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JumpCloud SAML Implementation

View in the help center:

<https://bitwarden.com/help/saml-jumpcloud/>

JumpCloud SAML Implementation

This article contains **JumpCloud-specific** help for configuring login with SSO via SAML 2.0. For help configuring login with SSO for another IdP, refer to [SAML 2.0 Configuration](#).

Configuration involves working simultaneously within the Bitwarden web app and the JumpCloud Portal. As you proceed, we recommend having both readily available and completing steps in the order they are documented.



Tip

Already an SSO expert? Skip the instructions in this article and download screenshots of sample configurations to compare against your own.

[Download Sample](#)

Open SSO in the web app

Log in to the Bitwarden web app and open the Admin Console using the product switcher:

The screenshot displays the Bitwarden web app interface. On the left, a dark blue sidebar contains navigation options: 'Password Manager', 'Vaults', 'Send', 'Tools', 'Reports', and 'Settings'. The 'Password Manager' option is highlighted with a red box. The main content area is titled 'All vaults' and features a table of vaults. The table has columns for 'Name' and 'Owner'. The vaults listed are: 'Company Credit Card' (Owner: My Organiz...), 'Personal Login' (Owner: Me), 'Secure Note' (Owner: Me), and 'Shared Login' (Owner: My Organiz...). A red arrow points from the 'Product switcher' button in the top right corner to the 'Password Manager' option in the sidebar.

Open your organization's **Settings** → **Single sign-on** screen:



- My Organization
- Collections
- Members
- Groups
- Reporting
- Billing
- Settings
- Organization info
- Policies
- Two-step login
- Import data
- Export vault
- Domain verification
- Single sign-on
- Device approvals
- SCIM provisioning

Single sign-on

Use the [require single sign-on authentication policy](#) to require all members to log in with SSO.

☒ Allow SSO authentication

Once set up, your configuration will be saved and members will be able to authenticate using their Identity Provider credentials.

SSO identifier (required)

unique-organization-identifier

Provide this ID to your members to login with SSO. To bypass this step, set up [Domain verification](#)

Member decryption options

☒ Master password

☐ Trusted devices

Once authenticated, members will decrypt vault data using a key stored on their device. The [single organization](#) policy, [SSO required](#) policy, and [account recovery administration](#) policy with automatic enrollment will turn on when this option is used.

Type

SAML 2.0

SAML service provider configuration

☒ Set a unique SP entity ID

Generate an identifier that is unique to your organization

SP entity ID

SAML 2.0 metadata URL

SAML 2.0 configuration

If you haven't already, create a unique **SSO identifier** for your organization and select **SAML** from the the **Type** dropdown. Keep this screen open for easy reference.

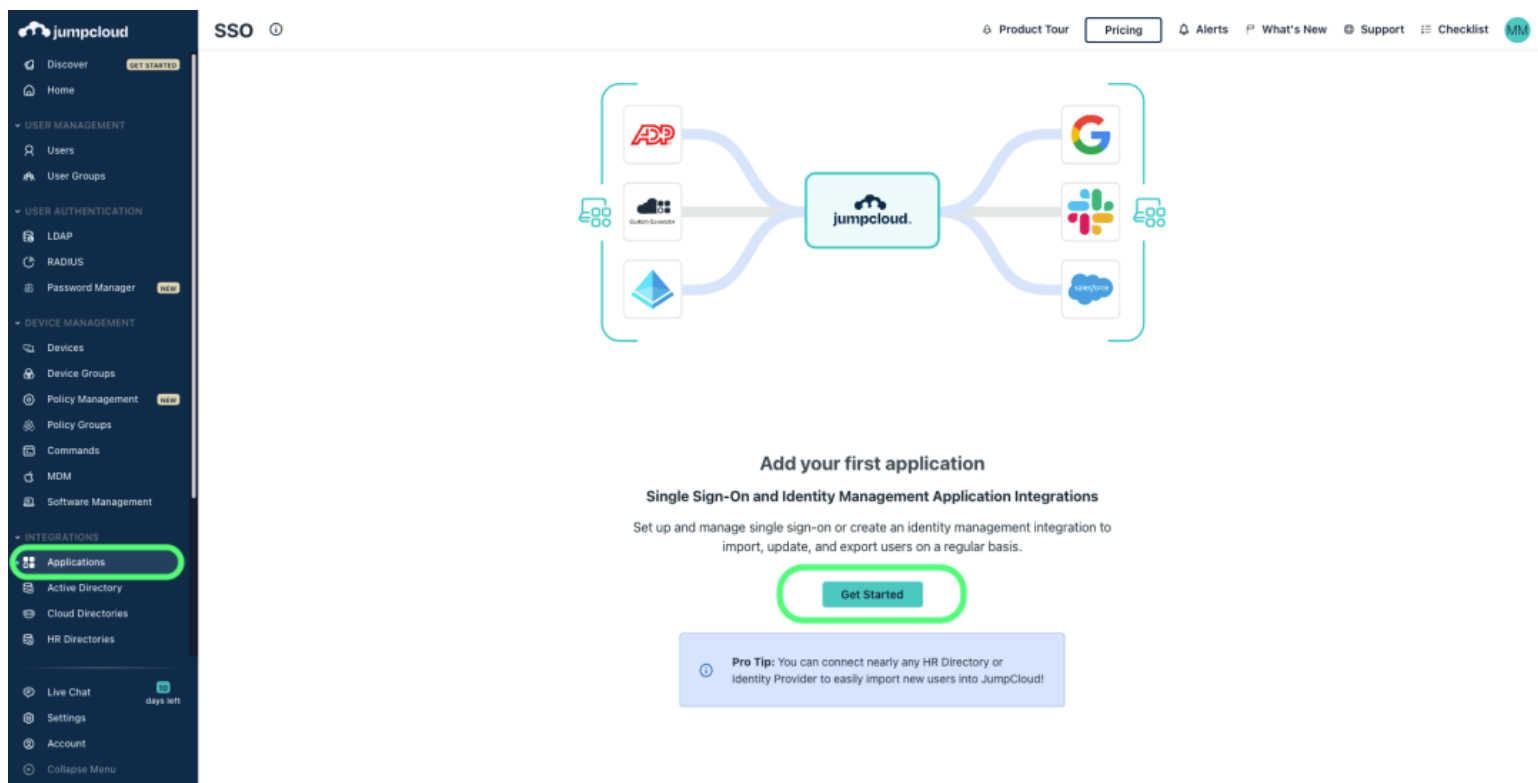
You can turn off the **Set a unique SP entity ID** option at this stage if you wish. Doing so will remove your organization ID from your SP entity ID value, however in almost all cases it is recommended to leave this option on.



There are alternative **Member decryption options**. Learn how to get started using [SSO with trusted devices](#) or [Key Connector](#).

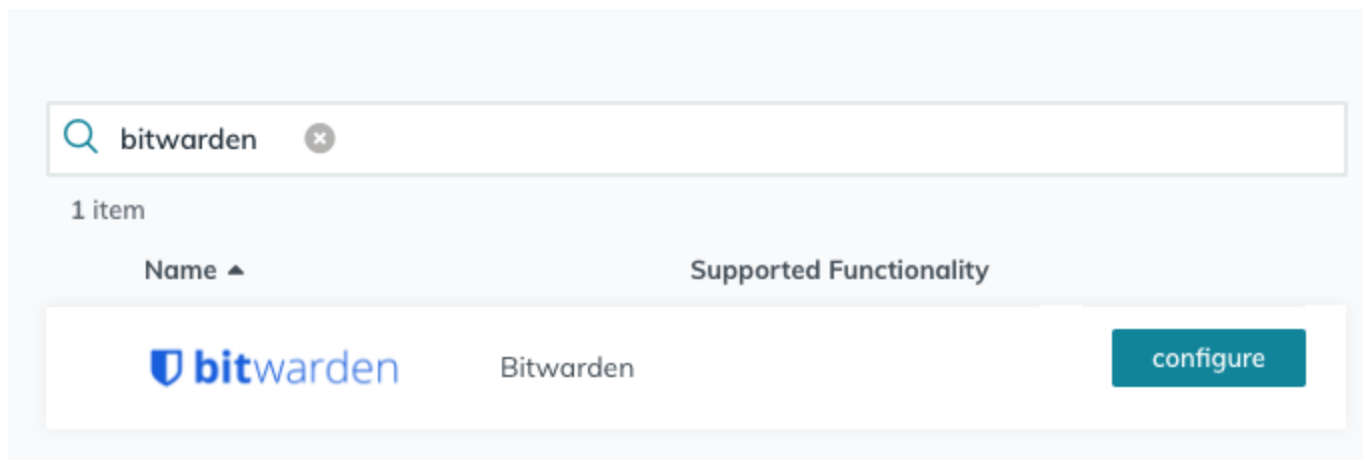
Create a JumpCloud SAML application

In the JumpCloud Portal, select **Applications** from the menu and select the **Get Started** button:



Create Bitwarden app Jumpcloud

Enter **Bitwarden** in the search box and select the **configure** button:



Configure Bitwarden



Tip

If you are more comfortable with SAML, or want more control over things like NameID Format and Signing Algorithms, create a **Custom SAML Application** instead.

General info

In the **General Info** section, configure the following information:

Field	Description
Display Label	Give the Application a Bitwarden-specific name.

Single sign-on configuration

In the **Single Sign-On Configuration** section, configure the following information:

General InfoSSOIdentity ManagementUser Groups

Single Sign-On Configuration

An IDP Certificate and Private Key will be generated for this application after activation. [Click here to see the Knowledge Base article with details for configuring this application](#)

Service Provider Metadata: ⓘ

Upload Metadata

IdP Entity ID: ⓘ

JumpCloud

SP Entity ID: ⓘ

https://sso.bitwarden.com/saml2/

ACS URL: ⓘ

https://sso.bitwarden.com/saml2/YOUR_ORG_ID/Acs/

SP Certificate:

Upload SP Certificate

IDP URL:

https://sso.jumpcloud.com/saml2/bitwarden

Attributes

If attributes are required by this Service Provider for SSO authentication, they are not editable. Additional attributes may be included in assertions, although support for each attribute will vary for each Service Provider. [Learn more.](#)

USER ATTRIBUTE MAPPING: ⓘ

Service Provider Attribute Name	JumpCloud Attribute Name
---------------------------------	--------------------------

cancel

activate

Jumpcloud SSO configuration

Field	Description
IdP Entity ID	Set this field to a unique, Bitwarden-specific value, for example, <code>bitwardensso_yourcompany</code> .
SP Entity ID	Set this field to the pre-generated SP Entity ID. This automatically-generated value can be copied from the organization's Settings → Single sign-on screen and will vary based on your setup.
ACS URL	Set this field to the pre-generated Assertion Consumer Service (ACS) URL. This automatically-generated value can be copied from the organization's Settings → Single sign-on screen and will vary based on your setup.

Custom SAML app only

If you created a Custom SAML Application, you will also need to configure the following **Single Sign-On Configuration** fields:

Field	Description
SAMLSubject NameID	Specify the JumpCloud attribute that will be sent in SAML responses as the NameID.
SAMLSubject NameID Format	Specify the format of the NameID sent in SAML responses.
Signature Algorithm	Select the algorithm to use to sign SAML assertions or responses.
Sign Assertion	By default, JumpCloud will sign the SAML response. Check this box to sign the SAML assertion.

Field	Description
Login URL	Specify the URL from which your users will login to Bitwarden via SSO. For cloud-hosted customers, this is https://vault.bitwarden.com/#/sso or https://vault.bitwarden.eu/#/sso. For self-hosted instances, this is determined by your configured server URL, for example https://your.domain.com/#/sso.

Attributes

In the **Single Sign-On Configuration → Attributes** section, construct the following SP → IdP attribute mappings. If you selected the Bitwarden Application in JumpCloud, these should already be constructed:

Attributes

If attributes are required by this Service Provider for SSO authentication, they are not editable. Additional attributes may be included in assertions, although support for each attribute will vary for each Service Provider. [Learn more.](#)

USER ATTRIBUTE MAPPING: ⓘ

Service Provider Attribute Name	JumpCloud Attribute Name
email	email ▼
uid	username ▼
firstname	firstname ▼
lastname	lastname ▼

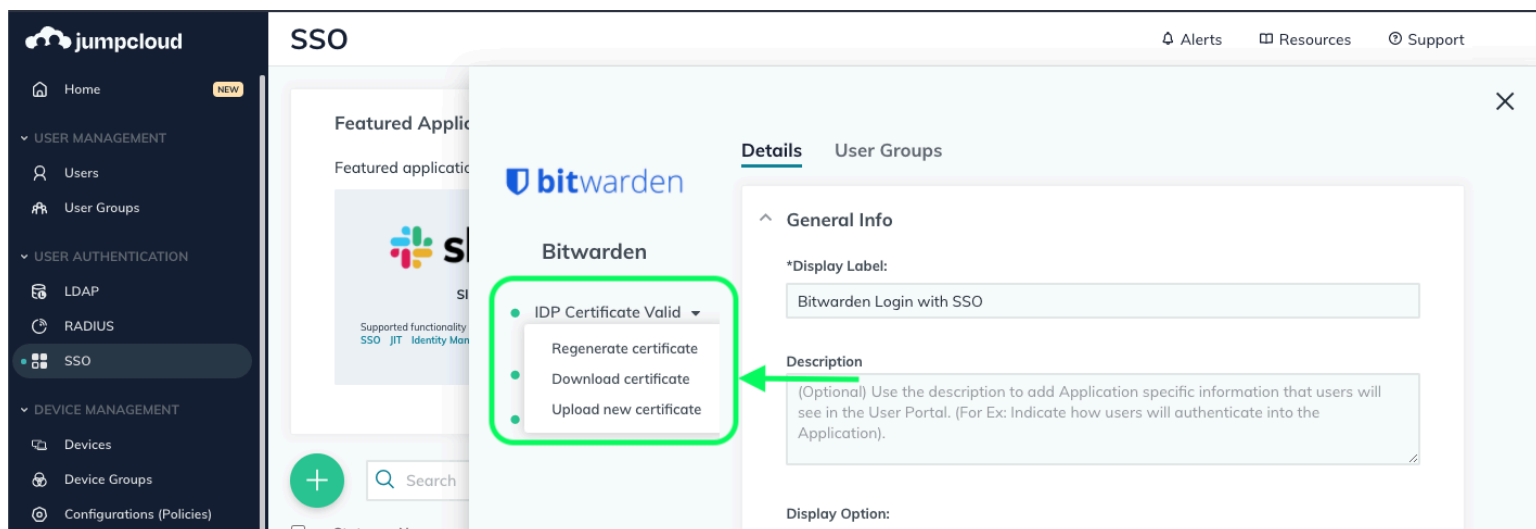
add attribute

Attribute Mapping

Once you are finished, select the **activate** button.

Download the certificate

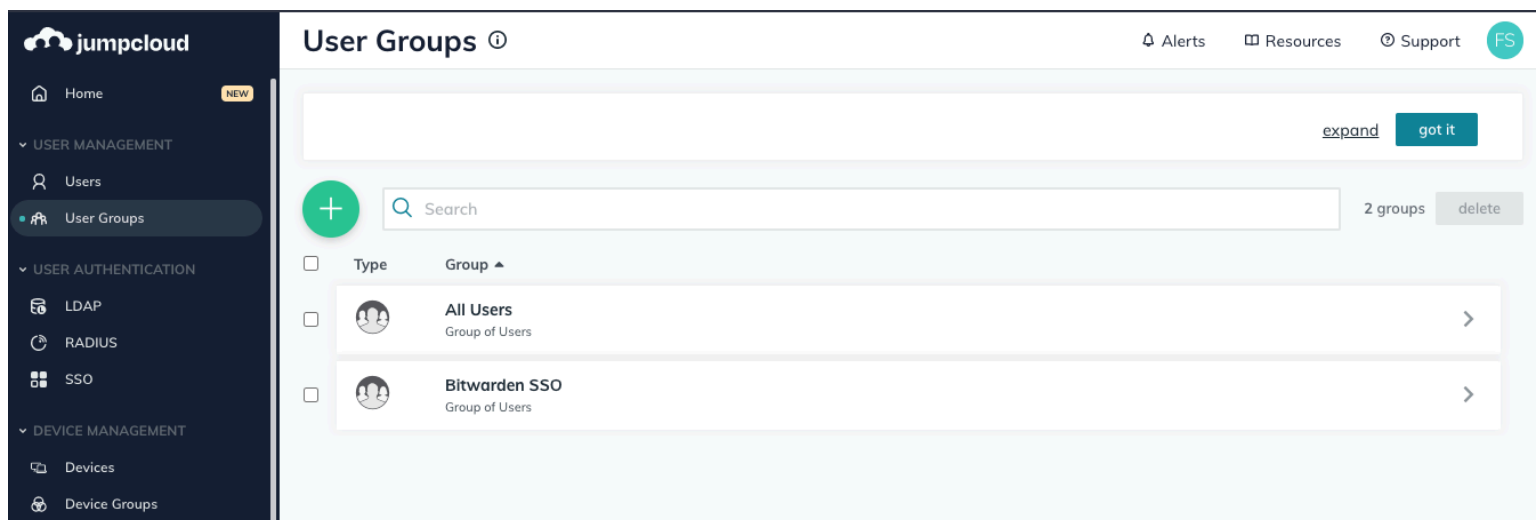
Once the application is activated, use the **SSO** menu option again to open the created Bitwarden application. Select the **IDP Certificate** dropdown and **Download certificate**:



Download Certificate

Bind user groups

In the JumpCloud Portal, select **User Groups** from the menu:



User Groups

Either create a Bitwarden-specific user group, or open the All Users default user group. In either case, select the **Applications** tab and enable access to the created Bitwarden SSO application for that user group:



Bitwarden SSO

Details
Users
Device Groups
Applications
RADIUS
Directories

Bitwarden SSO user group is bound to the following applications:

☒	Status	Name	Display Label ▲	Supported Functionality
☒			Bitwarden Login with SSO	

Bind App Access



Tip

Alternatively, you can bind access to user groups directly from the **SSO → Bitwarden Application** screen.

Back to the web app

At this point, you have configured everything you need within the context of the JumpCloud Portal. Return to the Bitwarden web vault to complete configuration.

The Single sign-on screen separates configuration into two sections:

- **SAML service provider configuration** will determine the format of SAML requests.
- **SAML identity provider configuration** will determine the format to expect for SAML responses.

Service provider configuration

Configure the following fields according to the choices selected in the JumpCloud Portal [during app creation](#):

Field	Description
Name ID Format	If you created a Custom SAML Application, set this to whatever the specified SAMLSubject NameID Format is. Otherwise, leave Unspecified .
Outbound Signing Algorithm	The algorithm Bitwarden will use to sign SAML requests.

Field	Description
Signing Behavior	Whether/when SAML requests will be signed. By default, JumpCloud will not require requests to be signed.
Minimum Incoming Signing Algorithm	If you created a Custom SAML Application, set this to whichever Signature Algorithm you selected. Otherwise, leave as rsa-sha256 .
Want Assertions Signed	If you created a Custom SAML Application, check this box if you set the Sign Assertion option in JumpCloud. Otherwise, leave unchecked.
Validate Certificates	Check this box when using trusted and valid certificates from your IdP through a trusted CA. Self-signed certificates may fail unless proper trust chains are configured within the Bitwarden login with SSO docker image.

When you are done with the service provider configuration, **Save** your work.

Identity provider configuration

Identity provider configuration will often require you to refer back to the JumpCloud Portal to retrieve application values:

Field	Description
Entity ID	Enter your JumpCloud IdP Entity ID , which can be retrieved from the JumpCloud Single Sign-On Configuration screen . This field is case sensitive.
Binding Type	Set to Redirect .
Single Sign On Service URL	Enter your JumpCloud IdP URL , which can be retrieved from the JumpCloud Single Sign-On Configuration screen .
Single Log Out Service URL	Login with SSO currently does not support SLO. This option is planned for future development.
X509 Public Certificate	Paste the retrieved certificate , removing -----BEGIN CERTIFICATE-----

Field	Description
	and -----END CERTIFICATE----- The certificate value is case sensitive, extra spaces, carriage returns, and other extraneous characters will cause certification validation to fail.
Outbound Signing Algorithm	If you created a Custom SAML Application, set this to whichever Signature Algorithm you selected. Otherwise, leave as rsa-sha256 .
Disable Outbound Logout Requests	Login with SSO currently does not support SLO. This option is planned for future development.
Want Authentication Requests Signed	Whether JumpCloud expects SAML requests to be signed.

Note

When completing the X509 certificate, take note of the expiration date. Certificates will have to be renewed in order to prevent any disruptions in service to SSO end users. If a certificate has expired, Admin and Owner accounts will always be able to log in with email address and master password.

When you are done with the identity provider configuration, **Save** your work.

Tip

You can require users to log in with SSO by activating the single sign-on authentication policy. Please note, this will require activating the single organization policy as well. [Learn more](#).

Test the configuration

Once your configuration is complete, test it by navigating to <https://vault.bitwarden.com>, entering your email address and selecting the **Use single sign-on** button:



Log in to Bitwarden

Email address (required)

☒ Remember email

Continue

or

 Log in with passkey

 Use single sign-on

New to Bitwarden? [Create account](#)

Log in options screen

Enter the [configured organization identifier](#) and select **Log In**. If your implementation is successfully configured, you will be redirected to the JumpCloud login screen:

JumpCloud Login

Note

Bitwarden does not support unsolicited responses, so initiating login from your IdP will result in an error. The SSO login flow must be initiated from Bitwarden.