

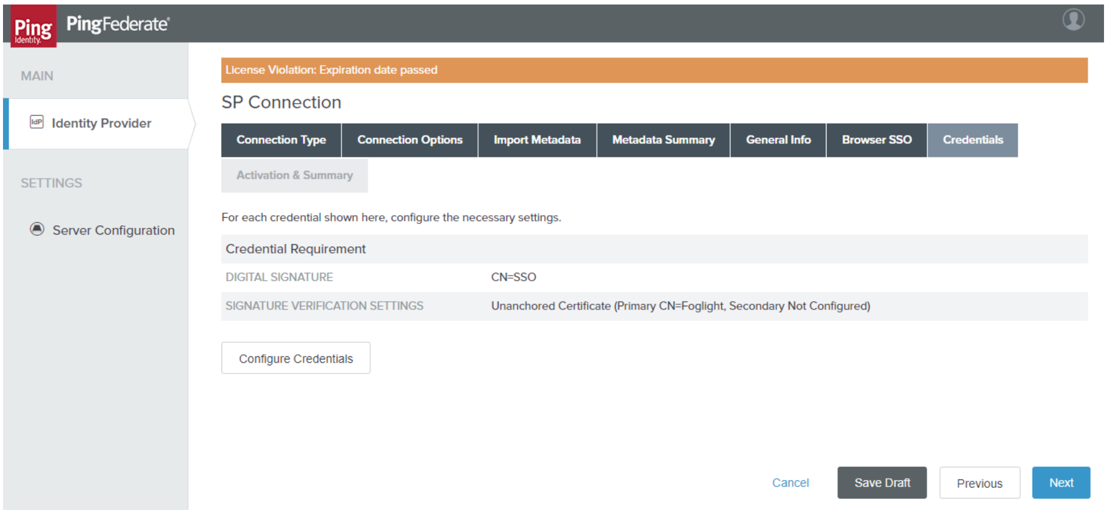
PRIMARY	8B:30:CD:B9:6A:CF:34:B5 (cn=Foglight)
SECONDARY	- SELECT -

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**.



License Violation: Expiration date passed

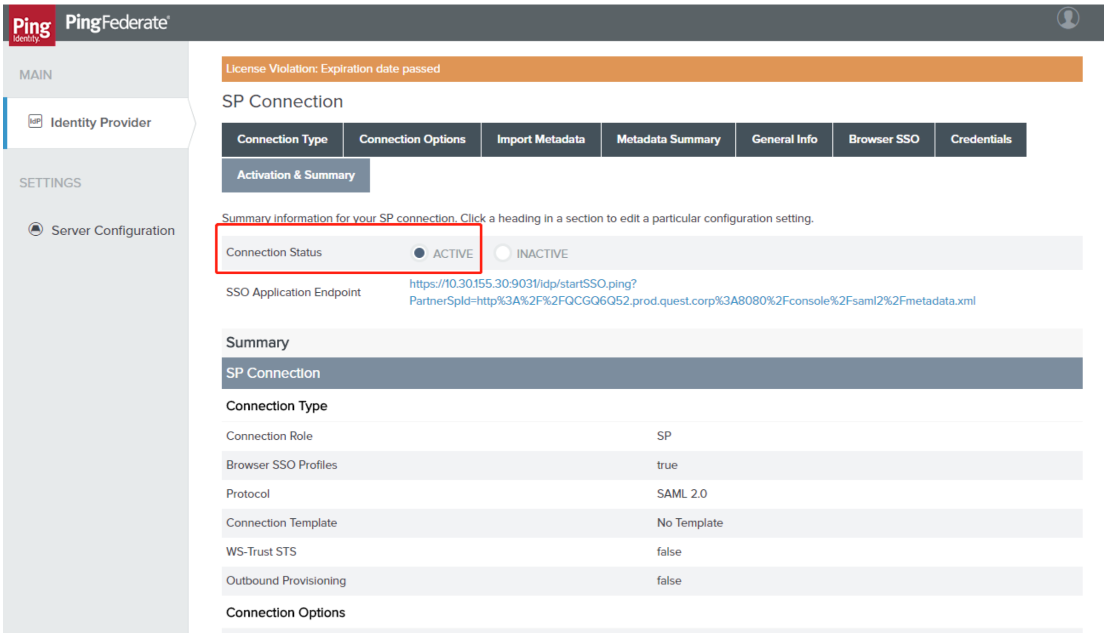
SP Connection

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)

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



License Violation: Expiration date passed

SP Connection

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/idp/startSSO.ping?PartnerSpId=http%3A%2F%2FQCGQ6Q52.prod.quest.corp%3A8080%2Fconsole%2Fsaml2%2Fmetadata.xml

Summary

SP Connection

Connection Type	
Connection Role	SP
Browser SSO Profiles	true
Protocol	SAML 2.0
Connection Template	No Template
WS-Trust STS	false
Outbound Provisioning	false

Connection Options

Step 6: Setting up SAML in Foglight

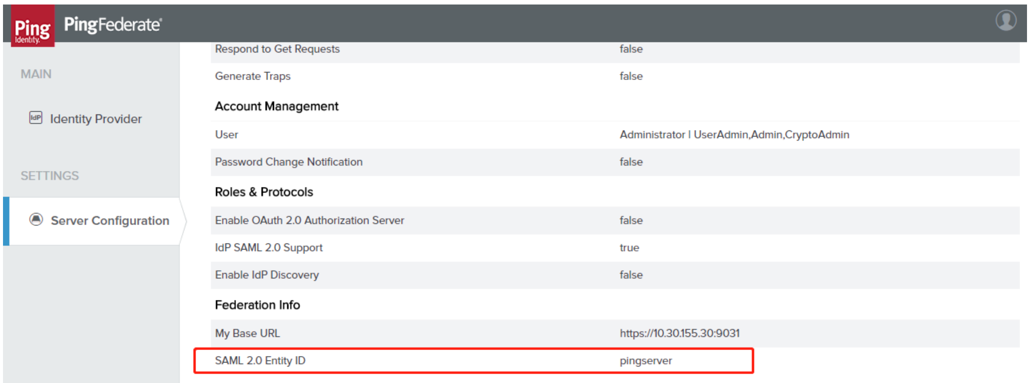
To set up SAML in the Foglight Management Server:

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.

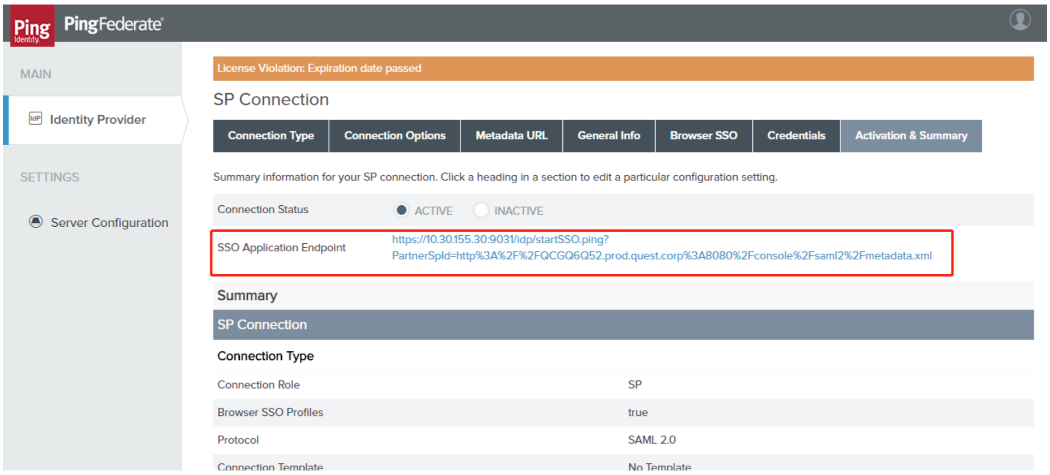
3 Click **Edit Settings** and configure the SAML settings as below. You could get the actual values from the PingFederate server.

a *Identity Provider Entity ID*: You could get this value from PingFederate's **Server Settings**.



Respond to Get Requests	false
Generate Traps	false
Account Management	
User	Administrator I UserAdmin,Admin,CryptoAdmin
Password Change Notification	false
Roles & Protocols	
Enable OAuth 2.0 Authorization Server	false
IdP SAML 2.0 Support	true
Enable IdP Discovery	false
Federation Info	
My Base URL	https://10.30.155.30:9031
SAML 2.0 Entity ID	pingserver

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



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/idp/startSSO.ping?PartnerSpId=http%3A%2F%2FQCGQ6Q52.prod.quest.corp%3A8080%2Fconsole%2Fsaml2%2Fmetadata.xml

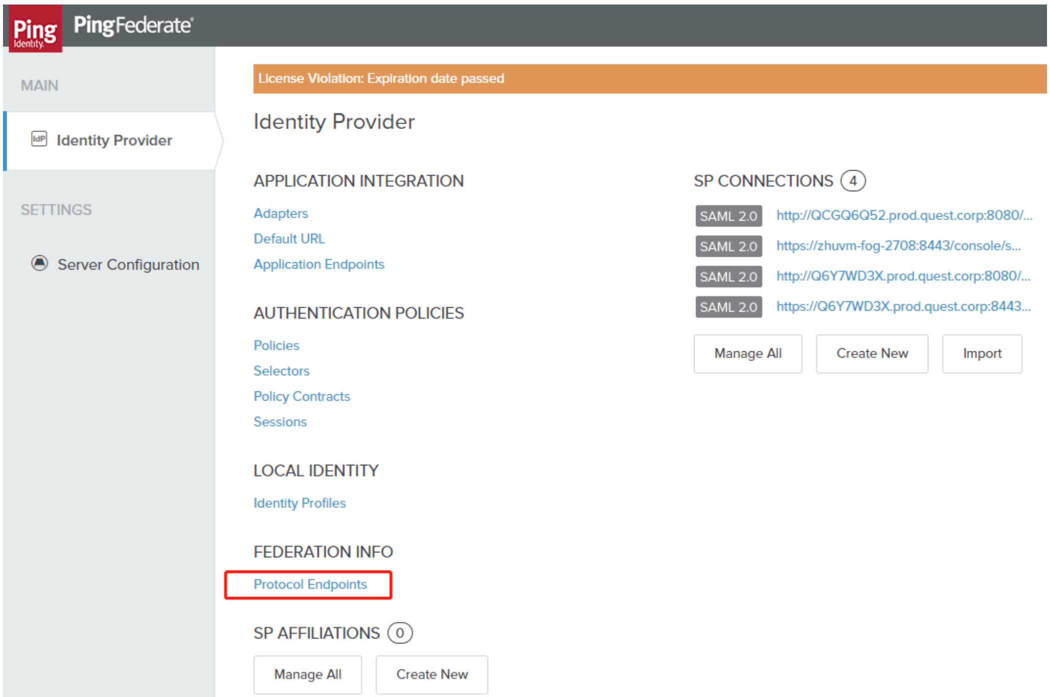
Summary

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>/idp/SLO.saml2. You could get the logout common postfix from PingFederate's **Protocol Endpoints**.



License Violation: Expiration date passed

Identity Provider

APPLICATION INTEGRATION

Adapters
Default URL
Application Endpoints

AUTHENTICATION POLICIES

Policies
Selectors
Policy Contracts
Sessions

LOCAL IDENTITY

Identity Profiles

FEDERATION INFO

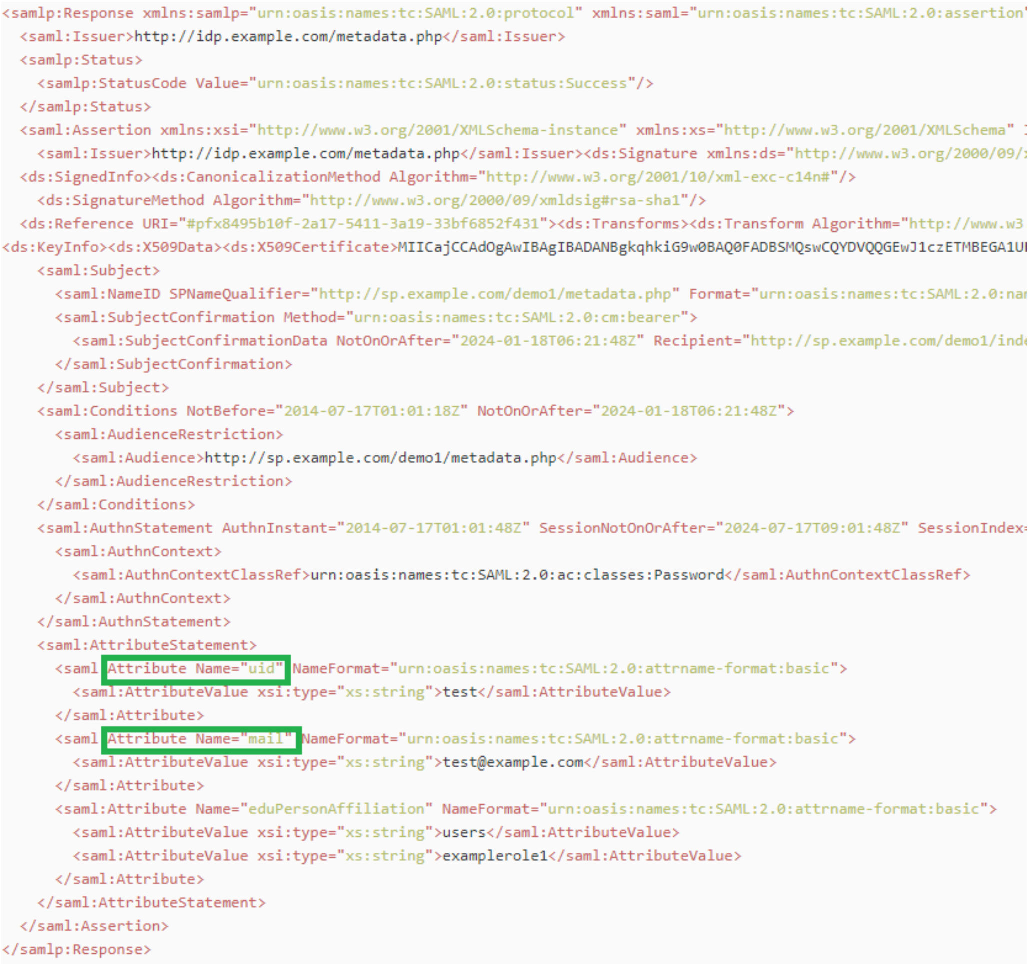
Protocol Endpoints

SP AFFILIATIONS (0)

SP CONNECTIONS (4)

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

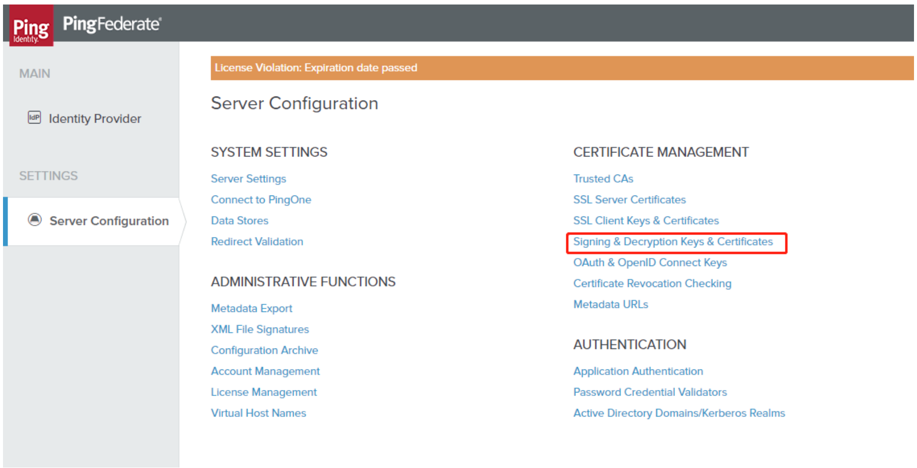
d *Attribute Key*: This is used to identity the attribute key of the assertion response. Take the below SAML 2.0 assertion response for example:



```
<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>MIICajCCAdOgAwIBAgIBADANBgkqhkiG9w0BAQ0FADBSMQswCQYDVQQGEwJ1czETMBEGA1U
    <saml:Subject>
      <saml:NameID SPNameQualifier="http://sp.example.com/demo1/metadata.php" Format="urn:oasis:names:tc:SAML:2.0:na
      <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/ind
      </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>
```

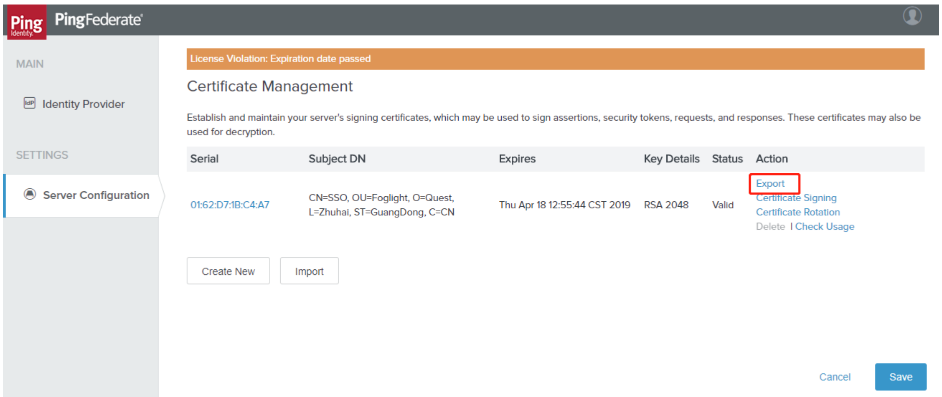
In the **saml:AttributeStatement** element, there are three **saml:Attribute** elements. Both **uid** and **mail** can be used to identify a user. In this sample response, either **uid** or **mail** can be used as the *Attribute Key*. Generally the IDP Server administrator knows details about this information. 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**.



License Violation: Expiration date passed

Server Configuration



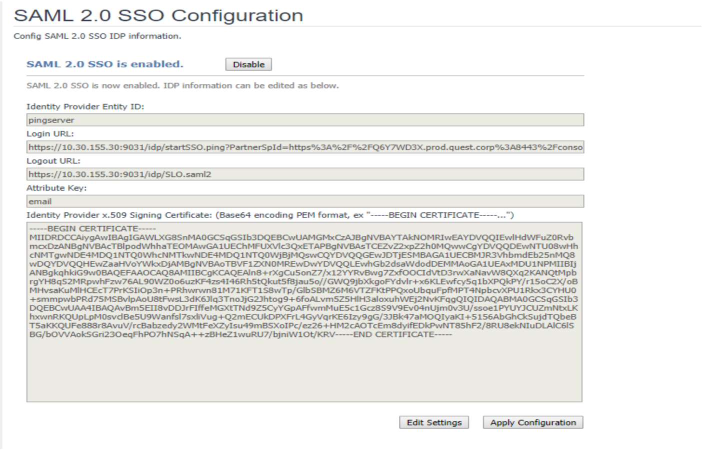
License Violation: Expiration date passed

Certificate Management

Establish and maintain your server's signing certificates, which may be used to sign assertions, security tokens, requests, and responses. These certificates may also be used for decryption.

Serial	Subject DN	Expires	Key Details	Status	Action
01:62:D7:1B:C4:A7	CN=SSO, OU=Foglight, O=Quest, L=Zhuhai, ST=GuangDong, C=CN	Thu Apr 18 12:55:44 CST 2019	RSA 2048	Valid	Export Certificate Signing Certificate Rotation Delete | Check Usage

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



SAML 2.0 SSO Configuration

Config SAML 2.0 SSO IDP information.

SAML 2.0 SSO is enabled.

SAML 2.0 SSO is now enabled. IDP information can be edited as below.

Identity Provider Entity ID:
pingserver

Login URL:
https://10.30.155.30:9031/idp/startSSO.ping?PartnerSpId=https%3A%2F%2FQ6Y7WD3X.prod.quest.corp%3A8443%2Fconso

Logout URL:
https://10.30.155.30:9031/idp/SLO.saml2

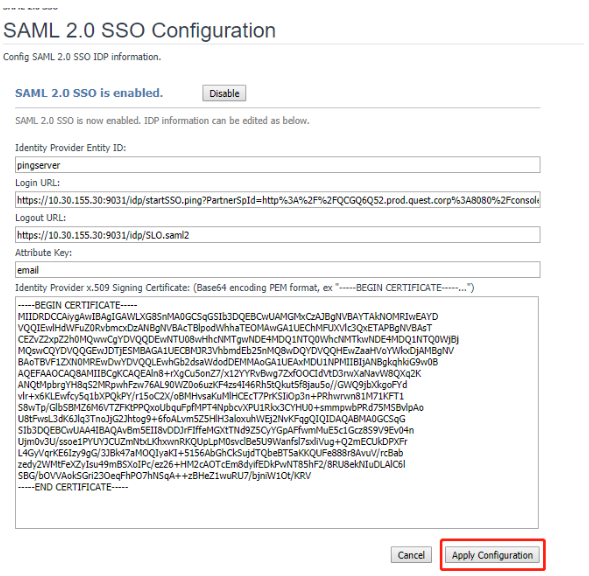
Attribute Key:
email

Identity Provider x.509 Signing Certificate: (Base64 encoding PEM format, ex "-----BEGIN CERTIFICATE-----...")

```
-----BEGIN CERTIFICATE-----
MIIDRDCCAiygAwIBAgIGAWLXG8SnMA0GCSqGSIb3DQEBCwUAMGMxCzAJBgNVBAYTAkNOMRIwEAYDVQQIEwlHdWFuZ0Rvb
mcxDzANBgNVBAcTBlpodWhhaTEOMAwGA1UEChMFUXVlc3QxETAPBgNVBAsTCEZvZ2xpZ2h0MQwwCgYDVQQDEwNTU08wHh
cNMTgwNDE4MDQ1NTQ0WhcNMTkwNDE4MDQ1NTQ0WjBjMQswCQYDVQQGEwJDTjESMBAGA1UECBMJR3VhbmdEb25nMQ8
wDQYDVQQHEwZaaHVoYWkxDjAMBgNVBAoTBVF1ZXN0MREwDwYDVQQLEwhGb2dsaWdodDEMMAoGA1UEAxMDU1NPMIIBIj
ANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAln8+rXgCu5onZ7/x12YYRvBwg7ZxfOOCIdVtD3rwXaNavW8QXq2KANQtMpb
rgYH8qS2MRpwhFzw76AL90WZ0o6uzKF4zs4I46Rh5tQkut5f8jau5o//GWQ9jbXkgoFYdvlr+x6KLEwfcy5q1bXPQkPY/r15oC2X/oB
MHvsaKuMlHCEcT7PrKSIiOp3n+PRhwrwn81M71KFT1S8wTp/GlbSBMZ6M6VTZFKtPPQxoUbquFpfMPT4NpbcvXPU1Rkx3CYHU0
+smmpwbPRd75MSBvlpAoU8tFwsL3dK6Jlq3TnoJjG2Jhtog9+6foALvm5Z5HlH3aloxuhWEj2NvKFqgQIQIDAQABMA0GCSqGSIb3
DQEBCwUAA4IBAQAvBm5EII8vDDJrFIffeMGXtTNd9Z5CyYGpAFfwmMuE5c1Gcz8S9V9Ev04nUjm0v3U/ssoe1PYUYJCUZmNtxLK
hxwnRKQUpLpM0svdBe5U9Wanfsl7sxliVug+Q2mECUkDPXFrL4GyVqrKE6Izy9gG/3JBk47aMOQIyaKI+5156AbGhCkSujdTQbeB
T5aKKQUFe888r8AvuV/rcBabzedy2WMtFeXZyIsu49mBSXoIPc/ez26+HM2cAOTcEm8dyifEDkPwNT85hF2/8RU8ekNIuDLAlC6lS
BG/bOVVAokSGri23OeqFhPO7hNSqA++zBHeZ1wuRU7/bjniW1Ot/KRV-----END CERTIFICATE-----
```

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.



SAML 2.0 SSO Configuration

Config SAML 2.0 SSO IDP information.

SAML 2.0 SSO is enabled.

SAML 2.0 SSO is now enabled. IDP information can be edited as below.

Identity Provider Entity ID: pingserver

Login URL: https://10.30.155.30:9031/idp/startSSO.ping?PartnerSpId=http%3A%2F%2FQCGQ6Q52.prod.quest.corp%3A8080%2Fconsol

Logout URL: https://10.30.155.30:9031/idp/SLO.saml2

Attribute Key: email

Identity Provider x.509 Signing Certificate: (Base64 encoding PEM format, ex "-----BEGIN CERTIFICATE-----...")

```
-----BEGIN CERTIFICATE-----
MIIDRDCCAiygAwIBAgIGAWLXG8SnMA0GCSqGSIb3DQEBCwUAMGMxCzAJBgNVBAYTAkNOMRIwEAYD
VQQIEwlHdWFuZ0RvbmcxDzANBgNVBAcTBlpodWhhaTEOMAwGA1UEChMFUXVlc3QxETAPBgNVBAsT
CEZvZ2xpZ2h0MQwwCgYDVQQDEwNTU08wHhcNMTgwNDE4MDQ1NTQ0WhcNMTkwNDE4MDQ1NTQ0WjBj
MQswCQYDVQQGEwJDTjESMBAGA1UECBMJR3VhbmdEb25nMQ8wDQYDVQQHEwZaaHVoYWkxDjAMBgNV
BAoTBVF1ZXN0MREwDwYDVQQLEwhGb2dsaWdodDEMMAoGA1UEAxMDU1NPMIIBIjANBgkqhkiG9w0B
AQEFAAOCAQ8AMIIBCgKCAQEAln8+rXgCu5onZ7/x12YYRvBwg7ZxfOOCIdVtD3rwXaNavW8QXq2K
ANQtMpbrgYH8qS2MRpwhFzw76AL90WZ0o6uzKF4zs4I46Rh5tQkut5f8jau5o//GWQ9jbXkgoFYd
vlr+x6KLEwfcy5q1bXPQkPY/r15oC2X/oBMHvsaKuMlHCEcT7PrKSIiOp3n+PRhwrwn81M71KFT1
S8wTp/GlbSBMZ6M6VTZFKtPPQxoUbquFpfMPT4NpbcvXPU1Rkx3CYHU0+smmpwbPRd75MSBvlpAo
U8tFwsL3dK6Jlq3TnoJjG2Jhtog9+6foALvm5Z5HlH3aloxuhWEj2NvKFqgQIQIDAQABMA0GCSqG
SIb3DQEBCwUAA4IBAQAvBm5EII8vDDJrFIffeMGXtTNd9Z5CyYGpAFfwmMuE5c1Gcz8S9V9Ev04n
Ujm0v3U/ssoe1PYUYJCUZmNtxLKhxwnRKQUpLpM0svclBe5U9Wanfsl7sxliVug+Q2mECUkDPXFr
L4GyVqrKE6Izy9gG/3JBk47aMOQIyaKI+5156AbGhCkSujdTQbeBT5aKKQUFe888r8AvuV/rcBab
zedy2WMtFeXZyIsu49mBSXoIPc/ez26+HM2cAOTcEm8dyifEDkPwNT85hF2/8RU8ekNIuDLAlC6l
SBG/bOVVAokSGri23OeqFhPO7hNSqA++zBHeZ1wuRU7/bjniW1Ot/KRV
-----END CERTIFICATE-----
```

About us

We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build community-driven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest' s invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation™.

Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece – you – to the community, to the new Quest.

Contacting Quest

For sales or other inquiries, visit www.quest.com/contact.

Technical support resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at https://support.quest.com.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request
- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product.