



BeyondTrust

BeyondInsight and Password Safe 23.1 Authentication Guide

Table of Contents

BeyondInsight and Password Safe Authentication Guide	4
Create and Configure Groups in BeyondInsight	5
Create and Edit Directory Credentials	8
Create an Active Directory Credential	9
Create an LDAP Credential	10
Create an Azure Active Directory Credential	11
Edit a Directory Credential	11
Register and Configure an Application in Azure Active Directory	13
Map Directory Credentials to a Domain	16
Add an Active Directory Group	17
Propagate Domain Changes to Group Members	20
Add an Azure Active Directory Group	21
Add an LDAP Group	24
Assign Group Permissions	28
Configure RADIUS Two-Factor Authentication for BeyondInsight and Password Safe ..	33
Configure the RADIUS Server	33
Configure RADIUS Two-Factor Authentication Using Duo	34
Configure Alternate Directory Attribute for RADIUS	35
Set RADIUS Two-Factor Authentication on User Accounts	35
Configure SecureAuth with Password Safe using RADIUS	37
Test the Configuration	37
Configure Two-Factor Authentication for BeyondInsight and Password Safe Using a Time-Based One-Time Password	38
Configure TOTP Two-Factor Authentication Settings	38
Set TOTP Two-Factor Authentication on User Accounts	38
Register a Device	39
Unregister a Device	40
Configure Smart Card Authentication	43
Enable Smart Card Two-Factor Authentication Settings	43
Enable Override Smart Card User Authentication Option on User Accounts	44
Disable Forms Login	44

Configure Two-Factor Authentication Settings for User Accounts	49
Configure a Claims-Aware Website in BeyondInsight	51
Create a BeyondInsight Group	51
Add Relying Party Trust	51
Set Up Claim Rules	52
Supported Federation Service Claim Types	52
Claims-Aware SAML	52
Disable Forms Login	53
Set Up SAML With a Generic Security Provider	55
Configure SAML in the BeyondInsight Console	55
Configure Identity Provider (IdP)	56
Multiple Identity Providers	58
Configure SAML Using the saml.config File	58
Update Host Name and SAML access URL	60
Configure Azure Active Directory SAML with BeyondInsight SAML	61
Disable Forms Login	63
Configure ADFS with Password Safe Using SAML	66
Configure ADFS on the Identity Provider Server	66
Configure SAML on the Service Provider Server (U-Series Appliance)	70
Disable Forms Login	72
Configure Okta with Password Safe	75
SLO Optional Setting	76
Configure SAML in Password Safe	78
Disable Forms Login	79
Configure Ping Identity with Password Safe	82
Configure SAML in Password Safe	83
Disable Forms Login	84
Troubleshoot Authentication Issues	87
Active Directory User Cannot Authenticate with BeyondInsight or Password Safe	87
Authentication Errors when using SAML 2.0 Web Applications	87

BeyondInsight and Password Safe Authentication Guide


BeyondInsight and Password Safe support BeyondInsight user account authentication, as well as multi-factor authentication, smart card authentication, and third-party authentication for web tools supporting the SAML 2.0 standard. Various authentication methods, such as smart card authentication, two-factor authentication using a RADIUS server, Ping Identity, Okta, and Active Directory Federation Services (AD FS) are detailed in this guide.

BeyondInsight provides authentication for users who are managed exclusively by BeyondInsight. You can also add Active Directory users and groups and apply BeyondInsight authentication.

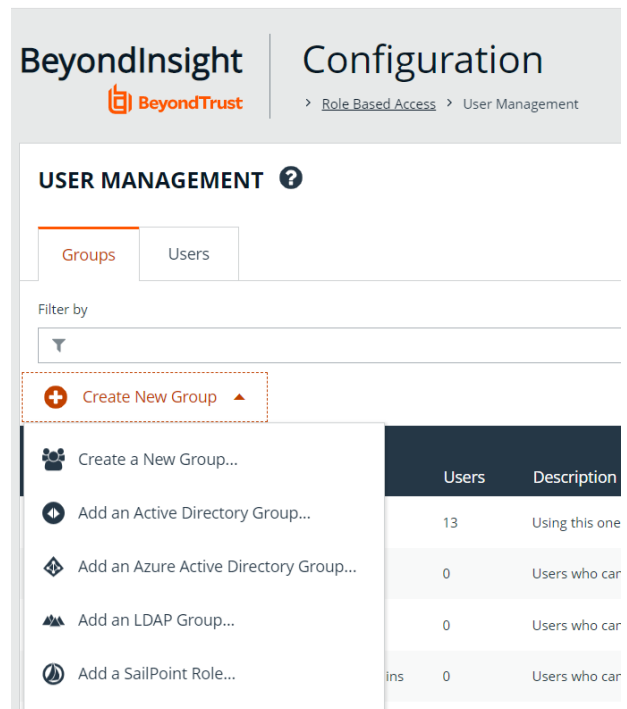
For a user to log in to BeyondInsight using BeyondInsight authentication, the user account must reside in the BeyondInsight database.

Create and Configure Groups in BeyondInsight

BeyondInsight offers a role-based delegation model so that you can explicitly assign permissions to groups on specific product features based on their role. Users are provisioned based on the permissions of their assigned groups.

 **Note:** By default, an **Administrators** group is created. The permissions assigned to the group cannot be changed. The user account you created when you configured BeyondInsight is a member of the group.


You can create BeyondInsight local groups, as well as add Active Directory, Azure Active Directory, and LDAP groups into BeyondInsight.

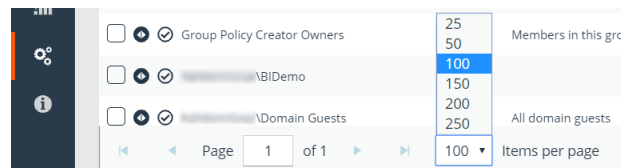


The screenshot shows the 'Configuration' page for 'BeyondInsight' under 'User Management'. It features a 'Groups' tab and a 'Filter by' dropdown. A 'Create New Group' button is highlighted, with a dropdown menu showing options: 'Create a New Group...', 'Add an Active Directory Group...', 'Add an Azure Active Directory Group...', 'Add an LDAP Group...', and 'Add a SailPoint Role...'. Below the menu is a table with columns 'Users' and 'Description'.

	Users	Description
Create a New Group...		
Add an Active Directory Group...	13	Using this one
Add an Azure Active Directory Group...	0	Users who car
Add an LDAP Group...	0	Users who car
Add a SailPoint Role...	ins 0	Users who car

You can filter the groups displayed in the grid by type of group, name of the group, group description, and the date the group was last synchronized.

 **Tip:** By default, the first 100 groups are displayed per page. You can change this by selecting a different number from the *Items per page* dropdown at the bottom of the grid.



The screenshot shows a table of groups with a pagination control at the bottom. The 'Items per page' dropdown is set to 100.

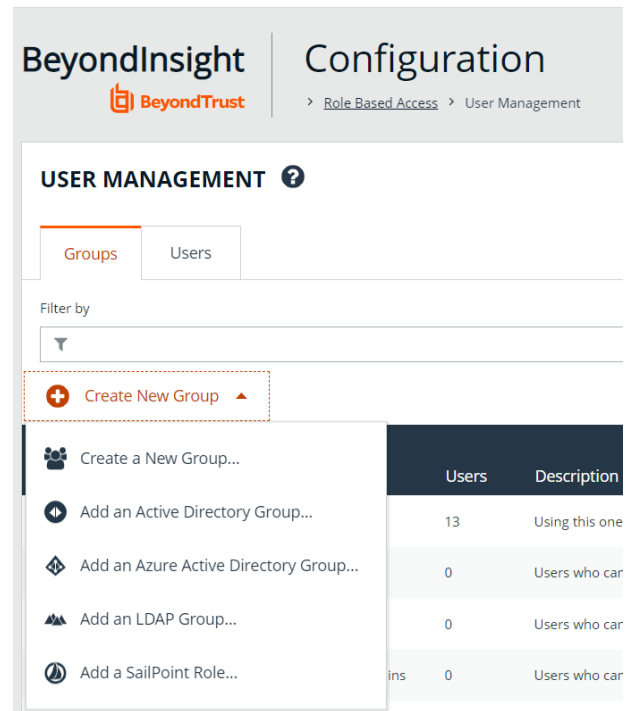
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Group Policy Creator Owners	25	Members in this grc
<input type="checkbox"/>	<input checked="" type="checkbox"/>	...	50	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	... \BI Demo	100	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	...	150	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	... \Domain Guests	200	All domain guests
<input type="checkbox"/>	<input checked="" type="checkbox"/>	...	250	

Page 1 of 1 | 100 Items per page

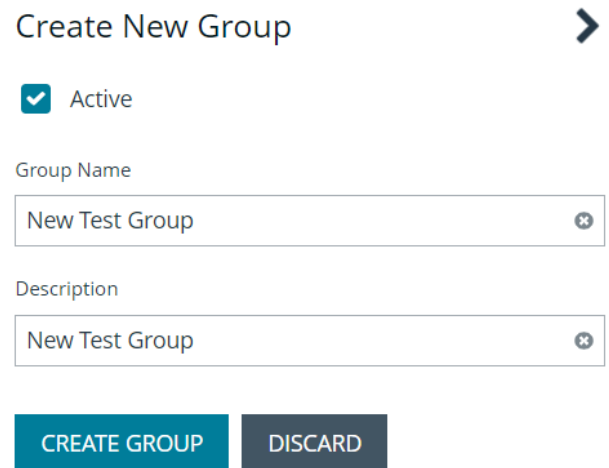
Create a BeyondInsight Local Group

1. Navigate to **Configuration > Role Based Access > User Management**.

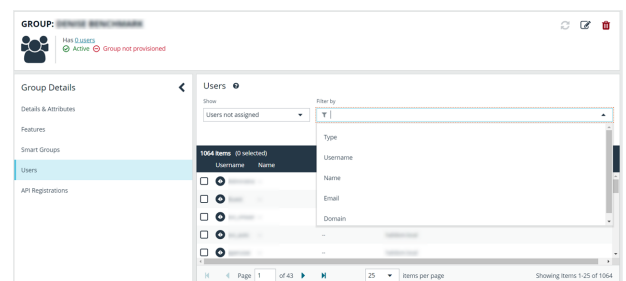
2. From the **Groups** tab, click **Create New Group**.
3. Select **Create a New Group**.



4. Enter a **Group Name** and **Description** for the group.
5. The group is set to **Active** by default. Check the box to deactivate it, if you prefer to activate it later.
6. Click **Create Group**.



7. Assign users to the group:
 - Under **Group Details**, select **Users**.
 - From the **Show** dropdown list, select **Users not assigned**.
 - Filter the list of users displayed in the grid by **Type**, **Username**, **Name**, **Email**, and **Domain**, if desired.



- Select the users you wish to add to the group, and then click **Assign User** above the grid.



Note: By default, new groups are not assigned any permissions. You must assign permissions on features and smart groups after creating a new group. For more information on permissions and how to assign them, please see "[Assign Group Permissions](#)" on page 28.



Note: When a local user logs in to BeyondInsight for the first time using SAML authentication, BeyondInsight provisions their account by mapping it to the groups assigned to their account.

For releases prior to 21.3, and for upgrades to the 21.3 release, if the user account's group membership has changed (in the SAML claims provided) upon subsequent logins, BeyondInsight does not deprovision the user by removing them from the groups that were initially mapped to their account. Instead, BeyondInsight maps the user to any newly assigned groups, in addition to the groups their account is already mapped to.

You can configure BeyondInsight to synchronize group membership each time a local user logs in using SAML, as follows:

1. Navigate to **Configuration > Authentication Management > Authentication Options**.
2. Under **SAML Logon for Local Users**, toggle the **Enable Group Resync** option to enable it.

For new installs of release 21.3 and later releases, this option is enabled by default.

Adding Active Directory, Azure Active Directory, and LDAP groups into BeyondInsight is documented in subsequent chapters. Before you can add directory groups into BeyondInsight you must first create credentials that have permissions to query the directories.

i For more information on creating and editing directory credentials, please see "[Create and Edit Directory Credentials](#)" on page 8.

Create and Edit Directory Credentials

A directory credential is required for querying Active Directory (AD), LDAP, and Azure AD, and also for adding AD, LDAP, and Azure AD groups and users in BeyondInsight. Follow the steps below for creating each type of directory credential.



Note: Before you can create an Azure AD credential, you must first register and configure permissions for an application in the Azure AD tenant where the user credentials reside. For more information, please see "[Register and Configure an Application in Azure Active Directory](#)" on page 13.

1. Navigate to **Configuration > Role Based Access > Directory Credentials**.
2. Click **Create New Directory Credential**.
3. Follow the steps in the below sections based on the type of directory you are creating.

Create an Active Directory Credential

1. Select **Active Directory** for the **Directory Type**.
2. Provide a name for the credential.
3. Enter the name of the domain where the directory and user credentials reside.
4. Enable the **Use SSL** option to use a secure connection when accessing the directory.



Note: If **Use SSL** is enabled, **SSL authentication** must also be enabled in the *BeyondInsight* configuration tool.

4. Enter the credentials for the account that has permissions to query the directory.
5. Enable the **Use Group Resolution** option to use this credential for resolving groups from the directory.



Note: Only one credential can be set for group resolution per domain or server.

6. Click **Test Credential** to ensure the credential can successfully authenticate with the domain or domain controller before saving the credential.
7. Click **CreateCredential**.

New Directory Credential

Directory Type

- Active Directory
- LDAP
- Azure Active Directory

Credentials

Title

Domain


Use SSL

Username

Password

Password

Confirm Password

Use Group Resolution (Optional) 

TEST CREDENTIAL

CREATE CREDENTIAL

DISCARD

Create an LDAP Credential

1. Select **LDAP** for the **Directory Type**.
2. Provide a name for the credential.
3. Enter the name of the LDAP server where the directory and user credentials reside.
4. Enable the **Use SSL** option to use a secure connection when accessing the directory.



Note: If **Use SSL** is enabled, **SSL authentication must also be enabled in the BeyondInsight configuration tool.**

5. Enter the credentials for the account that has permissions to query the directory.
6. Enable the **Use Group Resolution** option to use this credential for resolving groups from the directory.



Note: Only one credential can be set for group resolution per LDAP server.

7. Click **Test Credential** to ensure the credential can successfully authenticate with the domain or domain controller before saving the credential.
8. Click **Create Credential**.

New Directory Credential

➤

Directory Type

Active Directory
 LDAP
 Azure Active Directory

Credentials

Title

LDAP Server

Port - +

Use SSL

Password

Bind DN

Password SHOW

Confirm Password SHOW

Use Group Resolution (Optional) ?

TEST CREDENTIAL

CREATE CREDENTIAL

DISCARD

Create an Azure Active Directory Credential

1. Select **Azure Active Directory** for the **Directory Type**.
2. Provide a name for the credential.
3. Paste the **Client ID**, **Tenant ID**, and **Client Secret** that you copied when registering the application in your Azure AD tenant.
4. Enable the **Use Group Resolution** option to use this credential for resolving groups from the directory.



Note: Only one credential is supported per Azure AD tenant.

5. Click **Test Credential** to ensure the credential can successfully authenticate with the domain or domain controller before saving the credential.
6. Click **Save Credential**.

New Directory Credential ➔

Directory Type

Active Directory
 LDAP
 Azure Active Directory

Credentials

Title

Client ID

Tenant ID

Client Secret SHOW

Use Group Resolution (Optional) ?

TEST CREDENTIAL
CREATE CREDENTIAL
DISCARD

Edit a Directory Credential

1. From the **Directory Credentials** grid, click the vertical ellipsis for the credential, and then select **Edit**.

2. Make the changes required.




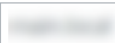

Note: For AD or LDAP credentials, if you change the **Domain** or **LDAP Server**, enable or disable the **Use SSL** option, or update the **Username** or **Bind DN**, you must change the password. Click **Change Password** to display fields to enter and confirm the new password.

3. Click **Test Credential** to ensure the edited credential can successfully authenticate with the domain or domain controller before saving the credential.
4. Click **Save Credential**.


Edit Directory Credential

Credentials


Title
Active Directory 

Domain
 

Use SSL

Username
administrator 

CHANGE PASSWORD

Use Group Resolution (Optional) 

TEST CREDENTIAL

UPDATE CREDENTIAL **DISCARD CHANGES**



Note: To use Azure AD credentials for logging into BeyondInsight, the accounts must use SAML authentication.



For more information on configuring Azure AD SAML with BeyondInsight, please see "[Configure Azure Active Directory SAML with BeyondInsight SAML](#)" on page 61.

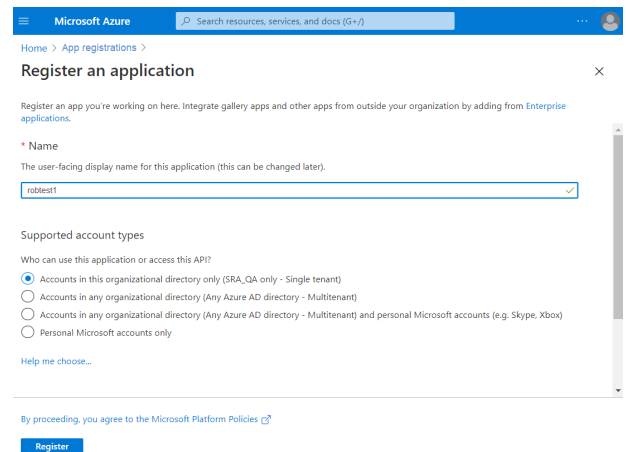
Register and Configure an Application in Azure Active Directory

Before you can create Azure Active Directory (AD) credentials and add Azure AD groups and users into BeyondInsight, you must first register and configure an application in the Azure AD tenant where the user accounts reside. The below steps walk through creating a registered application in Azure AD, creating a client secret for the registered app, and configuring API permissions for the registered app.

Create a Registered Application in Azure AD

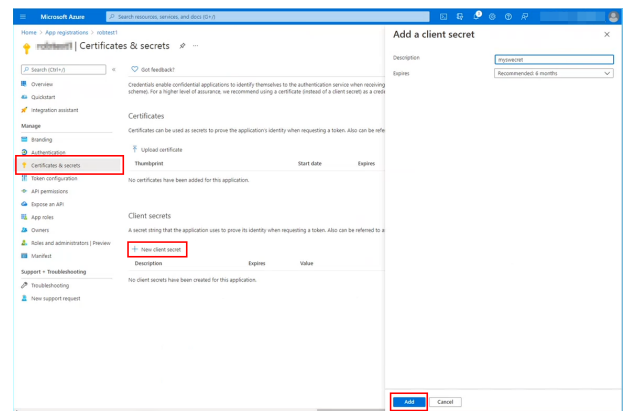
Sign into Azure and connect to the Azure AD tenant where the credentials you wish to add into BeyondInsight reside. Then follow these steps:

1. On the left menu, select **App registrations**.
2. Click **+ New Registration**.
3. Under **Name**, enter a unique application name.
4. Under **Supported account types**, select **Accounts in this organizational directory only**.
5. Click **Register**.



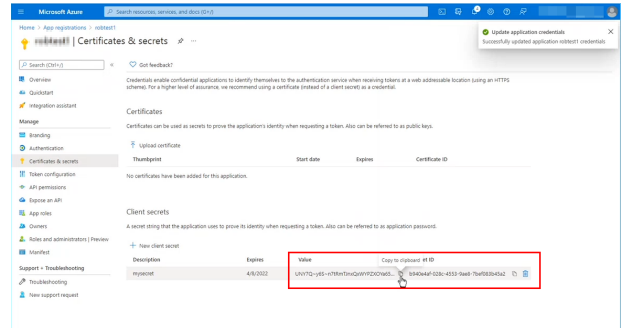
Create a Client Secret for the Registered App

1. Select the newly created app from the list of **App Registrations** (if not already visible).
2. Select **Certificates & secrets** from the left menu.
3. Click **+ New Client Secret**.
4. Provide a **Description** and appropriate **Expiry**. If you select 1 or 2 years, the directory credential must be refreshed in BeyondInsight with a new client secret on the anniversary of its creation.
5. Click **Add**.



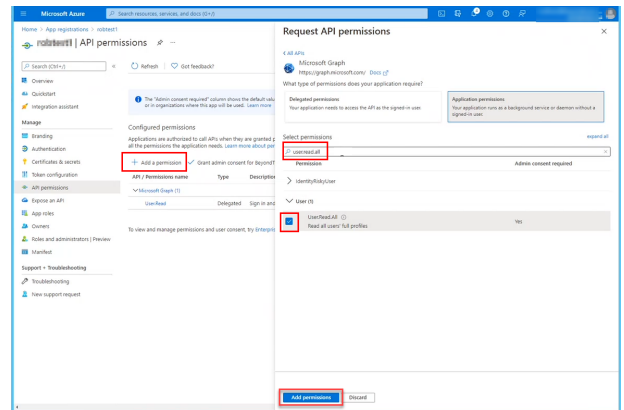
- Copy the client secret and store it in a safe place. It is required when creating directory credentials for Azure AD in BeyondInsight.

Note: This is the only time this client secret value is displayed.

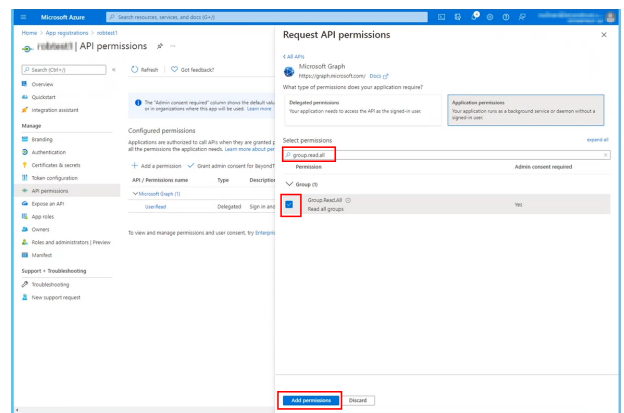


Assign API Permissions to the Registered Application

- Select the newly created app from the list of **App Registrations**
- Select **API Permissions** from the left menu.
- Click **+ Add a permission.**
- Click **Microsoft Graph.**
- Click **Application Permissions.**
- Search for **User.Read.All** and check the box in the search results.

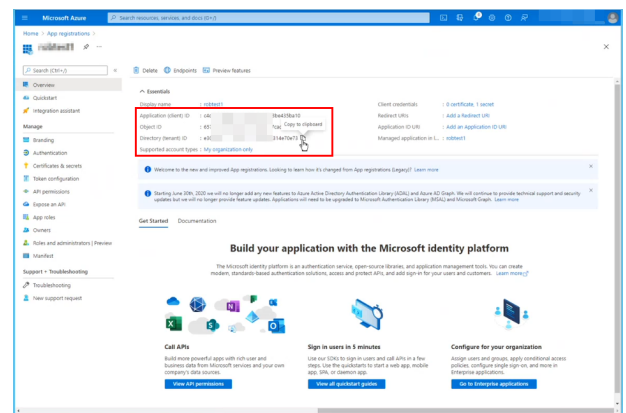
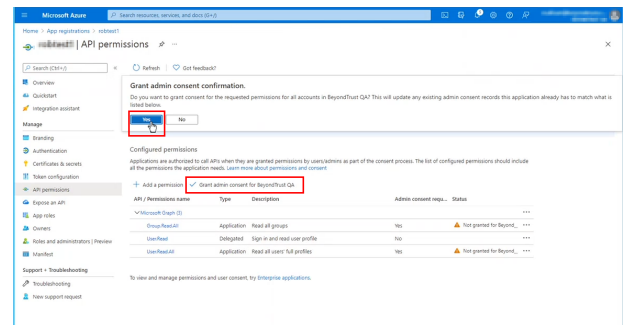
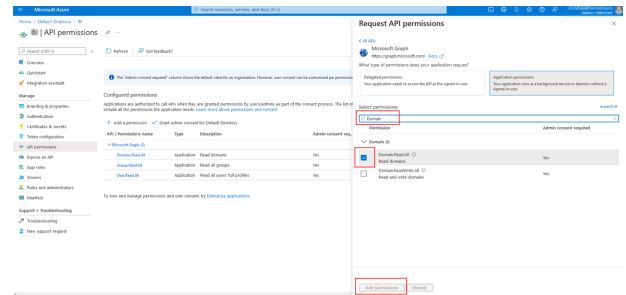


- Search for **Group.Read.All** and check the box in the search results.
- Click **Add permissions.**



9. Search for **Domain.Read.All** and check the box in the search results.
10. Click **Add permissions**.
11. Click **Grant Admin Consent for <directory name>** to give consent to the app to have those permissions you just added.
12. Click **Yes** to confirm.

Now that your registered app is created, has a client secret, and has API permissions assigned, select **Overview** from the left menu and copy the **Application (client) ID** and the **Directory (tenant) ID**. Store these in a safe place as these are required when creating directory credentials for Azure AD in BeyondInsight.



i For more information on directory credentials, please see *"Create and Edit Directory Credentials"* on page 8.

Map Directory Credentials to a Domain

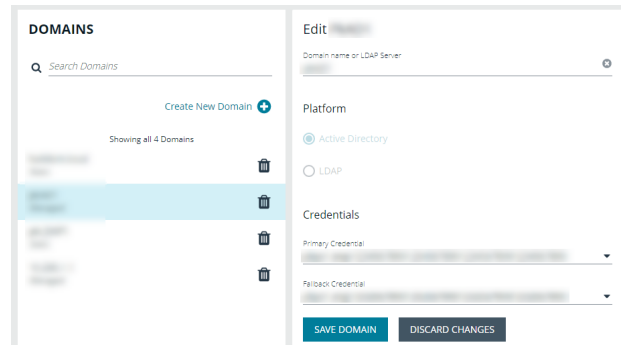
Domain management allows you to map a default primary directory credential and an optional fallback credential as preferred binding credentials used for account resolution against domains in your environment when logging in to BeyondInsight.



Note: If credentials are not mapped, or both mapped credentials fail, BeyondInsight attempts login following the legacy process of not using mapped credentials.

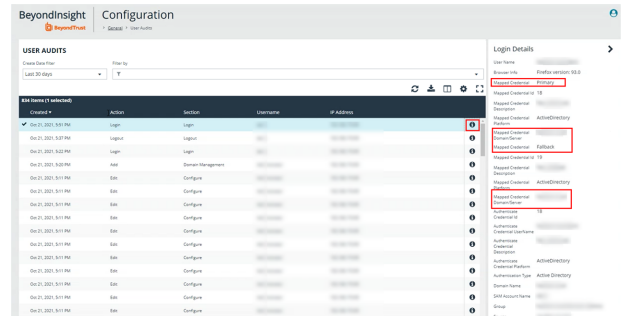
Follow these steps to add or edit primary and secondary credentials for a domain:

1. Navigate to **Configuration > Role Based Access > Domain Management**.
2. Click **Create New Domain** to create a new one.
3. Provide the name of the domain or LDAP server.
4. Select the type of platform.
5. Select a **Primary Credential** from the dropdown.
6. Select a **Fallback Credential** from the dropdown.
7. Click **Create Domain**.
8. To edit credentials for an existing domain, select the domain, make your edits, and then click **Save Domain**.



Tip: Primary and fallback credentials can include Password Safe managed accounts.

When domain management is configured for a domain and user selects the domain when logging into BeyondInsight, the specified primary and fallback credentials are used to resolve their account. The credentials used for authentication are shown in the **Login Details** for the specific login activity on the **Configuration > General > User Audits** page.



Add an Active Directory Group

Active Directory (AD) group members can log in to the management console and perform tasks based on the permissions assigned to the group. The group can authenticate against either a domain or domain controller. Upon logging into BeyondInsight, users can select a domain from the **Log in to** list on the **Login** page.



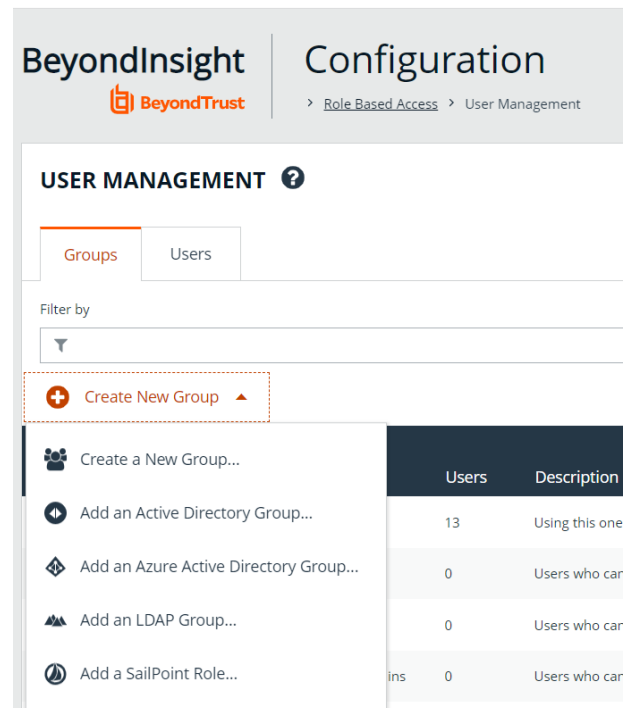
Tip: The **Log in to** list is only displayed on the **Login** page when there are either AD or LDAP user groups created in the BeyondInsight console. The **Log in to** list is displayed by default, but may be disabled / enabled by an admin user by toggling the **Show list of domains/LDAP servers on login page** setting from **Configuration > System > Site Options** page.



Note: AD users must log in to the management console at least once to receive email notifications.

Create an Active Directory Group in BeyondInsight, as follows:

1. Navigate to **Configuration > Role Based Access > User Management**.
2. From the **Groups** tab, click **Create New Group**.
3. Select **Add an Active Directory Group**.



The screenshot shows the BeyondInsight Configuration page. The breadcrumb trail is **Configuration > Role Based Access > User Management**. The main heading is **USER MANAGEMENT** with a help icon. There are two tabs: **Groups** (selected) and **Users**. Below the tabs is a 'Filter by' search box. A **Create New Group** button with a plus icon is highlighted with a dashed red box. A dropdown menu is open below it, listing several options: **Create a New Group...**, **Add an Active Directory Group...** (highlighted), **Add an Azure Active Directory Group...**, **Add an LDAP Group...**, and **Add a SailPoint Role...**. To the right of the dropdown is a table with columns **Users** and **Description**.

	Users	Description
Add an Active Directory Group...	13	Using this one
Add an Azure Active Directory Group...	0	Users who car
Add an LDAP Group...	0	Users who car
Add a SailPoint Role...	ins 0	Users who car

4. Select a credential from the list.



Note: If you require a new credential, click **Create New Credential** to create one. The new credential is added to the list of available credentials.

5. If the **Domain** field is not automatically populated, enter the name of a domain or domain controller.
6. After you enter the domain or domain controller credential information, click **Search Active Directory**. A list of security groups in the selected domain is displayed.

Active Directory Group Search

Credential

[Create New Credential...](#)

Domain

Filter by Group Name

SEARCH ACTIVE DIRECTORY

CANCEL



Note: The default filter is an asterisk (*), which is a wild card filter that returns all groups. For performance reasons, a maximum of 250 groups from Active Directory is retrieved.

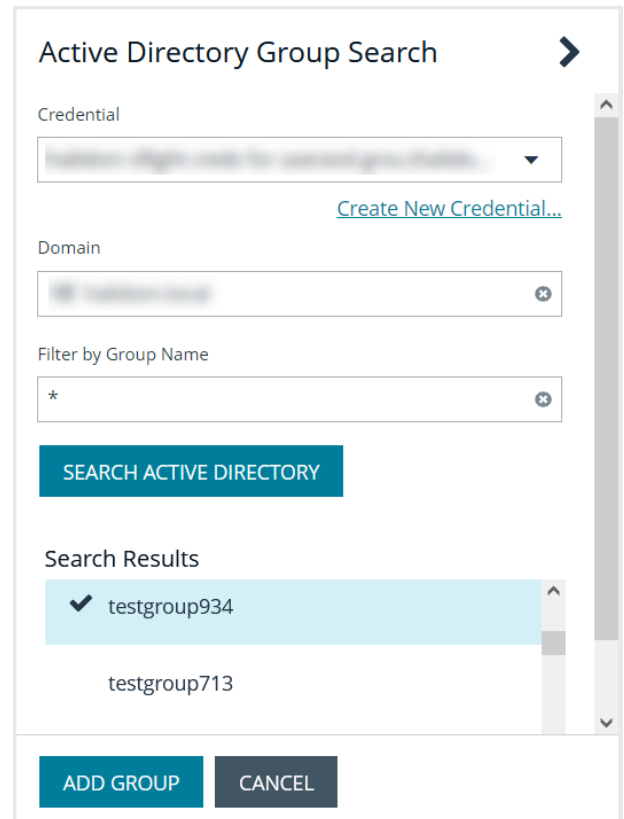
7. Set a filter on the groups to refine the list, and then click **Search Active Directory**.



Example: Sample filters:

- **a*** returns all group names that start with "a"
- ***d** returns all group names that end with "d"
- ***sql*** returns all groups that contain "sql" in the name

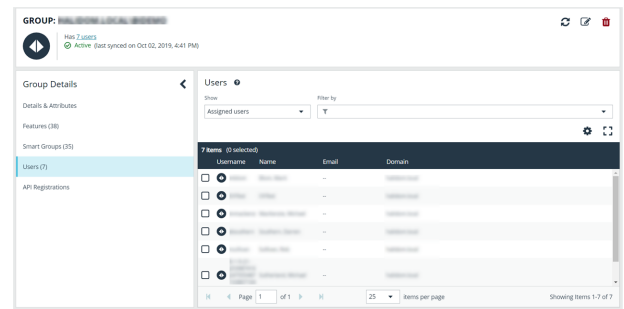
- Select a group, and then click **Add Group**.



- The group is added and set to **Active** but not provisioned or synchronized with AD. Synchronization with AD to retrieve users begins immediately.
- Once the group has been synced with AD, you can view the users assigned to the group by selecting **Users** from the **Group Details** pane.



Tip: Use the filters above the grid to narrow down the list of users displayed in the grid by **Type**, **Username**, **Name**, **Email**, or **Domain**, or to show users not assigned to the group.




Note: By default, new groups are not assigned any permissions. You must assign permissions on features and Smart Groups after creating a new group. For more information on permissions and how to assign them, please see ["Assign Group Permissions"](#) on page 28.

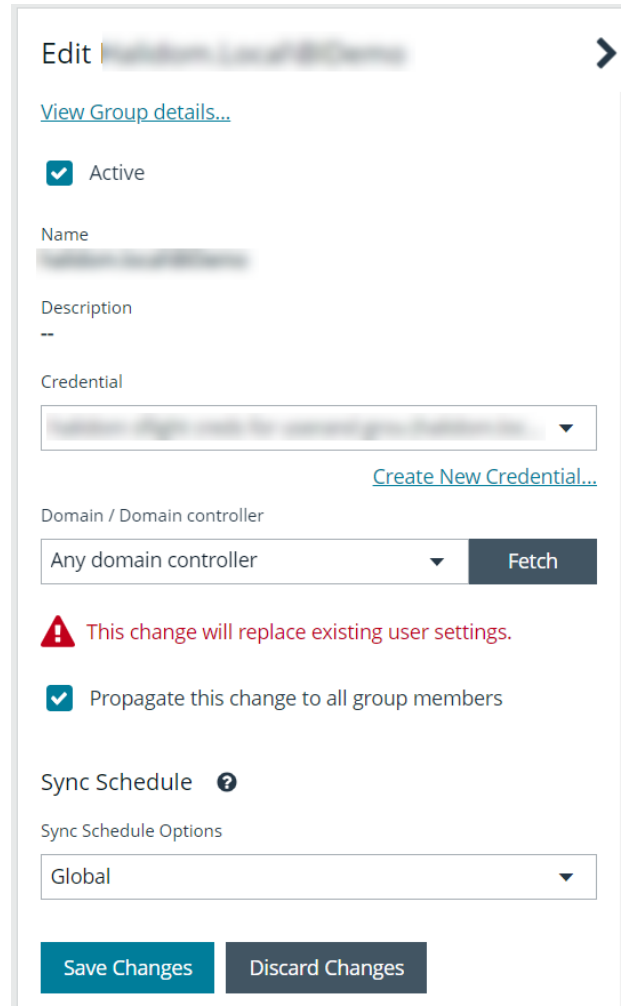


For more information on creating and editing directory credentials, please see ["Create and Edit Directory Credentials"](#) on page 8.

Propagate Domain Changes to Group Members

Domain changes can be propagated to all users in a group by enabling the **Propagate this change to all group members** option for the group. By default, this is set to OFF. When enabled, changes to the preferred domain controller at the group level are applied to all group members.

When creating a new group, we advise turning this setting on by editing the new group details. This ensures that all users in the new group get a preferred domain controller from the initial setup of the group.



Edit [Group Name] >

[View Group details...](#)


Active

Name [Group Name]


Description --

Credential [Credential Name] [Create New Credential...](#)

Domain / Domain controller [Any domain controller] [Fetch](#)

 This change will replace existing user settings.

Propagate this change to all group members

Sync Schedule 

Sync Schedule Options [Global]

[Save Changes](#) [Discard Changes](#)

Add an Azure Active Directory Group

Azure Active Directory (AD) group members can log in to the management console using SAML authentication and perform tasks based on the permissions assigned to the group. Upon logging into BeyondInsight, users can select a domain from the **Log in to** list on the **Login** page.



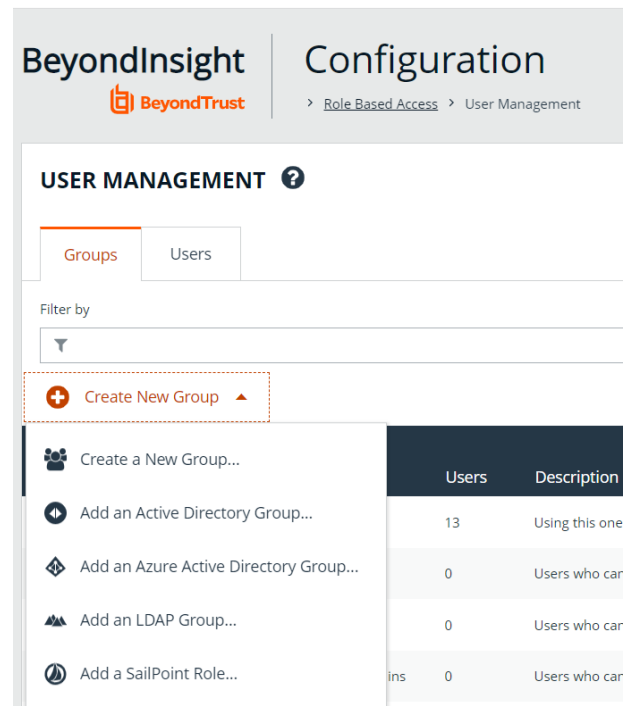
Tip: The **Log in to** list is only displayed on the **Login** page when there are either AD or LDAP user groups created in the BeyondInsight console. The **Log in to** list is displayed by default, but may be disabled / enabled by an admin user by toggling the **Show list of domains/LDAP servers on login page** setting from **Configuration > System > Site Options** page.



Note: AD users must log in to the management console at least once to receive email notifications.

Create an Azure Active Directory Group in BeyondInsight, as follows:


1. Navigate to **Configuration > Role Based Access > User Management**.
2. From the **Groups** tab, click **Create New Group**.
3. Select **Add an Azure Active Directory Group**.



The screenshot shows the BeyondInsight Configuration page. The breadcrumb trail is **Configuration > Role Based Access > User Management**. The main heading is **USER MANAGEMENT** with a help icon. There are two tabs: **Groups** (selected) and **Users**. Below the tabs is a 'Filter by' search box. A **Create New Group** button with a plus icon is highlighted with a dashed red box. A dropdown menu is open below it, listing several options: **Create a New Group...**, **Add an Active Directory Group...**, **Add an Azure Active Directory Group...**, **Add an LDAP Group...**, and **Add a SailPoint Role...**. To the right of the dropdown is a table with columns **Users** and **Description**.

	Users	Description
Add an Active Directory Group...	13	Using this one
Add an Azure Active Directory Group...	0	Users who car
Add an LDAP Group...	0	Users who car
Add a SailPoint Role...	ins 0	Users who car

- Select a credential from the list.

 **Note:** If you require a new credential, click **Create a New Credential** to create a new credential. The new credential is added to the list of available credentials.

- Click **Search Azure Active Directory**. A list of security groups displays.


Azure Active Directory Group Search ➔

Credential [Create New Credential...](#)


Filter by Group Name

*

SEARCH AZURE ACTIVE DIRECTORY
CANCEL

 **Note:** For performance reasons, a maximum of 250 groups from Azure AD is retrieved. The default filter is an asterisk (*), which is a wildcard filter that returns all groups. Use the group filter to refine the list.

- Set a filter on the groups that are to be retrieved, and then click **Search Azure Active Directory**.

 **Example:** Sample filters:

- **a*** returns all group names that start with a.
- ***d** returns all group names that end with d.
- ***sql*** returns all groups that contain sql in the name.

- Select a group, and then click **Add Group**.

Search Results

Functional Accounts
Group used to store Functional Accounts for QA testing

✓ PS_QA
PasswordSafe QA

Managed Accounts
Password Safe Managed Accounts

MsamiGRP
First test group

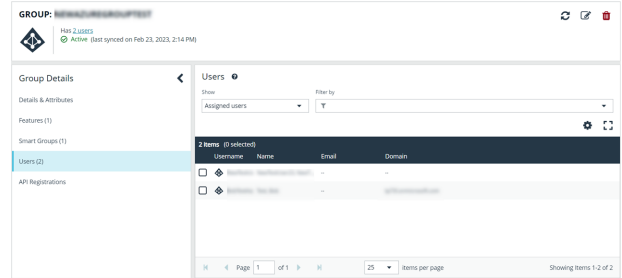
Automation
For Automation users


Admir
Group of administrators


ADD GROUP
CANCEL


- The group is added and set to **Active** but not provisioned or synchronized with Azure AD. Synchronization with Azure AD to retrieve users begins immediately.

- Once the group has been synced with Azure AD, you can view the users assigned to the group, as well as unassigned users, by selecting **Users** from the **Group Details** section and then using the filters.



 **Note:** By default, new groups are not assigned any permissions. You must assign permissions on features and Smart Groups after creating a new group. For more information on permissions and how to assign them, please see "[Assign Group Permissions](#)" on page 28.

 **Note:** To use Azure Active Directory credentials for logging into BeyondInsight, the accounts must use SAML authentication. For more information on configuring Azure AD SAML with BeyondInsight, please see "[Configure Azure Active Directory SAML with BeyondInsight SAML](#)" on page 61.

 For more information on creating and editing directory credentials, please see "[Create and Edit Directory Credentials](#)" on page 8.

Add an LDAP Group

LDAP group members can log in to the management console and perform tasks based on the permissions assigned to the group. The group can authenticate against either a domain or domain controller. Upon logging in to BeyondInsight, users can select a domain or LDAP server from the **Log in to** list on the **Login** page.



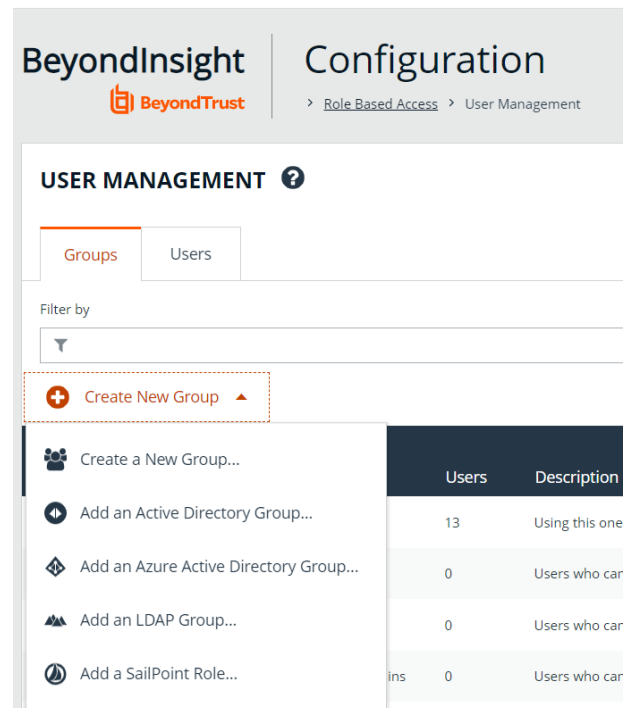
Tip: The **Log in to** list is only displayed on the **Login** page when there are either AD or LDAP user groups created in the BeyondInsight console. The **Log in to** list is displayed by default, but may be disabled / enabled by an admin user by toggling the **Show list of domains/LDAP servers on login page** setting from **Configuration > System > Site Options** page.



Note: LDAP users must log in to the management console at least once to receive email notifications.

Create an LDAP Group in BeyondInsight, as follows:

1. Navigate to **Configuration > Role Based Access > User Management**.
2. From the **Groups** tab, click **Create New Group**.
3. Select **Add an LDAP Group** from the list.



The screenshot shows the BeyondInsight Configuration page. The breadcrumb trail is Configuration > Role Based Access > User Management. The 'USER MANAGEMENT' section has a 'Groups' tab selected. Below the tabs is a 'Filter by' search box. A '+ Create New Group' button is highlighted with a dashed red box. A dropdown menu is open, listing the following options:

- Create a New Group...
- Add an Active Directory Group...
- Add an Azure Active Directory Group...
- Add an LDAP Group...
- Add a SailPoint Role...

On the right side of the dropdown, a table is partially visible with the following columns: 'Users' and 'Description'. The table contains the following data:

Users	Description
13	Using this one
0	Users who car
0	Users who car
ins 0	Users who car

4. Select a credential from the list.



Note: If you require a new credential, click **Create a New Credential** to create a new one. The new credential is added to the list of available credentials.

5. Click **Fetch** to load the list of Domain Controllers, and then select one.
6. To filter the group search, enter keywords in the group filter or use a wild card, and then click **Search LDAP**.

LDAP Group Search ➤

Credential

[Create New Credential...](#)

Server

Domain / Domain controller
 FETCH

Filter by Group Name

SEARCH LDAP **CANCEL**



Example: Sample filters:

- **a*** returns all group names that start with a.
- ***d** returns all group names that end with d.
- ***sql*** returns all groups that contain sql in the name.

7. Select a group, and then click **Continue to Add Group**.

LDAP Group Search

SEARCH LDAP

Search Results

- OracleDBSecurityAdmins
Users who can create and delete enterprise domains in this realm, move database
- OracleDBCreators
Users who can register databases in this realm, including creating the database
- OracleNetAdmins
Users who can register Network Service Alias in this Oracle Context.
- OracleDefaultDomain
- OracleContextAdmins
Users who can administer all entities in this Oracle Context

CONTINUE TO ADD GROUP CANCEL

8. Select the **Group Membership Attribute** and **Account Naming Attribute**.
9. Enter a **Base Distinguished Name**, if not automatically populated.
10. Click **Add Group**.

LDAP Group Search

 Active

Name
OracleNetAdmins

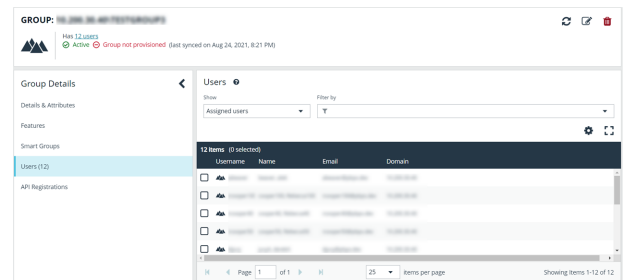
Description
Users who can register Network Service Alias in t

Group Membership attribute

Account Naming attribute

Base Distinguished Name

11. The group is added and set to **Active** but is not provisioned or synchronized with LDAP. Synchronization with LDAP to retrieve users begins immediately.
12. Once the group has been synced with LDAP, you can view the users assigned to the group, as well as unassigned users, by selecting **Users** from the **Group Details** section, and then using the filters.



GROUP: OracleNetAdmins
New 12 users
Active Group not provisioned (last synced on Aug 24, 2021, 8:21 PM)

Group Details

Details & Attributes

Features

Smart Groups

Users (12)

API Registrations

Users

Filter by
Assigned users

12 items (0 selected)	Username	Name	Email	Domain
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				

Showing items 1-12 of 12



Note: By default, new groups are not assigned any permissions. You must assign permissions on features and smart groups after creating a new group. For more information on permissions and how to assign them, please see ["Assign Group Permissions"](#) on page 28.



For more information on creating and editing directory credentials, please see ["Create and Edit Directory Credentials"](#) on page 8.

Assign Group Permissions

Permissions

The following permissions may be assigned to user groups in BeyondInsight for each feature.

Permission	Description
No Access	Users cannot access the selected feature. In most cases, the feature is not visible to the users.
Read Only	Users can view selected areas, but cannot change information.
Full Control	Users can view and change information for the selected feature.

Permissions for a BeyondInsight user must be assigned cumulatively and at the group level. You must assign permissions on features and Smart Groups after creating a new group in order for users in that group to be able to access features in the product. For example, if you want a BeyondInsight administrator to manage discovery scans only, then you must assign full control for the following features:

- **Management Console Access**
- **Asset Management**
- **Reports Management**
- **Scan – Job Management**
- **Scan Management**



Note: In addition to the group permissions noted, for the group to be provisioned, there must be at least one enabled Smart Group on the group. This sets the scope for the features.

Assign Features Permissions




Note: The features listed are based upon your BeyondInsight license. Only features relevant to your licensed installation are listed.





1. Navigate to **Configuration > Role Based Access > User Management**.
2. Click the vertical ellipsis button for the group, and then select **View Group Details**.
3. Under **Group Details**, click **Features**.
4. Filter the list of features displayed in the grid using the **Show** and **Filter by** dropdown lists.
5. Select the features you wish to assign permissions to, and then click **Assign Permissions** above the grid.
6. Select **Assign Permissions Read Only**, **Assign Permissions Full Control**, or **Disable Permissions**.

The following table provides information on the features permissions you can assign to your groups.

Feature	Provides Permissions To:
Analytics & Reporting	Log in to the console and access Analytics & Reporting to generate and subscribe to reports.
Appliance (U-Series) Access	Grant access to manage the U-Series Appliance as a BeyondInsight user.

Feature	Provides Permissions To:
Asset Management	<p>Create Smart Rules.</p> <p>Edit and delete buttons on the Asset Details window.</p> <p>Create Active Directory queries.</p> <p>Create address groups.</p>
Attribute Management	Add, rename, and delete attributes when managing user groups.
Credential Management	Add and change credentials when running scans and deploying policies.
Directory Credential Management	Grant access to the configuration area where directory credentials are managed. This feature must be enabled to support access to directory queries as well.
Directory Query Management	<p>Grant access to the configuration area where directory queries are managed.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  Note: Access to <i>Directory Credential Management</i> must also be granted. </div>
Domain Management	Grants the user permission to configure mappings of bind credentials to domains for account resolution.
Endpoint Privilege Management	Grant access to the Endpoint Privilege Management features, excluding Policy Editor and Reporting.
Endpoint Privilege Management Policy Editor	Grant access to the Endpoint Privilege Management Policy Editor feature.
Endpoint Privilege Management Reporting	Grant access to the Endpoint Privilege Management Reporting feature.
Endpoint Privilege Management for Unix & Linux	Grant access to the Endpoint Privilege Management for Unix & Linux features.
File Integrity Monitoring	Work with File Integrity rules.
License Reporting	View the Licensing folder in Analytics & Reporting (MSP reports, Privilege Management for Windows, Privilege Management for Mac true-up reports, and Assets Scanned report).
Management Console Access	Access the BeyondInsight management console.
Manual Range Entry	Allow the user to manually enter ranges for scans and deployments rather than being restricted to smart groups. The specified ranges must be within the selected smart group.
Option Management	Change the application options settings (for example, account lockout and account password settings).
Options - Connectors	Access the configuration area where connectors are managed.
Options - Scan Options	Access the configuration area where scan options are managed.
Password Safe Account Management	<p>Grant read or write permissions to the following features on the Managed Accounts page and through the public API:</p> <ul style="list-style-type: none"> • Bulk delete accounts • Add accounts to a Quick Group • Remove accounts from a Quick Group • Add, edit, and delete accounts
Password Safe Admin Session	Password Safe web portal admin sessions.

Feature	Provides Permissions To:
Password Safe Admin Session Reviewer	Grant a user admin session reviewer permissions only.
Password Safe Global API Quarantine	Access to the Quarantine APIs.
Password Safe Bulk Password Change	Change more than one password at a time.
Password Safe Agent Management	Grant a user administrator permissions to the Configuration > Privileged Access Management Agents page.
Password Safe Configuration Management	Grant a user administrator permissions to the Configuration > Privileged Access Management page.
Password Safe Domain Management	Check the Read and Write boxes to permit users to manage domains.
Password Safe Policy Management	Grant a user administrator permissions to the Configuration > Privileged Access Management Policies page.
Password Safe Role Management	Allows a user to manage roles, provided they have the following permissions: Password Safe Role Management and User Account Management .
Password Safe System Management	Read and write managed systems through the public API.
Password Safe Ticket System Management	This feature is not presently used.
Reports Management	Run scans, create reports, and create report categories.
Scan - Job Management	Activate Scan and Start Scan buttons. Activate Abort , Resume , Pause , and Delete on the Job Details page.
Scan - Report Delivery	Allow a user to set report delivery options when running a scan: <ul style="list-style-type: none"> • Export Type • Notify when complete • Email report to • Include scan metrics in email (only available for All Audits Scan)
Scan Management	Delete, edit, duplicate, and rename reports on the Manage Report Templates page. Activate New Report and New Report Category . Activate the Update button on the Edit Scan Settings view.
Secrets Safe	Provides access to Secrets Safe for all members of the selected group.
Session Monitoring	Use the session monitoring features.

Feature	Provides Permissions To:
Smart Rule Management – Asset	Grants permission to view, create, and edit asset Smart Rules; editing is limited to Smart Rules that are enabled for groups the user is a member of. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  Note: Newly created Smart Rules created by a non-administrator are automatically enabled with read permissions for all groups that the user is a member of, and with full permissions for all groups that the user is a member of AND has the Asset Management permissions for. For more information, see Use Smart Rules to Organize Assets in the BeyondInsight User Guide. </div>
Smart Rule Management – Managed Account	Grants permission to view, create, and edit managed account Smart Rules; editing is limited to smart rules that are enabled for groups the user is a member of. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  Note: Newly created Smart Rules created by a non-administrator are automatically enabled with read permissions for all groups that the user is a member of, and with full permissions for all groups that the user is a member of AND has the Asset Management permissions for. For more information, see Use Smart Rules to Organize Assets in the BeyondInsight User Guide. </div>
Smart Rule Management – Managed System	Grants permission to view, create, and edit managed system Smart Rules; editing is limited to smart rules that are enabled for groups the user is a member of. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  Note: Newly created Smart Rules created by a non-administrator are automatically enabled with read permissions for all groups that the user is a member of, and with full permissions for all groups that the user is a member of AND has the Asset Management permissions for. For more information, see Use Smart Rules to Organize Assets in the BeyondInsight User Guide. </div>
Smart Rule Management – Policy User	Grants permission to view, create, and edit policy user Smart Rules; editing is limited to smart rules that are enabled for groups the user is a member of. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  Note: Newly created Smart Rules created by a non-administrator are automatically enabled with read permissions for all groups that the user is a member of, and with full permissions for all groups that the user is a member of AND has the Asset Management permissions for. For more information, see Use Smart Rules to Organize Assets in the BeyondInsight User Guide. </div>
Ticket System	View and use the ticket system.
Ticket System Management	Mark a ticket as inactive. The ticket no longer exists when Inactive is selected.
User Accounts Management	Add, delete, or change user groups and user accounts. A minimum of read access to Directory Credential Management must also be granted to enable creation of AD and LDAP Groups.
User Audits	View audit details for management console users on the User Audits page.
U-Series Appliance Administrator	Provides access to manage all aspects of the U-Series Appliance.
U-Series Appliance Backups	Provides access to manage the Backup and Restore options of the U-Series Appliance.

Feature	Provides Permissions To:
U-Series Appliance High Availability	Provides access to manage the High Availability features of the U-Series Appliance.
U-Series Appliance Login	Provides access to manage the U-Series Appliance as a BeyondInsight user.
U-Series Appliance Manage RDP	Provides access to manage Remote Desktop Protocol to the U-Series Appliance.
U-Series Appliance Patching	Provides access to manage updates to the U-Series Appliance.



For more information, please see the *Managed Accounts* section in the [BeyondInsight and Password Safe API Guide](https://www.beyondtrust.com/docs/beyondinsight-password-safe/ps/api/password-safe/managed-accounts.htm) at <https://www.beyondtrust.com/docs/beyondinsight-password-safe/ps/api/password-safe/managed-accounts.htm>.

Features Permissions Required for Configuration Options

Configuration Option	Feature and Permission
Active Directory Queries	Asset Management - Full Control.
Address Groups	Asset Management - Full Control.
Attributes	Asset Management - Full Control.
Connectors	Asset Management and Management Console Access - Full Control.
Password Safe Connections	Member of the built-in BeyondInsight Administrators group.
Endpoint Privilege Management Module	Management Console Access and Endpoint Privilege Management - Full Control.
Scan Options	Scan Management - Full Control.
Services	Member of the built-in BeyondInsight Administrators group.
User Audits	User Audits - Full Control.
User Management	Everyone can access. Users without the Full Control permission to User Account Management feature can edit only their user record.
Workgroups	User Accounts Management - Full Control.

Assign Smart Groups Permissions

1. Navigate to **Configuration > Role Based Access > User Management**.
2. Click the vertical ellipsis button for the group, and then select **View Group Details**.
3. Under **Group Details**, select **Smart Groups**.
4. Filter the list of Smart Groups displayed in the grid using the **Show** and **Filter by** dropdown lists.
5. Select the Smart Groups you wish to assign permissions to, and then click **Assign Permissions** above the grid.
6. Select **Assign Permissions Read Only**, **Assign Permissions Full Control**, or **Disable Permissions**.

Configure RADIUS Two-Factor Authentication for BeyondInsight and Password Safe

You can configure two-factor authentication using a RADIUS server to log in to the BeyondInsight management console, Analytics & Reporting, and Password Safe.

In BeyondInsight, you must first configure the alias to represent the RADIUS server instance, and then select two-factor authentication settings for the user.

After you set up RADIUS two-factor authentication, users must log in using the two-factor authentication method.

Configure the RADIUS Server

1. Navigate to **Configuration > Authentication Management > Radius two-factor authentication**.
2. Click **Create New RADIUS Alias**.
3. Set the following:
 - **Alias:** Provide a name used to represent the RADIUS server instance. This is displayed in the RADIUS server grid and must be unique.
 - **Filter:** Select a filter that will be used to determine if this RADIUS server instance should be used. If you select one of the domain filters, you must enter a **Value**.
 - **Value:** If one of the domain filters is selected, enter a value that will identify the domain. Enter a domain or comma-separated list of domains, depending on the setting selected for the filter.
 - **Host:** Enter the DNS name or the IP address for your RADIUS server.
 - **Resource Zone:** Select a Resource Zone to send RADIUS requests through. Traffic proxies through the Resource Broker and on to the on-prem RADIUS server.
 - **Authentication Mechanism:** Select **PAP**, or **MSCHAPv2** if applicable. MSCHAPv2 is supported only if the Duo proxy is configured to use a RADIUS client.
 - **Authentication Port:** Enter the listening port that is configured on your RADIUS server to receive authentication requests. The default port is **1812**.
 - **Authentication Request Timeout:** Enter the time in seconds that you want BeyondInsight to wait for a response from the RADIUS server before the request times out. The default value is ten seconds.
 - **Shared Secret:** Enter the shared secret that is configured on your RADIUS server.
 - **Initial Request:** Provide the value passed to the RADIUS server on the first authentication request. Select from the following: **Forward User Name** (default), **Forward User Name and Password**, **Forward User Name and Token**.
 - **Prompt:** Provide the first message that displays to the user when they log in to the application. This setting is available only when **Forward User Name and Token** is selected as the initial request value.
 - **Transmit NAS Identifiers:** Enable this option if it is applicable to your environment. When this option is enabled, NAS identifiers are transmitted to permit access. In some cases, a RADIUS server does not permit access if NAS identifiers are not transmitted. BeyondInsight transmits its NAS IP Address and its NAS Identifier.
4. Click **Create New RADIUS Alias**.



Note: If a Resource Zone is selected, traffic is routed over a Resource Broker. If no Resource Zone is selected, traffic is routed directly from the cloud.

Configure RADIUS Two-Factor Authentication Using Duo

This section is a high-level overview on the configuration required for BeyondInsight and Password Safe to work with a RADIUS infrastructure using Duo.

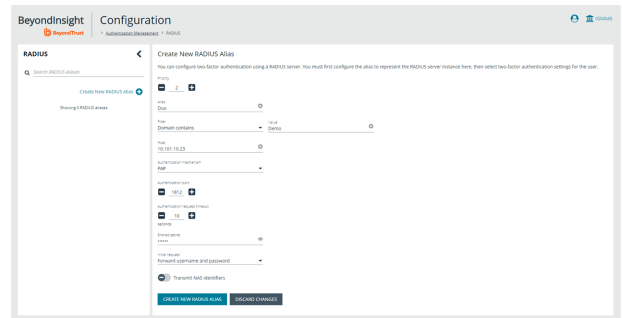
BeyondInsight and Password Safe can work with the following Duo configurations:

- RADIUS Auto
- RADIUS Challenge
- RADIUS Duo only

Configure Two-Factor for RADIUS Auto and RADIUS Challenge Configurations Using Duo

Follow the steps outlined above in "Configure the RADIUS Server" on page 33, using the following settings:

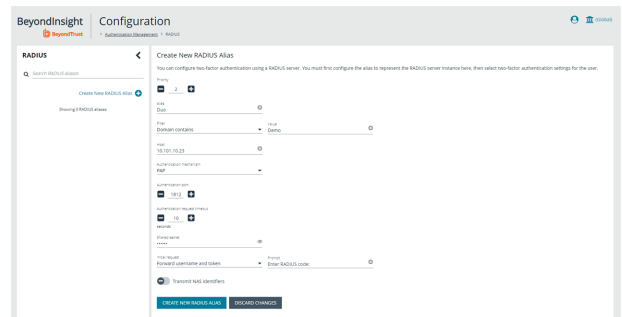
- For **Alias**, enter **Duo**.
- For **Authentication Mechanism**, select **PAP**.
- For **Initial Request**, select **Forward User Name and Password**.



Configure Two-Factor for a RADIUS Duo-only Configuration

Follow the steps outlined above in "Configure the RADIUS Server" on page 33, using the following settings:

- For **Alias**, enter **Duo**.
- For **Authentication Mechanism**, select **PAP**.
- For **Initial Request**, select **Forward User Name and Token**.
- For **Initial Prompt**, enter a message to display on the BeyondInsight login page to provide guidance to users on the information to enter. In this case, the user must enter the RADIUS code.



**Example: Duo-Only Login Page**

After RADIUS two-factor authentication is configured, the login page for end user varies, depending on the configured settings.

The screenshot shows a login page configured for Duo-only authentication. The user can enter a passcode to log in or select a device to send a code to. The user then enters the code on the login page.

Duo two-factor login for user1. Enter a passcode or select one of the following options: 1. Duo Push to XXX-XXX-6313 2. Phone call to XXX-XXX-6313 3. SMS passcodes to XXX-XXX-6313 (next code starts with: 2) Passcode or option (1-3):

Configure Alternate Directory Attribute for RADIUS

To configure an alternate directory attribute for Active Directory and LDAP users for RADIUS authentication, follow the below steps.



Note: This setting is optional.

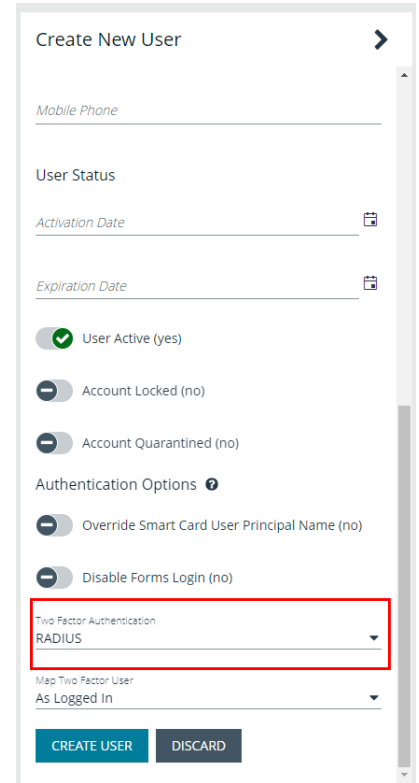
1. Navigate to **Configuration > Authentication Management > Authentication Options**.
2. Under **RADIUS Two-Factor Authentication**, set the following:
 - **Alternate directory attribute:** Enter the Active Directory or LDAP attribute that is matched on the RADIUS server to identify the user account. This can be any attribute in Active Directory or LDAP. The default value is **extensionName**.
 - **Enable for new directory accounts:** Click the toggle to enable this attribute for new accounts when they are discovered.
3. Click **Update RADIUS Two-Factor Authentication Options**.

Set RADIUS Two-Factor Authentication on User Accounts

The type of two-factor authentication can be set on a user account when a new user is created or when editing an existing user account. You can enable RADIUS two-factor authentication for all new users from **Authentication Options > RADIUS Two-Factor Authentication** settings, as indicated in the above section.

1. Select **Configuration > Role Based Access > User Management > Users > Create New User**.

- At the bottom of the user account settings, select **RADIUS** from the **Two Factor Authentication** list.



The screenshot shows the 'Create New User' form with the following fields and options:

- Mobile Phone**: Text input field.
- User Status**: Section header.
- Activation Date**: Date picker field.
- Expiration Date**: Date picker field.
- User Active (yes)**: Radio button (checked).
- Account Locked (no)**: Radio button (unchecked).
- Account Quarantined (no)**: Radio button (unchecked).
- Authentication Options**: Section header.
- Override Smart Card User Principal Name (no)**: Radio button (unchecked).
- Disable Forms Login (no)**: Radio button (unchecked).
- Two Factor Authentication**: Dropdown menu with **RADIUS** selected (highlighted with a red box).
- Map Two Factor User**: Dropdown menu with **As Logged In** selected.
- CREATE USER** and **DISCARD** buttons at the bottom.

Configure SecureAuth with Password Safe using RADIUS

Use the following procedures to configure SecureAuth two-factor authentication with Password Safe and RADIUS.

1. Install the SecureAuth app on a mobile device and click the bar code to scan.
2. In the BeyondInsight Console, perform the following:
 - Configure RADIUS, ensuring **UDP port 1812** is open for the SecureAuth instance.
 - Create a group with role access for managed accounts.
 - Create a user. The user must also be a user in the SecureAuth system.
 - Enable two-factor authentication for the user. Map the user to the account name in SecureAuth.

Test the Configuration

1. Log in to the Password Safe web portal using the user account that you created.
2. Enter **1** to receive the passcode in a text message.
3. Retrieve the passcode from your mobile device.
4. Enter the passcode on the Password Safe web portal login page, and then click **Login**.
5. Test other login methods.



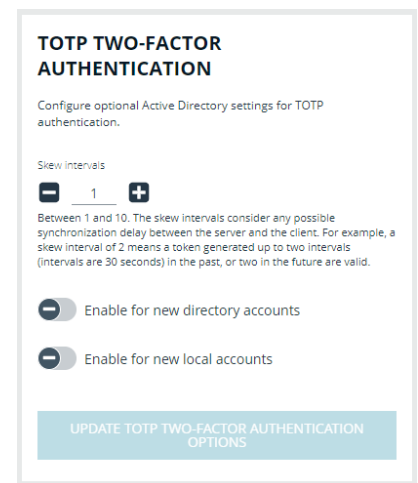
Note: For the push method (4), increase the timeout to **30 seconds**.

Configure Two-Factor Authentication for BeyondInsight and Password Safe Using a Time-Based One-Time Password

BeyondTrust supports two-factor authentication options using a time-based one-time password (TOTP). TOTP integrates with two-factor authentication apps. The end user must install one of these apps, such as Google Authenticator or Microsoft Authenticator, to register their device. As part of the configuration process, the user must register this two-factor app with BeyondTrust.

Configure TOTP Two-Factor Authentication Settings

1. Navigate to **Configuration > Authentication Management > Authentication Options**.
2. Under **TOTP Two-Factor Authentication**, set the following:
 - **Skew Intervals:** Considers how many prior tokens are valid and accepted. You can increase this value from the default if a lag is anticipated in the synchronization between the server and client.
 - **Enable for new directory accounts**
 - **Enable for new local accounts**
3. Click **Update TOTP Two-Factor Authentication Options**.

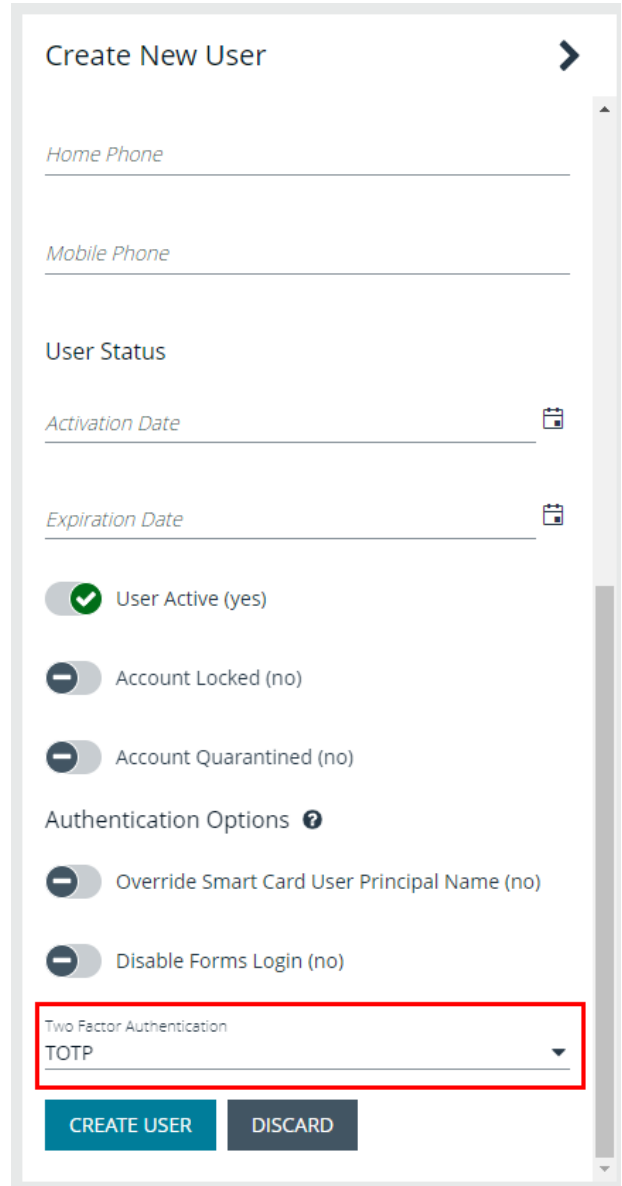


Set TOTP Two-Factor Authentication on User Accounts

The type of two-factor authentication can be set on a user account when a new user is created or when editing an existing user account. You can enable TOTP two-factor authentication for all new users from **Authentication Options > TOTP Two-Factor Authentication** settings, as indicated in the above section.

1. Select **Configuration > Role Based Access > User Management > Users > Create New User**.

- At the bottom of the user account settings, select **TOTP** from the **Two Factor Authentication** list.



Create New User

Home Phone

Mobile Phone

User Status

Activation Date

Expiration Date

User Active (yes)

Account Locked (no)

Account Quarantined (no)

Authentication Options

Override Smart Card User Principal Name (no)

Disable Forms Login (no)

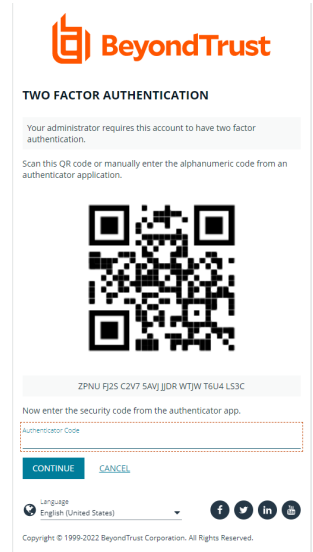
Two Factor Authentication
TOTP

CREATE USER DISCARD

Register a Device

The first time a new user logs in, they must register their device with a multiple authenticator app.

1. Download an authenticator app.
2. Scan the QR code or manually enter the alphanumeric code into the authenticator app. Once the code is detected, the app generates a 6-digit authenticator code.
3. Enter the code into the **Authenticator Code** field, and then click **Continue**. This activates the user's device.
4. Click **Continue**, and then enter login credentials.
5. Enter 6-digit code again.
6. Click **Submit**.

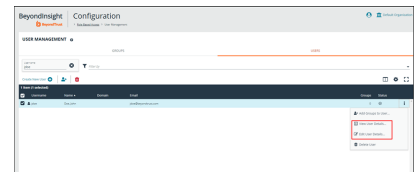


Note: The authenticator app generates a new code roughly every 30 seconds.

View and Edit TOTP Two-Factor Authentication

You can view and edit two-factor authentication in **User Details**.

1. Select **Configuration > Role Based Access > User Management > Users**.
2. Find the user and click the ellipsis on the right side to **View User Details** or **Edit User Details**.



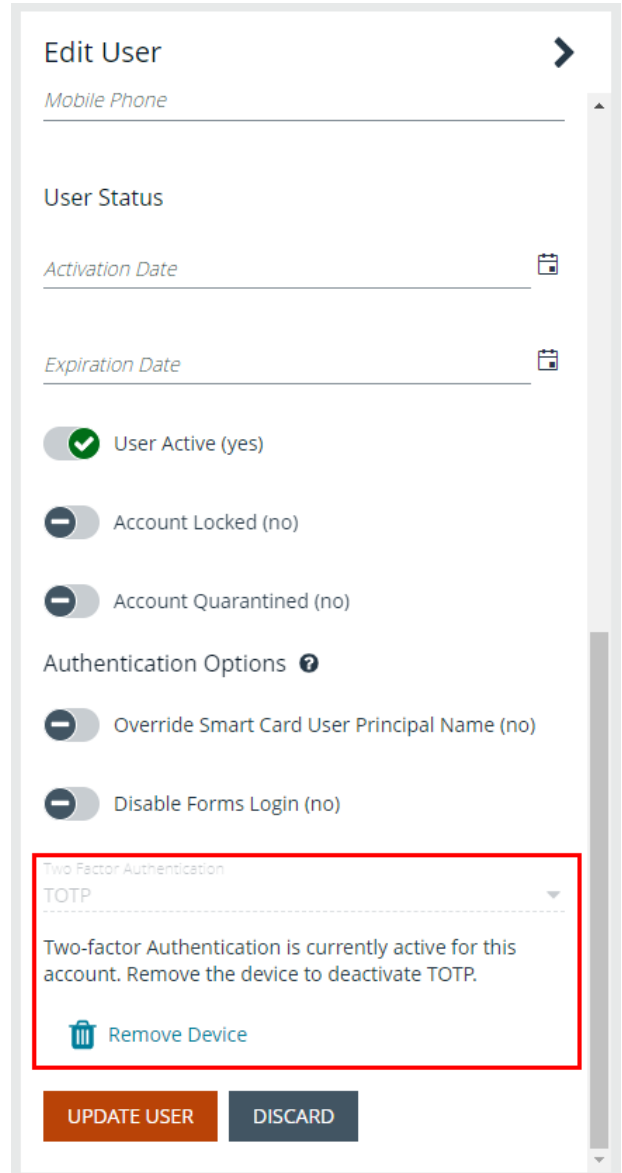
Unregister a Device

Administrators can unregister a device by removing it from a user account. Users can remove a device from their own account only.

Administrators

1. Select **Configuration > Role Based Access > User Management**
2. Find the user and click the ellipsis on the right side.
3. Select **Edit User Details**.

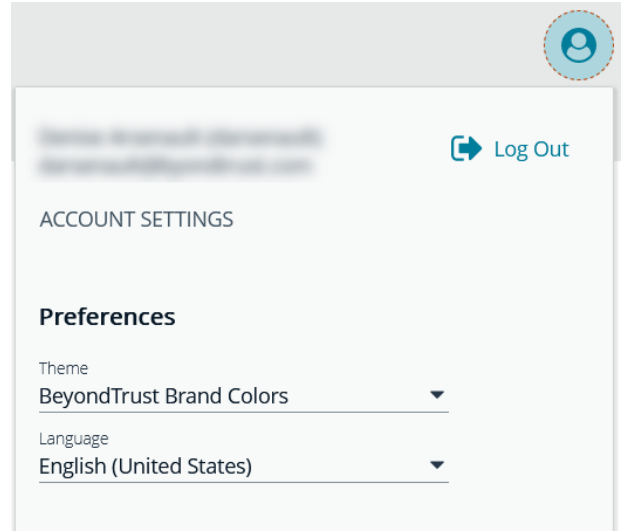
- At the bottom of the screen, click **Remove Device**.



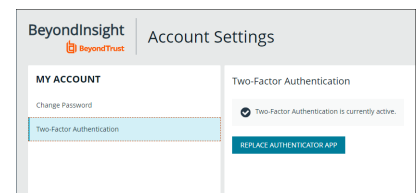
The screenshot shows the 'Edit User' interface. At the top, there is a title 'Edit User' and a right-pointing arrow. Below the title, there is a field for 'Mobile Phone'. Underneath, there is a section for 'User Status' which includes 'Activation Date' and 'Expiration Date', each with a calendar icon. Below that are three toggle switches: 'User Active (yes)' (checked), 'Account Locked (no)', and 'Account Quarantined (no)'. The next section is 'Authentication Options' with a help icon, containing two more toggle switches: 'Override Smart Card User Principal Name (no)' and 'Disable Forms Login (no)'. A red box highlights the 'Two Factor Authentication' section, which shows 'TOTP' as the active method. Below this, a message states: 'Two-factor Authentication is currently active for this account. Remove the device to deactivate TOTP.' A 'Remove Device' button with a trash icon is located below the message. At the bottom of the form are two buttons: 'UPDATE USER' and 'DISCARD'.

Users

1. Click the **Profile and preferences** icon in the top right corner.
2. Click **Account Settings**.



3. Select **Two-Factor Authentication**.
4. Click **Replace Authenticator App**.
5. To register the app again, click **Reconfigure Authenticator App**.



Note: Users may not enable both RADIUS and TOTP. Only one two-factor authentication option may be selected.

Configure Smart Card Authentication

Smart cards can be used for authentication when logging into BeyondInsight and Password Safe. Your network must already be configured to use smart card technology to use this feature.

This section is written with the understanding that you have a working knowledge of PKI, certificate-based authentication, and IIS.

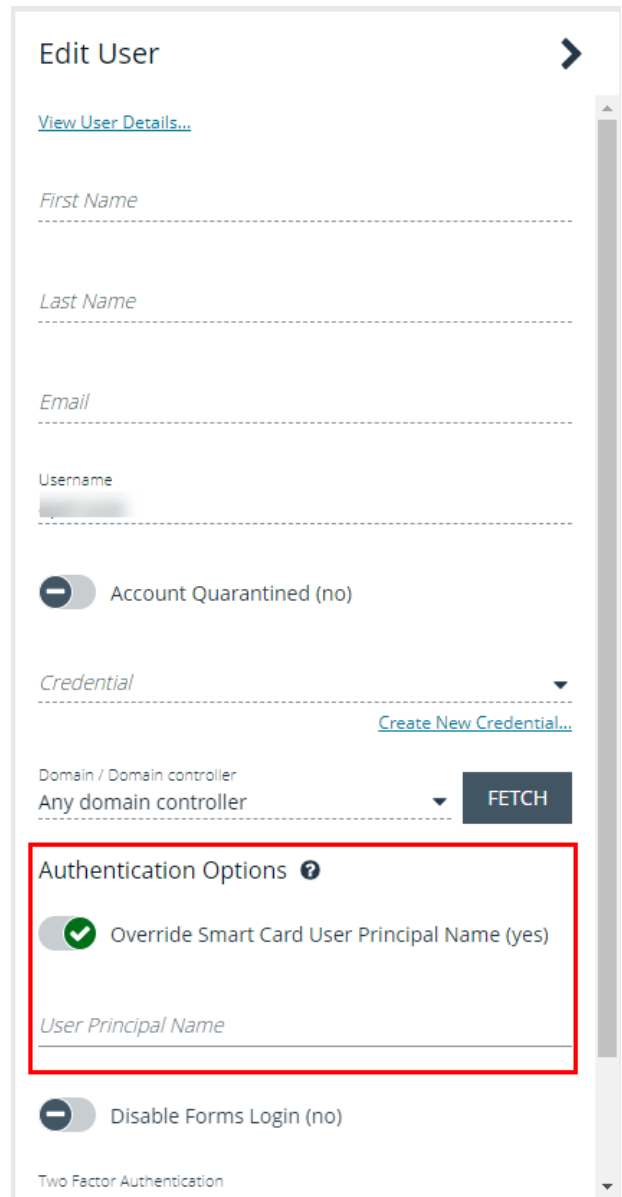
In BeyondInsight, you must first enable smart card two-factor authentication configuration settings, and then enable the **Override Smart Card User Principal Name** authentication option for the user accounts.

Enable Smart Card Two-Factor Authentication Settings

1. Navigate to **Configuration > Authentication Management > Smart Card two-factor authentication**.
2. Click the toggle to **Enable Smart Cards**.
3. Click the toggle to enable the **Allow UPN Override On User** option. This enables a BeyondInsight user with a smart card that has a different **Subject Alternative Name** to log into BeyondInsight and maps the smart card to the user.
4. Click **Update Smart Card Authentication**.

Enable Override Smart Card User Authentication Option on User Accounts

You must enable the **Override Smart Card User Principal Name** setting for the user accounts that use smart cards to authenticate. The **User Principal Name** is also required. This can be set in the properties of a user account when creating a new user or editing an existing user. This authentication option allows a BeyondInsight user with a smart card that has a different Subject Alternative Name to log into BeyondInsight, and maps the smart card to the user.



The screenshot shows the 'Edit User' interface. The 'Authentication Options' section is highlighted with a red box. It contains the following items:

- Override Smart Card User Principal Name (yes)
-
- Disable Forms Login (no)

Other visible options include 'Account Quarantined (no)' (disabled), 'Credential' (dropdown), 'Domain / Domain controller' (dropdown with 'Any domain controller' selected and a 'FETCH' button), and 'Two Factor Authentication' (dropdown).

Disable Forms Login

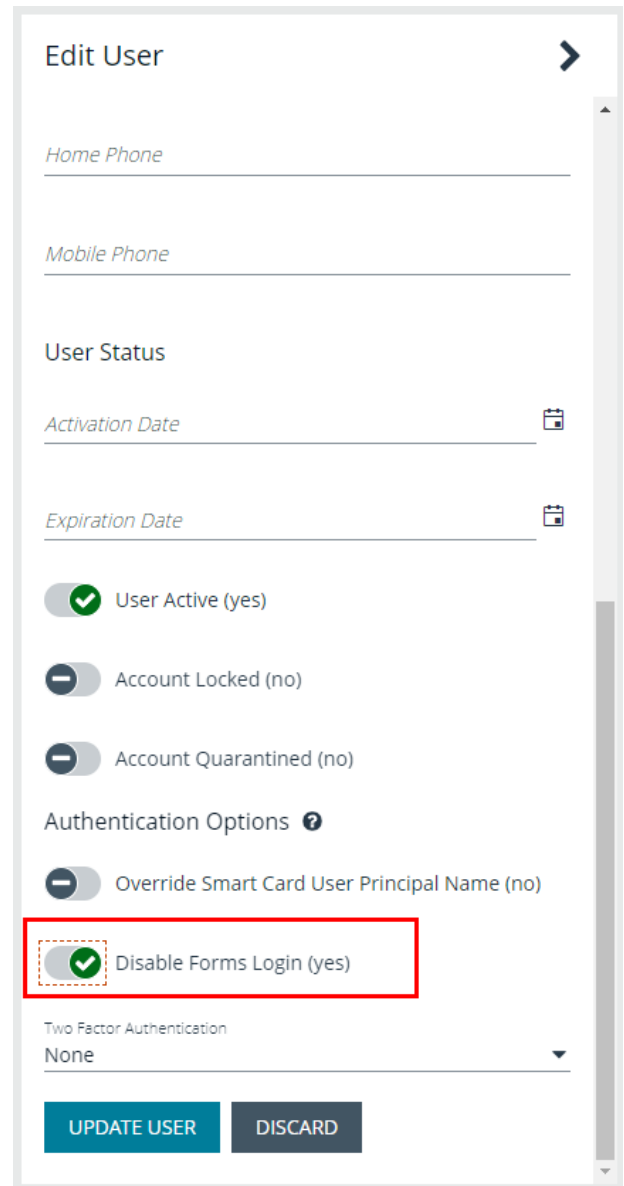
In environments where SAML, smart card, or claims-aware is configured, we recommend enabling the **Disable Forms Login** authentication option to disallow users from using the standard login form in BeyondInsight.

To disable forms login for existing users, enable this option directly on a user account as follows:

1. Click the vertical ellipsis for the user account, and then click **Edit User Details**.
2. Under **Authentication Options**, toggle **Disable Forms Login** to enable the option.



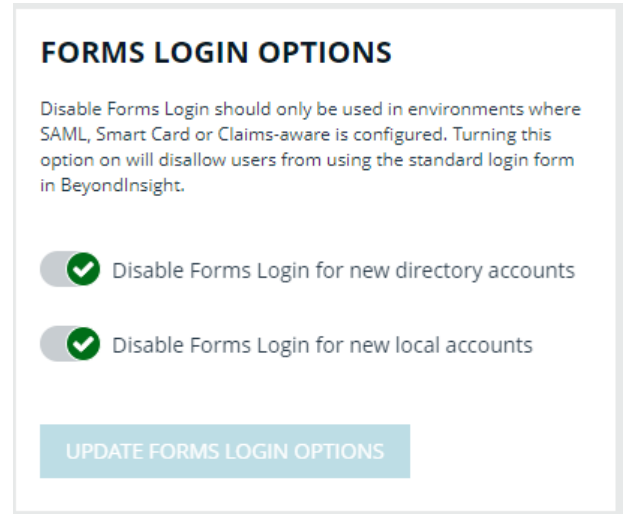
Note: Please contact support for assistance if you need to bulk-apply this setting to existing accounts.



The screenshot shows the 'Edit User' interface. It includes fields for 'Home Phone' and 'Mobile Phone'. Under 'User Status', there are 'Activation Date' and 'Expiration Date' fields with calendar icons. Below these are three toggle switches: 'User Active (yes)' (checked), 'Account Locked (no)' (unchecked), and 'Account Quarantined (no)' (unchecked). The 'Authentication Options' section contains the 'Override Smart Card User Principal Name (no)' toggle (unchecked) and the 'Disable Forms Login (yes)' toggle (checked), which is highlighted with a red dashed box. At the bottom, there is a 'Two Factor Authentication' dropdown menu set to 'None' and two buttons: 'UPDATE USER' and 'DISCARD'.

To configure login forms to automatically be disabled for newly created users:

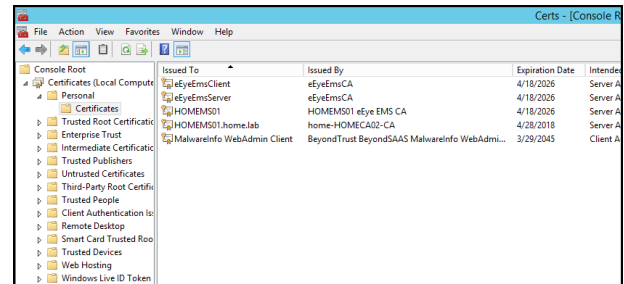
1. Navigate to **Configuration > Authentication Management > Authentication Options**.
2. Under **Forms Login Options**, enable one or both options as applicable:
 - **Disable Forms Login for new directory accounts**
 - **Disable Forms Login for new local accounts**



Verify the BeyondInsight Server Certificate

During the BeyondInsight installation, self-signed certificates are created for client and server authentication. These certificates are placed in your **Personal > Certificates** store and show as **Issued By eEyeEmsCA**.

To authenticate using smart cards, the server where BeyondInsight is running also requires a certificate issued and signed by a certificate authority (CA). Verify that your BeyondInsight server has the correct certificates issued before continuing.

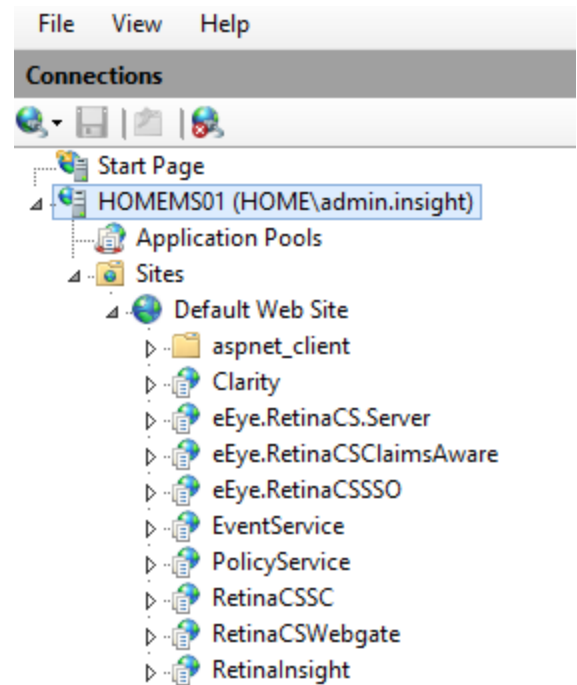


Verify the Web Server Certificate

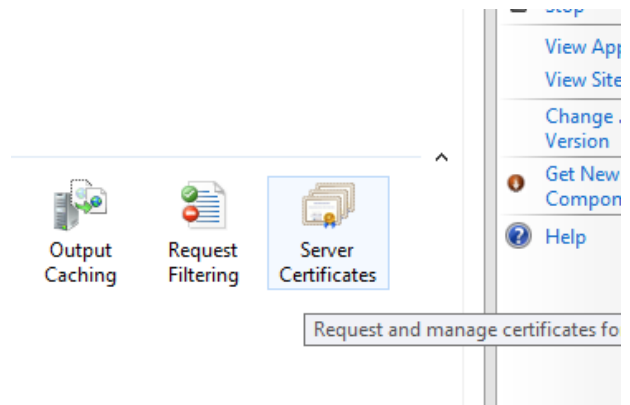
During the BeyondInsight installation, a self-signed web server certificate is created. This certificate must be replaced with a CA-issued certificate.

To verify you have a CA-signed certificate issued to the web server:

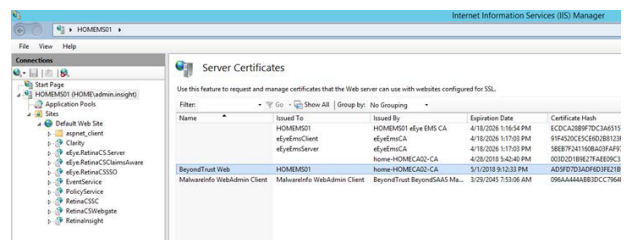
1. Open **IIS**.
2. Select your web server.



3. Select **Server Certificates**.



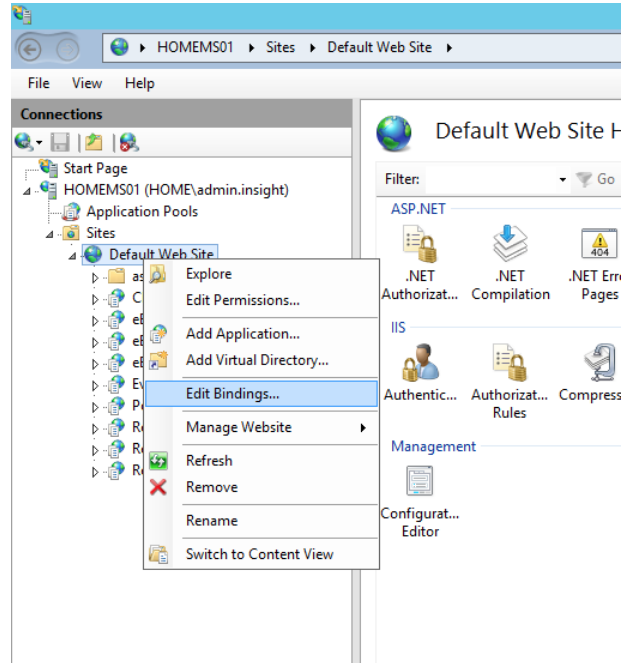
4. Verify you have a CA-issued certificate. If you do not see one listed, request one from your certificate authority.



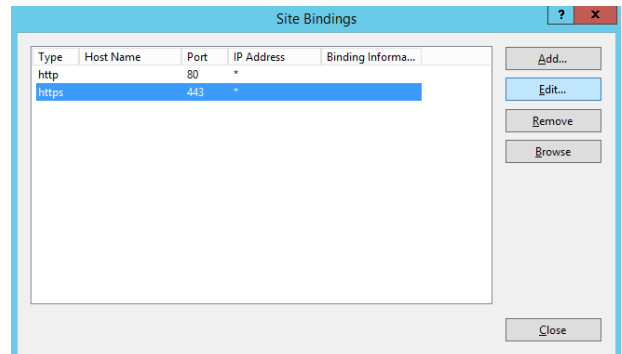
Update Default Web Site Bindings with CA-Issued Certificate

Once you have a CA-issued certificate in place, you must edit the bindings of the **Default Web Site**, replacing the self-signed certificate.

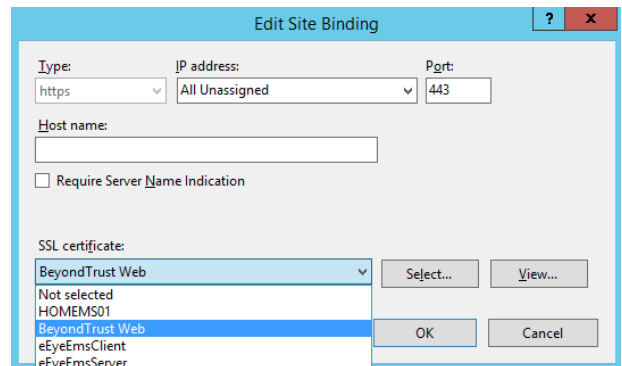
1. Open **IIS**.
2. Expand **Sites**, and then select **Default Web Site**.
3. Right-click **Default Web Site**, and then select **Edit Bindings**.



4. Select **https**, and then click **Edit**.



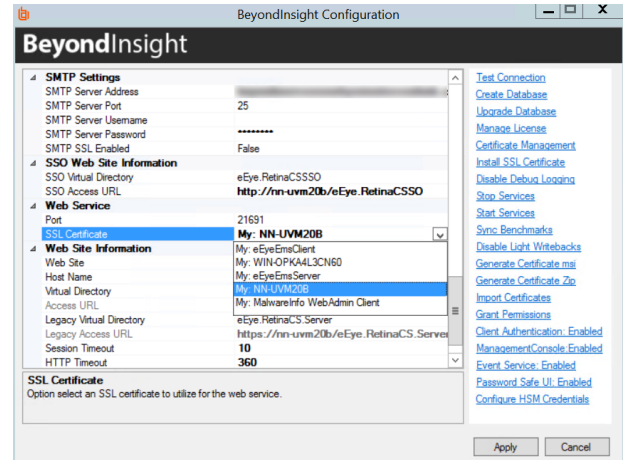
5. Select the issued domain certificate in the **SSL certificate** list, and then click **OK**.



Update SSL Certificate in BeyondInsight Configuration Tool

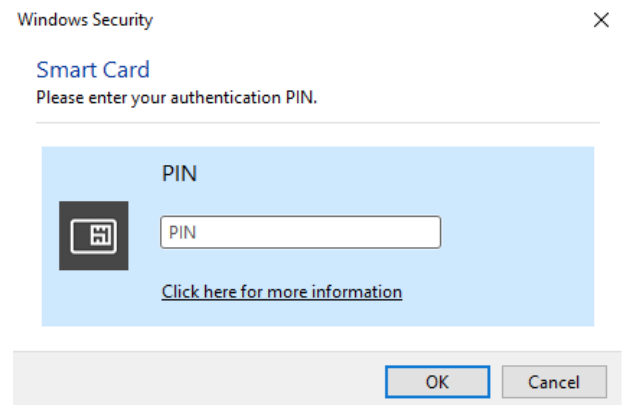
The next step is to change the domain issued certificate in the BeyondInsight Configuration tool.

1. Open the BeyondInsight Configuration tool. The default path is: **C:\Program Files (x86)\eEye Digital Security\Retina CS\REMEMConfig.exe.**
2. Scroll to **Web Service.**
3. From the **SSL Certificate** menu, select the **Domain Issued** certificate.
4. Click **Apply.**



Log In to BeyondInsight and Password Safe Using a Smart Card

With the correct certificates now applied, you can now open the BeyondInsight Console or go to **https://<servername>/RetinaCSSC**, where you are prompted to select your certificate and enter your pin. You are logged in using a secure encrypted connection.



Configure Two-Factor Authentication Settings for User Accounts

Two-factor authentication can be configured for Local, Active Directory, and LDAP user accounts as follows:

1. Navigate to **Configuration > Role Based Access > User Management.**
1. Click the vertical ellipsis for the user account, and then select **Edit User Details.**
2. On the **Edit User** page, select **RADIUS** from the **Two Factor Authentication** list.
3. From the **Map Two Factor User** list, select one of the options listed. The user type selected maps to a user on the RADIUS server. The options displayed in the list change depending on the user logging in.

- **Local BeyondInsight Users options:**
 - **As Logged in:** Use the BeyondInsight user account login.
 - **Manually Specified:** Enter the username the user enters when logging in.
- **Active Directory and LDAP Users options:**
 - **SAM Account Name:** This is the default value.
 - **Manually Specified:** This is the username the user enters when logging in.
 - **Alternate Directory Attribute:** This is the Active Directory or LDAP attribute that you set above when configuring the RADIUS server.
 - **Distinguished Name:** This is a combination of common name and domain component.
 - **User Principal Name:** This is a combination of user account name (prefix) and DNS domain name (suffix), joined using the @ symbol.



Note: The information for Active Directory and LDAP user settings is retrieved from the corresponding setting in the directory for the user account logging in.

4. Click **Update User**.

Configure a Claims-Aware Website in BeyondInsight

You can configure a claims-aware website to bypass the current BeyondInsight login page and authenticate against any configured Federated Service that uses SAML to issue claims.

The claims-aware website is configured to redirect to a defined Federation Service through the **web.config**. Upon receiving the required set of claims, the user is redirected to the existing BeyondInsight website. At that point, it is determined if the user has the appropriate group membership to log in, given the claims associated with them.

If users attempting to access BeyondInsight have group claims matching a group defined in BeyondInsight, and the group has the **Full Control** permission to the **Management Console Access** feature, the user bypasses the BeyondInsight login screen. If the user is new to BeyondInsight, they are created in the system using the same claims information. The user is also added to all groups they are not already a member of that match in BeyondInsight, and as defined in the group claim information.

If the user is not a member of at least one group defined in BeyondInsight or that group does not have the **Full Control** permission to the **Management Console Access** feature, they are redirected to the BeyondInsight login page.

Create a BeyondInsight Group

Create a BeyondInsight group and ensure the group is assigned the **Full Control** permission to the **Management Console Access** feature.

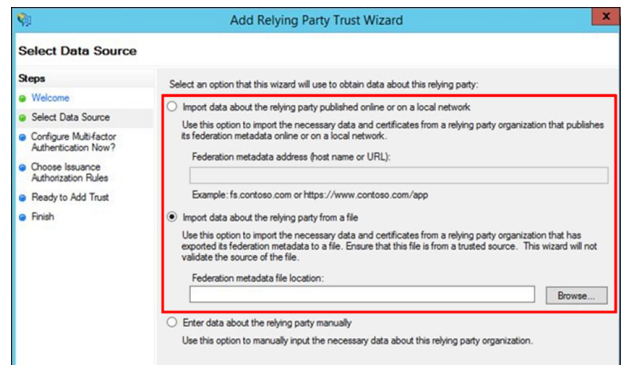
Add Relying Party Trust

After BeyondInsight is installed, metadata is created for the claims-aware website. Use the metadata to configure the relying party trust on the Federation Services instance.

The metadata is located in the following directory:

<Install path>\eEye Digital Security\Retina CS\WebSiteClaimsAware\FederationMetadata\2007-06\

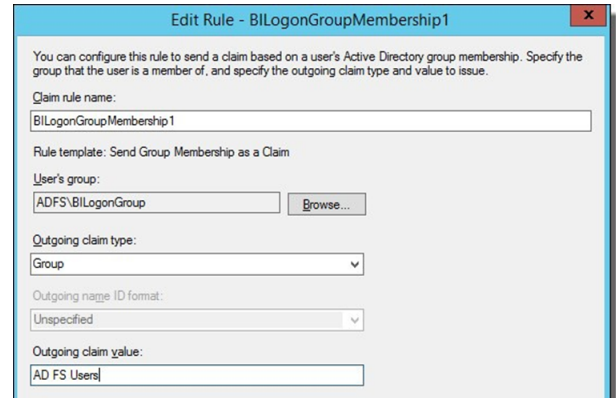
When selecting a **Data Source** in the **Add Relying Party Trust Wizard**, select the **FederationMetadata.xml** generated during the install.



Set Up Claim Rules



Note: Claims rules can be defined in a number of different ways. The example provided is simply one way of pushing claims to BeyondInsight. As long as the claims rules are configured to include at least one claim of outgoing type **Group** (with **Group** claim matching exactly what is in BeyondInsight) and a single outgoing claim of type **Name**, then BeyondInsight has enough information to potentially grant access to the site to the user.



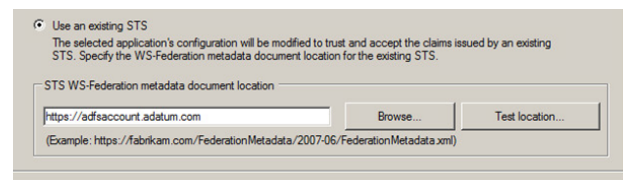
Supported Federation Service Claim Types

Outgoing Claim Type	Outgoing Claim Type	Mapping to BeyondInsight User Detail
http://schemas.xmlsoap.org/claims/Group	Required	Group membership
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name	Required	User name
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname	Optional	Surname
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname	Optional	First name
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress	Optional	Email address

Claims-Aware SAML

The following procedure demonstrates how to set up a claims-aware website using the Windows Identity Foundation (WIF) SDK.

1. Start the **Windows Identity Foundation Federation Utility**.
2. On the **Welcome** page, browse to and select the **web.config** file for **BeyondInsight Claims Aware** site. The application URI automatically populates.
3. Click **Next**.
4. Select **Using an existing STS**.
5. Enter **Root URL of Claims Issuer or STS**.
6. Select **Test location**. **FederationMetadata.xml** is downloaded.
7. Click **Next**.
8. Select a STS signing certificate option, and then click **Next**.
9. Select an encryption option, and then click **Next**.



10. Select the appropriate claims, and then click **Next**.
11. Review the settings on the **Summary** page, and then click **Finish**.

Disable Forms Login

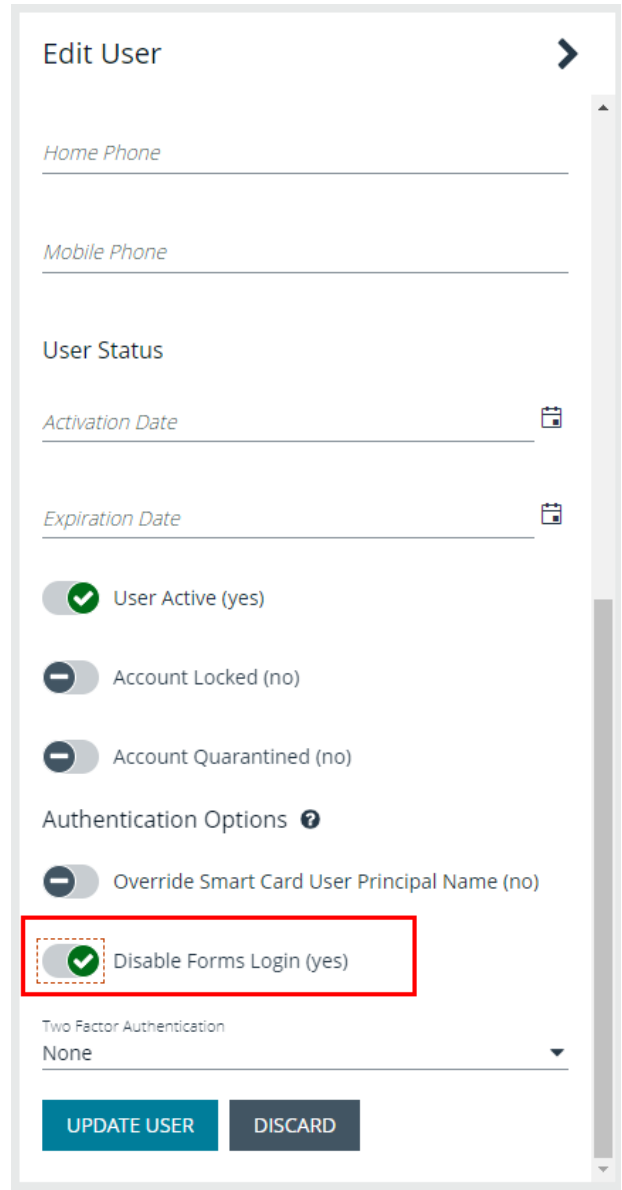
In environments where SAML, smart card, or claims-aware is configured, we recommend enabling the **Disable Forms Login** authentication option to disallow users from using the standard login form in BeyondInsight.

To disable forms login for existing users, enable this option directly on a user account as follows:

1. Click the vertical ellipsis for the user account, and then click **Edit User Details**.
2. Under **Authentication Options**, toggle **Disable Forms Login** to enable the option.



Note: Please contact support for assistance if you need to bulk-apply this setting to existing accounts.



The screenshot shows the 'Edit User' interface. It includes fields for 'Home Phone' and 'Mobile Phone'. Under 'User Status', there are 'Activation Date' and 'Expiration Date' fields with calendar icons. Below these are three toggle switches: 'User Active (yes)' (checked), 'Account Locked (no)' (unchecked), and 'Account Quarantined (no)' (unchecked). The 'Authentication Options' section contains a toggle for 'Override Smart Card User Principal Name (no)' (unchecked) and a toggle for 'Disable Forms Login (yes)' (checked), which is highlighted with a red dashed box. At the bottom, there is a 'Two Factor Authentication' dropdown menu set to 'None' and two buttons: 'UPDATE USER' and 'DISCARD'.

To configure login forms to automatically be disabled for newly created users:

1. Navigate to **Configuration > Authentication Management > Authentication Options**.
2. Under **Forms Login Options**, enable one or both options as applicable:
 - **Disable Forms Login for new directory accounts**
 - **Disable Forms Login for new local accounts**

FORMS LOGIN OPTIONS

Disable Forms Login should only be used in environments where SAML, Smart Card or Claims-aware is configured. Turning this option on will disallow users from using the standard login form in BeyondInsight.

- Disable Forms Login for new directory accounts
- Disable Forms Login for new local accounts

UPDATE FORMS LOGIN OPTIONS

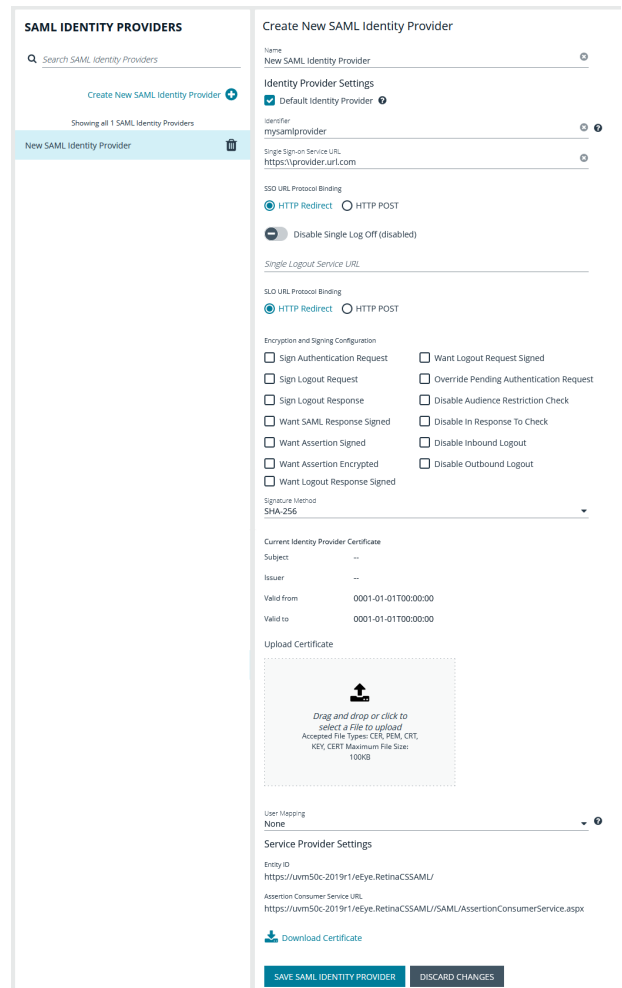
Set Up SAML With a Generic Security Provider

The following steps show how to set up BeyondInsight with a generic security provider.

Configure SAML in the BeyondInsight Console

To configure SAML in the BeyondInsight console, take follow the steps:

1. Navigate to **Configuration > Authentication Management > SAML Configuration**.
2. From the **SAML Identity Providers** pane, click **Create New SAML Identity Provider**.
3. Provide a name for the new SAML identity provider (IdP).
4. Complete the **Identity Provider Settings** as follows:
 - Check the **Default Identity Provider** option if you have more than one IdP for the same service provider (SP), and would like this IdP to be used as default for SP initiated logins. This is useful in the case where a user accesses the SAML site access URL without providing an IdP. Also, when a user clicks the **Use SAML Authentication** link from the BeyondInsight login page, they are redirected to the default IdP's site for authentication.
 - **Identifier:** Enter the name of the identity provider entry, normally supplied by the provider.
 - **Single Sign-on Service URL:** Provide the SSO URL, from the provider.
 - **SSO URL Protocol Binding:** Select either **HTTP Redirect** or **HTTP Post** as the type.
 - **Single Logout Service URL:** Enter the SLO URL, from the provider.
 - **SLO URL Protocol Binding:** Select either **HTTP Redirect** or **HTTP Post** as the type.
 - **Encryption and Signing Configuration:** Check applicable boxes to enable options, as required by your service provider.
 - **Signature Method:** Select the method, as is required by your IdP, from the dropdown.
 - **Current Identity Provider Certificate:** Upload the identity provider certificate.
 - **User Mapping:** Select the type of user account from the dropdown. This indicates how user claims from the SAML provider are mapped in the BeyondInsight User database.
 - **None:** This is the legacy type of mapping, which is not based on type of user.
 - **Local:** Select this option for local user account claims. BeyondInsight maps the user and group name.
 - **Azure Active Directory:** Select this option for Azure Active Directory user account claims. When selected, BeyondInsight maps the **ObjectID** attribute to the **AppUser** and **UserGroup** attributes for the user.



- **Active Directory:** Select this option for Active Directory user account claims. If the claims are configured to pass the SID of the user and group, BeyondInsight maps the SID for the user and group, which is preferred over mapping domain name and group name attributes.
5. Click **Save SAML Identity Provider**.
 6. The following **Service Provider Settings** are auto-generated by BeyondInsight:
 - **Entity ID:** This is the fully qualified domain name, followed by the file name: **https://<serverURL>/eEye.RetinaCSSAML/**. This is used for audience restriction.
 - **Assertion Consumer Service URL:** The HTTPS endpoint on the service provider where the identity provider redirects to with its authentication response. .
 7. Click **Save SAML Configuration**.

Once the SAML configuration is saved, a public service provider certificate is available to download. It can be uploaded to the IdP, if required.

Configure Identity Provider (IdP)

Below are some of the values an IdP may need:

- Audience Restriction: **https://<FQDN>/eEye.RetinaCSSAML/**
- SSO Service URL: **https://<FQDN>/eEye.RetinaCSSAML/SAML/AssertionConsumerService.aspx**
- SLO Service URL: **https://<FQDN>/eEye.RetinaCSSAML/SAML/SLOService.aspx**
- Service Provider Certificate: Generated when SAML configuration is saved.

Your IdP must provide the following attributes in the assertion:

- **None:**
 - **Group:** (Required) This must match the group created in BeyondInsight or imported from Active Directory / LDAP. If an Active Directory group is used, it must match the BI format of Domain\GroupName.
 - **Name:** (Required) UPN, domain\username, username or EmailAddress formats are acceptable.
 - **EmailAddress:** (Optional).
 - **Surname:** (Optional).
 - **GivenName:** (Optional).
- **Local:**
 - **Group:** (Required) This is the BeyondInsight groups the user must belong to and must be sent as the GroupName for each group.
 - **Name:** (Required) This is sent as the BeyondInsight username.
 - **EmailAddress:** (Optional).
 - **Surname:** (Optional).
 - **GivenName:** (Optional).
- **Active Directory:**
 - **SecurityIdentifier:** (Required) The user's SID.
 - **Group:** (Required) This is the BeyondInsight groups the user must belong to and must sent as the SID for each group.
 - **Name:** (Required) This is sent as UPN.

- **EmailAddress:** (Optional).
- **Surname:** (Optional).
- **GivenName:** (Optional).
- **Azure Active Directory:**
 - **ObjectID:** (Required) The user's ObjectID. Azure includes this with the assertion by default.
 - **Group:** (Required) This is the BeyondInsight groups the user must belong to and must be sent as the ObjectID for each group.
 - **Name:** (Required) This is sent as UPN.
 - **EmailAddress:** (Optional).
 - **Surname:** (Optional).
 - **GivenName:** (Optional).




Note: Assertion requirements change based on the SAML mapping you choose when configuring SAML.

Multiple Identity Providers

If you have added multiple IdPs to your SAML configuration, users can log in to BeyondInsight / Password Safe using the following two methods:

- IdP initiated login: the user logs in to the IdP first and launches BeyondInsight / Password Safe from there.
- SP initiated login: the user accesses the SP initiated URL to log in. During SP initiated logins the user is able to specify which IdP they want to log in with; otherwise BeyondInsight / Password Safe uses the default IdP.
 - Default SAML Site Access URL: **https://<BeyondInsightURL>/eEye.RetinaCSSAML/login.aspx**
 - Specific SAML Site Access URL: **https://<BeyondInsightURL>/eEye.RetinaCSSAML/login.aspx?partnerIdP=<IdP EntityID>**

 For more information on configuring an Azure Active Directory SAML Provider, please see "[Configure Azure Active Directory SAML with BeyondInsight SAML](#)" on page 61.

Configure SAML Using the saml.config File

In the case where you have multiple service providers, you can configure SAML manually as outlined below.

Copy Certificates from IdP

1. Copy the **idp.cer** file you received from the IdP to the following folder on the UVM: **C:\Program Files (x86)\eEye Digital Security\Retina CS\WebSiteSAML\Certificates**.

Generate or Obtain a Private Service Provider Certificate (sp.pfx file)

Generate your own Self Signed Certificate as follows:

1. Use PowerShell to generate a new certificate:

```
New-SelfSignedCertificate -Subject "BI SAML SP" -CertStoreLocation cert:\LocalMachine\My -
Provider "Microsoft Enhanced RSA and AES Cryptographic Provider" -HashAlgorithm SHA256 -
KeyLength 2048 -NotAfter 1/1/2050
```



Note: This command requires PowerShell 5.0 or later (Windows 10 or Server 2016).

2. Make note of the Thumbprint for later use, for example: **7120E0BD353429D18F9829096AB3BC9A80AF33B8**.
3. Export the public key for your certificate:

```
Export-Certificate -Cert cert:\LocalMachine\My\7120E0BD353429D18F9829096AB3BC9A80AF33B8 -
FilePath c:\certs\sp.der
```

4. Convert the certificate to base 64:

```
Certutil.exe -encode c:\certs\sp.der c:\certs\sp.cer
```

Use a certificate obtained from a Certificate Authority as follows:

Your Certificate must have the following capabilities:

- Enhanced Key Usage: Client Authentication, Server Authentication
- Key Usage: Digital Signature, Key Encipherment

Add the certificate to the Local Machine, **Personal Store** and add any Intermediate or Root certs to the proper stores if needed.

If you want to use the service provider cert from the **Certificate Store** you must grant permissions to IIS to READ the Private Key:

1. Open MMC.
2. Add the Certificate SnapIn for Local Machine.
3. Explore to **Personal/Certificates**.
4. Right-click on your Certificate that was setup for the service provider.
5. Select **All Tasks > Manage Private Keys**.
6. Add the IIS user: **IIS_IUSRS**.

Modify **saml.config** File

The file is located here: **C:\Program Files (x86)\eEye Digital Security\Retina CS\WebSiteSAML**.

Update the **Service Provider** section as follows:

- **Name**: Should be fully qualified domain followed by **eEye.ReintaCSSAML**. This is used for the Audience Restriction.
- **Description**: Add a description.
- **AssertionConsumerServiceUrl**: This shouldn't need to be modified.
- If you save the certificate for the SP to the certificate folder use these options:
 - **LocalCertificateFile**: Path to the certificate
 - **LocalCertificatePassword**: Password for the PFX file
- If you want to use the certificate from the cert store remove **LocalCertificateFile** and **LocalCertificatePassword** and add:
 - **LocalCertificateThumbprint**: Thumbprint of the certificate

You can remove all but your one IdP entry.

The following IdP fields must be updated to your environment settings:

- **Name**: The name of the Provider entry, normally provided by the Provider
- **SingleSignOnServiceUrl**: URL for SSO from IdP
- **SingleLogoutServiceUrl**: URL for SLO from IdP
- **PartnerCertificateFile**: Location to the public cert for the IdP

The other settings are set to what your Provider requires.

Below are some common configurations for some of the common IdPs:

example saml.config (this is configured for OKTA using a self signed service provider certificate)

```
<?xml version="1.0" encoding="utf-8"?>
<SAMLConfiguration xmlns="urn:componentspace:SAML:2.0:configuration">
  <ServiceProvider
    Name=https://pws.mydomain.com/eEye.RetinaCSSAML/
    Description="Example Service Provider"
    AssertionConsumerServiceUrl=~ /SAML/AssertionConsumerService.aspx">
    <LocalCertificates>
      <Certificate
        Thumbprint="05552BAF3B8BC9675C94EDB885D4B821F3DC15DE" />
    </LocalCertificates>
  </ServiceProvider>
  <PartnerIdentityProviders>
    <PartnerIdentityProvider
      Name=http://www.okta.com/exkldg5hqz3LbpBIj5d7
      Description="ADFS"
      SignAuthnRequest="false"
      SignLogoutRequest="false"
      WantSAMLResponseSigned="false"
      WantAssertionSigned="false"
      WantAssertionEncrypted="false"
      WantLogoutResponseSigned="false"
      SingleSignOnServiceBinding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST"
      SingleSignOnServiceUrl=https://dev-25872691.okta.com/app/dev-25872691_bi212_
1/exkldg5hqz3LbpBIj5d7/sso/saml
      SingleLogoutServiceBinding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST"
      SingleLogoutServiceUrl=https://dev-25872691.okta.com/app/dev-25872691_bi212_
1/exkldg5hqz3LbpBIj5d7/slo/saml>
      <PartnerCertificates>
        <Certificate
          FileName="Certificates\okta.cer" />
      </PartnerCertificates>
    </PartnerIdentityProvider>
  </PartnerIdentityProviders>
</SAMLConfiguration>
```

Update Host Name and SAML access URL



Note: The below steps are applicable for on-premises installations only. Access URLs can also be set from the configuration area in the BeyondInsight console for both PS Cloud and on-premises installations by navigating to **Configuration > Authentication Management > Single sign on site access urls.**

1. Open the BeyondInsight Configuration Tool.
2. Scroll Down to **SAML Access URL**.
3. Update it to the fully qualified domain, followed by the file name:

https://<FQDN>/eEye.RetinaCSSAML/

4. Scroll down to the **Host Name** field under the **Web Site Information** section.
5. Update it to the fully qualified domain, for example, **bidev.shines.test.cloud**.
6. Click **Apply**.



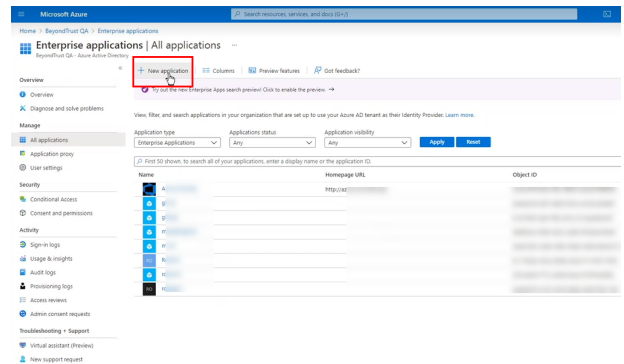
Note: The host name is the fully qualified domain name used to access BI/PS. If this is a load-balanced instance, the host name is the same on all servers.

Configure Azure Active Directory SAML with BeyondInsight SAML

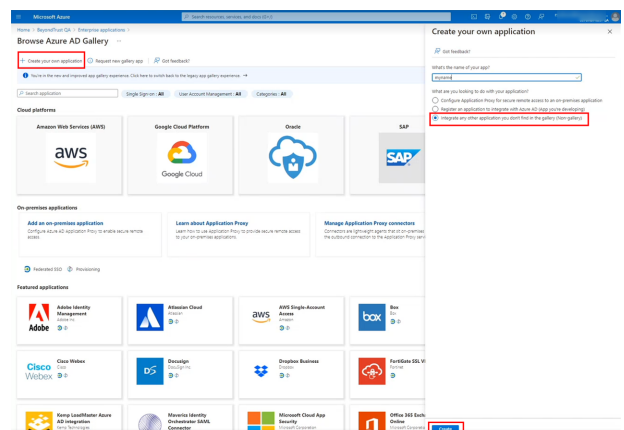
You can integrate Azure Active Directory (Azure AD) SAML with BeyondInsight SAML so that when BeyondInsight receives claims from Azure AD, it can enumerate groups for the user directly from Azure AD using the Group ID value in the claim. This allows an Azure AD user to log in to BeyondInsight using SAML authentication when the user account does not yet exist in the BeyondInsight User database. BeyondInsight adds the user to its database automatically upon successful Azure AD group enumeration and authentication into BeyondInsight.

To configure the integration between Azure AD SAML and BeyondInsight SAML, log in to your Azure AD tenant and follow the instructions below to add a new enterprise application to host the SAML configuration for BeyondInsight:

1. In Azure, navigate to **Enterprise Applications**, and then click **+ New Application**.

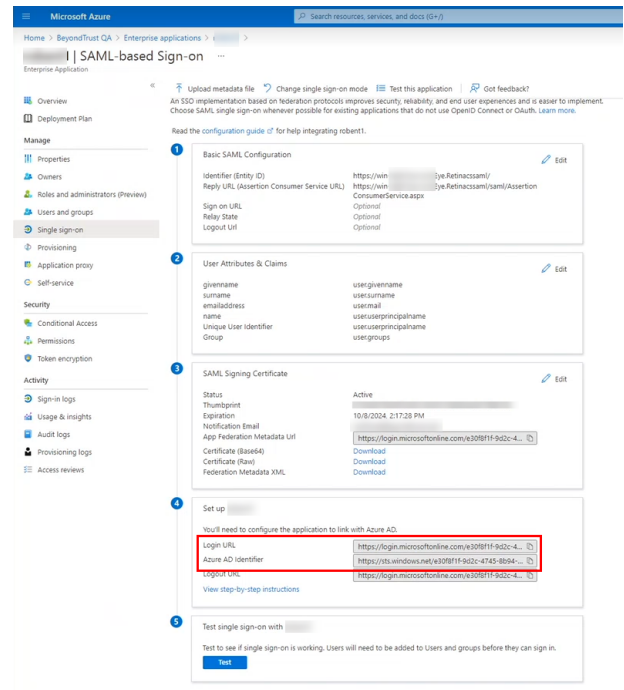


2. Click **+ Create your own application**.
3. Provide a name.
4. Select the **Integrate any other application you don't find in the gallery (Non-gallery)** option.
5. Click **Create**.

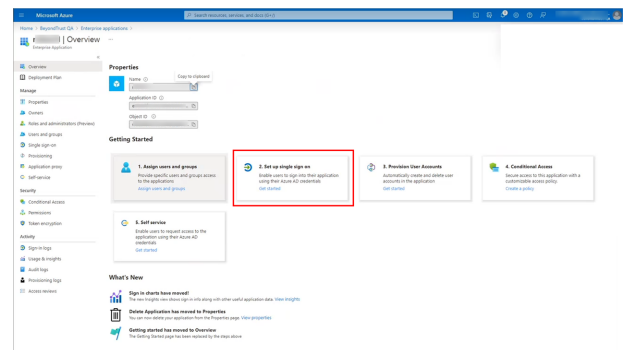


6. In the BeyondInsight console, create a new SAML identity provider. To complete the SAML IdP config in BeyondInsight, use the following information from the enterprise application you just created:

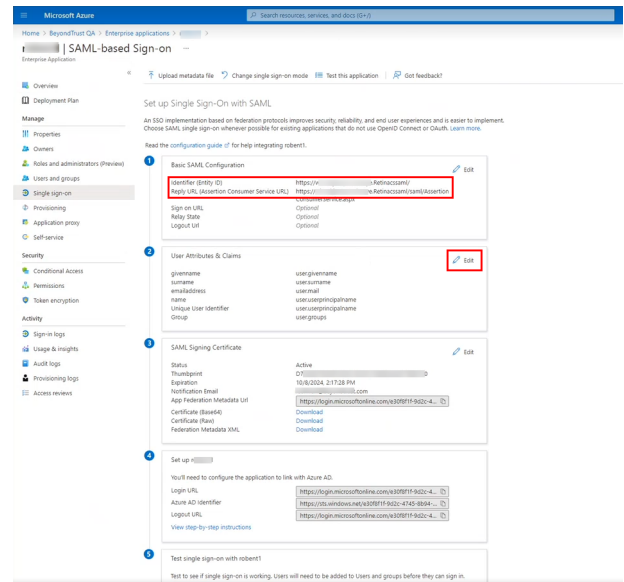
- In Azure, go to the **SAML-based Sign-on** configuration page for the application.
- In the **Set up <application name>** section, copy the **Login URL** and the **Azure AD Identifier** and save them.
- Paste them into the **Identifier, Single Sign-on Service URL, and Single Logout Service URL** fields in the BeyondInsight SAML IdP configuration.



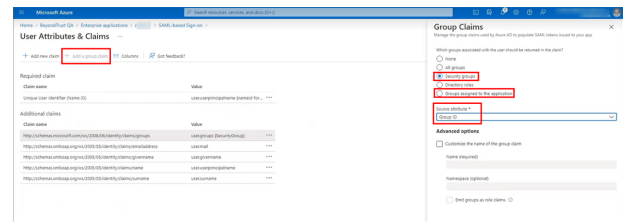
7. In Azure, open the **Properties** for the newly created enterprise application.
8. From the **Getting Started** section, click **Set up single sign-on**.



9. In the **Basic SAML Configuration** section, provide the **Identifier (Entity ID)** and **Reply URL (Assertion Consumer Service URL)** obtained from the SAML IdP you just created in BeyondInsight.
10. In the **User Attributes & Claims** section, click **Edit** to add the group claim.



11. Click **+ Add a group claim**.
12. In the **Group Claims** section:
 - Select which groups associated with the user to return in the claim: either **Groups assigned to the application** or **Security Groups**.
 - Select **Group ID** from the **Source attribute**.



i For more information on configuring a SAML IdP in BeyondInsight, please see "[Configure SAML in the BeyondInsight Console](#)" on page 55.

Disable Forms Login

In environments where SAML, smart card, or claims-aware is configured, we recommend enabling the **Disable Forms Login** authentication option to disallow users from using the standard login form in BeyondInsight.

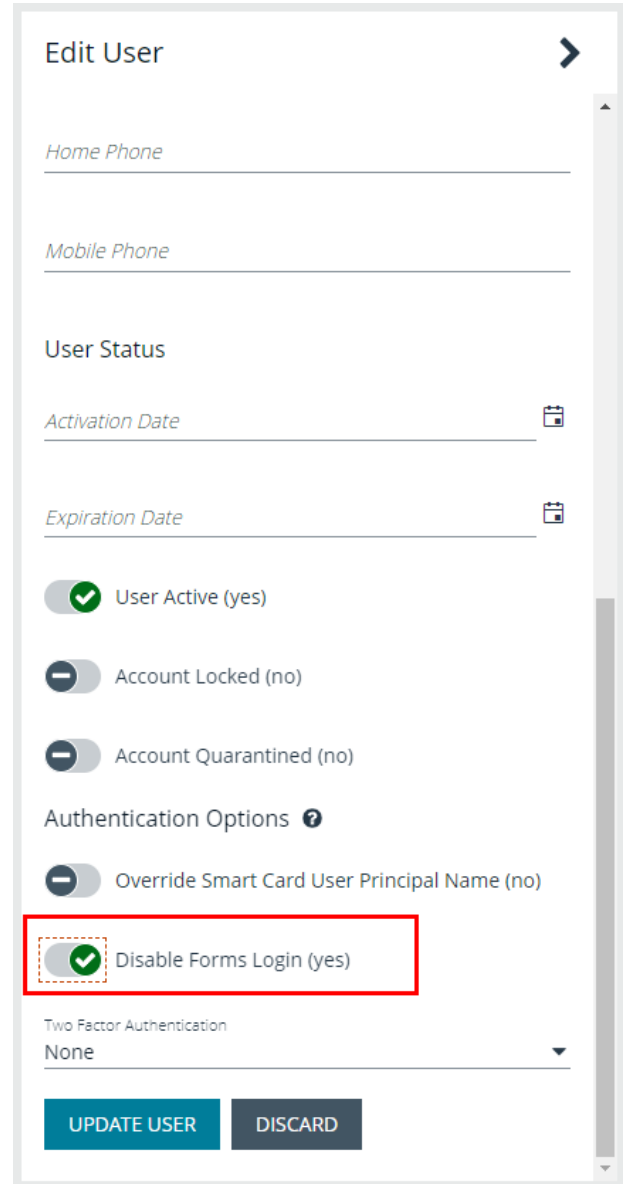
To disable forms login for existing users, enable this option directly on a user account as follows:

1. Click the vertical ellipsis for the user account, and then click **Edit User Details**.

2. Under **Authentication Options**, toggle **Disable Forms Login** to enable the option.



Note: Please contact support for assistance if you need to bulk-apply this setting to existing accounts.



The screenshot shows the 'Edit User' configuration page. It includes fields for 'Home Phone' and 'Mobile Phone'. Under 'User Status', there are 'Activation Date' and 'Expiration Date' fields with calendar icons. Below these are three toggle switches: 'User Active (yes)' (checked), 'Account Locked (no)' (unchecked), and 'Account Quarantined (no)' (unchecked). The 'Authentication Options' section contains the 'Override Smart Card User Principal Name (no)' (unchecked) and the 'Disable Forms Login (yes)' (checked) toggle, which is highlighted with a red dashed box. At the bottom, there is a 'Two Factor Authentication' dropdown menu set to 'None' and two buttons: 'UPDATE USER' and 'DISCARD'.

To configure login forms to automatically be disabled for newly created users:

1. Navigate to **Configuration > Authentication Management > Authentication Options**.
2. Under **Forms Login Options**, enable one or both options as applicable:
 - **Disable Forms Login for new directory accounts**
 - **Disable Forms Login for new local accounts**

FORMS LOGIN OPTIONS

Disable Forms Login should only be used in environments where SAML, Smart Card or Claims-aware is configured. Turning this option on will disallow users from using the standard login form in BeyondInsight.

Disable Forms Login for new directory accounts

Disable Forms Login for new local accounts

UPDATE FORMS LOGIN OPTIONS

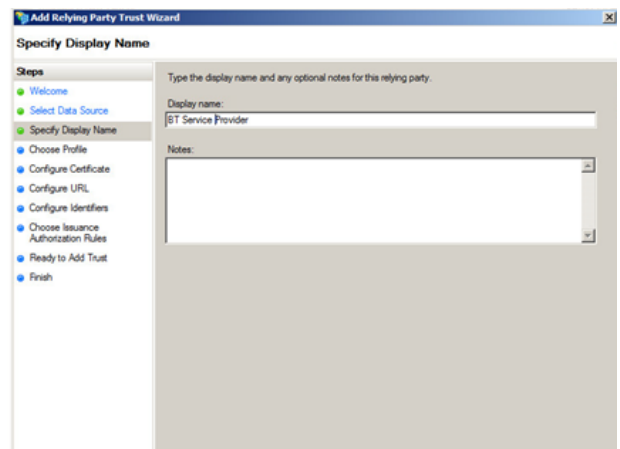
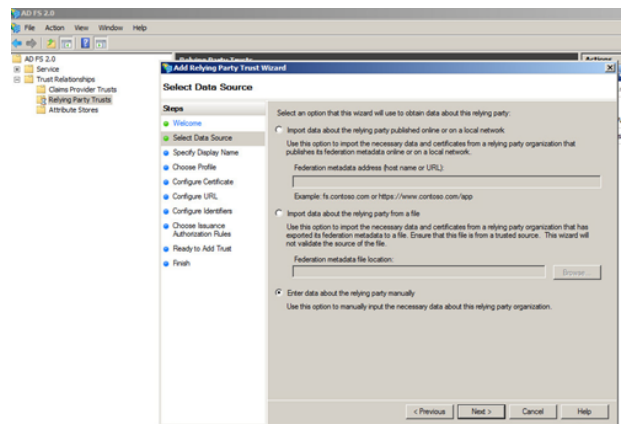
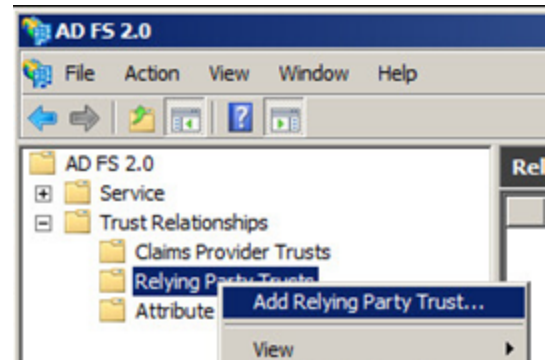
Configure ADFS with Password Safe Using SAML

Configure ADFS on the Identity Provider Server

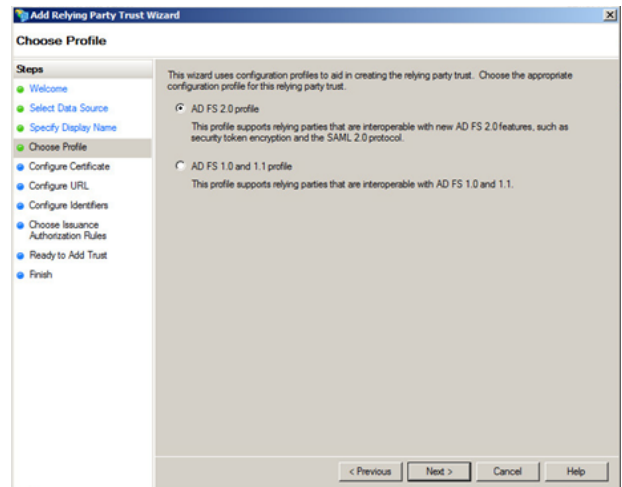
1. Open the ADFS management console.
2. Expand **Trust Relationships**.
3. Right-click **Relying Party Trusts**.
4. Select **Add Relying Party Trust**.

5. Click **Start**.
6. Select **Enter data about the relying party manually**, and then click **Next**.

7. Enter a **Display name**, and then click **Next**.



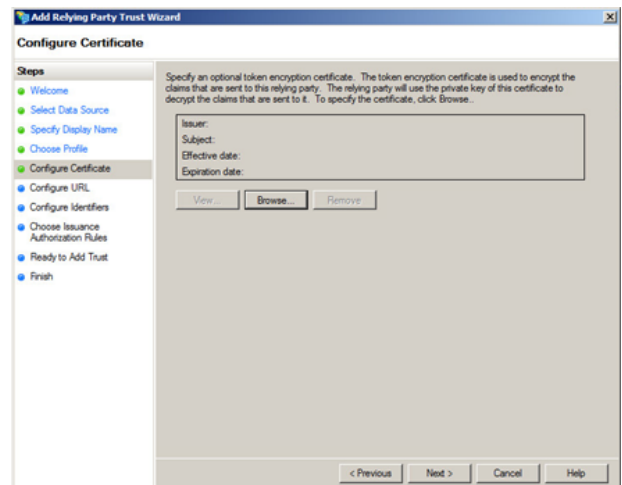
8. Leave **AD FS 2.0 profile** selected, and then click **Next**.



9. Click **Browse** on the **Configure Certificate** screen to import the service provider (SP) public certificate.

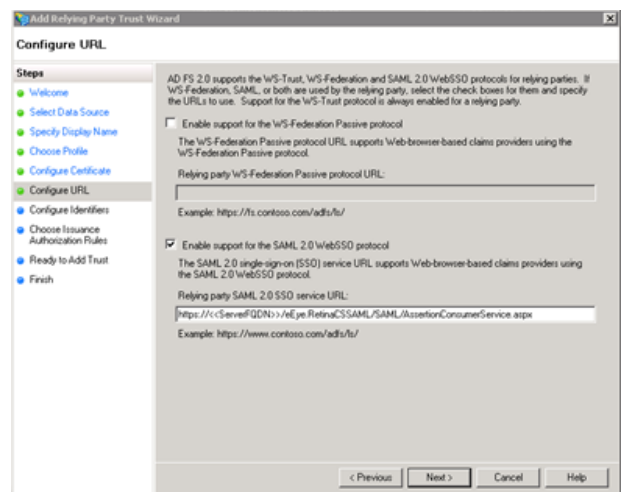
10. Navigate to the location of the SP certificate.

11. Select the certificate, click **Open**, and then click **Next**.

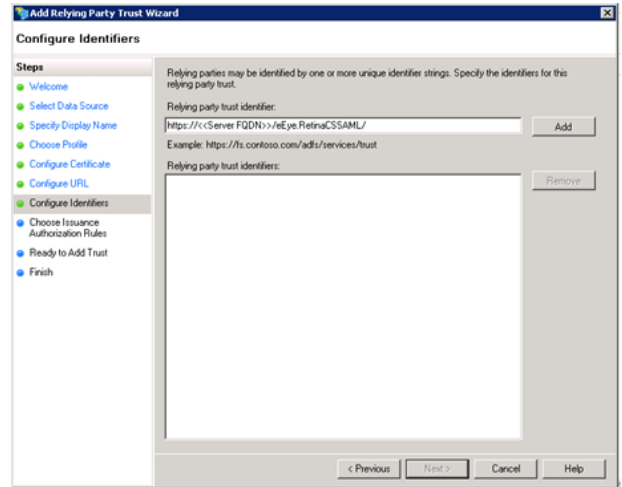


12. Select **Enable support for the SAML 2.0 WebSSO protocol**.

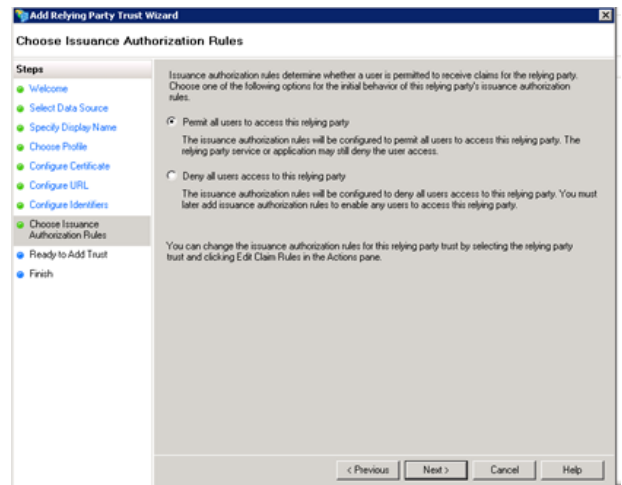
13. Enter the **Relying party SAML 2.0 SSO service URL**, and then click **Next**.



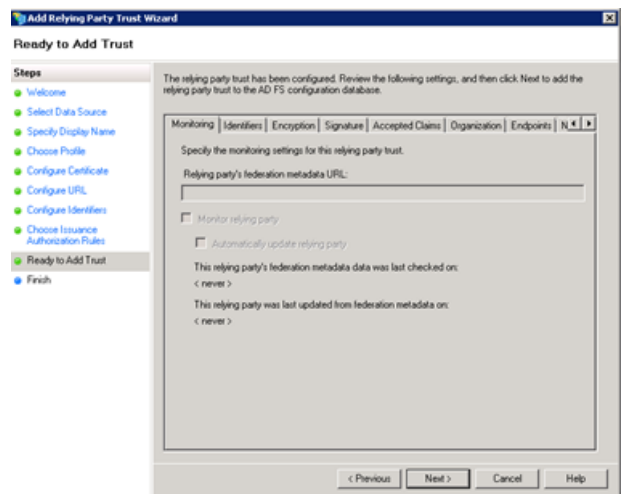
- Enter the **Relying party trust identifier**, click **Add**, and then click **Next**.



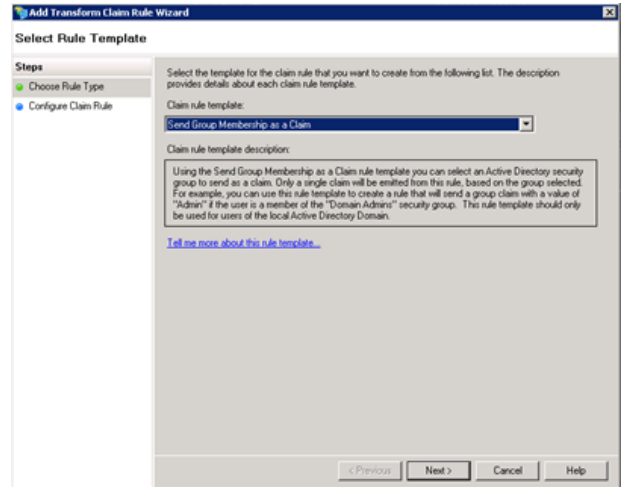
- Select the preferred method of access, and then click **Next**. The default is **Permit all users**.



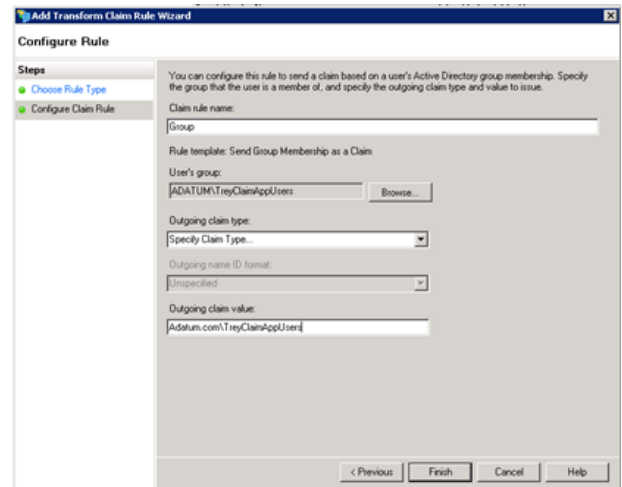
- Click **Next**, and then click **Close**.



17. Click **Add Rule**.
18. Select the **Send Group Membership as a Claim** rule template, and then click **Next**.

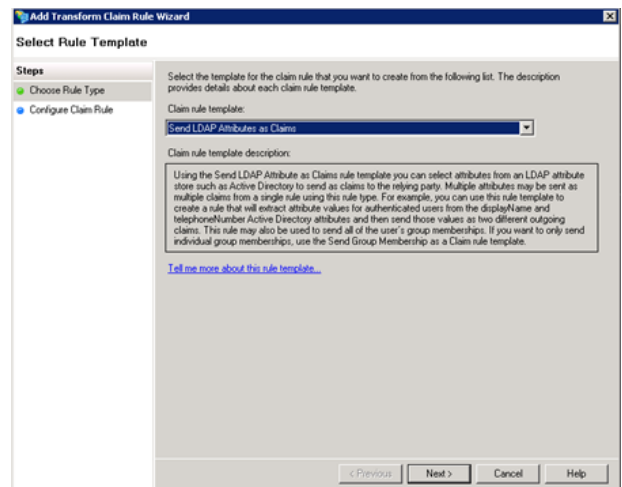


19. Enter a name for the claim rule.
20. Select the **User's group**.
21. Select the **Outgoing claim type**.
22. Select the **Outgoing claim value**.
23. Click **Finish**.

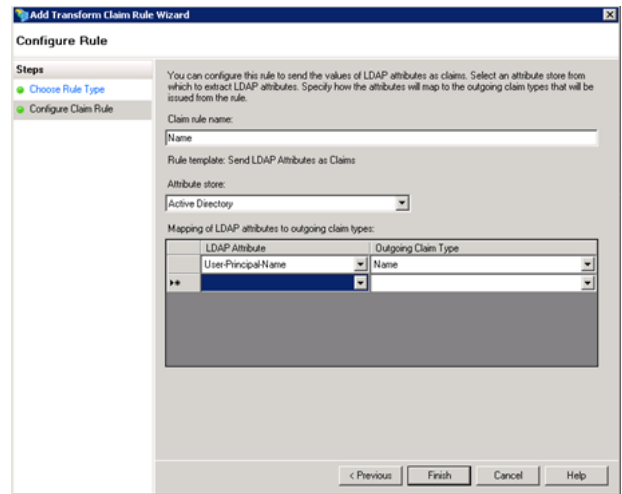


Note: The outgoing Group claim must match exactly what is in BeyondInsight.

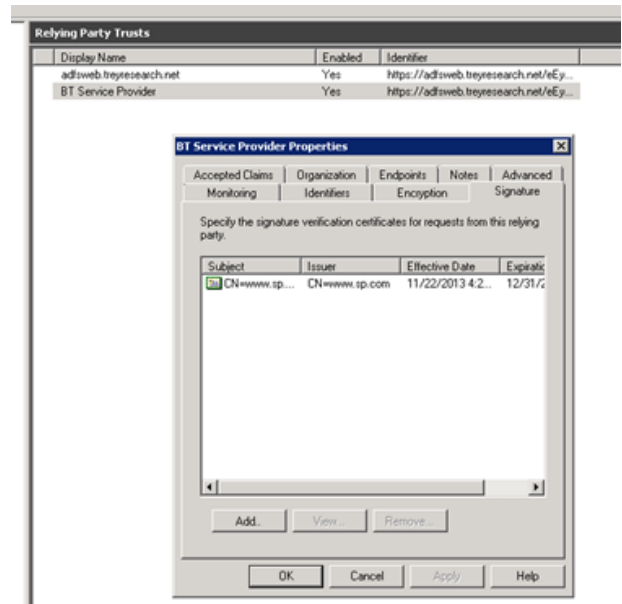
24. Click **Add Rule**.
25. Select the **Send LDAP Attributes as Claims** rule template, and then click **Next**.



26. Enter a **Claim rule name**.
27. Select the **Attribute store**.
28. Select **User-Principal-Name** for the **LDAP Attribute**.
29. Select **Name** as the **Outgoing Claim Type**.



30. Add the **Name ID** outgoing claim, which maps to **LDAP Attribute User-Principal-Name** or **SAM-Account-Name**.
31. Click **Finish**.
32. On the **Relying Party Trusts** page, right-click **BT Service Provider**, and then select **Properties**.
33. Select the **Signature** tab.
34. Click **Add**, and then enter the service provider public certificate.



Configure SAML on the Service Provider Server (U-Series Appliance)

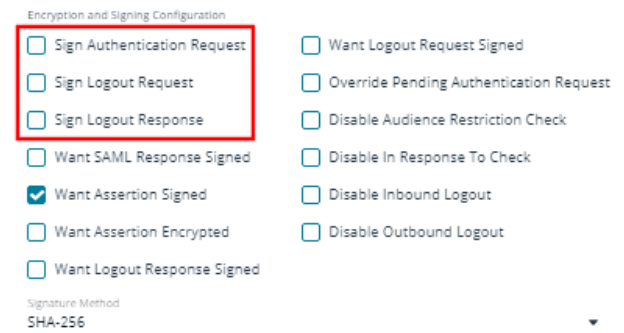
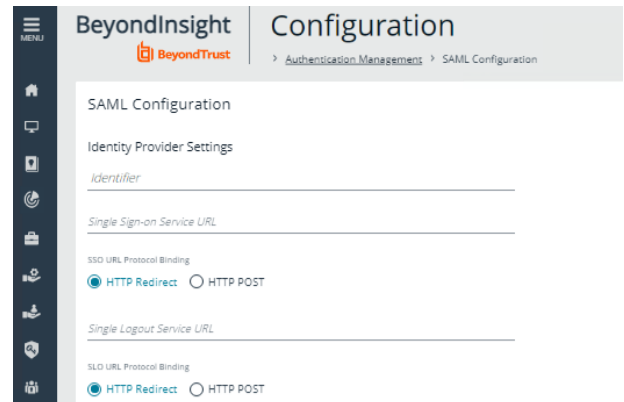
To configure SAML, go to the Dashboard or **Menu** and click **Configuration**. Under **Authentication Management**, click **SAML Configuration**.

Identity Provider Settings

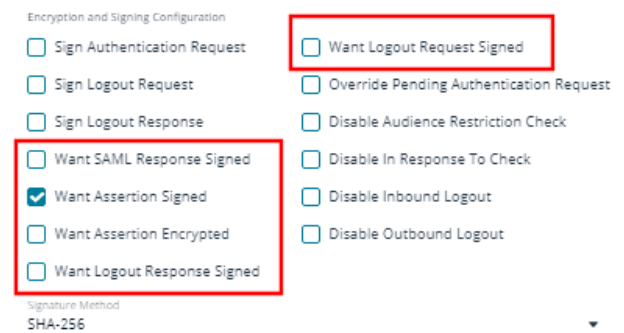
1. **Identifier:** The name of the identity provider (IdP) entry, normally supplied by the provider.
2. **Single Sign-on Service URL:** The SSO URL, from the provider.
3. Select **SSO URL Protocol Binding** type, **Redirect** or **Post**.
4. **Single Logout Service URL:** The SLO URL, from the provider.
5. Select **SLO URL Protocol Binding** type, **Redirect** or **Post**.

Encryption and Signing Configuration

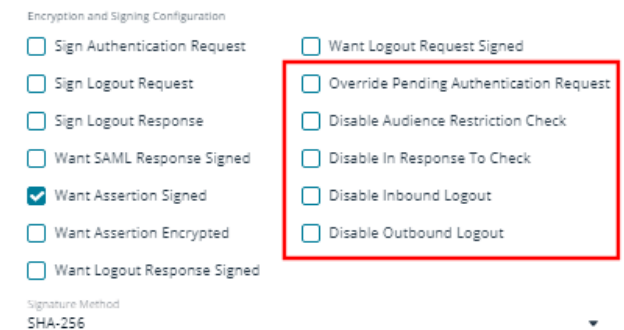
6. Depending on IdP configuration, check any of the first 3 settings, **Sign Authentication Request**, **Sign Logout Request**, and **Sign Logout Response**.



7. Check the appropriate service provider (SP) settings.



8. Check any required miscellaneous settings.



- Select the **Signature Method**, from the dropdown list of methods. The correct method is as required by your IdP.

Encryption and Signing Configuration

<input type="checkbox"/> Sign Authentication Request	<input type="checkbox"/> Want Logout Request Signed
<input type="checkbox"/> Sign Logout Request	<input type="checkbox"/> Override Pending Authentication Request
<input type="checkbox"/> Sign Logout Response	<input type="checkbox"/> Disable Audience Restriction Check
<input type="checkbox"/> Want SAML Response Signed	<input type="checkbox"/> Disable In Response To Check
<input checked="" type="checkbox"/> Want Assertion Signed	<input type="checkbox"/> Disable Inbound Logout
<input type="checkbox"/> Want Assertion Encrypted	<input type="checkbox"/> Disable Outbound Logout
<input type="checkbox"/> Want Logout Response Signed	

Signature Method
SHA-256

- Upload the identity provider certificate.

Current Identity Provider Certificate

Subject	--
Issuer	--
Valid from	0001-01-01T00:00:00
Valid to	0001-01-01T00:00:00

Upload Certificate

Drop File to upload
(or click)

Service Provider (SP) Settings

- Entity ID:** The fully qualified domain, followed by the file name:
https://<serverURL>/eEye.RetinaCSSAML/
- Click **SAVE SAML CONFIGURATION**.
- Once the SAML configuration is saved, a public SP certificate is available to download and upload to the IdP, if required.

Service Provider Settings

Entity ID
https://adfsweb.treyresearch.net/eEye.RetinaCSSAML/

Assertion Consumer Service URL
https://adfsweb.treyresearch.net/eEye.RetinaCSSAML/SAML/AssertionConsumerService.aspx

[Download Certificate](#)

Service Provider Settings

Entity ID
https://adfsweb.treyresearch.net/eEye.RetinaCSSAML/

Assertion Consumer Service URL
https://adfsweb.treyresearch.net/eEye.RetinaCSSAML/SAML/AssertionConsumerService.aspx

[Download Certificate](#)

Disable Forms Login

In environments where SAML, smart card, or claims-aware is configured, we recommend enabling the **Disable Forms Login** authentication option to disallow users from using the standard login form in BeyondInsight.

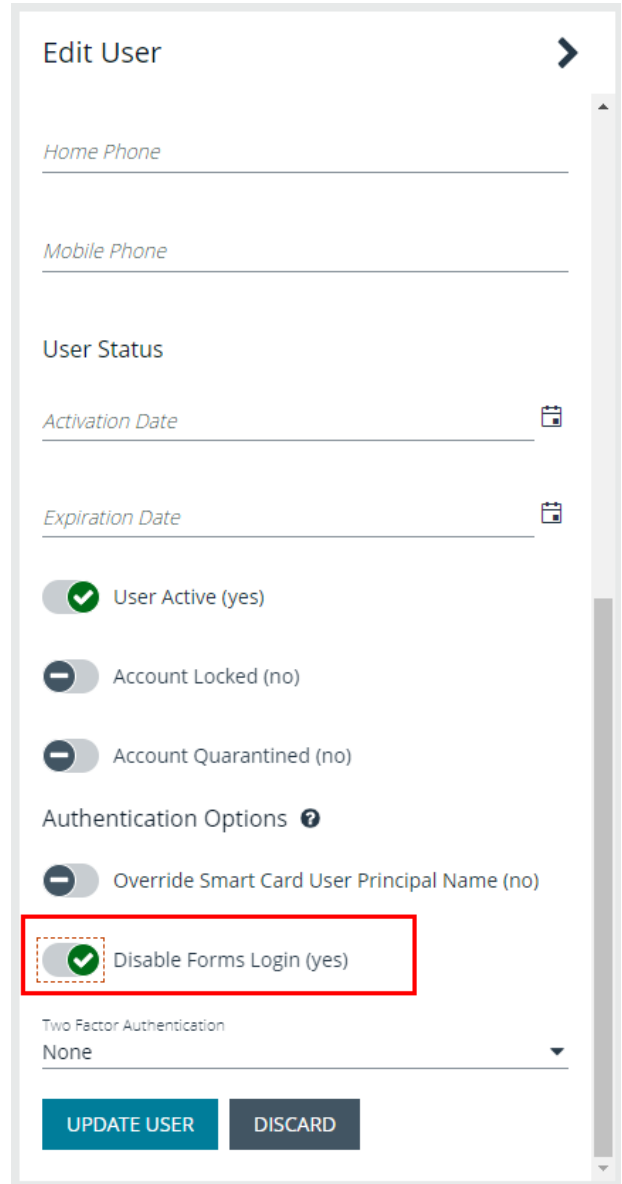
To disable forms login for existing users, enable this option directly on a user account as follows:

- Click the vertical ellipsis for the user account, and then click **Edit User Details**.

2. Under **Authentication Options**, toggle **Disable Forms Login** to enable the option.



Note: Please contact support for assistance if you need to bulk-apply this setting to existing accounts.



The screenshot shows the 'Edit User' interface with the following fields and controls:

- Home Phone**: Text input field.
- Mobile Phone**: Text input field.
- User Status**: Section header.
- Activation Date**: Date picker field.
- Expiration Date**: Date picker field.
- User Active (yes)**: Toggle switch (checked).
- Account Locked (no)**: Toggle switch (unchecked).
- Account Quarantined (no)**: Toggle switch (unchecked).
- Authentication Options ⓘ**: Section header.
- Override Smart Card User Principal Name (no)**: Toggle switch (unchecked).
- Disable Forms Login (yes)**: Toggle switch (checked), highlighted with a red dashed box.
- Two Factor Authentication**: Dropdown menu (set to None).
- UPDATE USER** and **DISCARD**: Action buttons.

To configure login forms to automatically be disabled for newly created users:

1. Navigate to **Configuration > Authentication Management > Authentication Options**.
2. Under **Forms Login Options**, enable one or both options as applicable:
 - **Disable Forms Login for new directory accounts**
 - **Disable Forms Login for new local accounts**

FORMS LOGIN OPTIONS

Disable Forms Login should only be used in environments where SAML, Smart Card or Claims-aware is configured. Turning this option on will disallow users from using the standard login form in BeyondInsight.

Disable Forms Login for new directory accounts

Disable Forms Login for new local accounts

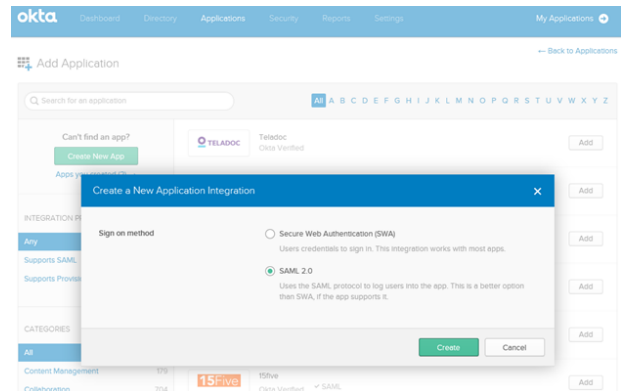
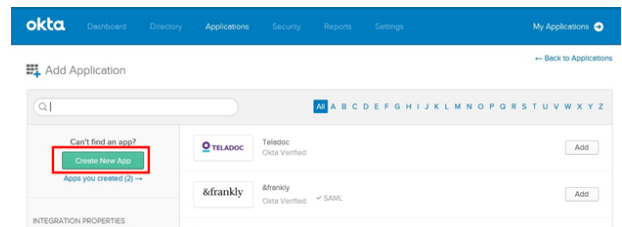
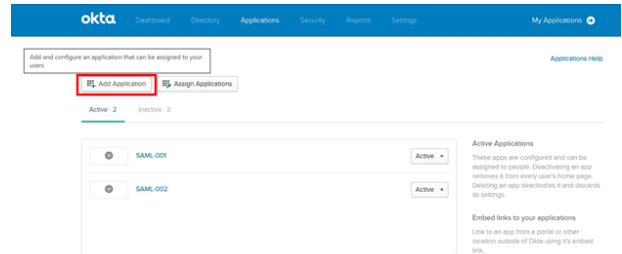
UPDATE FORMS LOGIN OPTIONS

Configure Okta with Password Safe

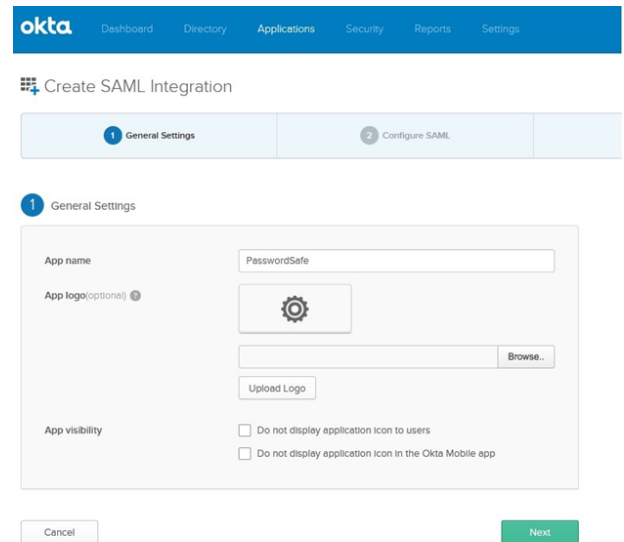
1. Log in to the Okta admin portal.
2. Click **Add Application**.

3. Click **Create New App**.
4. Select **SAML 2.0** as the sign-in method.

5. Click **Create**.

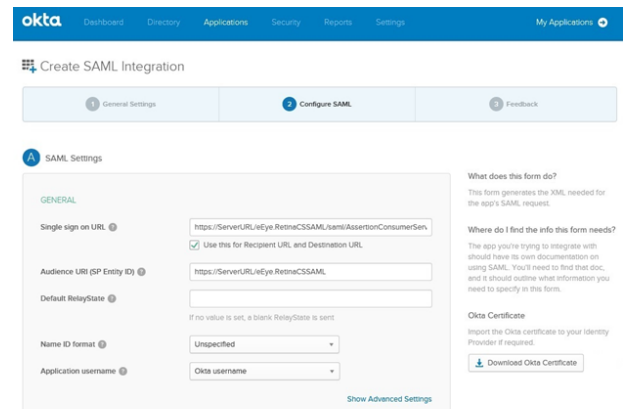


6. Enter the application name, and then click **Next**.
7. Enter the single sign on URL:
https://ServerURL/eEye.RetinaCSSAML/saml/AssertionConsumerService.aspx
8. Check the **Use this for Recipient and Destination URL** box.
9. Enter the audience URI (SP entity ID):
https://<ServerURL>/eEye.RetinaCSSAML



The screenshot shows the 'Create SAML Integration' page in the Okta dashboard. The 'General Settings' step is active. The 'App name' field contains 'PasswordSafe'. The 'App logo' field has a gear icon and a 'Browse...' button. The 'App visibility' section has two checkboxes: 'Do not display application icon to users' and 'Do not display application icon in the Okta Mobile app', both of which are unchecked. 'Cancel' and 'Next' buttons are at the bottom.

10. From the **Application username** list, select **Okta username**.



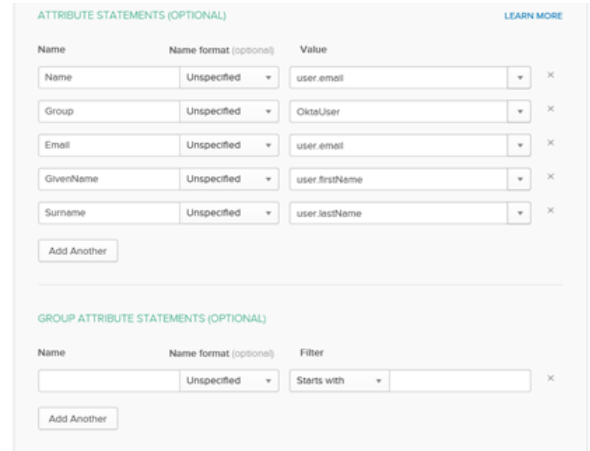
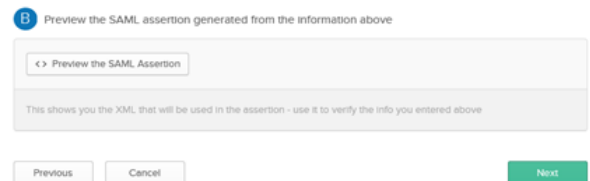
The screenshot shows the 'Create SAML Integration' page in the Okta dashboard, now on the 'SAML Settings' step. The 'GENERAL' section includes: 'Single sign on URL' with the value 'https://ServerURL/eEye.RetinaCSSAML/saml/AssertionConsumerService.aspx'; 'Audience URI (SP Entity ID)' with the value 'https://ServerURL/eEye.RetinaCSSAML'; 'Default RelayState' with a note 'If no value is set, a blank RelayState is sent'; 'Name ID format' set to 'Unspecified'; and 'Application username' set to 'Okta username'. The 'Use this for Recipient URL and Destination URL' checkbox is checked. On the right, there is a 'What does this form do?' section, a 'Where do I find the info this form needs?' section, and an 'Okta Certificate' section with a 'Download Okta Certificate' button. A 'Show Advanced Settings' link is at the bottom right.

SLO Optional Setting

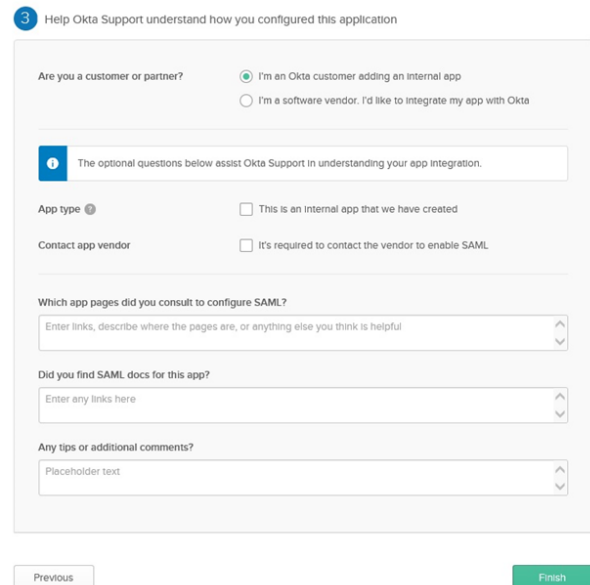
11. Click **Show Advanced Settings**.
12. Select **Enable Single Logout**.
13. Fill in the **Single Logout URL**:
HTTPS://<FQDN>/eEye.RetinaCSSAML/SAML/SLOService.aspx
14. Fill in the **SP Issuer**: **HTTPS://<FQDN>/eEye.RetinaCSSAML/**.
15. Select the **SP Public Certificate.cer** certificate.
16. Click **Upload Certificate**.

17. Add attributes, and then click **Next**.

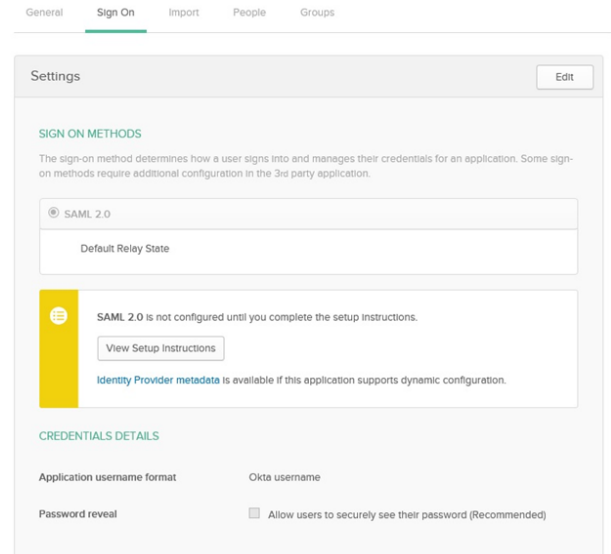
- **Group:** Set as a literal. This must match the group created in BeyondInsight or imported from AD. If an AD group is used, it must match the BI format **Domain\GroupName**.
- **Name:** (optional)
- **Email:** (optional)
- **Surname:** (optional)
- **GivenName:** (optional)

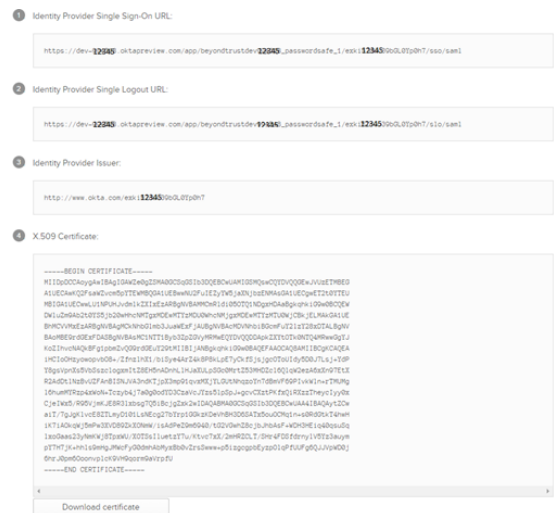
18. Select appropriate settings for Okta support, and then click **Finish**.



19. Click **View Setup Instructions**.



20. Copy the **Identity Provider Single Sign-On URL**. Save the value to be used in the next step.
21. Copy the **Identity Provider Issuer**. Save the value to be used in the next step.
22. Click **Download certificate**.



Configure SAML in Password Safe

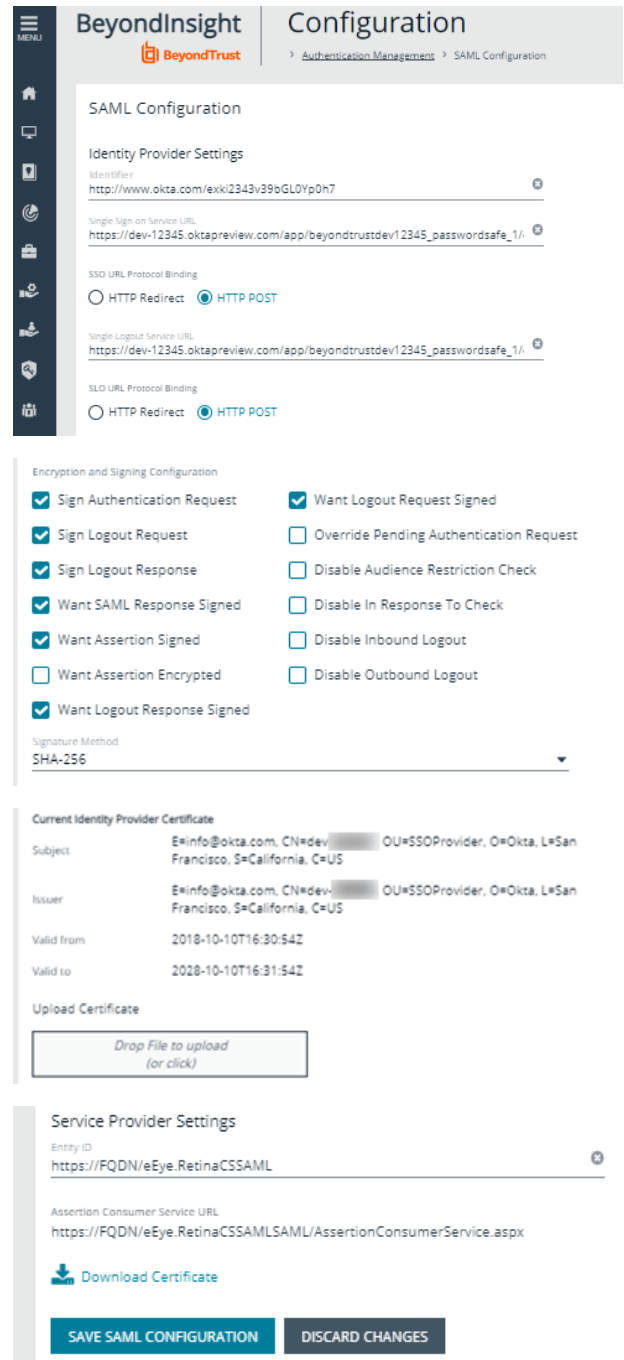
23. Go to the Dashboard or **Menu** and click **Configuration**, then, under **Authentication Management**, click **SAML Configuration**.

24. For **Identifier**, enter the Okta value **Identity Provider Issuer**.
25. For **Single Sign-on Service URL**, enter the Okta value **Identity Provider Single Sign-On URL**.
26. If available, set **Single Logout Service URL** to Okta value **Identity Provider Single Logout URL**.
27. Click **HTTP POST** Protocol Binding for SSO and SLO.

28. Under **Encryption and Signing Configuration**, check applicable boxes. A typical configuration is shown; however, depending on your Okta settings, some configuration selections may be different.

29. Upload Okta X.509 certificate.

30. Enter the service provider **Entity ID**.
31. Click **SAVE SAML CONFIGURATION**.
32. Once the SAML configuration is saved, a public SP certificate is available to download. It can be uploaded to the IdP if required.



BeyondTrust Configuration

Authentication Management > SAML Configuration

SAML Configuration

Identity Provider Settings

Identifier: <http://www.okta.com/exki2343v39bGL0Yp0h7>

Single Sign-on Service URL: https://dev-12345.oktapreview.com/app/beyondtrustdev12345_passwordsafe_1/

SSO URL Protocol Binding: HTTP Redirect HTTP POST

Single Logout Service URL: https://dev-12345.oktapreview.com/app/beyondtrustdev12345_passwordsafe_1/

SLO URL Protocol Binding: HTTP Redirect HTTP POST

Encryption and Signing Configuration

Sign Authentication Request Want Logout Request Signed

Sign Logout Request Override Pending Authentication Request

Sign Logout Response Disable Audience Restriction Check

Want SAML Response Signed Disable In Response To Check

Want Assertion Signed Disable Inbound Logout

Want Assertion Encrypted Disable Outbound Logout

Want Logout Response Signed

Signature Method: SHA-256

Current Identity Provider Certificate

Subject: E=info@okta.com, CN=dev-... OU=SSOProvider, O=Okta, L=San Francisco, S=California, C=US

Issuer: E=info@okta.com, CN=dev-... OU=SSOProvider, O=Okta, L=San Francisco, S=California, C=US

Valid from: 2018-10-10T16:30:54Z

Valid to: 2028-10-10T16:31:54Z

Upload Certificate

Drop File to upload (or click)

Service Provider Settings

Entity ID: <https://FQDN/eEye.RetinaCSSAML>

Assertion Consumer Service URL: <https://FQDN/eEye.RetinaCSSAMLSAML/AssertionConsumerService.aspx>

[Download Certificate](#)

SAVE SAML CONFIGURATION **DISCARD CHANGES**

Disable Forms Login

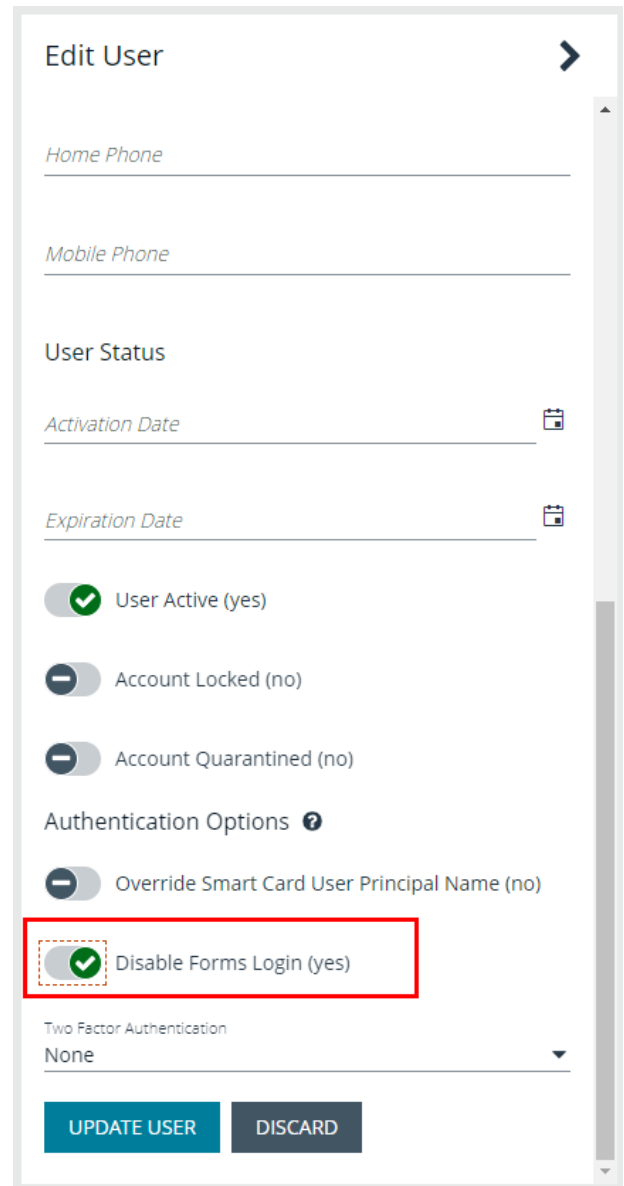
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To disable forms login for existing users, enable this option directly on a user account as follows:

1. Click the vertical ellipsis for the user account, and then click **Edit User Details**.
2. Under **Authentication Options**, toggle **Disable Forms Login** to enable the option.



Note: Please contact support for assistance if you need to bulk-apply this setting to existing accounts.



The screenshot shows the 'Edit User' interface. It includes fields for 'Home Phone' and 'Mobile Phone'. Under 'User Status', there are 'Activation Date' and 'Expiration Date' fields with calendar icons. Below these are three toggle switches: 'User Active (yes)' (checked), 'Account Locked (no)' (unchecked), and 'Account Quarantined (no)' (unchecked). The 'Authentication Options' section contains a toggle for 'Override Smart Card User Principal Name (no)' (unchecked) and a toggle for 'Disable Forms Login (yes)' (checked), which is highlighted with a red dashed box. At the bottom, there is a 'Two Factor Authentication' dropdown menu set to 'None' and two buttons: 'UPDATE USER' and 'DISCARD'.

To configure login forms to automatically be disabled for newly created users:

1. Navigate to **Configuration > Authentication Management > Authentication Options**.
2. Under **Forms Login Options**, enable one or both options as applicable:
 - **Disable Forms Login for new directory accounts**
 - **Disable Forms Login for new local accounts**

FORMS LOGIN OPTIONS

Disable Forms Login should only be used in environments where SAML, Smart Card or Claims-aware is configured. Turning this option on will disallow users from using the standard login form in BeyondInsight.

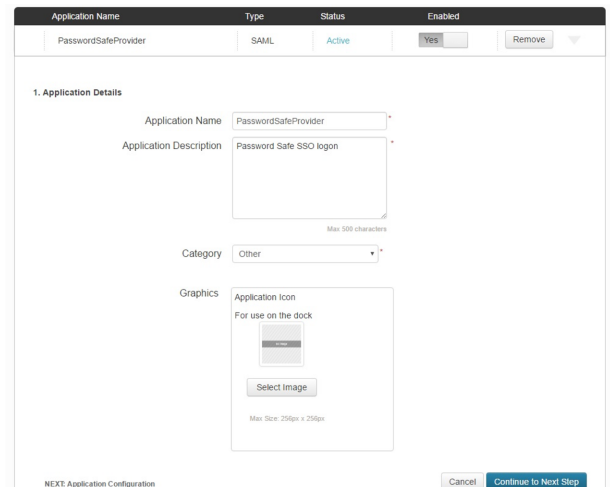
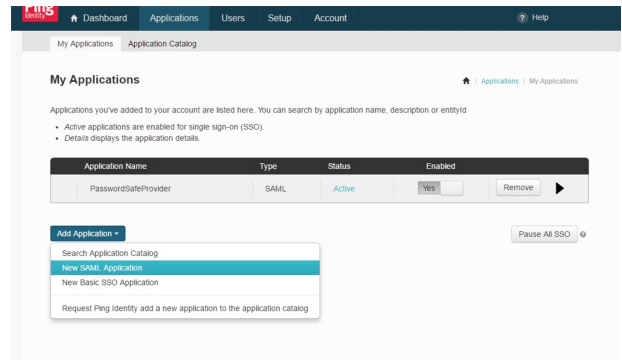
Disable Forms Login for new directory accounts

Disable Forms Login for new local accounts

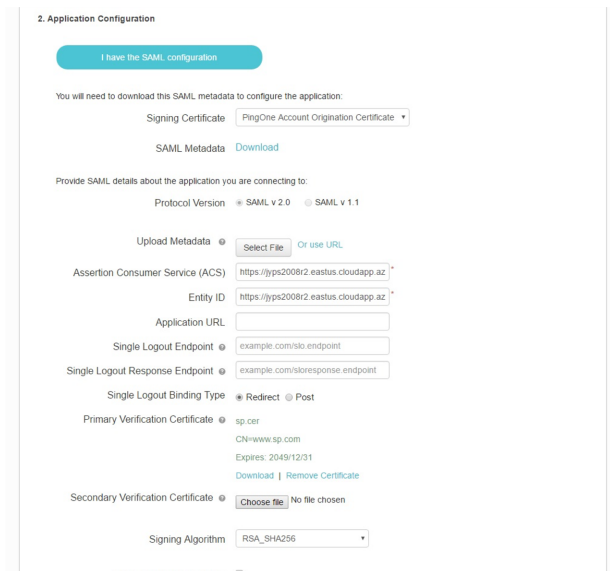
UPDATE FORMS LOGIN OPTIONS

Configure Ping Identity with Password Safe

1. Log in to the Ping Identity admin portal.
2. Click the **Add Application** button, and then select **New SAML Application** from the menu.
3. Fill in **Application Name** and **Description**.
4. Set **Category** to **Other**, and then click **Continue to Next Step**.

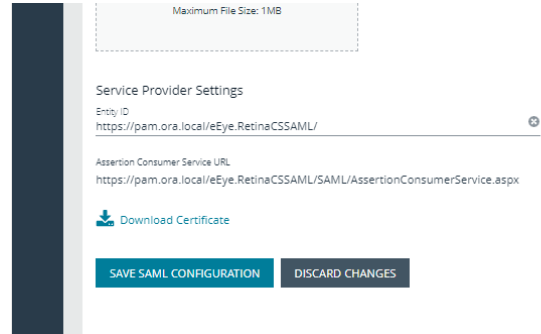


5. Set the following:
 - Set **Assertion Consumer Service (ACS)** to **`https://<ServerURL>/eEye.RetinaCSSAML/saml/AssertionConsumerService.aspx`**
 - Set **Entity ID** to **`https://<ServerURL>/eEye.RetinaCSSAML/`**
 - Set **Single Logout Binding Type** to **Redirect**.
 - Upload **Primary Verification Certificate** (use **SP Public Certificate.cer** from **\\WebSiteSAML\Certificates**). The certificate is automatically generated when the BI SAML configuration is saved.
 - Click **Continue to Next Step**.





Note: When setting up SAML configuration through the web console, the administrator needs to download the certificate from the web console.



Maximum File Size: 1MB

Service Provider Settings

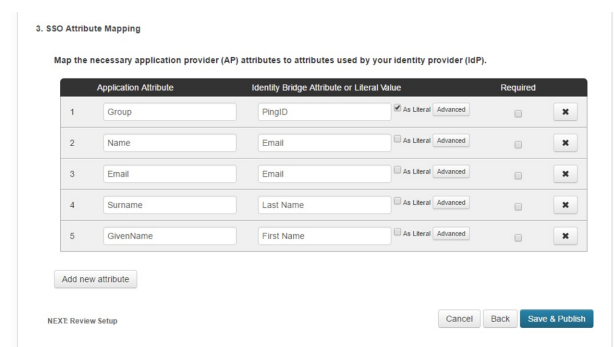
Entity ID
https://pam.ora.local/eEye.RetinaCSSAML/

Assertion Consumer Service URL
https://pam.ora.local/eEye.RetinaCSSAML/SAML/AssertionConsumerService.aspx

[Download Certificate](#)

SAVE SAML CONFIGURATION **DISCARD CHANGES**

6. Add the following attributes, and then click **Save & Publish**:
 - **Group:** Check the **As Literal** box. This must match the group created in BeyondInsight.
 - **Name** (required).
 - **Email** (optional).
 - **Surname** (optional).
 - **GivenName** (optional).



3. SSO Attribute Mapping

Map the necessary application provider (AP) attributes to attributes used by your identity provider (IdP).

	Application Attribute	Identity Bridge Attribute or Literal Value	As Literal	Advanced	Required
1	Group	PingID	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Name	Email	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Email	Email	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Surname	Last Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	GivenName	First Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Add new attribute](#)

NEXT: Review Setup Cancel Back Save & Publish



Note: The following is **applicable only to BI version 6.3.1**. It is not required for 6.4.4 or later releases. In 6.4.4 and later releases, the user is automatically logged in to Password Safe, and can then navigate to BeyondInsight, if they have the proper permissions.

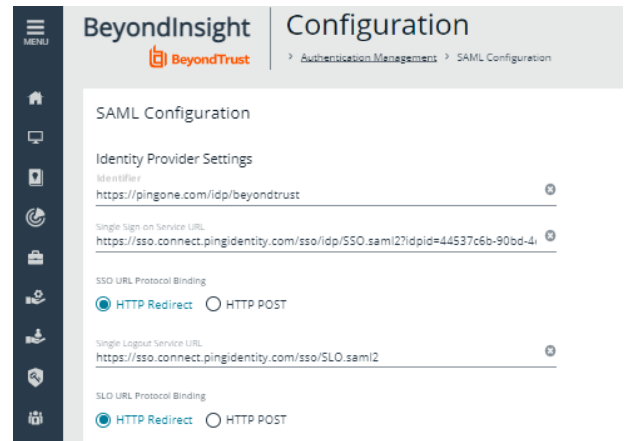
To create an application that goes to Password Safe when IdP-initiated login is used, add a new attribute called **Website**. When the value of **Website** is set to **Password Safe**, the user is logged in to Password Safe. If the attribute is not present or is set to anything other than **Password Safe**, the user will be directed to BeyondInsight.

7. Download the **Signing Certificate**.
8. Download **SAML Metadata**.
9. Click **Finish**.

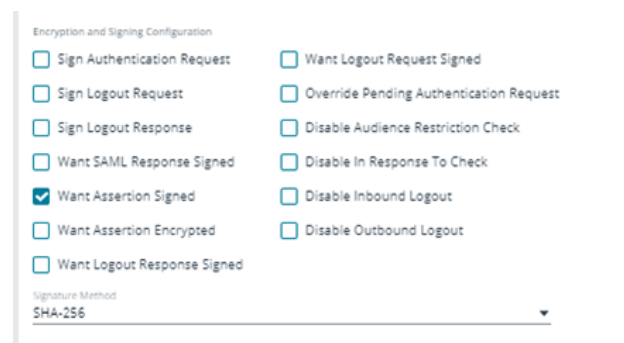
Configure SAML in Password Safe

10. Go to the Dashboard or **Menu** and click **Configuration**, then, under **Authentication Management**, click **SAML Configuration**.

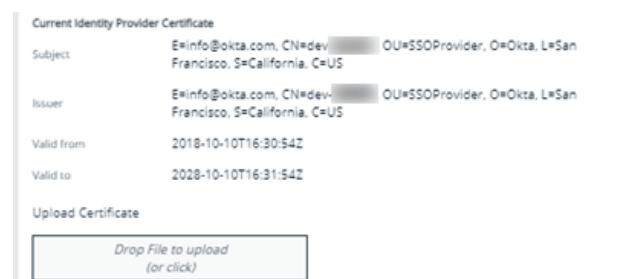
11. For **Identifier**, enter the Okta value **Identity Provider Issuer**.
12. For **Single Sign-on Service URL**, enter the Okta value **Identity Provider Single Sign-On URL**.
13. If available, set **Single Logout Service URL** to Okta value **Identity Provider Single Logout URL**.
14. Click **HTTP POST** Protocol Binding for SSO and SLO.



15. Under **Encryption and Signing Configuration**, check applicable boxes. A typical configuration is shown, however, depending on your Ping settings, some configuration selections may be different.



16. Upload Ping X.509 certificate.
17. Enter the service provider **Entity ID**.
18. Click **SAVE SAML CONFIGURATION**.
19. Once the SAML configuration is saved, a public SP certificate is available to download. It can be uploaded to the IdP if required.



Disable Forms Login

In environments where SAML, smart card, or claims-aware is configured, we recommend enabling the **Disable Forms Login** authentication option to disallow users from using the standard login form in BeyondInsight.

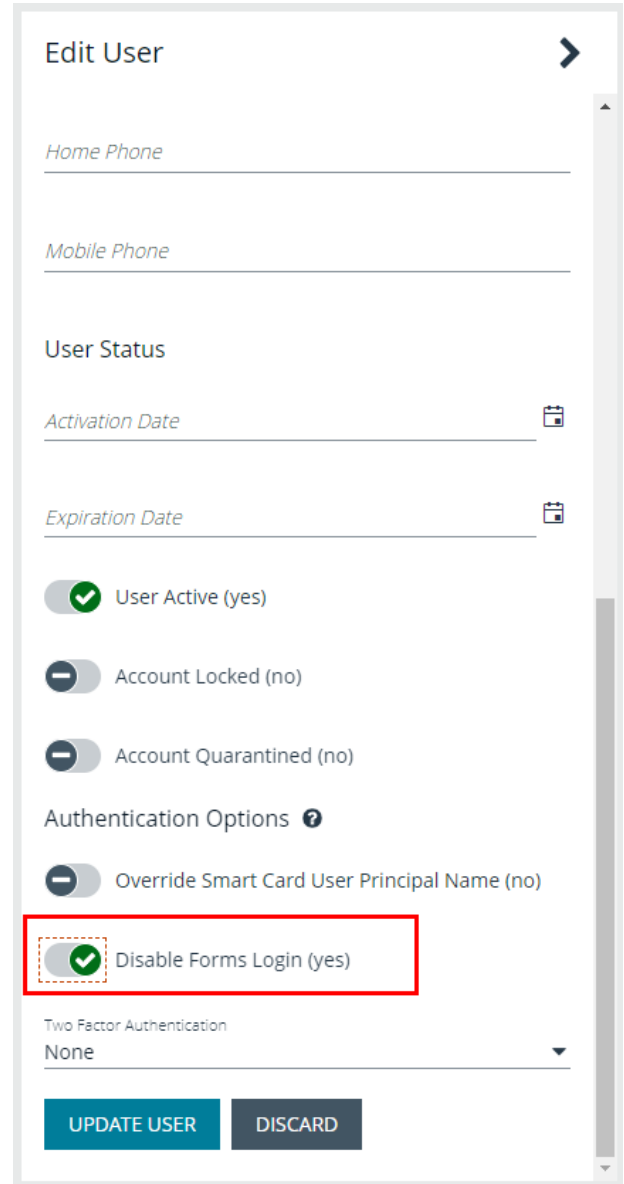
To disable forms login for existing users, enable this option directly on a user account as follows:

1. Click the vertical ellipsis for the user account, and then click **Edit User Details**.

- Under **Authentication Options**, toggle **Disable Forms Login** to enable the option.



Note: Please contact support for assistance if you need to bulk-apply this setting to existing accounts.



The screenshot shows the 'Edit User' configuration page. It includes fields for 'Home Phone' and 'Mobile Phone'. Under 'User Status', there are 'Activation Date' and 'Expiration Date' fields with calendar icons. Below these are three toggle switches: 'User Active (yes)' (checked), 'Account Locked (no)' (unchecked), and 'Account Quarantined (no)' (unchecked). The 'Authentication Options' section contains the 'Override Smart Card User Principal Name (no)' toggle (unchecked) and the 'Disable Forms Login (yes)' toggle (checked), which is highlighted with a red dashed box. At the bottom, there is a 'Two Factor Authentication' dropdown menu set to 'None' and two buttons: 'UPDATE USER' and 'DISCARD'.

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FORMS LOGIN OPTIONS

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Disable Forms Login for new directory accounts

Disable Forms Login for new local accounts

UPDATE FORMS LOGIN OPTIONS

Troubleshoot Authentication Issues

Active Directory User Cannot Authenticate with BeyondInsight or Password Safe

If an Active Directory user is a member of more than 120 Active Directory groups, the user may encounter the following error when attempting to log in to the BeyondInsight management console, Analytics & Reporting, or Password Safe, although correct credentials were supplied:

- Authentication fails with *The username or password is incorrect. Please try again.*
- An error is logged in the **frontend.txt** file associated with that login attempt, that includes *A local error occurred.*

The user cannot authenticate because the Kerberos token that is generated during authentication attempts has a fixed maximum size. To correct this issue, you can increase the maximum size in the registry.

1. Start the registry editor on the BeyondInsight server.
2. Locate and click the following registry subkey:

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Lsa\Kerberos\Parameters



Note: If the **Parameters** key does not exist, create it now.

3. From the **Edit** menu, select **New**, and then select **DWORD Value**, or **DWORD (32-bit) Value**.
4. Type **MaxPacketSize**, and then press **Enter**.
5. Double-click **MaxPacketSize**, type **1** in the **Value** box, select **Decimal**, and then click **OK**.
6. From the **Edit** menu, select **New**, and then click **DWORD Value**, or **DWORD (32-bit) Value**.
7. Type **MaxTokenSize**, and then press **Enter**.
8. Double-click **MaxTokenSize**, type **65535** in the **Value** box, select **Decimal**, and then click **OK**.
9. Close the registry editor, and then restart the BeyondInsight server.



For more information, please see [Problems with Kerberos authentication when a user belongs to many groups](https://docs.microsoft.com/en-US/troubleshoot/windows-server/windows-security/kerberos-authentication-problems-if-user-belongs-to-groups) at <https://docs.microsoft.com/en-US/troubleshoot/windows-server/windows-security/kerberos-authentication-problems-if-user-belongs-to-groups>.

Authentication Errors when using SAML 2.0 Web Applications



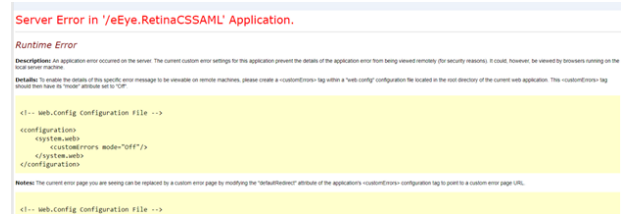
Note: Both *Runtime Error* and *Internal Server Error* are for on-premises Password Safe deployments only. If an error shown below occurs using Password Safe Cloud, please contact BeyondTrust Technical Support.

Runtime Error

If you receive a Runtime Error, add the following to the **web.config** file:

Set mode to Off < customErrors mode="Off" />

This provides an actual error.



```

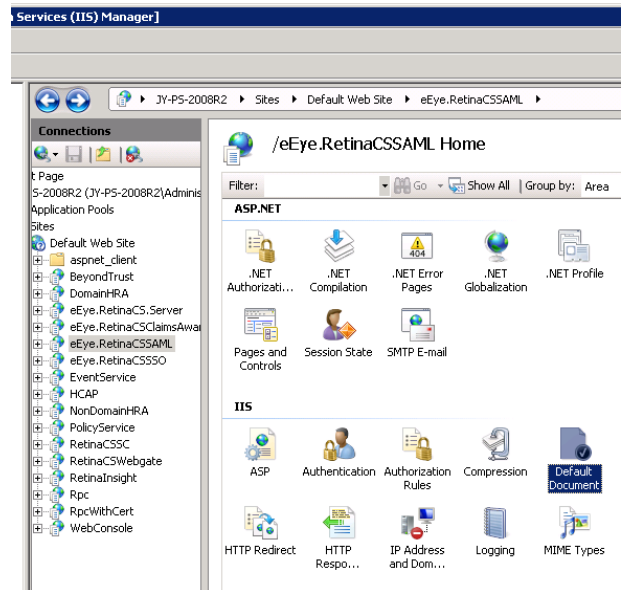
23  -->
24  <system.web>
25  <!--
26  |   Set compilation debug="true" to insert debugging
27  |   symbols into the compiled page. Because this
28  |   affects performance, set this value to true only
29  |   during development.
30  -->
31  <compilation debug="true" targetFramework="4.5" />
32  <authentication mode="Forms">
33  |   <forms name="ServiceProvider" loginUrl="login.aspx" />
34  </authentication>
35  <authorization>
36  |   <deny users="?" />
37  </authorization>
38  <customErrors mode="Off" />

```

Internal Server Error (500)

An *Internal Server Error (500)* message usually indicates that the **web.config** file is not formatted correctly.

1. Open IIS on the U-Series Appliance.
2. Browse to the SAML website, and then double-click **Default Document**.



3. If there is a formatting error in the **web.config** file, an error displays, indicating the line number for the error.

