1. SSO - Admin Guide . . . 2
1.1 Setting up Global SSO . . . 2
1.1.1 Configuring IDP . . . 2
1.1.1.1 ADFS configuration . . . 2
1.1.1.1.1 Configuring ADFS for SSO . . . 2
1.1.1.1.2 ADFS - Preparing certificate for SAML SSO Client . . . 15
1.1.1.1.3 ADFS - configuring SAML sign-out . . . 17
1.1.2 Step 1: Performing prerequisites check . . . 19
1.1.3 Step 2: Preparing and configuring SAML SSO Client . . . 19
1.1.4 Step 3: Installing and configuring Atlassian SSO add-ons . . . 20
1.1.4.1 Configuring JIRA SSO add-on . . . 21
1.1.4.2 Configuring Confluence SSO add-on . . . 23
1.1.4.3 Configuring Bamboo SSO add-on . . . 25
1.1.4.4 Configuring Bitbucket SSO add-on . . . 27
1.1.4.5 Configuring FishEye SSO add-on . . . 27

SSO - Admin Guide

> The content is intended for IDP Admins, Atlassian System Admins, thus we are assuming that the audience has sufficient and relevant technical knowledge.

The following pages describe how to prepare IDP, set up and configure Global SSO:

- Setting up Global SSO
  - Configuring IDP
    - ADFS configuration
  - Step 1: Performing prerequisites check
  - Step 2: Preparing and configuring SAML SSO Client
  - Step 3: Installing and configuring Atlassian SSO add-ons
    - Configuring JIRA SSO add-on
    - Configuring Confluence SSO add-on
    - Configuring Bamboo SSO add-on
    - Configuring Bitbucket SSO add-on
    - Configuring FishEye SSO add-on
- Upgrading Atlassian tools that have Global SSO

Setting up Global SSO

To set up cPrime's Global SSO, perform the following operations:

1. Configure IDP
2. Step 1: Perform prerequisites check
3. Step 2: Prepare and configure SAML SSO Client
4. Step 3: Install and enable the Atlassian authenticators

Configuring IDP

Depending on how your IDP is set up, the IDP Admin should work on one of the following IDP configurations in order to work with cPrime Global SSO:

- ADFS configuration
- OneLogin configuration
- Centrify configuration

We will use ADFS as an example to explain how to configure ADFS to work with Global SSO.

ADFS configuration

If you have ADFS IDP, here is additional information for ADFS configuration:

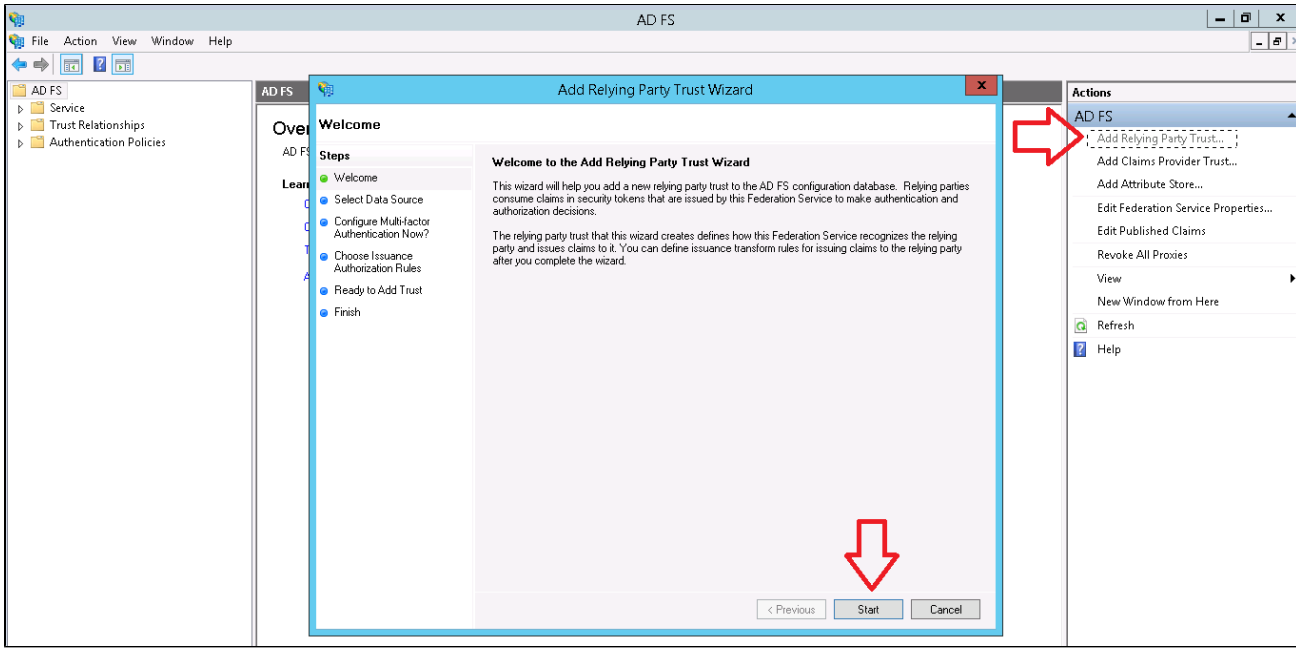
1. Configuring ADFS for SSO
2. ADFS - Preparing certificate for SAML SSO Client
3. ADFS - configuring SAML sign-out

After you are done with ADFS configuration, proceed with Step 1 for SSO setup - prerequisites check.

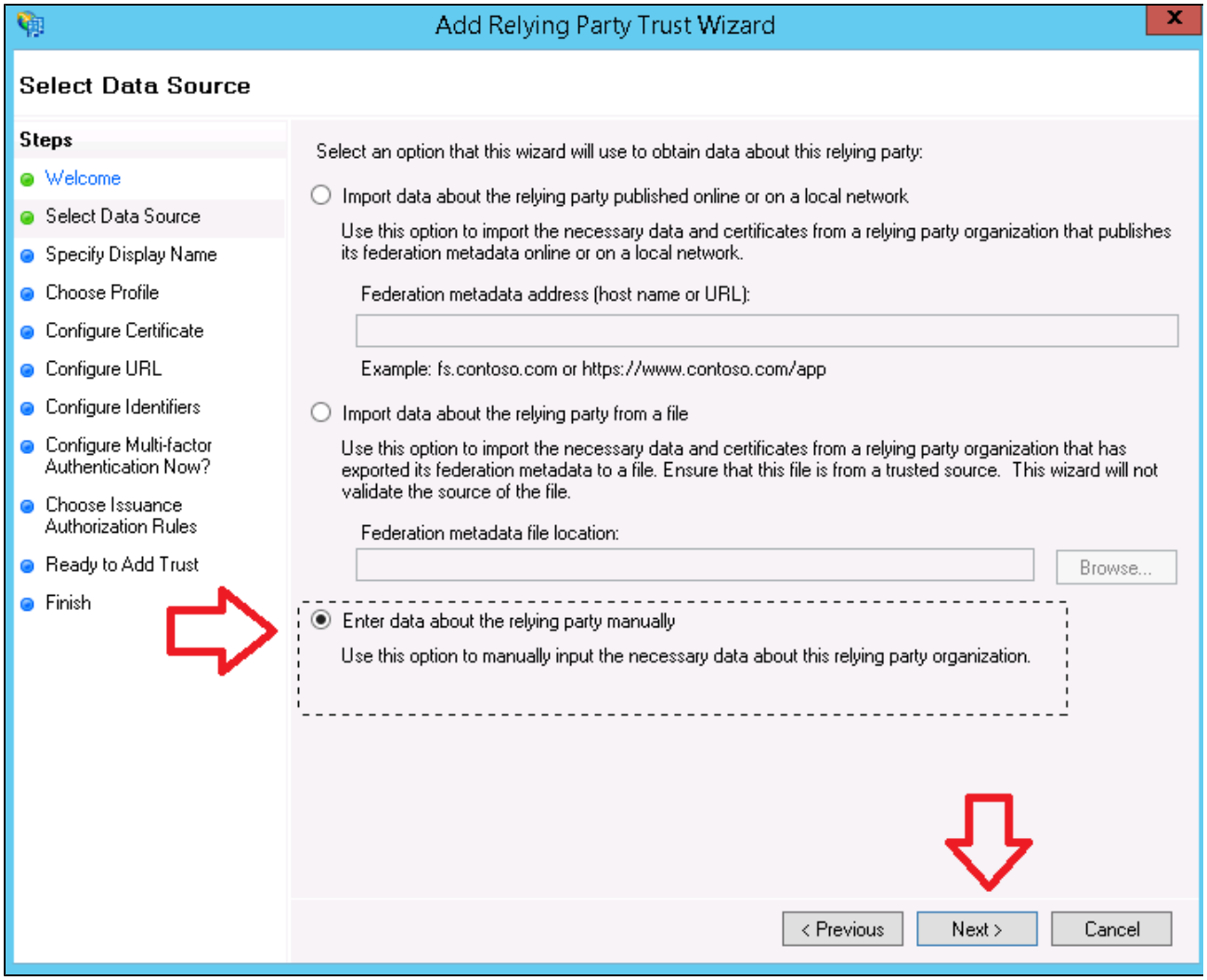
Configuring ADFS for SSO

On Your AD FS Server, perform the following operations:

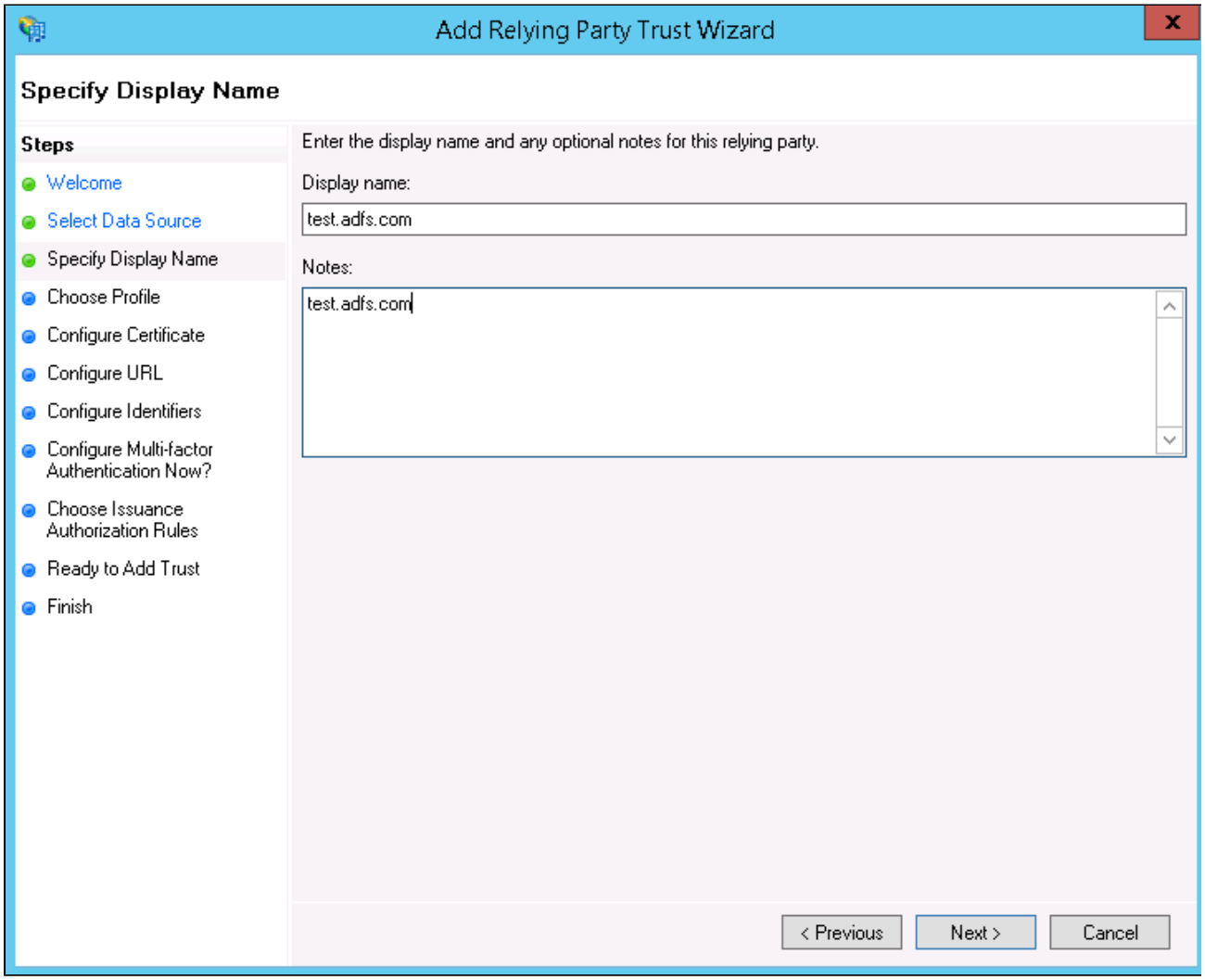
1. Open the AD FS Management console.
2. In the Actions pane, click **Add Relying Party Trust**.
3. On the wizard introduction page, click **Start**.



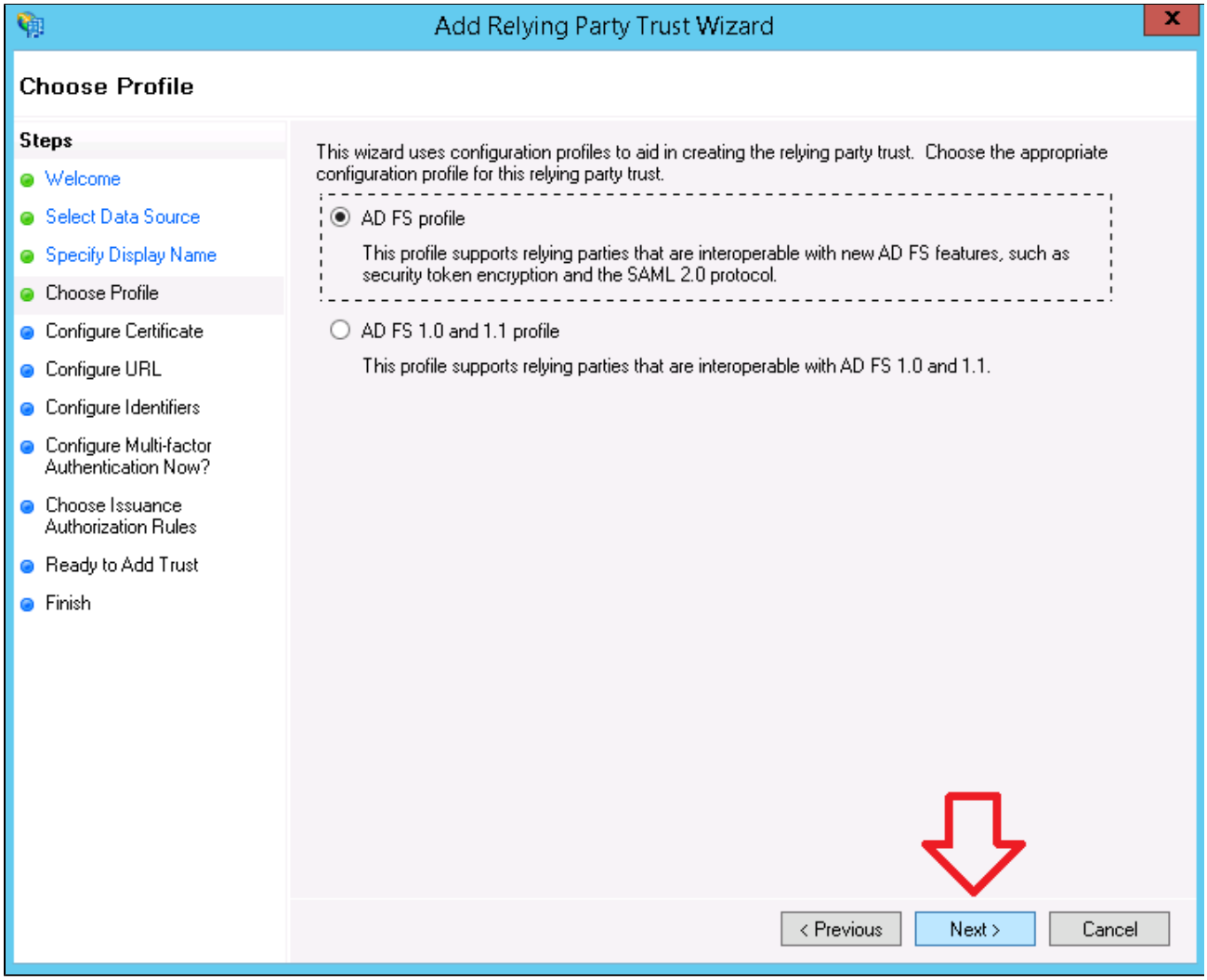
4. Select **Enter data about the relying party manually** and click **Next**.



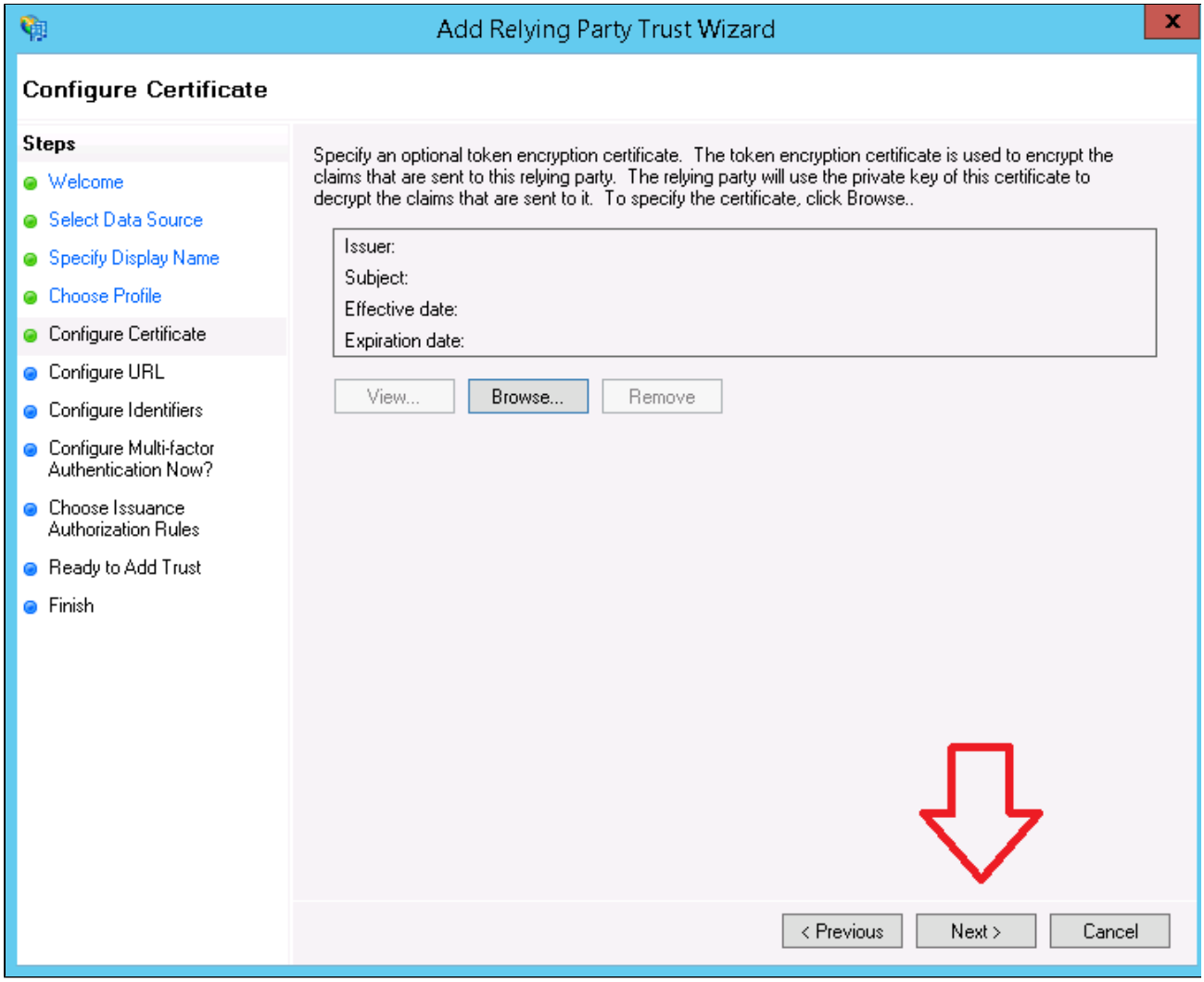
5. Fill in the **Display name** field and click **Next**.



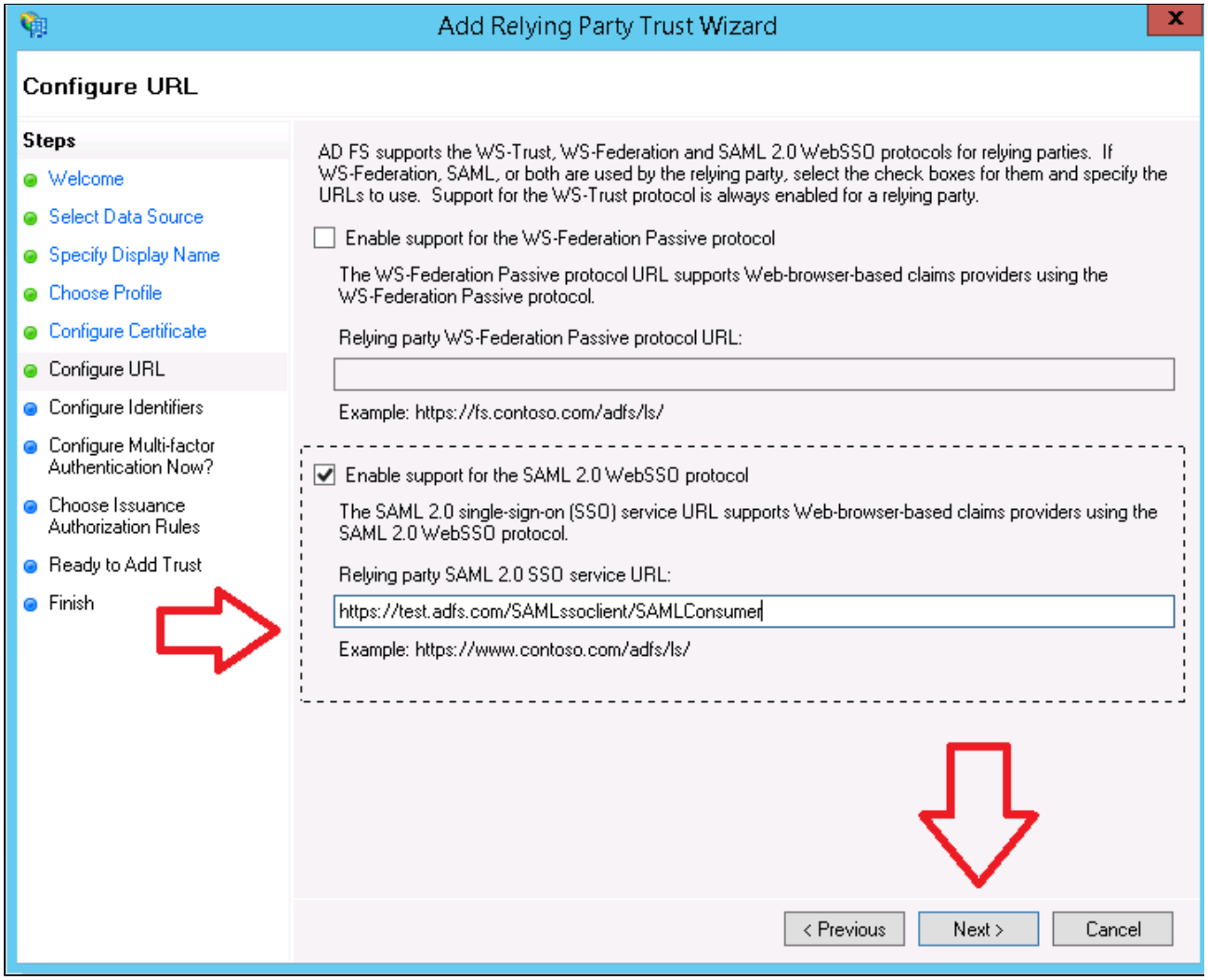
6. Select the **AD FS profile** option and click **Next**.



7. You will not need a token encryption certificate, so click **Next** to continue.

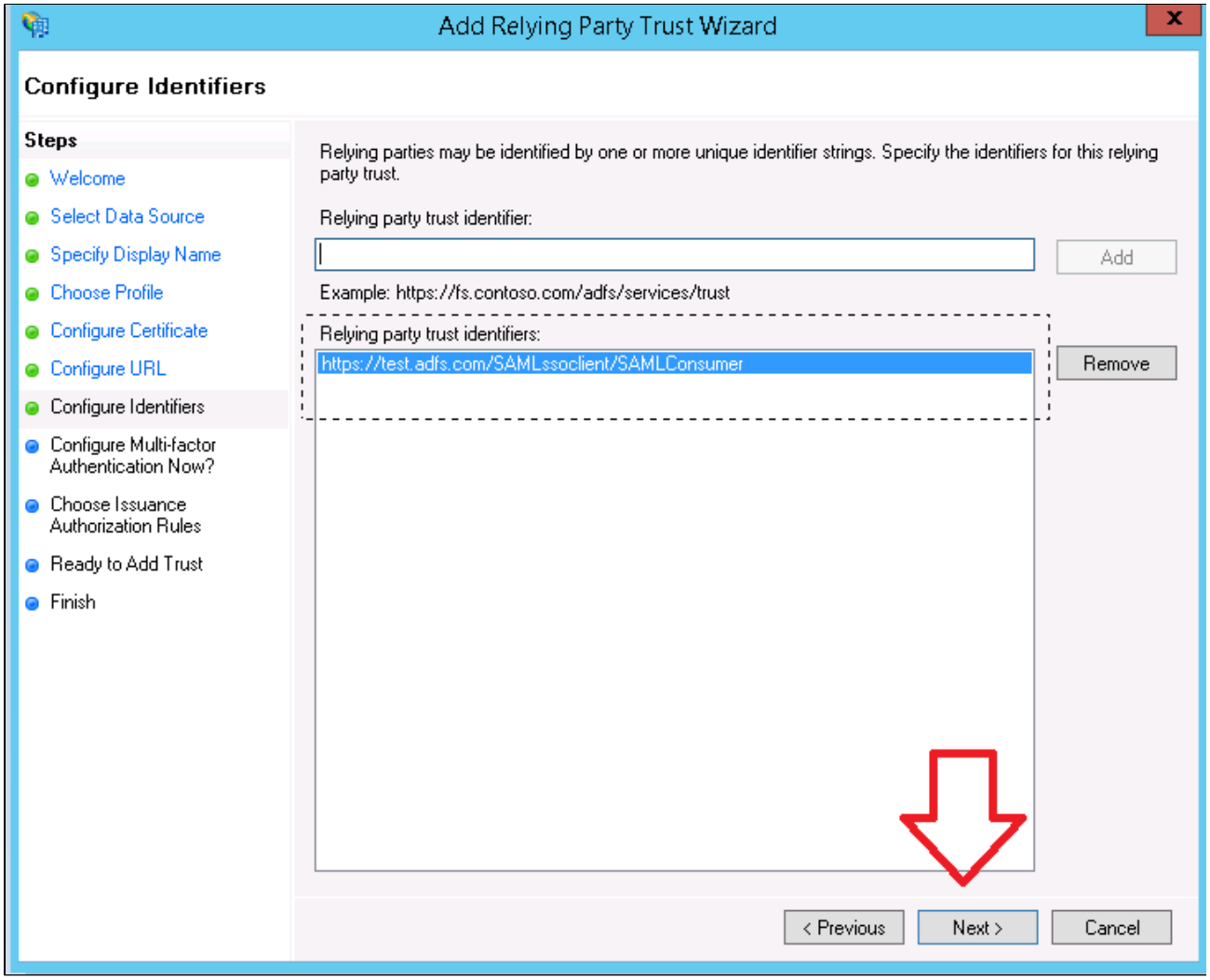


8. Select **Enable support for the SAML 2.0 WebSSO protocol**, paste the URL of your SAML Consumer service, and click **Next**. Example: *https://test.adfs.com/SAMLssoclient/SAMLConsumer*.



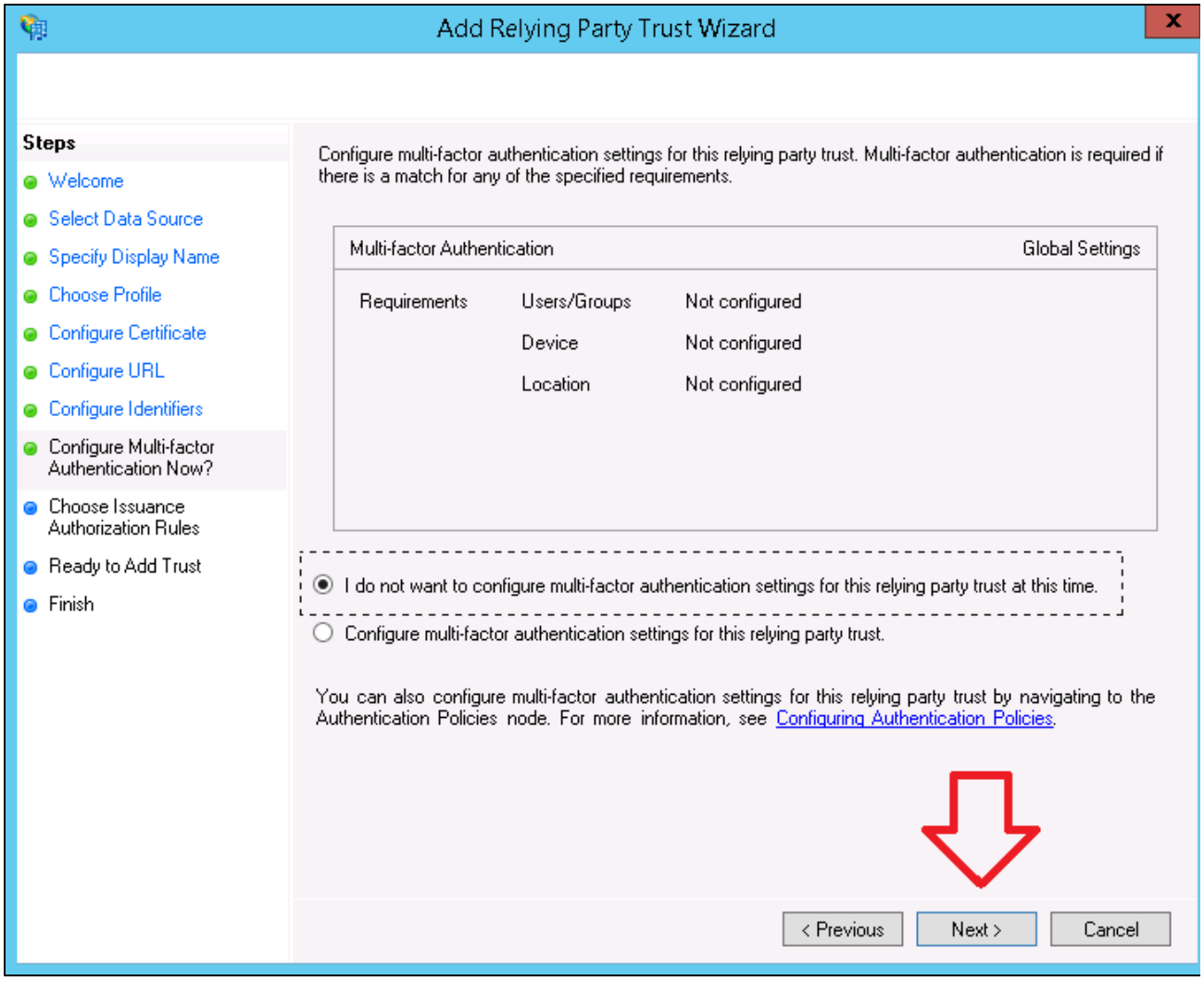
9. In the **Relying party trust identifiers** field, enter the same URL (example: *https://test.adfs.com/SAMLssoclient/SAMLConsumer*).

   ⚠ Ensure that you include `https://` here, and that you omit a slash at the end of the URL. Otherwise the integration will not work.

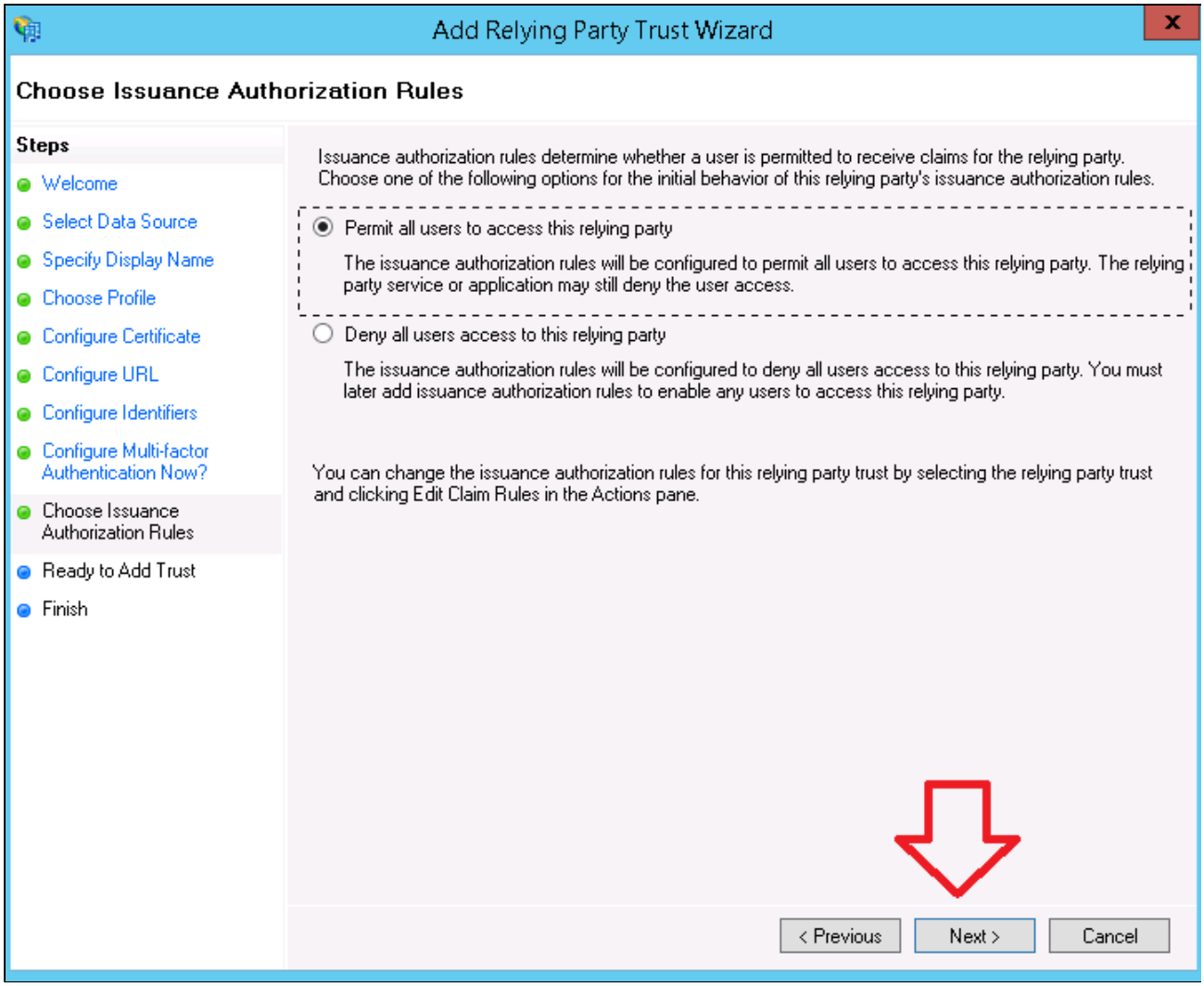


10. Select your desired multi-factor authentication option for users and click **Next**.

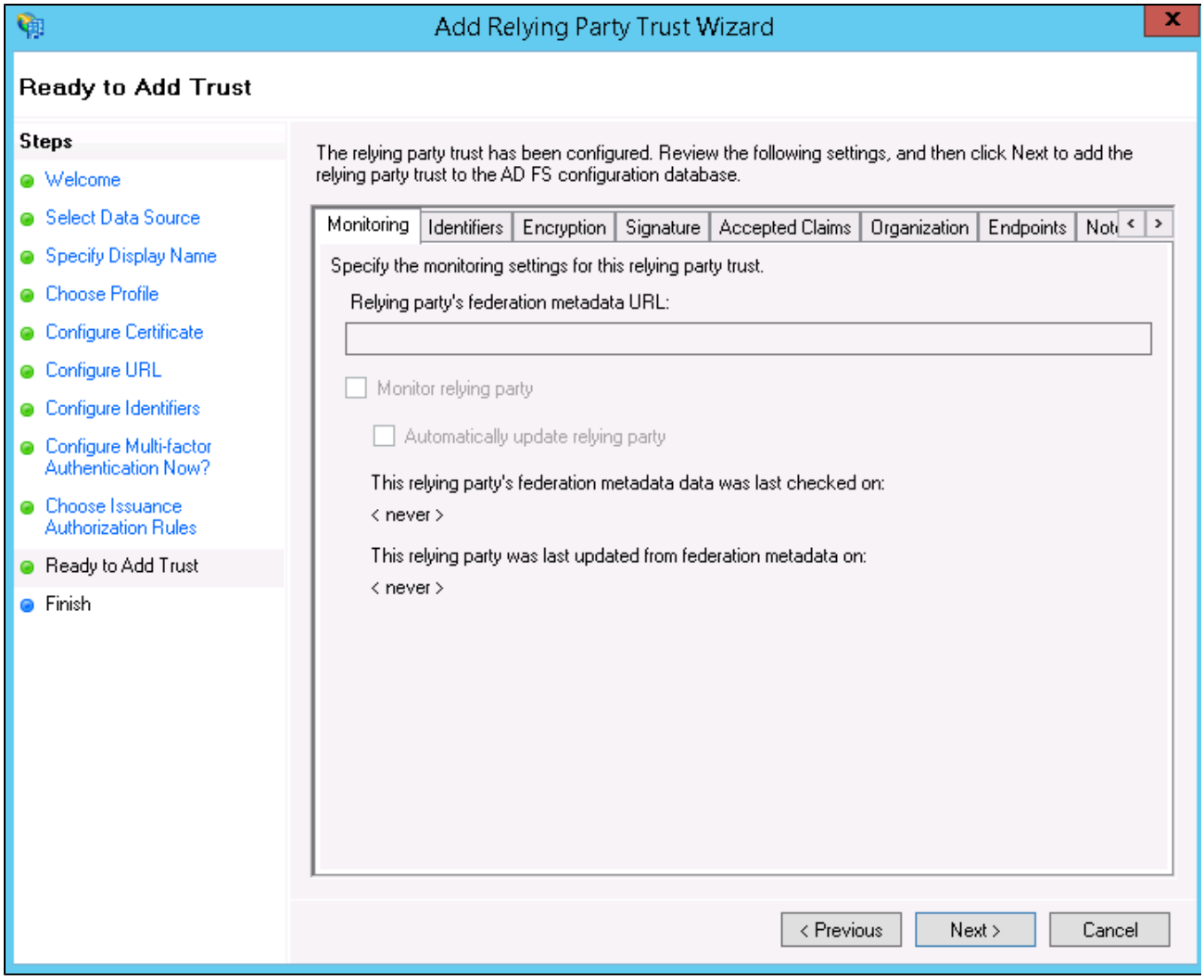
Enabling multi-factor authentication requires additional steps that are outside the scope of this guide.



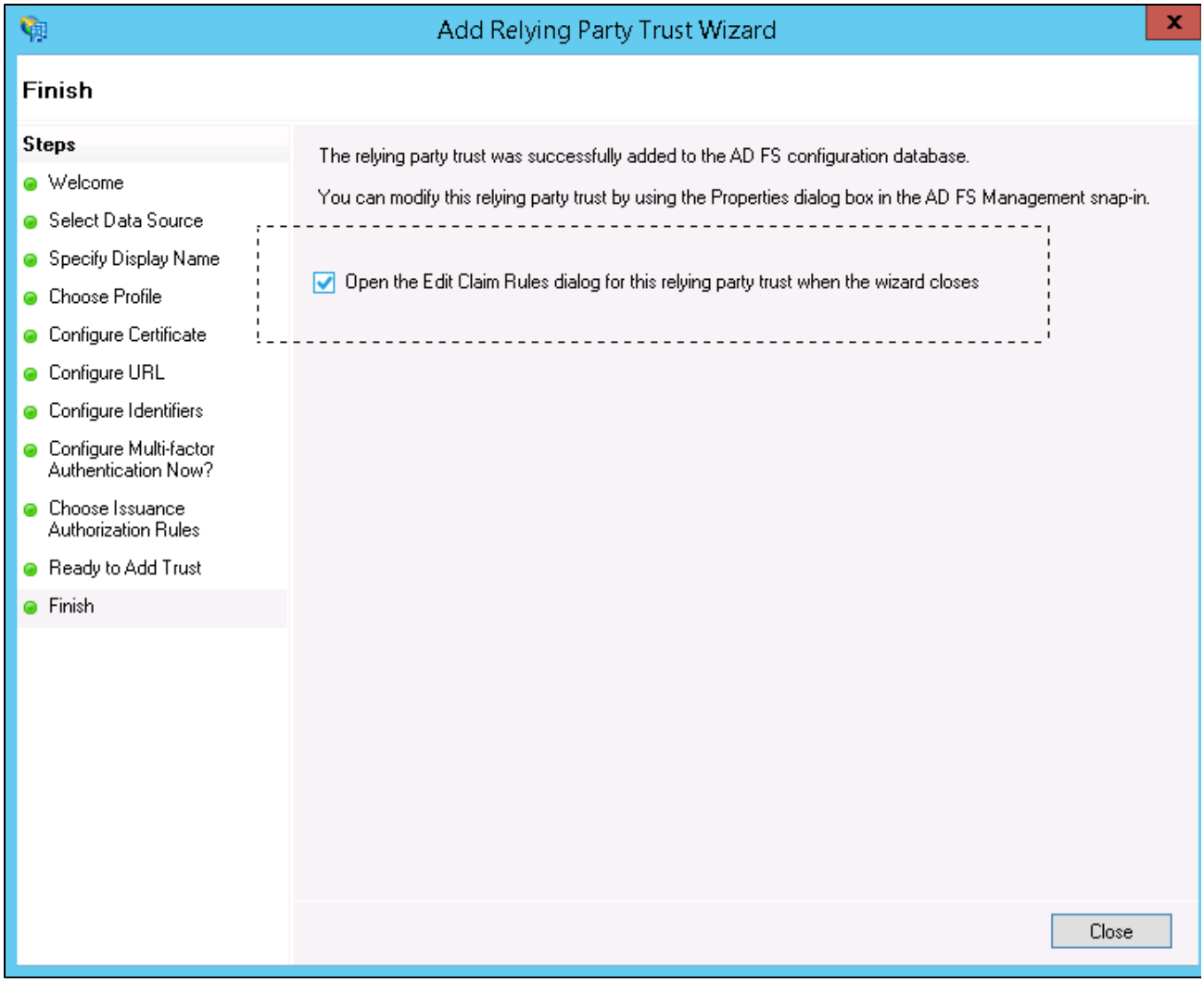
11. Select **Permit all users to access this relying party** and click **Next**.



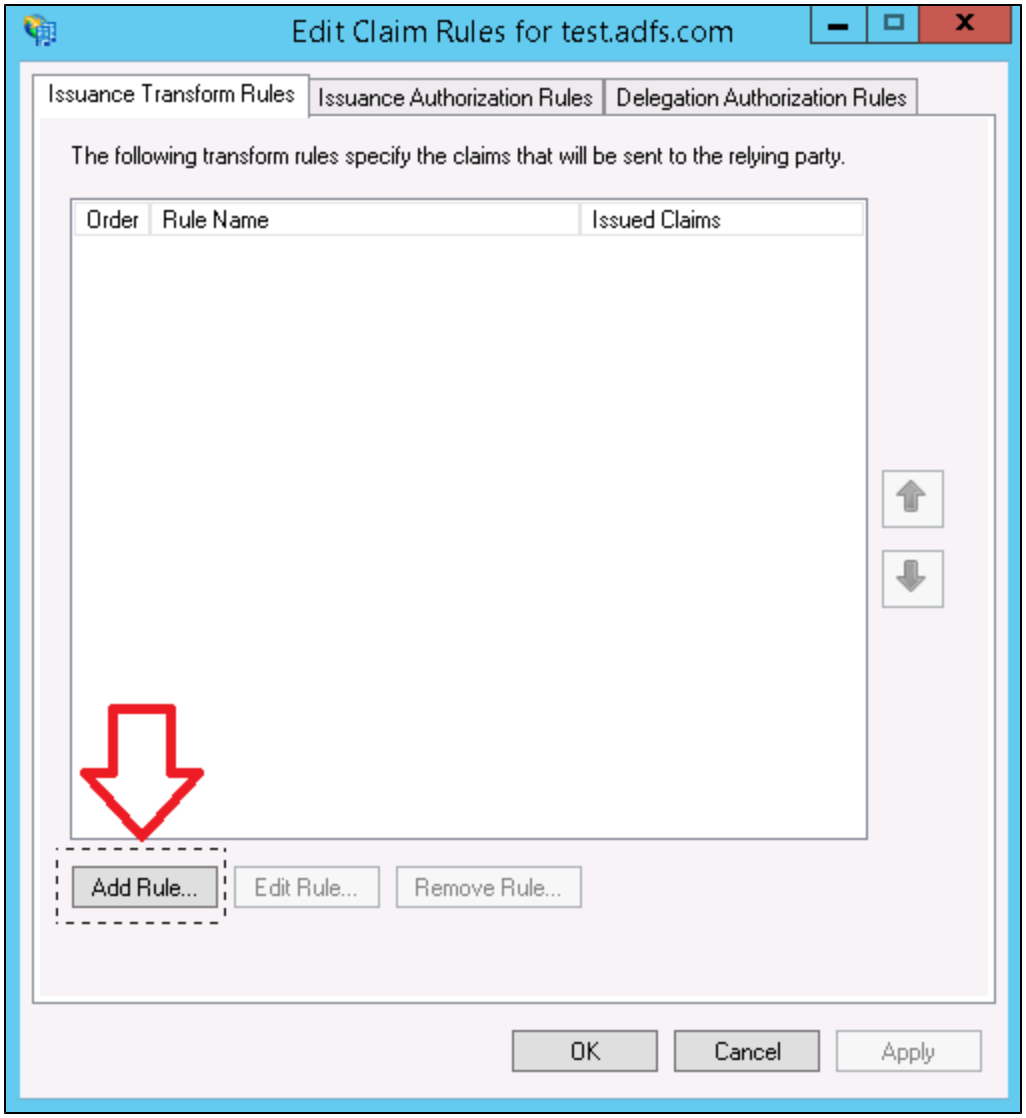
12. Review your settings and click **Next**.



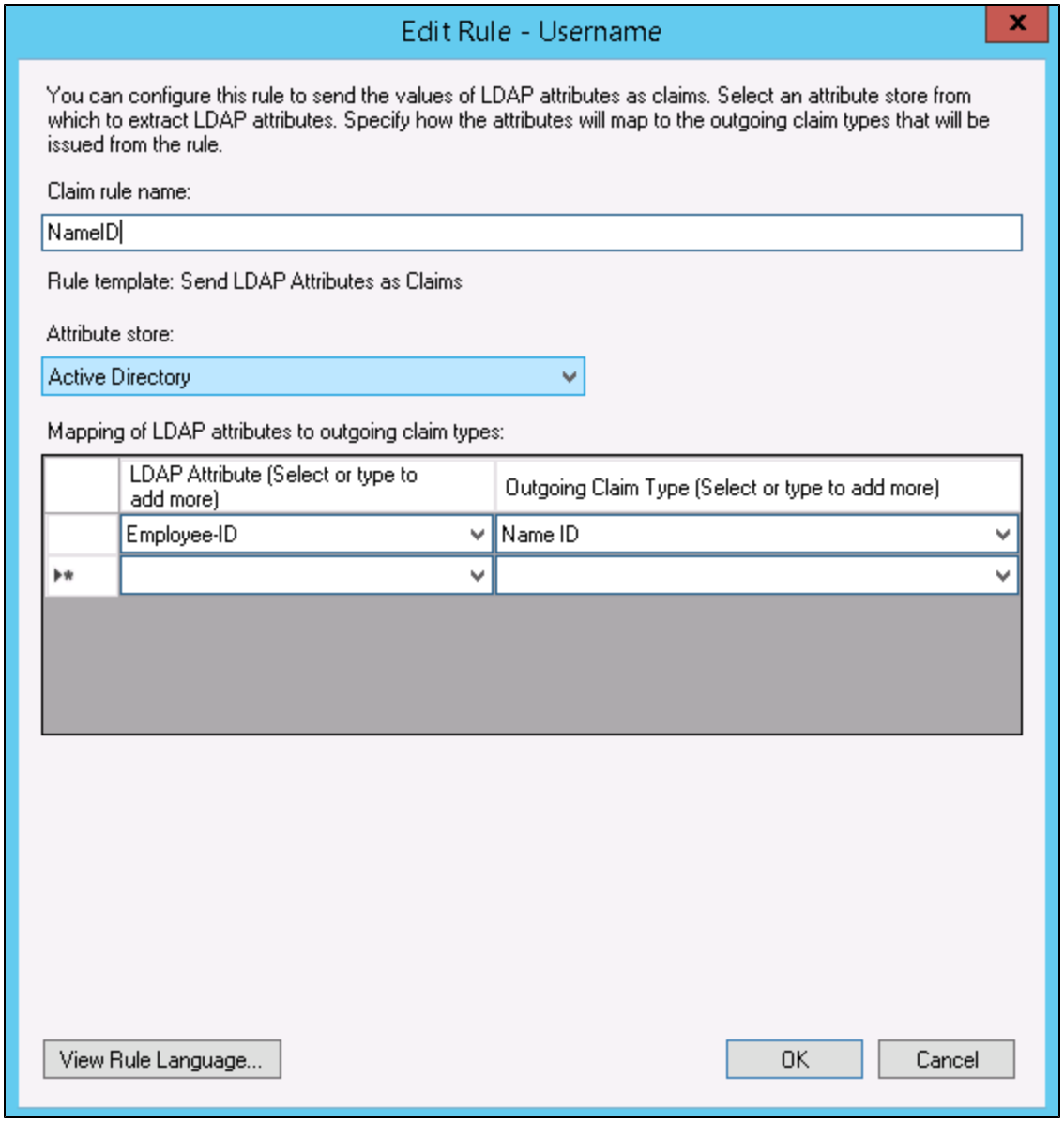
13. To exit the wizard, click **Close**.



14. In the **Issuance Transform Rules** tab of the dialog, click **Add Rule**.

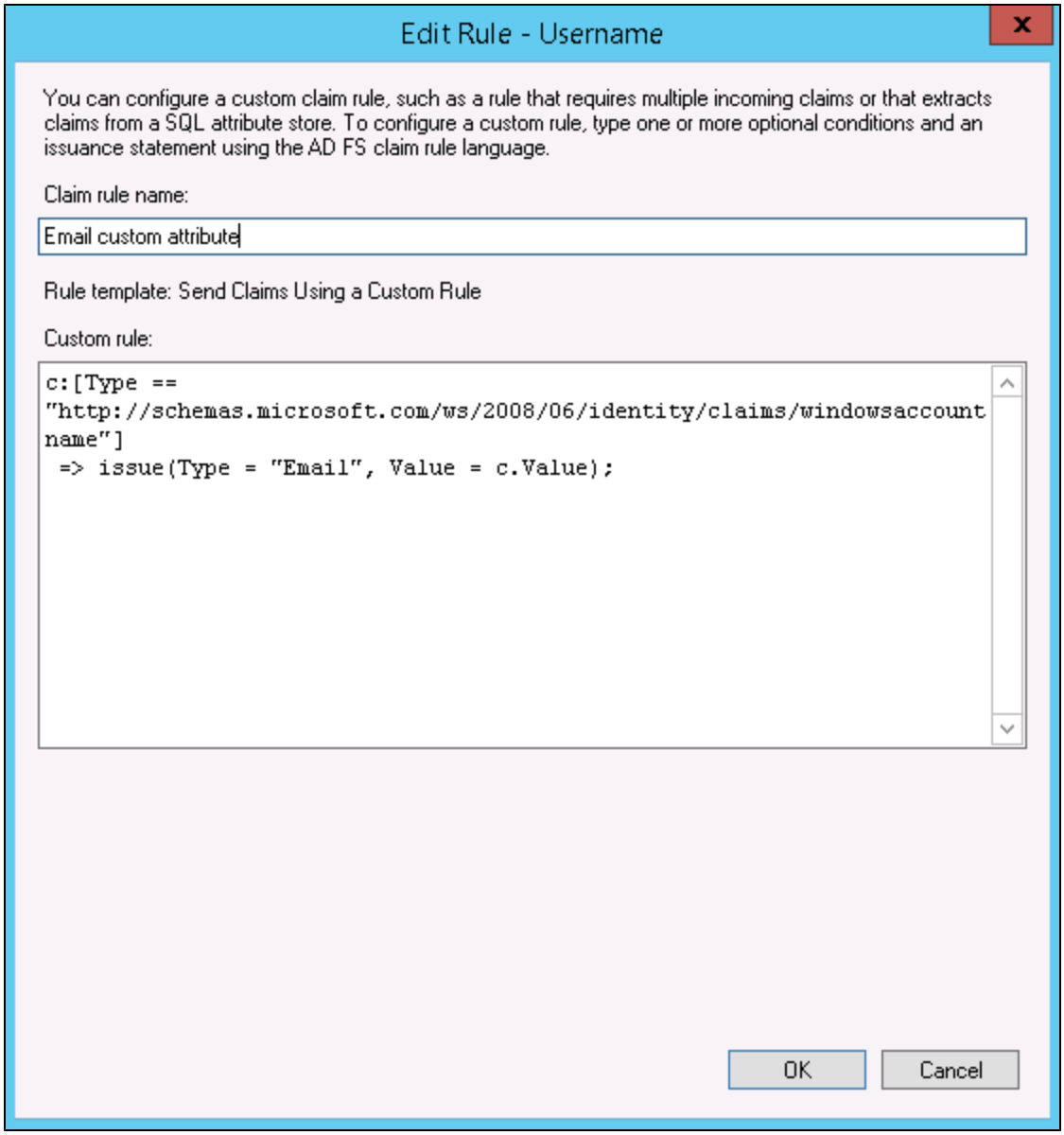


15. Configure the **Send LDAP Attributes as Claims** rule and click **Next**.



16. In this case we will send the "Email" attribute to our consumer, so click **Add Rule** again, select "Send Claims Using a Custom Rule", and put in the following rule:

```
c:[Type ==
"http://schemas.microsoft.com/ws/2008/06/identity/claims/windowsaccou
ntname"]
=> issue(Type = "Email", Value = c.Value);
```



After these steps, proceed with configuring SAML sign-out.

ADFS - Preparing certificate for SAML SSO Client

To prepare the certificate for SAML SSO Client, perform the following operations:

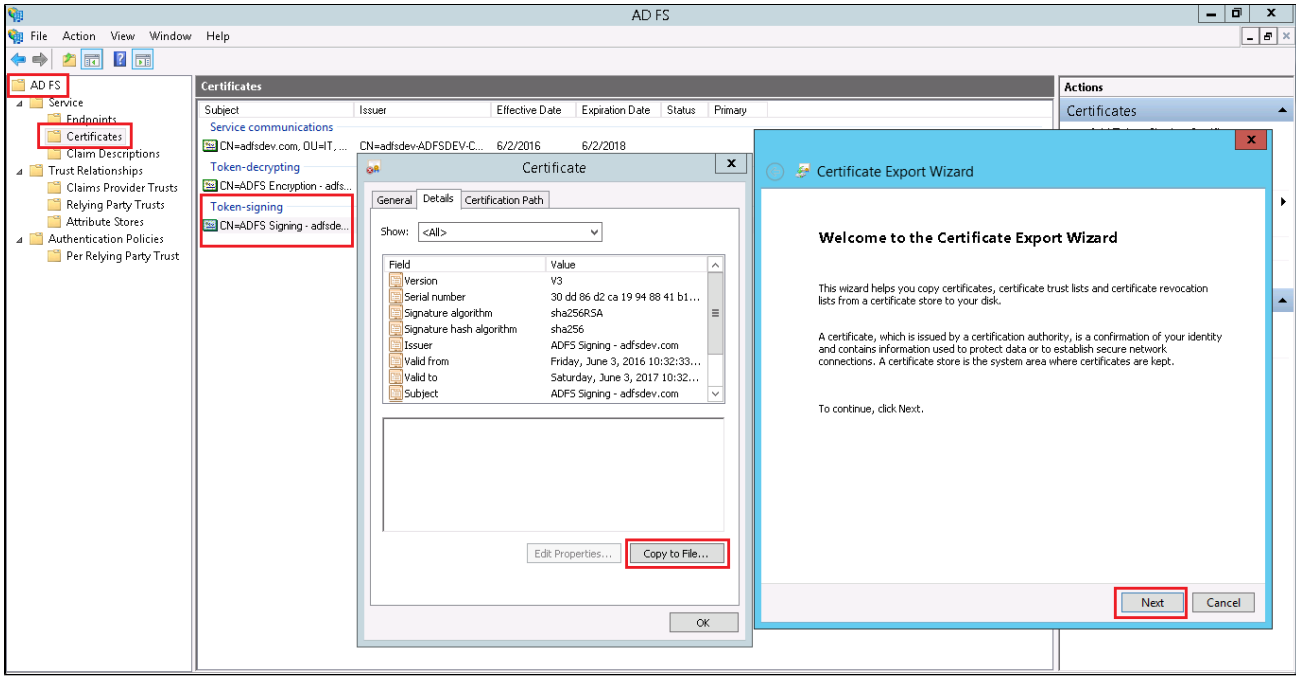
1. Export the Token Signing Certificate
2. Convert this certificate for our SAML SSO Client

Exporting the Token Signing Certificate

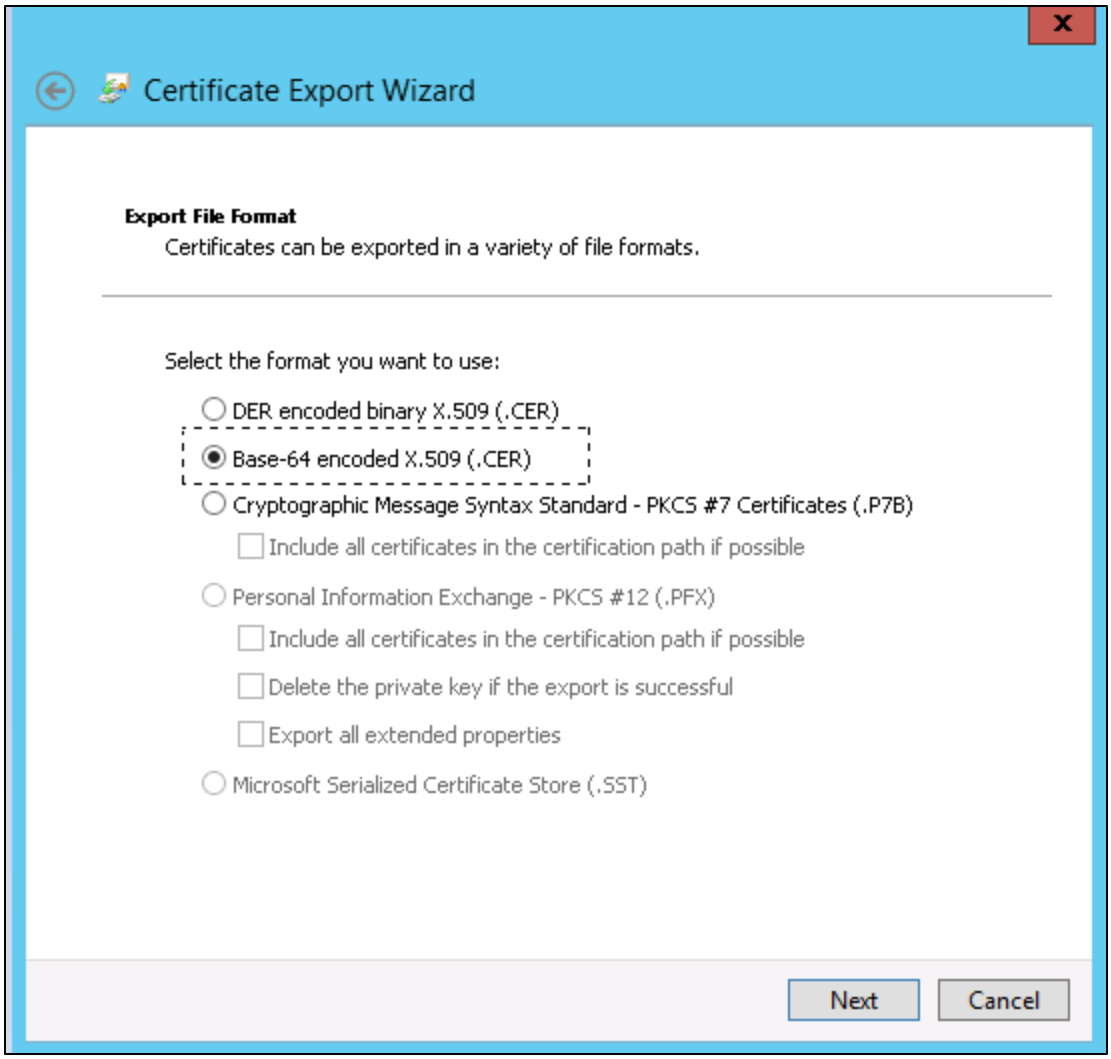
The Token Signing Certificate can be exported from the ADFS 2.0 Management, Services snap-in.

To export the Token Signing Certificate:

1. Go to ADFS Management.
2. Click **Services** to open the **Service** Snap-in.
3. In the **Services** Snap-in, click **Certificates**.
4. In **Token-signing** of the **Certificates** pane, select the Certificate and open it.
5. In the **Details** tab of the **Certificate** window, click **Copy to File**.
6. Click **Next**.



7. Select **Base-64 encoded X.509 (.CER)**, click **Next**, and save it.



Converting the certificate for our SAML SSO Client

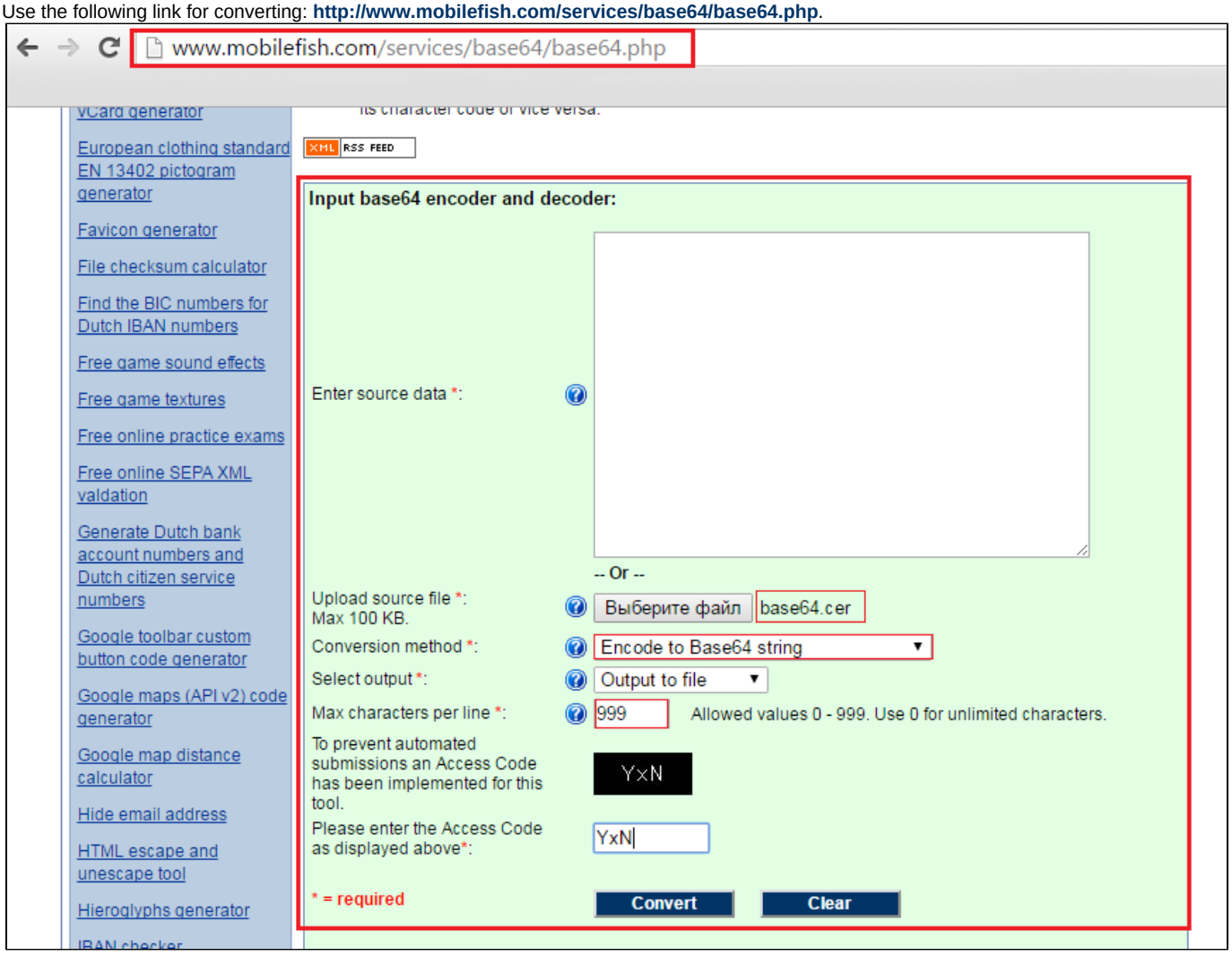
After these steps, convert this certificate for our SAML SSO Client. There are two ways to implement it:

1. Executing Linux command for converting

```
openssl enc -base64 -A -in Example.cer -out finalBase64.ser
```

2. Using a link

Use the following link for converting: **http://www.mobilefish.com/services/base64/base64.php**.

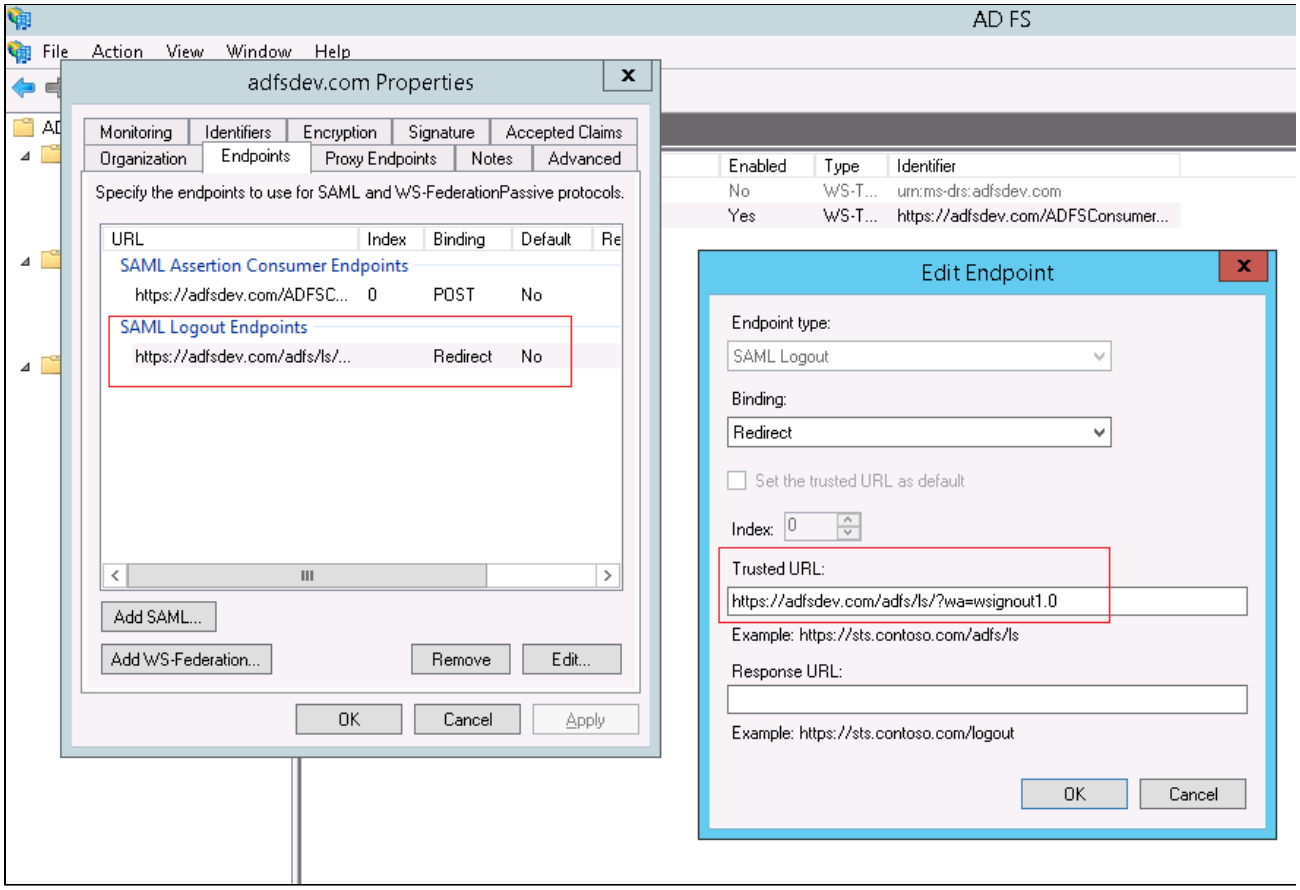


ADFS - configuring SAML sign-out

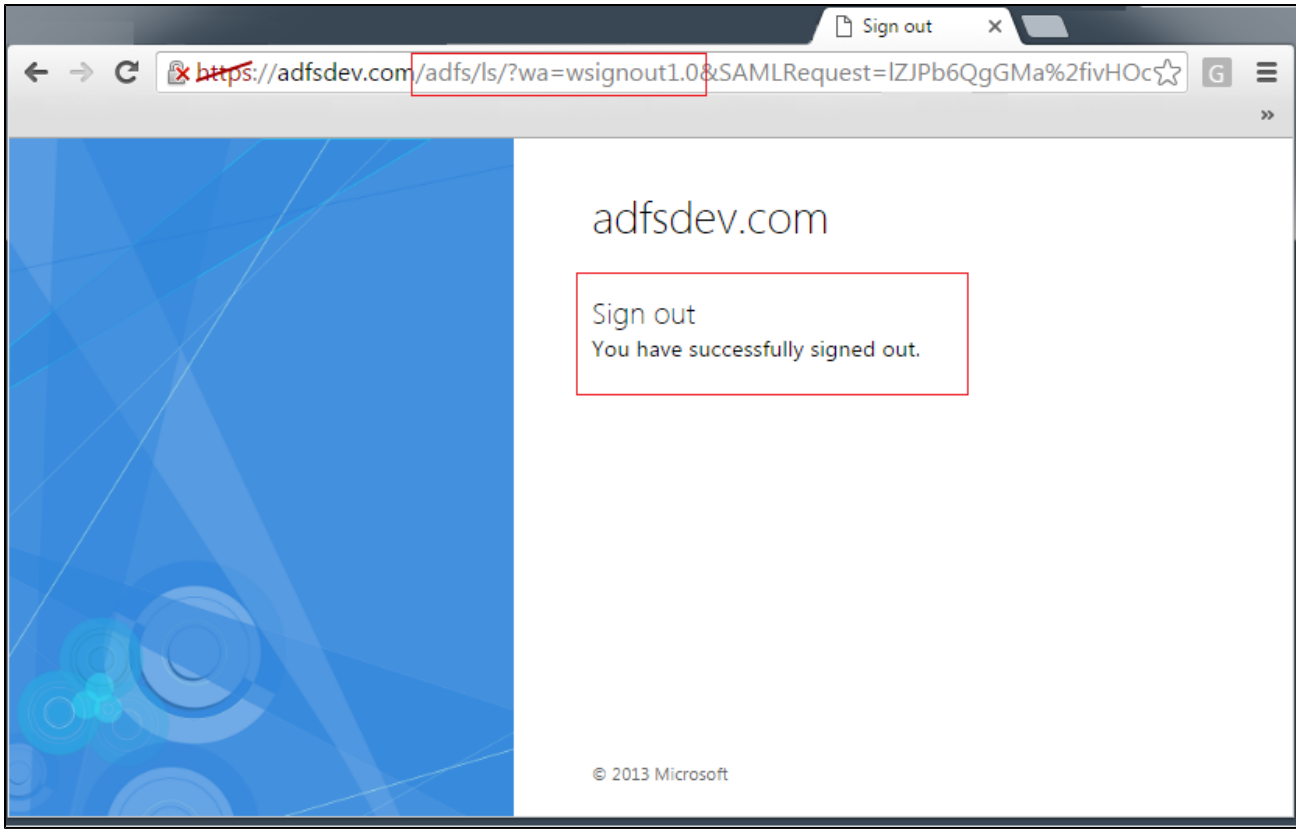
Inside your SaaS SSO configuration, define a sign-out URL.
Example: **https://test-adfs.com/adfs/ls/?wa=wsignout1.0**.

1. On the ADFS side, go to **RP trust** for your app.
2. Configure a SAML logout endpoint.

   Example:



When configured, a proper logout will look like this:



After you are done with ADFS configuration, proceed with step 1 for SSO setup.

Step 1: Performing prerequisites check

Prerequisites before setting up Global SSO

1. For Global SSO, the Atlassian products must be accessible via HTTPS only.
2. SSO should only accept HTTPS SAML URL's.
3. IDP should support SAML 2.0 Assertions.
4. Global SSO works on the server implementations only.
5. We will need to have a signing certificate from IDP and will need to convert it to a Base64 encrypted string in preparation for our SAML SSO Client configuration.

After you are done with the prerequisites, proceed with SAML SSO Client configuration.

Step 2: Preparing and configuring SAML SSO Client

To prepare and configure SAML SSO Client, perform the following operations:

1. Generate a public/private key pair
2. Convert the certificate from IDP to base64 string
3. Configure SAML SSO Client
4. Configure logout for the Atlassian applications

1. Generating a public/private key pair

To generate a public/private key pair, execute the following commands in the Linux console:

1. openssl genrsa -out mykey.pem 2048
2. openssl pkcs8 -topk8 -inform PEM -outform PEM -in mykey.pem -out **private_key.pem** -nocrypt
3. openssl rsa -in mykey.pem -pubout -outform DER -out **public_key.der**

2. Converting the certificate from IDP to base64 string

WARNING! In openssl, the base64 line length is limited to 76 characters by default. To be able to decode a base64 line without a line feed that exceeds the 76 characters, use -A option:

openssl enc -base64 -A -in Example.cer -out finalBase64.ser
and put this certificate in the **../SAMLssoclient/WEB-INF/classes/** directory

3. Configuring SAML SSO Client

1. Deploy the **SAMLssoclient.war** directly to a new Tomcat instance or to any Atlassian application.
2. Configure IDP.
3. Configure SAML SSO Client by using one of the following options:
    a. Using SAML SSO Client Admin page: **https://yourdomain.com/SAMLssoclient/SsoUpdate**
    b. Manually, by using a config file on your server: **../SAMLssoclient/WEB-INF/classes/config.properties**

config.properties

```
unauthorizedPage=403.html
EncryptionPrivateKey=..\path_to_your\private_key.pem
assertionConsumerServiceUrl=http\://domain.com/SAMLConsumer/SAML
Consumer
errorPage=error.html
idpServerUrl=https\://domain.com/idpinitiatedsignon
NameAttribute=Email
certificate=converted_certificate.ser
cookiePath=/
loggingLevel=DEBUG
cookieDomain=domain.com
```

Where:

Name (admin page)	Attribute(config.properties)	Description
—	unauthorizedPage	User failed validation page for redirecting
Private key	EncryptionPrivateKey	Full path to our private key for encryption
Assertion Consumer Service URL	assertionConsumerServiceUrl	Link to our SAML SSO Client page
Name Attribute	NameAttribute	Attribute name which we use for username encoding and then put to an SSO cookie
Certificate	certificate	Put your converted certificate to a folder, for example **"..\Tomcat 8.0\webapps\SAMLssoclient\WEB-INF\classes\"**, and enter the name of this certificate here.
—	errorPage	SAML error page for redirecting.
—	cookiePath	URL path for saving the SSO cookie
Log Level	loggingLevel	The logging level can be DEBUG, INFO, or ERROR
Cookie Domain	cookieDomain	Your server's domain
IDP Server URL	idpServerUrl	Link to your IDP
Issuer Application URL	issuerUrl	Issuer Application URL
Default target service	default.target.service	Default target service

4. Configuring logout for the Atlassian applications

As a result, you can have one logout for all Atlassian applications:

To implement logout, set the cookiePath property (**../SAMLssoclient/WEB-INF/classes/config.properties** file)**:**
cookiePath=/

⚠️
Note that the same value for path property should be set in all SSO authenticators.

Step 3: Installing and configuring Atlassian SSO add-ons

This step describes how to configure and enable the following Atlassian SSO add-ons:

- JIRA
- Confluence
- Bitbucket
- Bamboo
- FishEye

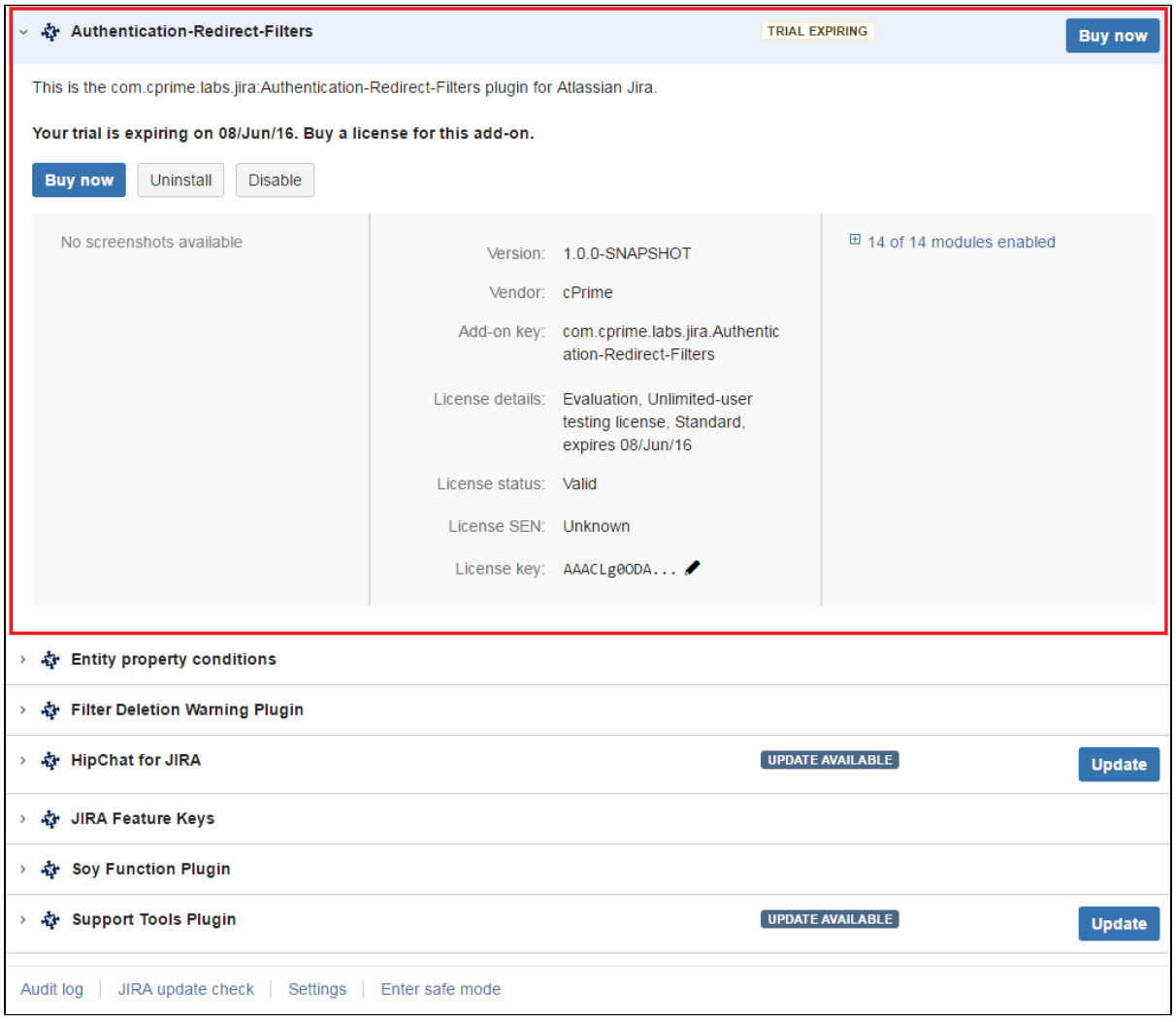
Configuring JIRA SSO add-on

This article describes how to configure SSO authenticator for JIRA.

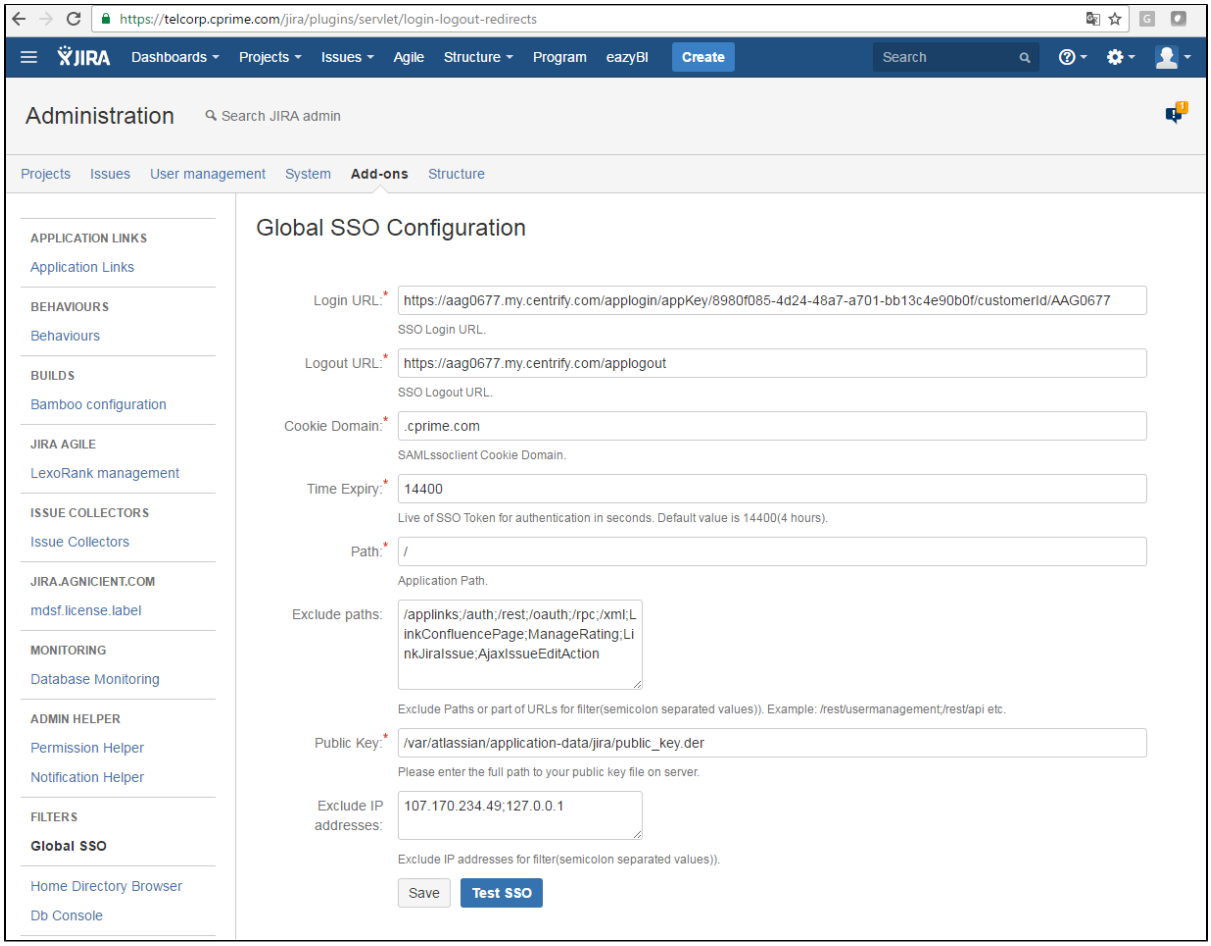
WARNING! If you entered wrong parameters, use a "back door" functionality in order to avoid cyclic redirects and to access application bypass SSO.
Just add a GET parameter `sso=off` to the needed URL. Example: **https://some.jira.com/?sso=off**.

To configure SSO for JIRA:

1. Install JIRA SSO add-on.



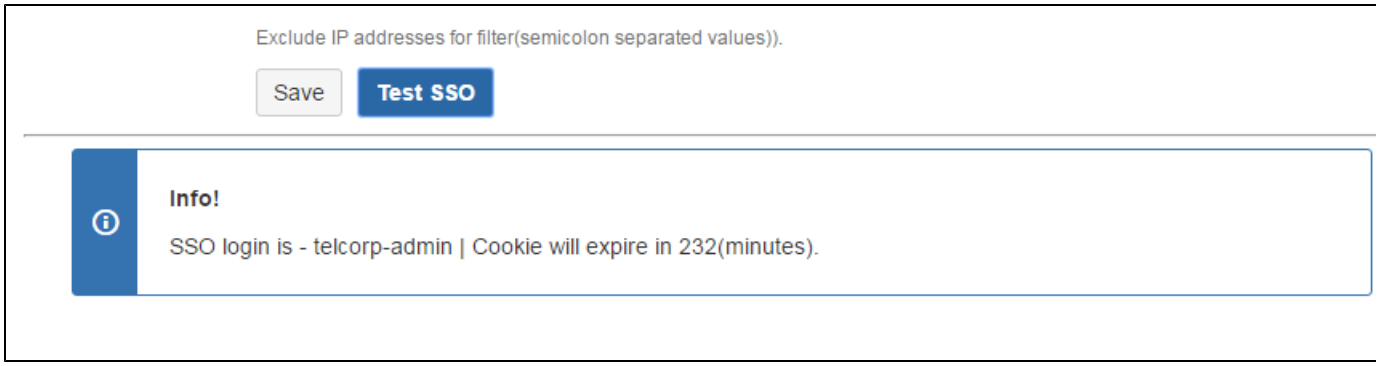
2. Go to **Administration** > **Add-Ons**.
3. In the **FILTERS** section, click **Global SSO**.
   The **Global SSO Configuration** page opens.
4. Fill in the fields on this page. The field description is provided in the table below.



Field description for the Global SSO Configuration page

Attribute	Description
Login URL	IDP Login Page Examples: • https://adfs-test.com/adfs/ls/idpinitiatedsignon • https://aag0677.my.centrify.com/applogin/appKey/8980f085-4d24-48a7-a701-bb13c4e90b0f/customerId/AAG0677
Logout URL	IDP Logout Page Examples: • https://aag0677.my.centrify.com/applogout • https://adfs-test.com/adfs/ls/?wa=wsignout1.0
Cookie Domain	Domain of your applications for SSO cookie
Path	Your application path. If you need to have one logout from all applications, enter "/" for this field.
Exclude paths	You can disable SSO from URLs which contain custom pieces of URL (semicolon separated values). Example: **/rest/usermanagement;/rest/api** Another case is to open REST API for using.
Public Key	Full path to your public key file for decrypting the SSO username
Exclude IP addresses	To support deep linking between applications, specify a list of application's IP addresses for linking
Time Expiry	Life length of SSO Token (cookie) for authentication in seconds. Default value is 14400 (4 hours).

You can test your SSO cookie by using the **Test SSO** button:



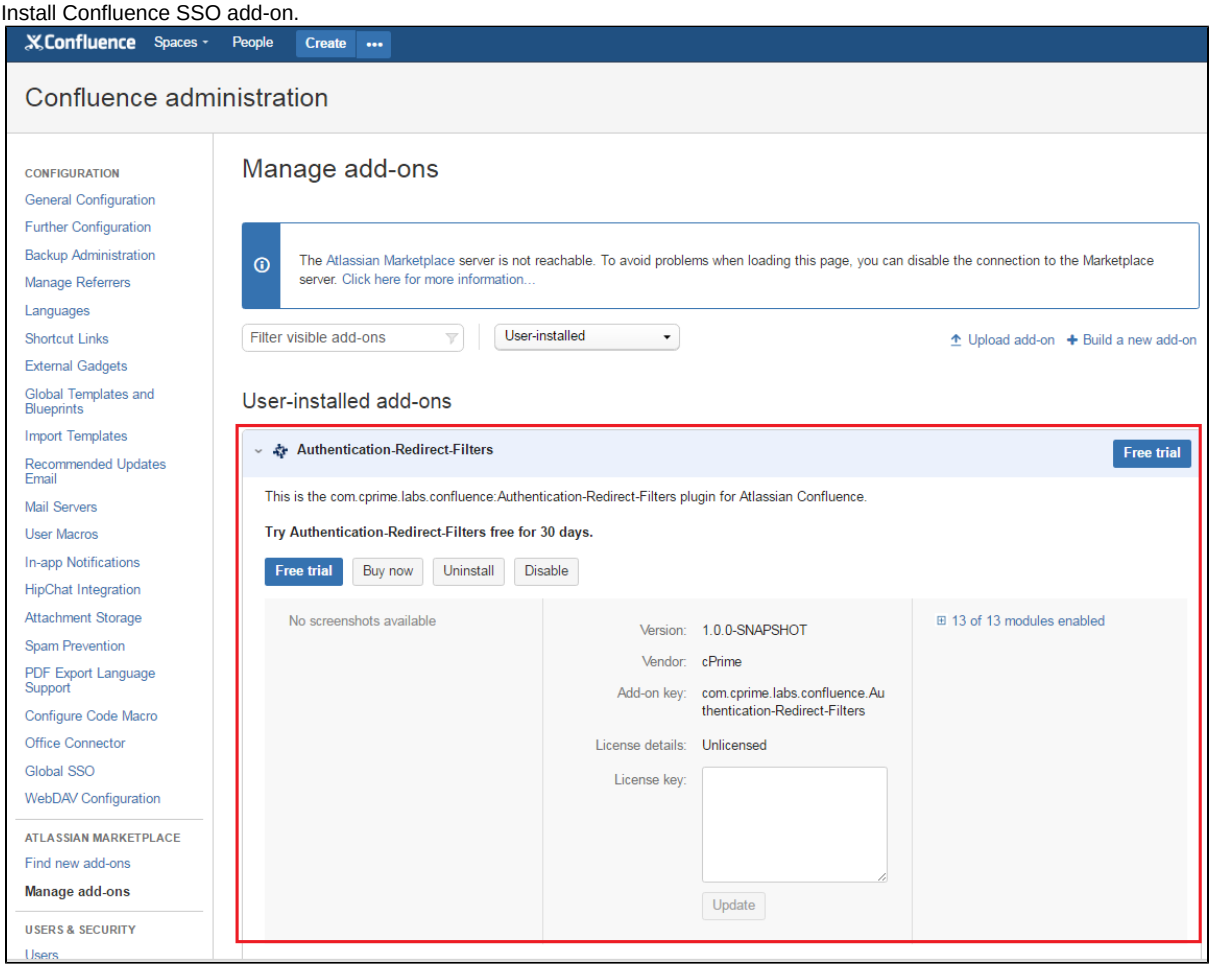
Configuring Confluence SSO add-on

This article describes how to configure SSO authenticator for Confluence.

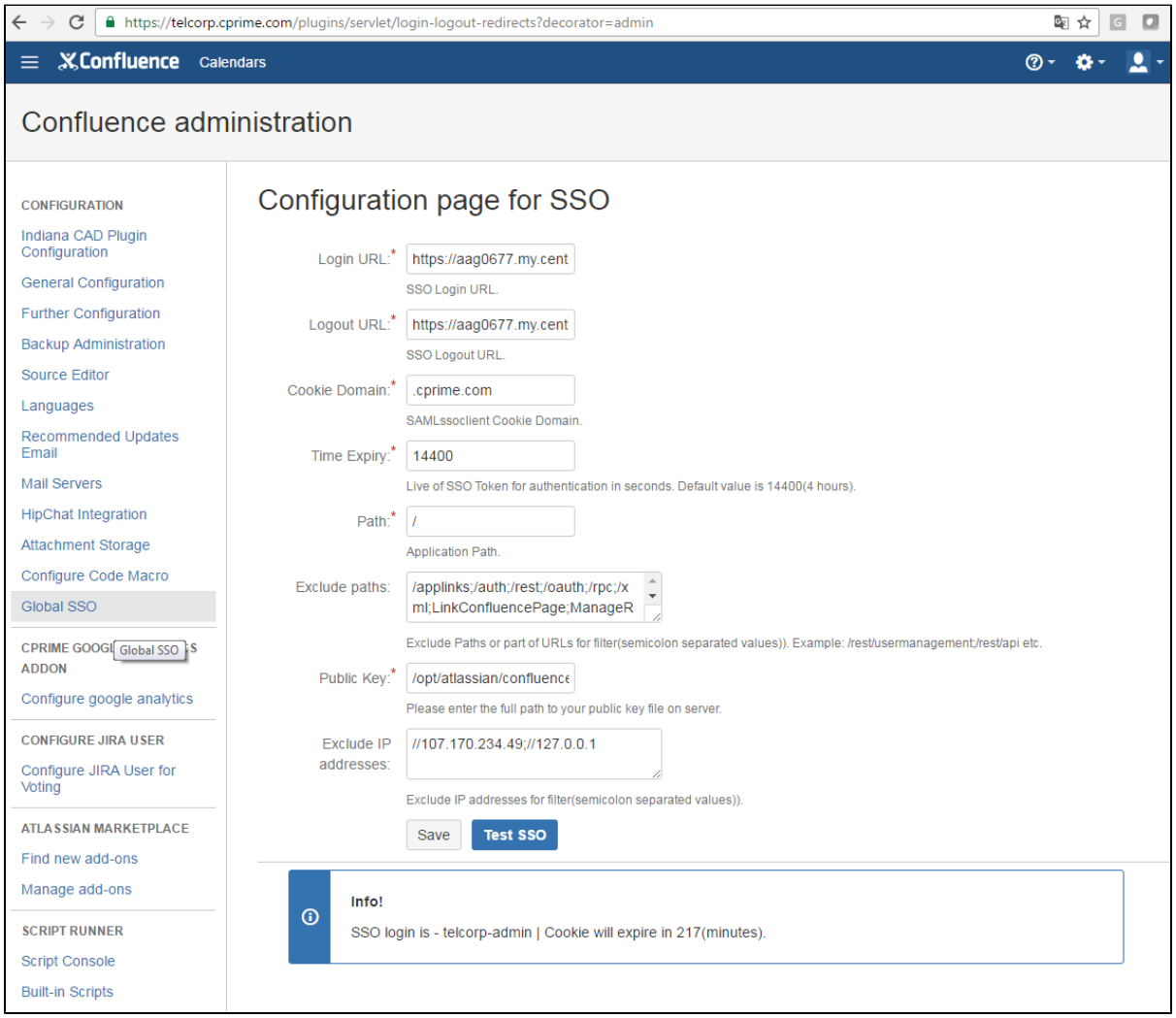
WARNING! If you entered wrong parameters, use a "back door" functionality in order to avoid cyclic redirects and to access application bypass SSO.
Just add a GET parameter `sso=off` to the needed URL. Example: **https://some.confluence.com/?sso=off**.

To configure SSO for Confluence:

1. Install Confluence SSO add-on.



2. Go to **Administration** > **Add-Ons**.
3. In the **CONFIGURATION** section, click **Global SSO**.
   The **Configuration page for SSO** opens.
4. Fill in the fields on this page. The field description is provided in the table below.



Field description for the Global SSO Configuration page

Attribute	Description
Login URL	IDP Login Page Examples: • https://adfs-test.com/adfs/ls/idpinitiatedsignon • https://aag0677.my.centrify.com/applogin/appKey/8980f085-4d24-48a7-a701-bb13c4e90b0f/customerId/AAG0677
Logout URL	IDP Logout Page Examples: • https://aag0677.my.centrify.com/applogout • https://adfs-test.com/adfs/ls/?wa=wsignout1.0
Cookie Domain	Domain of your applications for SSO cookie
Path	Your application path. If you need to have one logout from all applications, enter "/" for this field.
Exclude paths	You can disable SSO from URLs which contain custom pieces of URL (semicolon separated values). Example: **/rest/usermanagement;/rest/api** Another case is to open REST API for using.
Public Key	Full path to your public key file for decrypting the SSO username
Exclude IP addresses	To support deep linking between applications, specify a list of application's IP addresses for linking
Time Expiry	Live of SSO Token for authentication in seconds. Default value is 14400(4 hours).

You can test your SSO cookie by using the **Test SSO** button.

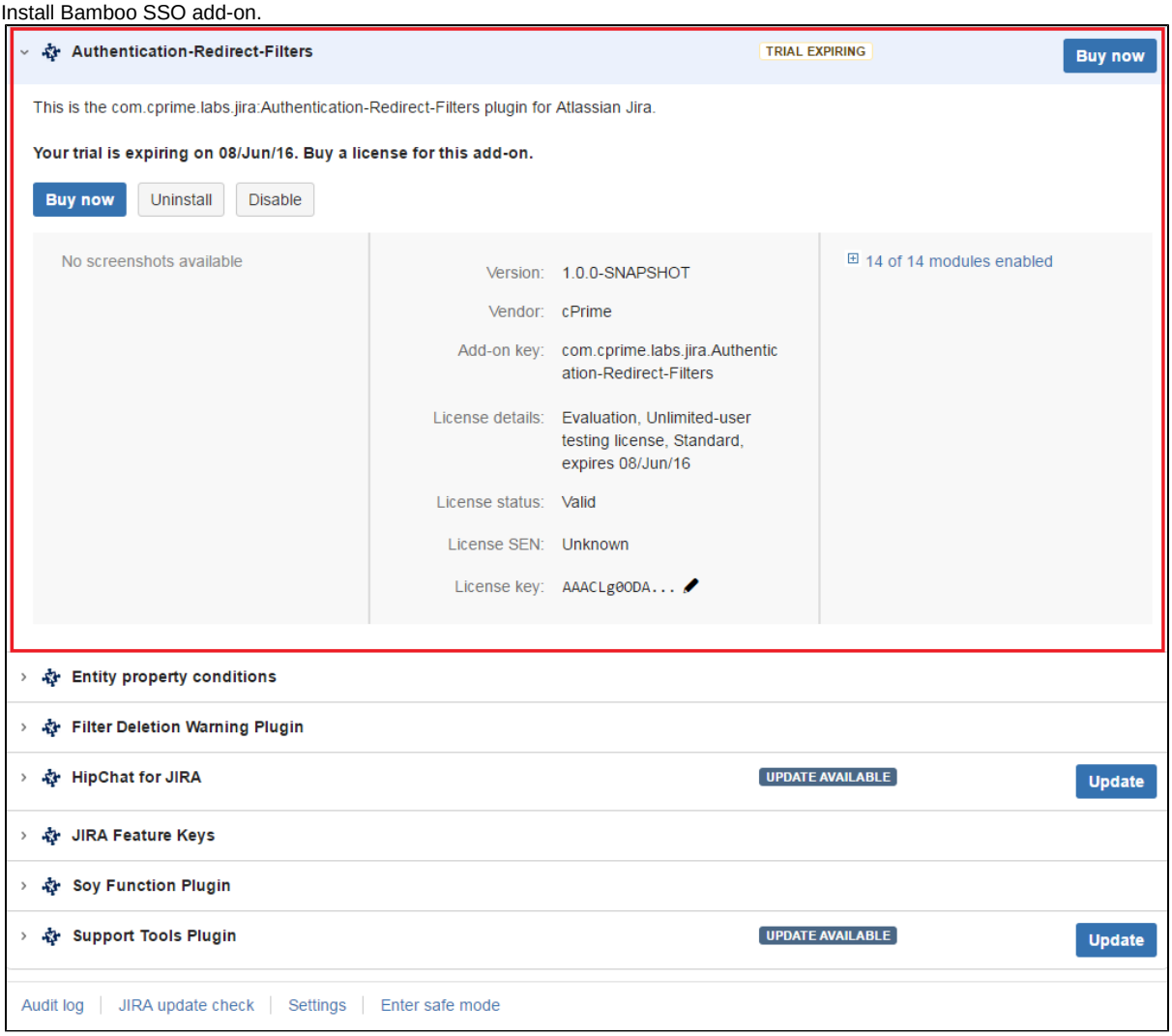
Configuring Bamboo SSO add-on

This article describes how to configure SSO authenticator for Bamboo.

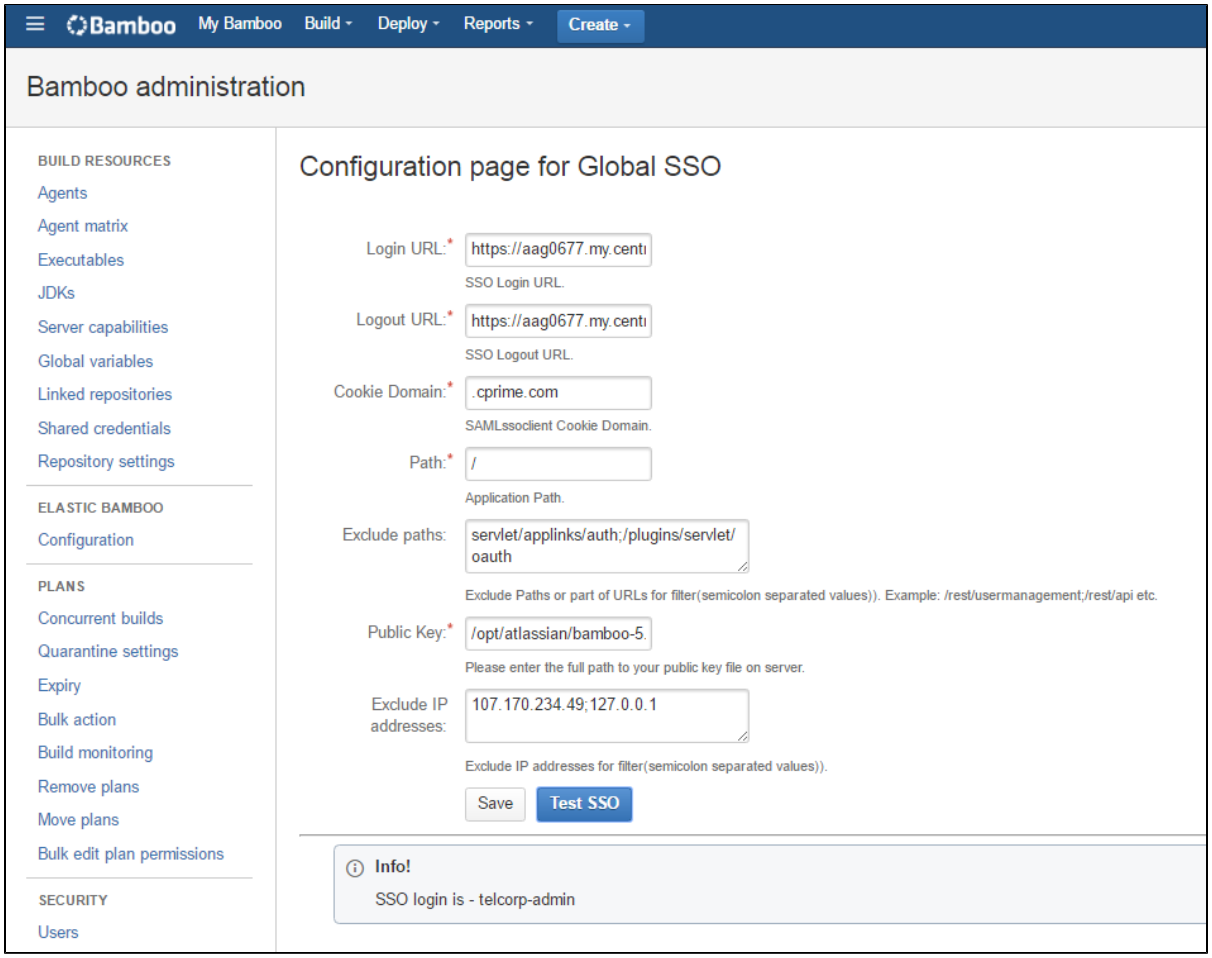
WARNING! before installing this add-on, check whether you can receive the SSO cookie.

To configure SSO for Bamboo:

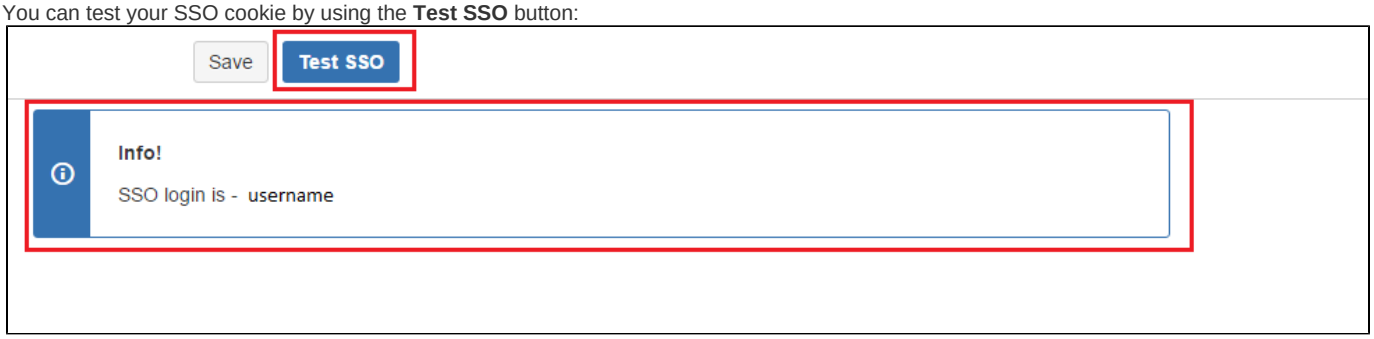
1. Install Bamboo SSO add-on.



2. Go to **Administration** > **Add-Ons**.
3. Click **Global SSO** on the left panel.
   The **Configurationpage for Global SSO** opens.
4. Fill in the fields on this page. The field description is provided in the table below.
   WARNING! Before you enter login / logout URL, test your SSO!



You can test your SSO cookie by using the **Test SSO** button:



Field description for the Global SSO Configuration page

Attribute	Description
Login URL	IDP Login Page Examples: • https://adfs-test.com/adfs/ls/idpinitiatedsignon • https://aag0677.my.centrify.com/applogin/appKey/8980f085-4d24-48a7-a701-bb13c4e90b0f/customerId/AAG0677
Logout URL	IDP Logout Page Examples: • https://aag0677.my.centrify.com/applogout • https://adfs-test.com/adfs/ls/?wa=wsignout1.0
Cookie Domain	Domain of your applications for SSO cookie

Path	Your application path. If you need to have one logout from all applications, enter "/" for this field.
Exclude paths	You can disable SSO from URLs which contain custom pieces of URL (semicolon separated values). Example: **/rest/usermanagement;/rest/api** Another case is to open REST API for using.
Public Key	Full path to your public key file for decrypting the SSO username
Exclude IP addresses	To support deep linking between applications, specify a list of application's IP addresses for linking

Configuring Bitbucket SSO add-on

To configure Bitbucket SSO Authenticator, perform the following operations:

1. Intstall the Bitbucket SSO add-on.
2. Configure the **BITBUCKET_WORK_DIR/shared/bitbucket.properties** file.
   As a result, you will have a configuration like this:

bitbucket.properties

```
...
plugin.global-sso.login.url=https://aag0677.my.centrify.com/applogin/
appKey/6c7c624e-b80d-447d-8b0a-c9e9ef31c73c/customerId/AAG0677
plugin.global-sso.logout.url=https://aag0677.my.centrify.com/applogout
plugin.global-sso.public.key.file=/var/atlassian/application-data/bit
bucket/public_key.der
plugin.global-sso.path=/
plugin.global-sso.domain=.cprime.com
plugin.global-sso.expiry.time=14400
```

   Where:

Property	Description
`plugin.global-sso.login.url`	IDP Login URL.
`plugin.global-sso.logout.url`	IDP Logout URL.
`plugin.global-sso.public.key.file`	Full path to the public key on the server(for decription the cookie).
`plugin.global-sso.path`	Cookie path.
`plugin.global-sso.domain`	Cookie domain.
`plugin.global-sso.expiry.time`	`Live of SSO Cookie for authentication in seconds. Default value is 14400(4 hours).`

3. Generate **public_key.der** and specify a path to this key.
4. Restart Bitbucket instance.
5. Install the **Bitbucket-SSO-Authenticator** add-on.

Configuring FishEye SSO add-on

Content in development, please wait a bit.