SafeNet Authentication Service
Integration Guide

Using SafeNet Authentication Service as an Identity Provider for JIRA
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Third-Party Software Acknowledgement

This document is intended to help users of SafeNet products when working with third-party software, such as JIRA.

Material from third-party software is being used solely for the purpose of making instructions clear. Screen images and content obtained from third-party software will be acknowledged as such.

Description

SafeNet Authentication Service delivers a fully automated, versatile, and strong authentication-as-a-service solution.

With no infrastructure required, SafeNet Authentication Service provides smooth management processes and highly flexible security policies, token choice, and integration APIs.

JIRA is a proprietary issue tracking product, developed by Atlassian. It provides bug tracking, issue tracking, and project management functions.

This document describes how to:

- Configure SAML authentication in JIRA using SafeNet Authentication Service as an identity provider.

It is assumed that the JIRA environment is already configured and working with static passwords prior to implementing multi-factor authentication using SafeNet Authentication Service.

JIRA can be configured to support multi-factor authentication in several modes. The SAML authentication will be used for the purpose of working with SafeNet Authentication Service.

Applicability

The information in this document applies to:

- **SafeNet Authentication Service (SAS)**—SafeNet's cloud-based authentication service
- **SafeNet Authentication Service – Service Provider Edition (SAS-SPE)**—A server version that is used by Service providers to deploy instances of SafeNet Authentication Service
- **SafeNet Authentication Service – Private Cloud Edition (SAS-PCE)**—A server version that is used to deploy the solution on-premises in the organization

Environment

The integration environment that was used in this document is based on the following software versions:

- **SafeNet Authentication Service – Private Cloud Edition (SAS-PCE)** — Mention only if SAS-PCE is relevant. Add version number to the SAS-PCE.
- **JIRA**—(atlassian-jira-6.3.13-x64)
- **SAML Single Sign-On add-on for JIRA**—(samlssso-JIRA-0.9.4)
Audience

This document is targeted to system administrators who are familiar with JIRA, and are interested in adding multi-factor authentication capabilities using SafeNet Authentication Service.

SAML Authentication using SafeNet Authentication Service Cloud

SafeNet Authentication Service (SAS) Cloud provides a service for SAML authentication that is already implemented in the SAS Cloud environment and can be used without any installation.

![SAML Authentication using SafeNet Authentication Service Cloud](image)

SAML Authentication using SafeNet Authentication Service-SPE and SafeNet Authentication Service-PCE

In addition to the pure cloud-based offering, SafeNet Authentication Service (SAS) comes with two on-premises versions:

- **SafeNet Authentication Service – Service Provider Edition (SPE)**—An on-premises version of SafeNet Authentication Service targeted at service providers interested in hosting SAS in their data center.

- **SafeNet Authentication Service – Private Cloud Edition (PCE)**—An on-premises version of SafeNet Authentication Service targeted at organizations interested in hosting SAS in their private cloud environment.

For both on-premises versions, SAS can be integrated with the Shibboleth infrastructure, which uses a special on-premises agent called SafeNet Authentication Service Agent for Shibboleth.

For more information on how to install and configure the SafeNet Authentication Service Agent for Shibboleth, refer to the SafeNet Support Portal.

SAML Authentication Flow using SafeNet Authentication Service

SafeNet Authentication Service (SAS) communicates with a large number of service providers and cloud-based services solutions using the SAML protocol.

The image below describes the dataflow of a multi-factor authentication transaction for JIRA.
1. A user attempts to log on to JIRA. The user is redirected to SafeNet Authentication Service. SAS collects and evaluates the user's credentials.

2. SAS returns a response to JIRA, accepting or rejecting the user’s authentication request.

**SAML Prerequisites**

To enable SafeNet Authentication Service (SAS) to receive SAML authentication requests from JIRA, ensure that the end users can authenticate from the JIRA environment with a static password.

**Configuring JIRA**

To add SafeNet Authentication Service (SAS) as an Identity Provider in JIRA:

- Installing the SAML Single Sign-On Plugin, page 6
- Configuring SAS as an Identity Provider in JIRA, page 9

**Installing the SAML Single Sign-On Plugin**

The SAML single sign-on plugin turns JIRA into the SAML 2.0 Service Provider, delegating authentication to the SAML Identity Provider.

Download the SAML single sign-on plugin from Atlassian using the following link:
To install the SAML SSO plugin:

3. Open JIRA in a web browser.

4. On the JIRA Log in window, enter the administrator credentials and then click Log in.

(The screen image above is from Atlassian®. Trademarks are the property of their respective owners.)

5. On the JIRA Dashboard window, click Administration ( ) > Add-ons.

(The screen image above is from Atlassian®. Trademarks are the property of their respective owners.)

6. On the Administrator Access window, enter the administrator password, and then click Confirm.

(The screen image above is from Atlassian®. Trademarks are the property of their respective owners.)
7. On the **JIRA Administration** window, in the left pane, click **Manage add-ons**.

8. In the right pane, under **Manage add-ons**, click **Upload add-on**.

9. On the **Upload add-on** window, click **Browse**, select the downloaded SAML sign-on add-on JAR file, and then click **Upload**.

A confirmation message is displayed when the add-on is successfully installed.
Configuring SAS as an Identity Provider in JIRA

10. On the JIRA Administration window, in the left pane, click Manage add-ons.

11. In the right pane, under User-installed add-ons, expand SAML SingleSignOn for JIRA, and then click Configure.

12. On the SAMLSSO plugin configuration window, enter the following SSO settings to configure SAS as an Identity Provider, and then click Submit Query.

<table>
<thead>
<tr>
<th><strong>IdP URL</strong></th>
<th>Enter the SAML Identity Provider URL. For example, <a href="https://idp1.cryptocard.com/idp/profile/SAML2/Redirect/SSO">https://idp1.cryptocard.com/idp/profile/SAML2/Redirect/SSO</a></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Login Page URL</strong></td>
<td>If the SAML login fails, a link to the username/password login page is displayed on the error page. For JIRA, this page is /login.jsp.</td>
</tr>
<tr>
<td><strong>Redirect login requests</strong></td>
<td>Select this option to redirect login requests to this plugin instead of the login page.</td>
</tr>
<tr>
<td><strong>IdP Certificate</strong></td>
<td>Download the Identity Provider certificate from the SAS console and paste the certificate in base64-encoded format, including the BEGIN and END CERTIFICATE lines.</td>
</tr>
</tbody>
</table>
Downloading the SafeNet Authentication Service Metadata

Browse to the https://idp1.cryptocard.com/idp/shibboleth URL. The SafeNet Authentication Service metadata will automatically download. Save it locally on your machine.

*If third party need IDP certificate, in this case we need to download SAS IdP certificate*

Download the SafeNet Identity Provider Certificate

Browse to the https://cloud.safenet-inc.com/console/cert/idp.crt URL. The SafeNet identity provider certificate will automatically download. Save it locally on your machine.

Configuring SafeNet Authentication Service

The deployment of multi-factor authentication using SafeNet Authentication Service (SAS) with JIRA using SAML authentication requires:

- Synchronizing Users Stores to SafeNet Authentication Service, page 11
- Assigning an Authenticator in SafeNet Authentication Service, page 11
- Adding JIRA as a Service Provider (SP) in SafeNet Authentication Service, page 12
- Enabling SAML Services in SafeNet Authentication Service, page 15
Synchronizing Users Stores to SafeNet Authentication Service

Before SafeNet Authentication Service (SAS) can authenticate any user in your organization, you need to create a user store in SAS that reflects the users that would need to use multi-factor authentication. User records are created in the SAS user store using one of the following methods:

- Manually, one user at a time using the **Create User** shortcut
- Manually, by importing one or more user records via a flat file
- Automatically, by synchronizing with your Active Directory/LDAP server using the SAS Synchronization Agent

For further details on importing users to SafeNet Authentication Service, refer to “Creating Users” in the *SafeNet Authentication Service Subscriber Account Operator Guide*:


All SafeNet Authentication Service documentation can be found on the SafeNet Knowledge Base site.

Assigning an Authenticator in SafeNet Authentication Service

SafeNet Authentication Service (SAS) supports a number of authentication methods that can be used as a second authentication factor for users authenticating through JIRA.

The following authenticators are supported:

- eToken PASS
- RB-1 keypad token
- KT-4 token
- SafeNet GOLD
- SMS tokens
- MP-1 software token
- GrIDsure
- MobilePASS

Authenticators can be assigned to users in two ways:

- **Manual provisioning**—Assign an authenticator to users one at a time.
- **Provisioning rules**—The administrator can set provisioning rules in SAS so that the rules will be triggered when group memberships and other user attributes change. An authenticator will be assigned automatically to the user.

Refer to “Provisioning” in the *SafeNet Authentication Service - Subscriber Account Operator Guide* to learn how to provision the different authentication methods to the users in the SAS user store.

Adding JIRA as a Service Provider (SP) in SafeNet Authentication Service

Add a service provider entry in the SafeNet Authentication Service (SAS) **SAML Service Providers** module to prepare it to receive SAML authentication requests from JIRA. You will need the metadata of JIRA.

**To download the JIRA metadata:**
1. In a web browser, open the `http://<jira-url>/plugins/servlet/samlsso/admin` URL and then enter administrator credentials to log in.
2. On the **SAMLSSO plugin configuration** window, click **SAML Metadata** to download the XML file onto your local machine.

(The screen image above is from Atlassian®. Trademarks are the property of their respective owners.)

**To add JIRA as a Service Provider in SafeNet Authentication Service:**
1. Log in to the SafeNet Authentication Service console with an Operator account.
2. Click the **COMMS** tab, and then click **SAML Service Providers**.

3. In the **SAML Service Providers** module, click the **SAML 2.0 Settings** link.

4. Click **Add**.
5. **Under Add SAML 2.0 Settings**, complete the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendly Name</td>
<td>Enter a friendly name for the application (for example, JIRA).</td>
</tr>
<tr>
<td>SAML 2.0 Metadata</td>
<td>Select <strong>Upload Existing Metadata File</strong>. Click <strong>Choose File</strong> and then specify the downloaded JIRA metadata file.</td>
</tr>
</tbody>
</table>

![Add SAML 2.0 Settings](image)

**NOTE:** The remaining options are used to customize the appearance of the logon page presented to the user. For more information on logon page customization, refer “Configure SAML Service” in the SAML Configuration Guide:


**Under Return Attributes**, add the following attributes, and then click **Apply**:

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress</a></td>
<td>According to ThirdParty Product Requirements</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/claims/EmailAddress">http://schemas.xmlsoap.org/claims/EmailAddress</a></td>
<td>According to ThirdParty Product Requirements</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name</a></td>
<td>According to ThirdParty Product Requirements</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname</a></td>
<td>According to ThirdParty Product Requirements</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/claims/CommonName">http://schemas.xmlsoap.org/claims/CommonName</a></td>
<td>According to ThirdParty Product Requirements</td>
</tr>
</tbody>
</table>
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/nameidentifier  According to ThirdParty Product Requirements

principal  According to ThirdParty Product Requirements

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://schemas.microsoft.com/ws/2005/05/identity/claims/ad">http://schemas.microsoft.com/ws/2005/05/identity/claims/ad</a></td>
<td>UID</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/windowsaccountname">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/windowsaccountname</a></td>
<td>SAML Login ID</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress</a></td>
<td>Email address</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/EmailAddress">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/EmailAddress</a></td>
<td>Email address</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name</a></td>
<td>Name</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname</a></td>
<td>Given name</td>
</tr>
<tr>
<td><a href="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/commonName">http://schemas.xmlsoap.org/ws/2005/05/identity/claims/commonName</a></td>
<td>Name</td>
</tr>
<tr>
<td>principal</td>
<td>principal</td>
</tr>
</tbody>
</table>

Add attribute

JIRA is added as a service provider in the system.

Enabling SAML Services in SafeNet Authentication Service

After JIRA has been added to SafeNet Authentication Service (SAS) as a service provider, the users should be granted permission to use this service provider with SAML authentication.

There are two methods to enable the user to use the service provider:

- Manually, one user at a time, using SAML Services module
- Automatically, by defining groups of users, using SAML Provisioning Rules
Using the SAML Services Module

Manually enable a single user to authenticate against one or more configured SAML Service providers.

1. Log in to the SafeNet Authentication Service console with an Operator account.

2. Click the ASSIGNMENT tab, and then search for the required user.

3. Click the appropriate user in the User ID column.
4. Click **SAML Services**.

5. Click **Add**.

6. Under **Add SAML Service**, do the following:
   a. From the **Service** menu, select the JIRA service provider.
   b. In **SAML Login ID** field, select the type of login ID (User ID) to be sent as a UserID to JIRA in the response.
   c. Click **Add**.
The user can now authenticate to JIRA using SAML authentication.

### Using SAML Provisioning Rules

Use this module to enable groups of users to authenticate to SAML service providers.

1. Log in to the SafeNet Authentication Service console with an Operator account.

2. Click the POLICY tab, and then click **Automation Policies**.
3. Click the **SAML Provisioning Rules** link.

4. Click **New Rule**.

5. Configure the following fields, and then click **Add**:

<table>
<thead>
<tr>
<th><strong>Rule Name</strong></th>
<th>Enter a name for the rule.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User is in container</strong></td>
<td>Users affected by this rule must be in the selected container.</td>
</tr>
<tr>
<td><strong>Groups</strong></td>
<td>The <strong>Virtual Server groups</strong> box lists all groups. Click the user groups that will be affected by the rule, and then click the right arrow to move it to the <strong>Used by rule</strong> box.</td>
</tr>
<tr>
<td><strong>Parties</strong></td>
<td>The <strong>Relying Parties</strong> box lists all service providers. Click the service providers that the groups of users will authenticate to, and then click the right arrow to move it to <strong>Rule Parties</strong> box.</td>
</tr>
<tr>
<td><strong>SAML Login ID</strong></td>
<td>Select User ID. The User ID will be returned to the service provider in the SAML assertion.</td>
</tr>
</tbody>
</table>
Running the Solution

Users can log on to JIRA using SAML authentication with SafeNet Authentication Service.

For this integration, the SafeNet Gridsure token is configured for authentication with the SAS solution.

To log on to your JIRA environment:

1. Open JIRA in a web browser.
2. On the JIRA login window, at the top right, click Log in. The user is redirected to the SAS login page.

(The screen image above is from Atlassian®. Trademarks are the property of their respective owners.)
3. On the SAS **Login** window, enter your user name in the **User Name** field, and then click **Login**.

![Login window](image)

4. In the **Password** field, enter the characters that correspond to the configured Personal Identification Pattern (PIP), and then click **Login**.

![Password input](image)

5. After successful authentication, a security warning message is displayed. Click **Continue**.

![Security warning](image)

The user is redirected to the default JIRA **System Dashboard** page.

![System Dashboard](image)

*(The screen image above is from Atlassian®. Trademarks are the property of their respective owners.)*
Appendix: How to Change the JIRA Login and Logout URL

For the Identify Provider logout URL, configuration is not available on the SAML sign-on add-on configuration page. You can change the logout URL in the *seraph-config.xml* file.

**Sample steps to change the logout URL:**

1. Shut down JIRA.
2. Open the *seraph-config.xml* file and find the following:
   ```xml
   <init-param>
   <!-- URL for logging out.
   - If relative, Seraph just redirects to this URL, which is responsible for calling Authenticator.logout()
   - If absolute (eg. SSO applications), Seraph calls Authenticator.logout() and redirects to the URL
   -->
   <param-name>logout.url</param-name>
   <!---<param-value>/secure/Logout!default.jspa</param-value>--->
   <init-param>
   
   3. Edit the intended URL, similar to the line added in bold below.
      ```xml
      <init-param>
      <!-- URL for logging out.
      - If relative, Seraph just redirects to this URL, which is responsible for calling Authenticator.logout().
      - If absolute (eg. SSO applications), Seraph calls Authenticator.logout() and redirects to the URL
      -->
      <param-name>logout.url</param-name>
      <!---<param-value>/secure/Logout!default.jspa</param-value>--->
      <param-value>https://idp1.cryptocard.com/idp/signout.jsp</param-value>
      <init-param>
      
      4. Save the *seraph-config.xml* file and start JIRA.
## Support Contacts

If you encounter a problem while installing, registering, or operating this product, please make sure that you have read the documentation. If you cannot resolve the issue, contact your supplier or Gemalto Customer Support. Gemalto Customer Support operates 24 hours a day, 7 days a week. Your level of access to this service is governed by the support plan arrangements made between Gemalto and your organization. Please consult this support plan for further information about your entitlements, including the hours when telephone support is available to you.

<table>
<thead>
<tr>
<th>Contact Method</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>Gemalto, Inc.</td>
</tr>
<tr>
<td></td>
<td>4690 Millennium Drive</td>
</tr>
<tr>
<td></td>
<td>Belcamp, Maryland 21017 USA</td>
</tr>
<tr>
<td><strong>Phone</strong></td>
<td>United States</td>
</tr>
<tr>
<td></td>
<td>1-800-545-6608</td>
</tr>
<tr>
<td></td>
<td>International</td>
</tr>
<tr>
<td></td>
<td>1-410-931-7520</td>
</tr>
<tr>
<td><strong>Technical Support</strong></td>
<td><a href="https://serviceportal.safenet-inc.com">https://serviceportal.safenet-inc.com</a></td>
</tr>
<tr>
<td><strong>Customer Portal</strong></td>
<td>Existing customers with a Technical Support Customer Portal account can log in to</td>
</tr>
<tr>
<td></td>
<td>manage incidents, get the latest software upgrades, and access the Gemalto Knowledge</td>
</tr>
<tr>
<td></td>
<td>Base.</td>
</tr>
</tbody>
</table>