



# BeyondTrust

## **Privileged Remote Access 24.1 Cloud Guide**

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# BeyondTrust Privileged Remote Access Admin Interface

This guide offers a detailed overview of **/login** and is designed to help you administer BeyondTrust users and your BeyondTrust software. The BeyondTrust Appliance B Series serves as the central point of administration and management for your BeyondTrust software and enables you to log in from anywhere that has internet access in order to download the access console.

# Log in to the PRA Administrative Interface

## Login

The user administrative interface enables administrators to create user accounts and configure software settings. Log in to the user administrative interface by going to your B Series Appliance's URL followed by `/login`.

Although your B Series Appliance's URL can be any registered DNS, it is most likely a subdomain of your company's primary domain, for example, `access.example.com/login`.

Default Username: **admin**

Default Password: **password**



**Note:** When logging into the administrative interface for the first time, BeyondTrust Cloud administrators are required to click through and accept the BeyondTrust EULA.

If two-factor authentication is enabled for your account, enter the code from the authenticator app.



**Note:** If more than one language is enabled for your site, select the language you want to use from the dropdown menu.

You can also change the language of your choice after you login to the admin site.



For more information, please see [Log into the PRA Access Console at https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/login-to-the-access-console.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/login-to-the-access-console.htm).

## Use Passwordless Login

FIDO2-certified authenticators can be used to securely log in to the desktop access console, privileged web access console, and the `/login` administrative interface without entering your password. You can register up to 10 authenticators.

If passwordless login has been enabled, **Authenticate Using** may default to **Passwordless FIDO2**, or it can be selected. The exact process for passwordless login depends on the type of device and manufacturer.

You can enable passwordless login and set the default authentication after logging into the `/login` administrative interface, by navigating to **Management > Security**, and then registering passwordless authenticators at **My Account > Security**. Administrators can view and manage passwordless login registration and usage at **Users & Security > Users > Passwordless Authenticators**



**Note:** Passwordless login for the desktop access console on macOS or Linux systems is supported only for roaming authenticators (such as the YubiKey hardware security keys). Platform or integrated authenticators (such as Face ID and fingerprint scanners) are not supported for the desktop access console login when using macOS or Linux systems.

## Use Integrated Browser Authentication

If Kerberos has been properly configured for single sign-on, you can click the link to use integrated browser authentication, allowing you to enter directly into the web interface without requiring you to enter your credentials.



## Forgot your password?

If password reset has been enabled from the **/login > Management > Security** page and the SMTP server has been set up for your site, this link is visible. To reset your password, click the link, enter and confirm your email address, and then click **Send**. If there is more than one user sharing the same email address, you are required to confirm your username. You will receive an email with a link that takes you back to the login page. On the login screen, enter and confirm your new password, and then click **Change Password**.

## Login Agreement

Administrators may restrict access to the login screen by enabling a prerequisite login agreement that must be confirmed before the login screen is displayed. The login agreement can be enabled and customized from the **/login > Management > Site Configuration** page.

## Search /login Administrative Interface

From every page within Privileged Remote Access /login, you can search for settings and features within the administrative interface using the search bar in the top-right corner. This feature searches for static text, including titles and labels, within the entirety of /login. Search results are listed in a dropdown, grouped by page. You can click any of the items in the listed search results to be taken directly to the page within /login. Titles and labels specific to your search are highlighted on the page.

**Note:**

- Search results include only areas within /login where you have permissions.
- User-entered items are not searched.
- Search supports all languages supported by /login — all languages are searched and indexed.

## App Switcher

If you have BeyondTrust Identity Security Insights, you can connect Privileged Remote Access and other BeyondTrust cloud applications, and then switch between applications without needing to re-enter credentials. The App Switcher menu appears in the same place in all applications: in the upper right. In Privileged Remote Access, the menu appears between the **Search** field and the **User Menu**.

Click the menu for a list of connected applications, and click the desired application. There can be more than one instance of an application, except for Identity Security Insights.

The menu does not appear if there are no connected applications. The menu is automatically removed if all connected applications are removed, or if it has not been used for 60 days. Re-entering credentials may be necessary in some circumstances, depending on the login configuration of the different applications. Configuration of this feature is managed in BeyondTrust Identity Security Insights.

## User Menu

The user dropdown menu, located in the upper-right corner of the screen, offers access to a few key features from anywhere on the admin site. Click the user icon to view the logged-in user name and email address, and available links and options.

**Log Out:** Click to log out of the /login administrative interface. This does not log you out of any consoles. Those must be logged out separately.

**Change Email Settings:** This is a link to **My Account > Profile**.

**Change Password:** This is a link to **My Account > Security**.

**Launch Privileged Web Access Console:** This gives you convenient access to the web console from anywhere in /login.

**Download Access Console:** This gives you a quick link to download the access console.

**Enable Extended Availability:** Click to enable this feature in the access console. Once enabled, this option switches to **Disable**, and can be clicked again to disable this feature. Extended Availability Mode allows you to receive email invitations from other users requesting to share a session when you are not logged into the console.

**Language:** Displays the current language. If more than one language is enabled for your site, select the language you want to use from the dropdown menu. This language is also applied to the privileged web access console.

**Color Scheme:** Select your preferred color scheme for the /login administrative interface. You can switch between **Light** and **Dark** modes, or **System**, which uses whatever mode is selected for your system.



*For more information on these features, please see the following:*

- ["Change Your Email Settings" on page 27](#)
- ["Change Your Password" on page 28](#)

## Status

### Information: View Privileged Remote Access Site Status and Software Details



Status

INFORMATION

### Site Status

The main page of the BeyondTrust Privileged Remote Access /login interface gives an overview of your B Series Appliance statistics. When contacting BeyondTrust Technical Support for software updates or troubleshooting purposes, you may be asked to email a screenshot of this page.

### Restart Privileged Remote Access Software

You can restart the BeyondTrust software remotely. Restart your software only if instructed to do so by BeyondTrust Technical Support.

### Time Zone

An administrator can select the appropriate time zone from a dropdown, setting the correct date and time of the B Series Appliance for the selected region.

### Total Active Jump Clients Allowed

Review the total number of active Jump Clients that are allowed on your system. If you need more Jump Clients, contact BeyondTrust Technical Support.

### Maximum Concurrent Users

Review the maximum number of concurrent users that are allowed on your system. If you need more users, contact BeyondTrust Technical Support.

### Endpoint Licenses

View the number of endpoint licenses available on your BeyondTrust Appliance B Series. If you need more licenses, contact BeyondTrust Sales.

### Endpoints Configured

View the number of endpoints currently configured on your system.

## Download License Usage Report

Download a ZIP file containing detailed information (English only) on your BeyondTrust license usage. This file contains a list of all Jump Items (not counting uninstalled Jump Clients), daily counts for Jump Item operations and license usage, and a summary for the B Series Appliance and its endpoint license usage and churn.

## Client Software

This is the hostname to which BeyondTrust client software connects. If the hostname attempted by the client software needs to change, notify BeyondTrust Technical Support of the needed changes so that Support can prepare a software update.

## Connected Clients

View the number and type of BeyondTrust software clients that are connected to your B Series Appliance.



For more information about the BeyondTrust Appliance B Series, please see [B Series Appliance Overview](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/deployment/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/deployment/index.htm>.

## ECM Clients

View the number of BeyondTrust Endpoint Credential Managers (ECM) that are connected to your B Series Appliance. Also, view information about the location and connection time for each ECM, as well as the group it belongs to.



**Note:** To ensure optimal up-time, administrators can install up to three ECMs on different Windows machines to communicate with the same credential store. A list of the ECMs connected to the appliance site can be found at **/login > Status > Information > ECM Clients**.

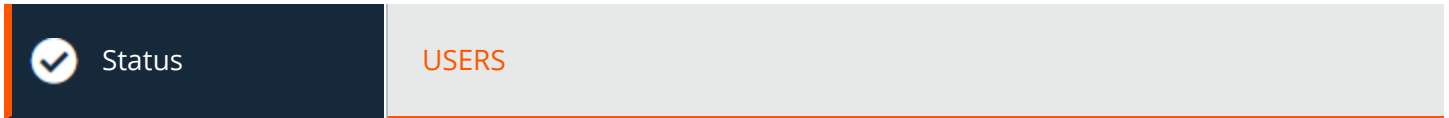


**Note:** When ECMs are connected in a high availability configuration, the BeyondTrust Appliance B Series routes requests to the ECM in the ECM Group that has been connected to the appliance the longest.



For more information, please see [Log Into Endpoints Using Credential Injection](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/web-access/credential-injection.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/web-access/credential-injection.htm>.

## Users: View Logged In Users and Send Messages



### Logged In Users

View a list of users logged into the access console, along with their login time and whether they are running any sessions.

### Terminate

You can terminate a user's connection to the access console.

### Send Message to Users

Send a message to all logged-in users via a pop-up window in the access console.

### Extended Availability Users

View users who have extended availability mode enabled.

### Disable

You may disable a user's extended availability.

# What's New: See Privileged Remote Access Software Release Details



Status

WHAT'S NEW

## What's New

Easily review BeyondTrust features and capabilities newly available with each release. Learning about new features as they become available can help you make the most of your BeyondTrust deployment.

The first time you log into the administrative interface after a BeyondTrust software upgrade, the **What's New** page will receive focus, alerting you that new features are available on your site. You must be an administrator to view this tab.

The information shown on the **What's New** page is also available to users in the access console from the **Help > About** menu.



For more information, please see [BeyondTrust Privileged Remote Access Update Documentation](https://www.beyondtrust.com/docs/privileged-remote-access/updates/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/updates/index.htm>.

# Consoles & Downloads: Launch the Web Access Console and Download the Desktop Access Console



Consoles &amp; Downloads

ACCESS CONSOLE

## BeyondTrust Privileged Web Access Console

Launch the privileged web access console, a web-based access console. Access remote systems from your browser without having to download and install the full access console.

## BeyondTrust Access Console

### Choose Platform

Choose the operating system on which you wish to install this software. This dropdown defaults to the appropriate installer detected for your operating system.

**i** For more information, please see [Privileged Web Access Console Guide](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/web-access/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/web-access/index.htm>.

## Download BeyondTrust Access Console

Download the BeyondTrust access console installer.

For system administrators who need to deploy the console installer to a large number of systems, the Microsoft Installer can be used with your systems management tool of choice. In your command prompt, when composing the command to install the console using an MSI, change to the directory where the MSI was downloaded and enter the command included on the **My Account** page.

You can include optional parameters for your MSI installation.

- **INSTALLDIR=** accepts any valid directory path where you want the console to install.
- **RUNATSTARTUP=** accepts **0** (default) or **1**. If you enter **1**, the console runs each time the computer starts up.
- **ALLUSERS=** accepts **""** (default) or **1**. If you enter **1**, the console installs for all users on the computer; otherwise, it installs only for the current user.
- **SHOULDAUTOUPDATE=1** If you install for only the current user, you can choose to have the console automatically update each time the site is upgraded by entering a value of **1**; a value of **0** (default) does not auto-update, and the console must be manually reinstalled when the site is upgraded. If you install the console for all users, it does not auto-update.
- **/quiet** or **/q** runs the installer without displaying any windows, spinners, error, or other visible alerts.



## Consoles & Downloads: Download Drivers



Consoles &amp; Downloads

DRIVERS

### Remote Desktop Agent

#### Download Remote Desktop Agent Installer

Click to download. Install the Remote Desktop Agent on 64-bit Windows servers with Remote Desktop Services to launch and inject credentials in administrator-defined applications.

### Virtual Smart Card

A virtual smart card allows you to authenticate to a remote system using a smart card on your local system.

To attempt virtual smart card authentication, the BeyondTrust user must have the BeyondTrust virtual smart card driver installed. The computer being accessed must be running in elevated mode. It must also either have the BeyondTrust endpoint virtual smart card driver installed or be accessed by the Jump To functionality of the access console.



**Note:** This feature is not supported for ARM-based Windows systems.



For more details and requirements, please see the [Smart Cards for Remote Authentication](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/smart-card/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/smart-card/index.htm>.

#### Choose Windows Architecture

Select the appropriate virtual smart card installer for the BeyondTrust user system or the endpoint system.

#### Download Virtual Smart Card Installer

Click to download the virtual smart card installer selected above.

### Access Console Network Tunneling Service



**Note:** Network Tunnel Jump is an advanced feature and disabled by default. This feature can be activated, at no additional cost, by contacting your BeyondTrust representative.

Protocol Tunnel Jump shortcuts, including Network Tunnel Jump, are enabled only if their Jumpoint is configured for the Protocol Tunnel Jump method on the `/login > Jump > Jumpoint` page.

If a Privileged Remote Access user needs access to an endpoint through an IP Network Tunnel, then the Access Console Network Tunneling Service must be installed on the user system. The Access Console Network Tunneling Service requires 64-bit Windows Environments. This feature can be installed manually or via a software deployment tool. Once installed, it creates a service: *BeyondTrust Privileged Remote Access Network Tunnel Endpoint* service.

Click **Download Access Console Network Tunneling Service Installer** if required.

 For more information, including other requirements for Network Tunnels, see [Create Network Tunnel in the Privileged Remote Access Jumpoint Guide](#).

# My Account: Email Settings and Extended Availability Mode



My Account

PROFILE

## Change Your Email Settings

### Email Address

Set the email address to where email notifications are sent, such as password resets or extended availability mode alerts.

### Preferred Email Language

Displays the current language. If more than one language is enabled for your site, select the language you want to use from the dropdown menu.

### Password

Enter the password for your /login account, not your email password. The password is required to confirm your identity before changing your email settings.



**Note:** To change your password, please see "[Change Your Password](#)" on page 28.

## Extended Availability Mode

### Enable or Disable

Enable or disable Extended Availability Mode by clicking the **Enable/Disable** button. Extended Availability Mode allows you to receive email invitations from other users requesting to share a session when you are not logged into the console.

# My Account: Change Password Settings and add Passwordless Authenticators



My Account

SECURITY

## Change Your Password

BeyondTrust recommends changing your password regularly.

### Username, Current Password, New Password

Verify that you are logged into the account for which you want to change the password, and then enter your current password. Create and confirm a new password for your account. The password may be set to whatever you choose, as long as the string complies with the defined policy set on the **/login > Management > Security** page.

## Passwordless Authenticators

This feature is available only if enabled under **Management > Security**. The default authentication method is also selected here. Either authentication method can be selected when logging in.

FIDO2-certified authenticators can be used to securely log in to the desktop access console (Windows only), privileged web access console, and **/login** without entering your password. You can register up to 10 authenticators.

Only FIDO2-certified hardware authenticators that perform user verification – biometrics or PIN – are allowed.

There are two types of authenticators:

### Roaming

Roaming authenticators, or cross-platform security keys like YubiKeys, are FIDO2-certified external devices that use biometrics or a PIN for user verification. They can be used instead of your password when logging into the desktop access console (Windows only), privileged web access console, and **/login** on any machine and supported operating system that allows the use of external FIDO2 authenticators.

### Platform

Platform authenticators such as Windows Hello or macOS Touch ID are integrated, FIDO2-certified biometric authenticators. These authenticators are tied to the machine where you registered the authenticator. They can be used instead of your password when logging into the desktop access console (Windows only), privileged web access console, and **/login**. On macOS and Linux, platform authenticators can only be used in the browser they were registered in. Incognito or private browsing windows cannot be used for authentication.

## Register and Manage Authenticators

The screen shows all registered authenticators, with their name, type, registration date and time, and last usage date and time. Registered authenticators can be edited or deleted by selecting them and clicking the appropriate icon.

To register a new authenticator, click **Register**.

Select **Roaming** or **Platform**, depending on your requirements.

Enter an **Authenticator Name**. Choose a name to help you identify this authenticator when viewing all registered authenticators in a list.

Enter your BeyondTrust Privileged Remote Access **Account Password**. This is the password used to log in with *Username & Password* authentication, not the authenticator's PIN or passcode. It is used to confirm your identity before allowing a new authenticator to be registered to your account. It is not associated with the authenticator in any way.

Click **Continue**.

The remaining steps for registering your authenticator depend on the type, the manufacturer, the browser, and the OS.



**Tip:** The browser or OS can timeout the authentication if there are delays responding to prompts.

Set up authenticators (for example, YubiKey or Windows Hello) within the OS before registering the authenticator. It is important to follow the manufacturer's directions. For example, YubiKey Bio requires a PIN at setup, even for fingerprint authentication.

Windows Hello can be set up using a PIN and a fingerprint. If this is done, either method can be used, regardless of how it is registered.

Registering an authenticator might fail if the browser and OS combination does not support passwordless authentication. For example, Firefox 110 does not support passwordless authentication for Linux and macOS. A warning message is usually generated in these cases.



**Note:** Authenticators usually record failed authentication attempts, and may lock. They must be reset following the manufacturer's instructions. A failed authentication at the authentication device does not count as a failed login to the BeyondTrust site, as the incorrect information is not submitted to the site.

## Two Factor Authentication

### Activate Two Factor Authentication

Activate two-factor authentication (2FA) to increase the level of security for users accessing /login and the BeyondTrust access console. Click **Activate Two Factor Authentication** and scan the displayed QR code using an authenticator app, such as Google Authenticator. Alternatively, you can manually enter the alphanumeric code displayed below the QR code into your authenticator app.

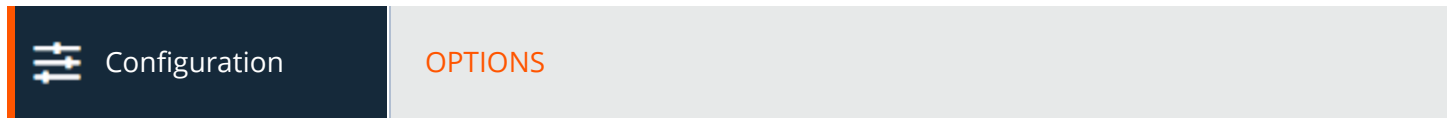
The app automatically registers the account and begins providing you with codes. Enter your password and the code generated by the authenticator app, and then click **Activate**. Please note that each code is valid for 60 seconds, after which time a new code is generated. Once you log in, you have the option to switch to a different authenticator app or disable 2FA.



**Note:** If 2FA was deployed by your administrator, you do not have the option to disable it.

# Configuration

## Options: Manage Connection Options, Record Sessions, Speed Up Sessions



### Session Options

#### Require Closed Sessions on Logout or Quit

If you check **Require Closed Sessions on Logout or Quit**, users will be unable to log out of the console if they currently have any session tabs open.

### Connection Options

#### Reconnect Timeout

Determine how long a disconnected endpoint client should attempt to reconnect.

#### Restrict physical access to the endpoint if the endpoint loses its connection or if all of the users in session are disconnected

If the session connection is lost, the remote system's mouse and keyboard input can be temporarily disabled, resuming either when the connection is restored or when the session is terminated.

### Access Session Logging Options

#### Enable Screen Sharing Recording

Choose if screen sharing sessions should be automatically recorded as videos.

#### Screen Sharing Recording Resolution

Set the resolution at which to view session recording playback.



**Note:** All recordings are saved in raw format; the resolution size affects playback only.

## Enable User Recording for Protocol Tunnel Jump

Choose if Protocol Tunnel Jump sessions should be automatically recorded as videos. Because Protocol Tunnel Jumps require the use of a third-party application of choice, the user's entire desktop is captured, including all monitors.

### User Recording Resolution

Set the resolution at which to view session recording playback.



**Note:** All recordings are saved in raw format; the resolution size affects playback only.

## Require User's Consent Before Recording Starts

Choose if users should receive a prompt telling them that their desktop will be recorded when beginning a Protocol Tunnel Jump session. Please note that if the user does not consent, Protocol Tunnel Jump session will not continue.

## Enable Command Shell Recording

Choose if command shell sessions should be automatically recorded as videos. Enabling command shell recordings also enables command shell sessions to be available as text transcripts.

### Command Shell Recording Resolution

Set the resolution at which to view session recording playback.



**Note:** All recordings are saved in raw format; the resolution size affects playback only.



### IMPORTANT!

*The recording settings enabled on this page can be overridden by a Jump Policy that has **Disable Session Recordings** selected. This affects screen sharing, protocol tunnel Jump recording, and command shell recordings.*

## Enable Automatic Logging of System Information

Choose if system information should be automatically pulled from the remote system at the beginning of the session, to be available later in the session report details.

## Enable Session Forensics

Choose if you want the added capability to search across all sessions based on session events, which include chat messages, file transfer, registry editor events, and session foreground window changed events. This feature is enabled by default.



**Note:** If Command Shell is enabled, Session Forensics allows you to do an in-depth search of shell recordings. When you search for a key term and a match is made in a stored shell recording, the video will automatically be queued to that point in time in the recording. No command output or passwords are recorded.

## Peer to Peer Options

Enabling peer-to-peer connections for access sessions enhances the performance of screen sharing, file transfer, and command shell tools. Additional firewall configuration might be required to successfully establish peer-to-peer connections.

### Disabled

This is the default setting. Disables Peer to Peer connections. To enable this feature, you must choose a server to negotiate the session. When screen sharing, file transfer, or command shell is detected, the peer-to-peer connection is attempted. If successful, this creates a direct connection between the user and the client systems, while still sending a second data stream to the B Series Appliance for auditing purposes. If for any reason a peer-to-peer connection cannot be established, the session traffic defaults to the B Series Appliance-mediated connection.

## Use BeyondTrust Hosted Peer to Peer Server

BeyondTrust clients attempt to reach a peer-to-peer connection through the server hosted by BeyondTrust. This requires that your BeyondTrust clients can make outbound UDP 3478 connection requests to [stun.bt3ng.com](https://stun.bt3ng.com). This setting is expected to work in most situations.

## Access Portal Logo

Administrators may upload a custom logo image to be displayed on public-facing web pages. This allows external users to verify they are on your organization's web site, as well as enhancing the access portal with your organization's branding.

The logo image is displayed on the following public-facing web pages:

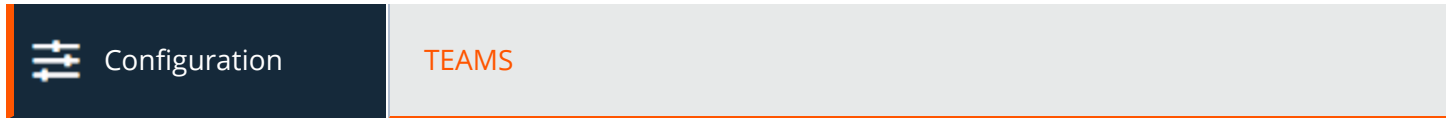
- Access invite download page (the page shown after clicking a link in an access invite email)
- Public recording URLs (view and download)
- Extended availability responses (the page shown after clicking a link in an extended availability invitation email)
- Jump approval authorizations (the page shown after clicking a link in a Jump approval email)



**Note:** Uploaded logo image files may be in any standard image format. The logical image size maximum is 250 pixels wide and 64 pixels high. However, BeyondTrust supports high density displays which allows for a maximum physical size of 500 pixels wide and 128 pixels high.



# Teams: Group Users into Teams



## Manage Teams

Grouping users into teams aids efficiency by assigning leadership within groups of users. In the access console, each team appears as a separate queue for sessions.

### Add New Team, Edit, Delete

Create a new team, modify an existing team, or remove an existing team. Deleting a team does not delete those user accounts, only the team with which they are associated.

## Add or Edit Team

### Team Name

Create a unique name to help identify this team.

### Code Name

Set a code name for integration purposes. If you do not set a code name, PRA creates one automatically.

### Comments

Add comments to help identify the purpose of this object.

## Group Policies

Note any group policies which assign members to this team. Click the link to go to the **Group Policies** page to verify or assign policy members.

## Team Members

Search for users to add to this team. You can set each member's role as a **Team Member**, **Team Lead**, or **Team Manager**. These roles play a significant part in the **Dashboard** feature of the access console.

In the table below, view existing team members. You can filter the view by entering a user's name in the filter box. You can also edit a member's role or delete a member from the team.

To add a group of users to a team, go to **Users & Security > Group Policies** and assign that group to one or more teams in a given role.



**Note:** You may be unable to edit or delete some team members. This occurs when a user is added via group policy.

You can click the group policy link to modify the policy as a whole. Any changes made to the group policy apply to all members of that group policy.

You can also add the individual to the team, overriding their settings as defined elsewhere.

## Dashboard Settings

Within a team, a user can administrate only others with roles lower than their own. Note, however, that roles apply strictly on a team-by-team basis, so a user may be able to administrate another user in one team but not be able to administer that same user in another team.

### Monitoring Team Members from Dashboard

If enabled, a team lead or manager can monitor team members from the dashboard. Choose to **Disable** the ability to monitor, or choose **Only Access Console** to allow a team lead or manager to monitor a team member's access console. Monitoring affects team leads and managers for all teams on the site.

### Enable Session Join and Take Over in Dashboard

If this option is checked, a team lead can join or take over a team member's sessions. Similarly, a team manager can administrate both team members and team leads. The team lead must have start session access to the Jump Item that was used to create the session, unless the option below is also checked.

### Allow Team Managers/Leads to use "Transfer", "Take Over" and "Join Session" for sessions that are started from Jump Items to which they do not have "Start Session" access.

If this option is checked, a team lead can join or take over a team member's sessions, even if the team lead does not have start session access to the Jump Item that was used to create the session.

## Team Chat History

### Enable Replay of Team Chat History

If this option is checked, chat messages to everyone in the **Team Chat** area of the access console persist between access console logins. This prevents loss of chat history if the connection is lost. This does not affect chat within a session, or private chats.

### Hours of Team Chat History to Replay

By default, 8 hours of history is retained. This can be changed from a minimum of 1 to a maximum of 24, using the + and - icons or entering the desired value. The time is set in one hour increments. Click **Save** after changing the time.



**Note:** A maximum of 1000 chat messages is replayed. This limit applies regardless of the number of hours selected.

## Custom Fields: Create, Edit, Delete Custom API Fields



Configuration

CUSTOM FIELDS

Create custom API fields to gather information about your customer, enabling you to more deeply integrate BeyondTrust with your existing programs. Custom fields must be used in combination with the BeyondTrust API. Create a new field, modify an existing field, or remove an existing field.

### Add or Edit Custom API Field

#### Display Name

Create a unique name to help identify this custom field. This name is displayed in the access console as part of the session details.

#### Code Name

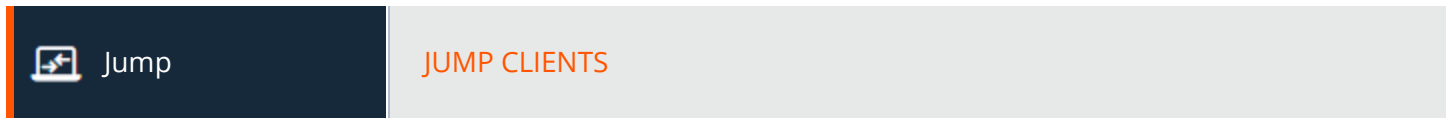
Set a code name for integration purposes. If you do not set a code name, PRA creates one automatically.

#### Show in Access Console

If you check **Show in Access Console**, this field and its values will be visible wherever custom session details are displayed in the access console.

# Jump

## Jump Clients: Manage Settings and Install Jump Clients for Endpoint Access



### Jump Client Installer List

This list shows all previously installed active Jump Client installers. Administrators and privileged users can view, download, delete, or extend Jump Client installers.

A warning message appears at the top of the list: *Installing more than one Jump Client on the same system is being phased out in a future release. In the Access Console you may use the **copy** action on a Jump Client to apply different policies to the same endpoint. Click **Dismiss** to remove the warning message.*

### Generic Jump Client Installer Download

The generic installer allows you to create Jump Client and Jumpoint installers that are not tied to a specific Jump Client or Jumpoint. Generic installers can be used for automated or ephemeral deployments on VM images, and do not require authenticating and downloading the Jump Client or Jumpoint-specific installer once deployed.

To use the generic Jump Client installer, select your desired platform, and click **Download**. When prompted, copy the Jump Client-specific key to complete the installation.

### Jump Client Mass Deployment Wizard

To access the Jump Client Mass Deployment Wizard, click **Add** at the top of the Jump Client Installer List.

The Mass Deployment Wizard enables administrators and privileged users to deploy Jump Clients to one or more remote computers for later unattended access.



For more information, please see [Privileged Remote Access Jump Client Guide: Unattended Access to Systems in Any Network](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jump-clients/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jump-clients/index.htm>.

### Jump Group

From the **Jump Group** dropdown, select whether to pin the Jump Client to your personal list of Jump Items or to a Jump Group shared by other users. Pinning to your personal list of Jump Items means that only you can access this remote computer through this Jump Client. Pinning to a shared Jump Group makes this Jump Client available to all members of that Jump Group.

### Name

Add a name for the Jump Client.

Some Mass Deployment Wizard settings allow override, enabling you to use the command line to set parameters that are specific to your deployment, prior to installation.

## Jump Policy

You may apply a Jump Policy to this Jump Client. Jump Policies are configured on the **Jump > Jump Policies** page and determine the times during which a user can access this Jump Client. A Jump Policy can also send a notification when it is accessed or can require approval to be accessed. If no Jump Policy is applied, this Jump Client can be accessed without restriction.

## Jumpoint Proxy

If you have one or more Jumpoints set up as proxies, you can select a Jumpoint to proxy these Jump Client connections. That way, if these Jump Clients are installed on computers without native internet connections, they can use the Jumpoint to connect back to your B Series Appliance. The Jump Clients must be installed on the same network as the Jumpoint selected to proxy the connections.

## Attempt an Elevated Install if the Client Supports It

If **Attempt an Elevated Install if the Client Supports It** is selected, the installer attempts to run with administrative rights, installing the Jump Client as a system service. If the elevated installation attempt is unsuccessful or if this option is deselected, the installer runs with user rights, installing the Jump Client as an application. This option applies only to Windows and Mac operating systems.



**Note:** A Jump Client pinned in user mode is available only when that user is logged in. In contrast, a Jump Client pinned in service mode, with elevated rights, allows that system to always be available, regardless of which user is logged in.

## This Installer Is Valid For

The installer remains usable only as long as specified by the **This Installer is Valid For** dropdown. Be sure to leave adequate time for installation. If someone should attempt to run the Jump Client installer after this time, installation fails, and a new Jump Client installer must be created. Additionally, if the installer is run within the allotted time but the Jump Client is unable to connect to the B Series Appliance within that time, the Jump Client uninstalls, and a new installer must be deployed. The validity time can be set for anywhere from 10 minutes to 1 year. This time does NOT affect how long the Jump Client remains active.

Once a Jump Client has been installed, it remains online and active until it is uninstalled from the local system either by a user from the Jump interface or by an uninstall script. It can also be uninstalled, or extended, from the Jump Client Installer List. A user cannot remove a Jump Client unless the user is given appropriate permissions by their admin from the /login interface.

## Comments

Add **Comments**, which can be helpful in searching for and identifying remote computers. Note that all Jump Clients deployed via this installer have the same comments set initially, unless you check **Allow Override During Installation** and use the available parameters to modify the installer for individual installations.

## Session Policy

You may choose a session policy to assign to this Jump Client. Session policies are configured on the **Users & Security > Session Policies** page. A session policy assigned to this Jump Client has the highest priority when setting session permissions.



For more information, please see at [Session Policies: Set Session Permission and Prompting Rules](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/admin/session-policies.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/admin/session-policies.htm>.

## Maximum Offline Minutes Before Deletion

You can set the **Maximum Offline Minutes Before Deletion** of a Jump Client from the system. This setting overrides the global setting, if specified.

## Prompt for Elevation Credentials if Needed

If **Prompt for Elevation Credentials if Needed** is selected, the installer prompts the user to enter administrative credentials if the system requires that these credentials be independently provided; otherwise, it installs the Jump Client with user rights. This applies only if an elevated install is being attempted.

## Tag

Adding a **Tag** helps to organize your Jump Clients into categories within the access console.

## Allow Override During Installation

Some Mass Deployment Wizard settings allow override, enabling you to use the command line to set parameters that are specific to your deployment, prior to installation.

## Mass Deploy Help

For system administrators who need to push out the Jump Client installer to a large number of systems, the Windows, Mac, or Linux executable or the Windows MSI can be used with your systems management tool of choice. You can include a valid custom install directory path where you want the Jump Client to install.



**Note:** It is common for receive an error message during the install, regarding a layout or appearance issue. This can be disregarded.

Duplicate installations of Jump Clients or large numbers of installations can lead to installation failures or degraded performance. Please see [Review Best Practices for Jump Client Mass Deployment](#).

You can also override certain installation parameters specific to your needs. When you mark specific installation options for override during installation, you can use the following optional parameters to modify the Jump Client installer for individual installations. Note that if a parameter is passed on the command line but not marked for override in the /login administrative interface, the installation fails. If the installation fails, view the operating system event log for installation errors.

Command Line Parameter	Value	Description
<code>--install-dir</code>	<directory_path>	Specifies a new writable directory under which to install the Jump Client. This is supported only on Windows and Linux. When defining a custom install directory, ensure that the directory you are creating does not already exist and is in a location that can be written to.

<code>--jc-name</code>	<code>&lt;name...&gt;</code>	If override is allowed, this command line parameter sets the Jump Client's name.
<code>--jc-jump-group</code>	<code>user:&lt;username&gt;jumpgroup:&lt;jumpgroup-code-name&gt;</code>	If override is allowed, this command line parameter overrides the Jump Group specified in the Mass Deployment Wizard.
<code>--jc-session-policy</code>	<code>&lt;session-policy-code-name&gt;</code>	If override is allowed, this command line parameter sets the Jump Client's session policy that controls the permission policy during an access session.
<code>--jc-jump-policy</code>	<code>&lt;jump-policy-code-name&gt;</code>	If override is allowed, this command line parameter sets the Jump Policy that controls how users are allowed to Jump to the Jump Client.
<code>--jc-max-offline-minutes</code>	<code>&lt;minutes&gt;</code>	The maximum number of minutes a Jump Client can be offline before it is deleted from the system. This setting overrides the global setting if specified.
<code>--jc-ephemeral</code>		Sets the maximum number of minutes a Jump Client will be offline before it is deleted from the system to 5 minutes. This is a convenience option that specifies the Jump Client as being ephemeral and is functionally equivalent to specifying <b><code>--jc-max-offline-minutes 5</code></b>
<code>--jc-tag</code>	<code>&lt;tag-name&gt;</code>	If override is allowed, this command line parameter sets the Jump Client's tag.
<code>--jc-comments</code>	<code>&lt;comments ... &gt;</code>	If override is allowed, this command line parameter sets the Jump Client's comments.
<code>--silent</code>		If included, the installer shows no windows, spinners, errors, or other visible alerts.



**Note:** When deploying an MSI installer on Windows using an `msiexec` command, the above parameters can be specified by:

1. Removing leading dashes (`--`)
2. Converting remaining dashes to underscores (`_`)
3. Assigning a value using an equal sign (`=`)

**MSI Example:**

```
msiexec /i bomgar-pec-win32.msi KEY_INFO=w0dc3056g7ff8d1j68ee6wi6dhwzfeeggzyeh7c40jc90
jc_jump_group=jumpgroup:server_support jc_tag=servers
```

When deploying an EXE installer, the above parameters can be specified by:

- Adding dashes
- Adding a space between the parameter and the value

**EXE Example:**



```
bomgar-pec-[unique id].exe --jc-jump-group jumpgroup:servers --jc-tag servers
```

Other rules to consider:

- *installdir* has a dash in the EXE version but no dashes in the MSI version.
- */quiet* is used for the MSI version in place of *--silent* in the EXE version.

## Jump Client Statistics

An administrator can choose which statistics to view for all Jump Clients on a site-wide basis. These statistics are displayed in the access console and include CPU, console user, disk usage, a thumbnail of the remote screen, and uptime.

## Upgrade

### Automatic Jump Client Upgrades

Use the radio buttons below to control automatic Jump Client upgrades. You can:

- Permanently disable Jump Client upgrades.
- Temporarily enable Jump Client upgrades for the current upgrade cycle.
- Permanently enable Jump Client upgrades.



**Note:** In order to manually update Jump Clients in the privileged web access console, you must first disable Automatic Jump Client Upgrades.

## Maintenance

### Number of days before Jump Clients that have not connected are automatically deleted

If a Jump Client goes offline and does not reconnect to the B Series Appliance for the number of days specified by the **Number of days before Jump Clients that have not connected are automatically deleted** setting, it is automatically uninstalled from the target computer and is removed from the Jump interface of the access console.



**Note:** This setting is shared with the Jump Client during normal operation so that even if it cannot communicate with the site, it uninstalls itself at the configured time. If this setting is changed after the Jump Client loses connection with the B Series Appliance, it uninstalls itself at the previously configured time.

### Number of days before Jump Clients that have not connected are considered lost

If a Jump Client goes offline and does not reconnect to the B Series Appliance for the number of days specified by the **Number of days before Jump Clients that have not connected are automatically deleted** setting, it is labeled as lost in the access console. No specific action is taken on the Jump Client at this time. It is labeled as lost only for identification purposes, so that an administrator can



diagnose the reason for the lost connection and take action to correct the situation.



**Note:** To allow you to identify lost Jump Clients before they are automatically deleted, this field should be set to a smaller number than the deletion field above.

## Miscellaneous

### Allow Representative to attempt to wake up Jump Clients

**Allow users to attempt to wake up Jump Clients** provides a way to wake up a selected Jump Client by broadcasting Wake-on-LAN (WOL) packets through another Jump Client on the same network. Once a WOL is attempted, the option becomes unavailable for 30 seconds before a subsequent attempt can be made. WOL must be enabled on the target computer and its network for this function to work. The default gateway information of the Jump Client is used to determine if other Jump Clients reside on the same network. When sending a WOL packet, the user has an advanced option to provide a password for WOL environments that require a secure WOL password.



**Note:** You can set Jump Clients to allow or disallow simultaneous Jumps from the **Jump > Jump Items > Jump Settings** section. If allowed, multiple users can gain access to the same Jump Client without an invitation to join an active session by another user. If disallowed, only one user can Jump to a Jump Client at a time. Only an invitation by the user who originated the session can allow for a second user to access the session.



For more information, please see [Manage Jump Client Settings at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jump-clients/settings.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jump-clients/settings.htm).

### Use screen state to detect Customer Presence

When enabled, a customer will be considered present only if a user is logged in, the system is not locked, and a screen saver is not running. When disabled, a customer will be considered present if a user is logged in, regardless of the screen state. Customer Presence affects the session policy used for sessions started from a Jump Client.

### Global connection rate for Jump Clients

The global connection rate setting is used by disconnected Jump Clients as a clue to know how aggressively to try to reconnect.

# Jump Groups: Configure Which Users Can Access Which Jump Items

 Jump

JUMP GROUPS

## Jump Groups

A Jump Group is a way to organize Jump Items, granting members varying levels of access to those items. Users are assigned to Jump Groups either from this page or from the **Users & Security > Group Policies** page.

### Add New Jump Group, Edit, Delete

Create a new group, modify an existing group, or remove an existing group.

### Search Jump Groups

To quickly find an existing group in the list of **Jump Groups**, enter the name, part of the name, or a term from the comments. The list filters all groups with a name or comment containing the entered search term. The list remains filtered until the search term is removed, even if the user goes to other pages or logs out. To remove the search term, click the **X** to the right of the search box.

## Add or Edit Group

### Name

Create a unique name to help identify this group. This name helps when adding Jump Items to a group as well as when determining which users and group policies are members of a Jump Group.

### Code Name

Set a code name for integration purposes. If you do not set a code name, PRA creates one automatically.

### ECM Group

Select which ECM group to associate with the Jump Group. The dropdown menu shows ECM groups have been created on the site. If there are no custom ECM Groups, only **Default** is available as an option. Credential requests originating from Jump Items in a Personal Jump Group are routed to the Default ECM group.



**Note:** This feature is only present if enabled when your site is built. If it is not present, please contact your site administrator.



**Note:** While the ECM Groups must exist to be associated with a Jump Group, they still need to be associated with an API Account in order for routing to occur. For more information, please see ["API Configuration: Enable the XML API and Configure Custom Fields" on page 196.](#)

## Comments

Add a brief description to summarize the purpose of this Jump Group.

## Group Policies

This displays a listing of the group policies which assign users to this Jump Group.

## Allowed Users

Search for users to add to this Jump Group. You can set each user's **Jump Item Role** to set their permissions specific to Jump Items in this Jump Group, or you can use the user's default Jump Item Roles as set on the **Users & Security > Group Policies** or **Users & Security > Users** page. A Jump Item Role is a predefined set of permissions regarding Jump Item management and usage.

You can also apply a **Jump Policy** to each user to manage their access to the Jump Items in this Jump Group. Selecting **Set on Jump Items** instead uses the Jump Policy applied to the Jump Item itself. Jump Policies are configured on the **Jump > Jump Policies** page and determine the times during which a user can access this Jump Item. A Jump Policy can also send a notification when it is accessed or can require approval to be accessed. If neither the user nor the Jump Item has a Jump Policy applied, this Jump Item can be accessed without restriction.

Existing Jump Group users are shown in a table. You can filter the list of users by entering a username in the **Filter** box. You can also edit a user's settings or delete the user from the Jump Group.

To add groups of users to a Jump Group, go to **Users & Security > Group Policies** and assign that group to one or more Jump Groups.



**Note:** Edit and delete functionality may be disabled for some users. This occurs either when a user is added via group policy or when a user's system Jump Item Role is set to anything other than **No Access**.

You can click the group policy link to modify the policy as a whole. Any changes made to the group policy apply to all members of that group policy.

You can click the user link to modify the user's system Jump Item role. Any changes to the user's system Jump Item role apply to all other Jump Groups in which the user is an unassigned member.

You also can add the individual to the group, overriding their settings as defined elsewhere.



For more information, please see [Use Jump Groups to Configure Which Users Can Access Which Jump Items](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-groups.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-groups.htm>.

# Jump Policies: Set Schedules, Notifications, and Approvals for Jump Items

 Jump

JUMP POLICIES

## Jump Policies

Jump Policies are used to control when certain Jump Items can be accessed by implementing schedules, sending email notifications when a Jump Item is accessed, or requiring approval or user entry of a ticket system ID before a Jump Item may be accessed.

### Add New Jump Policy, Edit, Delete

Create a new policy, modify an existing policy, or remove an existing policy.

## Add or Edit a Policy

### Display Name

Create a unique name to help identify this policy. This name should help users identify this policy when assigning it to Jump Items.

### Code Name

Set a code name for integration purposes. If you do not set a code name, PRA creates one automatically.

### Description

Add a brief description to summarize the purpose of this policy.

## Jump Schedule

### Enabled

Set a schedule to define when Jump Items under this policy can be accessed. Set the time zone you want to use for this schedule, and then add one or more schedule entries. For each entry, set the start day and time and the end day and time.

If, for instance, the time is set to start at 8 am and end at 5 pm, a user can start a session using this Jump Item at any time during this window but may continue to work past the set end time. Attempting to re-access this Jump Item after 5 pm, however, results in a notification indicating that the schedule does not permit a session to start. If necessary, the user may choose to override the schedule restriction and start the session anyway.

## Force session to end when schedule does not permit access

If stricter access control is required, check **Force session to end**. This forces the session to disconnect at the scheduled end time. In this case, the user receives recurring notifications beginning 15 minutes prior to being disconnected.

## Jump Notification

### Notify recipients when a session starts

If this option is checked, a notification email is sent to the designated recipients whenever a session is started with any Jump Item that uses this Jump Policy. When a user attempts to start a session with a Jump Item that uses this policy, a prompt states that a notification email will be sent and asks if the user would like to start the session anyway.

### Notify recipients when a session ends

If this option is checked, a notification email is sent to the designated recipients whenever a session ends for any Jump Item that uses this Jump Policy. When a user attempts to start a session with a Jump Item that uses this policy, a prompt states that a notification email will be sent at the end of the session and asks if the user would like to start the session anyway.

### Email Address(es)

Enter one or more email addresses to which emails should be sent. Separate addresses with a space. This feature requires a valid SMTP configuration for your B Series Appliance, set up on the **/login > Management > Email Configuration** page.

### Display Name

Enter the name of the email recipient. This name appears on the prompt the user receives prior to a session with a Jump Item that uses this policy.

### Locale

If more than one language is enabled on this site, set the language in which to send emails.

## Jump Approval

### Require a ticket ID before a session starts

If this option is checked, the user must enter a valid ticket ID before an access session can begin. When a user attempts to access an endpoint with this Jump Policy applied, the user must enter a ticket ID from your existing ITSM or ticket ID approval process before access is granted. Configure the ITSM or ticket system integration from the **Jump Policies :: Ticket System** section.

### Require approval before a session starts

If this option is checked, an approval email is sent to the designated recipients whenever a session is attempted with any Jump Item that uses this Jump Policy. When a user attempts to start a session with a Jump Item that uses this policy, a dialog prompts the user to enter a request reason and the time and duration for the request.

## Maximum Access Duration

Set the maximum length of time for which a user can request access to a Jump Item that uses this policy. The user can request a shorter length of access but no longer than that set here.

## Access Approval Applies To

When approval has been granted to a Jump Item, that Jump Item becomes available either to any user who can see and request access to that Jump Item or only to the user who requested access.

## Email Address(es)

Enter one or more email addresses to which emails should be sent. Separate addresses with a space. This feature requires a valid SMTP configuration for your B Series Appliance, set up on the **/login > Management > Email Configuration** page.

## Display Name

Enter the name of the email recipient. This name appears on the prompt the user receives prior to a session with a Jump Item that uses this policy.

## Locale

If more than one language is enabled on this site, set the language in which to send emails.

## Disable Recordings

### Disable Recordings

If this option is checked, sessions started with this Jump Policy will not be recorded, even if recordings are enabled on the **Configuration > Options** page. This affects screen sharing, user recordings for protocol tunnel Jump, and command shell recordings.

## Email Notification Template

### Subject

Customize the subject of this email. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.

### Body

Customize the body of this email. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.

## Email Approval Template

### Subject

Customize the subject of this email. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.

### Body

Customize the body of this email. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.

## Ticket System

### Ticket System URL

In **Ticket System URL**, enter the URL for your external ticket system. The B Series Appliance sends an outbound request to your external ticketing system. The URL must be formatted for either HTTP or HTTPS. If an HTTPS URL is entered, the site certificate must be verified for a valid connection. If a Jump Policy requiring a ticket ID exists, a ticket system URL must be entered or you will receive a warning message.

### Upload a certificate for HTTPS connections

Click **Choose a certificate** to upload the certificate for the HTTPS ticket system connection to the B Series Appliance. If your certificate is uploaded, the B Series Appliance uses it when it contacts the external system. If you do not upload a certificate and the **Ignore SSL certificate errors** box below this setting is checked, the B Series Appliance optionally falls back to use the built-in certificate store when sending the request.

### User Prompt

In **User Prompt**, enter the dialog text you want access console users to see when they are requested to enter the ticket ID required for access.

### Treat the Ticket ID as sensitive information

If this box is checked, the ticket ID is considered sensitive information and asterisks are shown instead of text. You must use an HTTPS Ticket System URL. If an address with HTTP is entered, an error message appears to remind you HTTPS is required.

When this feature is enabled you cannot bypass issues with SSL certificates by checking the **Ignore SSL certificate errors** box. This means you must have a valid SSL certificate in place. If you try to check the **Ignore SSL certificate errors** box, a message appears stating that you cannot ignore SSL certificate errors.

When the Ticket ID is sensitive, the following rules apply:

- Both the desktop and the web access consoles show asterisks instead of text.
- The ticket is not logged anywhere by the access console or on the B Series Appliance.



For more information, please see [Create Jump Policies to Control Access to Jump Items at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/policies.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/policies.htm).

## Ignore SSL certificate errors

If checked, the B Series Appliance does **not** include the certificate validation information when it is contacting the external ticket system. Leave this box unchecked if you are uploading a certificate for secure HTTPS connection.



# Jump Item Roles: Create Permission Sets for Jump Items



## JUMP ITEM ROLES

### Jump Item Roles

A Jump Item Role is a predefined set of permissions regarding Jump Item management and usage. Jump Item Roles are applied to users either from the **Jump > Jump Groups** page or from the **Users & Security > Group Policies** page.

If more than one role is assigned to a user, then the most specific role for a user is always used. The order of specificity for Jump Item Roles, from most specific to least specific, is:

- The role assigned to the relationship between a user and a Jump Group on the **Jump > Jump Groups** page.
- The role assigned to the relationship between a user and a Jump Group on the **Users & Security > Group Policies** page.
- The **Jump Item Roles** configured for a user on the **Users & Security > Users** page or the **Users & Security > Group Policies** page.



**Note:** A new **Jump Item Role** called **Auditor** is automatically created on new site installations. On existing installations it has to be created. This role only has a single **View Reports** permission enabled, giving admins the option to grant a user just the permission to run Jump Item reports, without the need to grant any other permission.

### Add New Jump Item Role, Edit, Delete

Create a new role, modify an existing role, or remove an existing role.

### Add or Edit a Jump Item Role

#### Name

Create a unique name to help identify this role. This name helps when linking a Jump Item Role with a user or group of users in a Jump Group.

#### Description

Add a brief description to summarize the purpose of this role.

## Permissions

### Jump Group or Personal Jump Items

#### Create and deploy new Jump Items

Enables the user to create Jump Items and install them on remote systems.

#### Move and Copy Jump Items

Enables the user to move or copy Jump Items from one Jump Group into another. This permission must be enabled on both Jump Groups. Copied Jump Items can be edited.

**i** For more information on how to copy Jump Items, please see [Jump Interface: Use Jump Items to Access Remote Systems](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/jump-interface.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/jump-interface.htm>.

#### Remove existing Jump Items

Enables the user to delete Jump Items.

#### View Reports

Enables the user to view reports. This applies to the Jump Group to which the user is added with this role.

### Jump Item

#### Start Sessions

Enables the user to Jump to remote systems.

#### Edit Tag

Enables the user to edit a Jump Item's tag field.

#### Edit Comments

Enables the user to edit a Jump Item's comments field.

#### Edit Jump Policy

Enables the user to set which if any Jump Policy is applied to a Jump Item.

## Edit Session Policy

Enables the user to set which if any session policy a Jump Item should use. Changing the session policy may affect the permissions allowed in the session.

## Edit Connectivity and Authentication

Enables the user to modify a Jump Item's connection and authentication information. This includes such fields as hostname, Jumpoint, port, and username, among others.

## Edit Behavior and Experience

Enables the user to modify the behavior of Jump Items. This includes such fields as connection type, display size, and terminal type, among others.



For more information, please see [Use Jump Item Roles to Configure Permission Sets for Jump Items at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-item-roles.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-item-roles.htm).

# Jumpoint: Set Up Unattended Access to a Network



JUMPOINT

## Jumpoint Management

BeyondTrust's Jump Technology enables a user to access computers on a remote network without having to pre-install software on every machine. Simply install a single Jumpoint agent at any network location to gain unattended access to every PC within that network.

### Add New Jumpoint, Edit, Delete

Create a new Jumpoint, modify an existing Jumpoint, or remove an existing Jumpoint.

### Redeploy

Uninstall an existing Jumpoint and download an installer to replace the existing Jumpoint with a new one. Jump shortcuts associated with the existing Jumpoint will use the new Jumpoint once it is installed.



**Note:** When an existing Jumpoint is replaced, its configuration is not saved. The new Jumpoint must be reconfigured.

## Add or Edit Jumpoint

### Name

Create a unique name to help identify this Jumpoint. This name should help users locate this Jumpoint when they need to start a session with a computer on the same network.

### Code Name

Set a code name for integration purposes. If you do not set a code name, PRA creates one automatically.

### External Jump Item Network ID

On the **Security** page **Access Console** settings, when **Jumpoint for External Jump Item Sessions** is set to **Automatically Selected by External Jump Item Network ID**, this value is matched against the **Network ID** property for external Jump Items returned by the Endpoint Credential Manager to determine which Jumpoint handles a session.



**Note:** **Network ID** is equivalent to the **Workgroup** attribute on managed systems in Password Safe.

## Comments

Add a brief description to summarize the purpose of this Jumpoint. This is helpful when managing Jumpoints.

## Disabled

If checked, this Jumpoint is unavailable to make Jump connections.

## Clustered

If checked, you will be able to add multiple, redundant nodes of the same Jumpoint on different host systems. This ensures that as long as at least one node remains online, the Jumpoint will be available.

## Enable Shell Jump Method

If you want users to be able to connect to SSH-enabled and Telnet-enabled network devices through this Jumpoint, check the **Enable Shell Jump Method** option. Command filtering can be configured to prevent accidental use of commands that can be harmful to endpoint systems.



For more information on command filtering, please see [Use Shell Jump to Access a Remote Network Device at www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm).

## Enable Protocol Tunnel Jump Method

If the **Enable Protocol Tunnel Jump Method** option is checked, users may make connections from their systems to remote endpoints through these types of Jumpoint.



For more information, see [Protocol Tunnel Jump Shortcuts in the Privileged Remote Access Jumpoint Guide](#).

## RDP Service Account

Select the vault account to be used by the Jumpoint to run a user-initiated client on the RDP server. This allows you to collect additional event information from an RDP session started with this Jumpoint. This account is used only if the Remote RDP Jump Item is configured to enable the **Session Forensics** functionality.



**Note:** The RDP Service Account setting must not use a local admin account, and must use a domain admin account with privileges on the endpoint including access to remotely connect to the endpoint's C\$ share, remotely create and start services on the endpoint machine, and access remote file systems.



For more information, see [Use RDP to Access a Remote Windows Endpoint in the Privileged Remote Access Jumpoint Guide](#).

## Group Policies

This displays a listing of the group policies which allow users access to this Jumpoint.

## Allowed Users

### New Member Name

Search for users to add to this Jumpoint. Users who are allowed to use this Jumpoint can start sessions with or create Jump Items connecting through this Jumpoint, as their permissions allow.

In the table below, view existing Jumpoint users. You can filter the view by entering a string in the **Filter by Name** text box. You can also delete the user from the Jumpoint.

To add a group of users to a Jumpoint, go to **Users & Security > Group Policies** and assign that group to one or more Jumpoints.



**Note:** You may see some users whose **Delete** options are disabled. This occurs when a user is added via group policy.

You can click the group policy link to modify the policy as a whole. Any changes made to the group policy apply to all members of that group policy.

You also can add the individual to the Jumpoint, overriding their settings as defined elsewhere.



For more information about Jumpoint configuration, please see [Configure and Install a PRA Jumpoint at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/installation-windows.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/installation-windows.htm).

# Jump Items: Mass Import Jump Shortcuts and Manage Jump Item Settings

 Jump

JUMP ITEMS

## Jump Shortcuts Mass Import Wizard

Through a Jumpoint, Jump shortcuts can be created to:

- Start a standard access session.
- Start a Remote Desktop Protocol session with Windows or Linux systems.
- Jump to a web site on a remote browser.
- Shell Jump to an SSH-enabled or Telnet-enabled network device.
- Connect to a VNC server.
- Make a TCP connection through a Protocol Tunnel Jump.



**Note:** Linux Jumpoints can only be used for RDP, SSH/Telnet, Protocol Tunneling, Web Jump, and VNC sessions, allowing for credential injection from user or Vault, as well as RemoteApp functionality and Shell Jump filtering. Clustered Jumpoints can only add new nodes of the same OS. You cannot mix Windows and Linux nodes.

When creating a large number of Jump shortcuts, it may be easier to import them via a spreadsheet than to add them one by one in the access console.



For more information, please see [Use a Jump Shortcut to Jump to a Remote System](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-shortcuts.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-shortcuts.htm>.


## Download Template

From the dropdown in the **Jump Shortcuts Mass Import Wizard** section of the /login interface, select the type of Jump Item you wish to add, and then click **Download Template**. Using the text in the CSV template as column headers, add the information for each Jump shortcut you wish to import. If any required fields are missing, import fails. Optional fields can be filled in or left blank.

## Import Jump Shortcuts


Once you have completed filling out the template, use **Import Jump Shortcuts** to upload the CSV file containing the Jump Item information. The maximum file size allowed to be uploaded at one time is 5 MB. Only one type of Jump Item can be included in each CSV file. The CSV file should use the format described in the tables below.

## Local Jump Shortcut


Field	Description
Hostname	The hostname of the endpoint to be accessed by this Jump Item. This string has a maximum of 128 characters.
Name	The name of the endpoint to be accessed by this Jump Item. This name identifies the item in the session tabs. This string has a maximum of 128 characters.
Jump Group	The code name of the Jump Group with which this Jump Item should be associated.  <div style="border: 1px solid black; background-color: #e0f0ff; padding: 5px;">  <b>Note:</b> When using the import method, a Jump Item cannot be associated with a personal list of Jump Items.                 </div>
Tag (optional)	You can organize your Jump Items into categories by adding a tag. This string has a maximum of 1024 characters.
Comments (optional)	You can add comments to your Jump Items. This string has a maximum of 1024 characters.
Jump Policy (optional)	The code name of a Jump Policy. You can specify a Jump Policy to manage access to this Jump Item.
Session Policy (optional)	The code name of a session policy. You can specify a session policy to manage the permissions available on this Jump Item.
Endpoint Agreement Policy (optional)	The value <b>accept</b> automatically accepts the endpoint agreement if it times out and allows the session the start. The value <b>reject</b> automatically rejects the endpoint agreement and stops the session from starting. The value <b>no_prompt</b> does not show an endpoint agreement even if the feature is configured. This field has no effect if the global endpoint agreement is not enabled.

**i** For more information about the global setting, please see [Jump Items: Mass Import Jump Shortcuts and Manage Jump Item Settings](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/admin/jump-items.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/admin/jump-items.htm>.

## Remote Jump Shortcut


Field	Description
Hostname	The hostname of the endpoint to be accessed by this Jump Item. This string has a maximum of 128 characters.
Jumpoint	The code name of the Jumpoint through which the endpoint is accessed.
Name	The name of the endpoint to be accessed by this Jump Item. This name identifies the item in the session tabs. This string has a maximum of 128 characters.
Jump Group	The code name of the Jump Group with which this Jump Item should be associated.  <div style="border: 1px solid black; background-color: #e0f0ff; padding: 5px;">  <b>Note:</b> When using the import method, a Jump Item cannot be associated with a personal list of                 </div>



Field	Description
	 <i>Jump Items.</i>
Tag (optional)	You can organize your Jump Items into categories by adding a tag. This string has a maximum of 1024 characters.
Comments (optional)	You can add comments to your Jump Items. This string has a maximum of 1024 characters.
Jump Policy (optional)	The code name of a Jump Policy. You can specify a Jump Policy to manage access to this Jump Item.
Session Policy (optional)	The code name of a session policy. You can specify a session policy to manage the permissions available on this Jump Item.
Endpoint Agreement Policy (optional)	The value <b>accept</b> automatically accepts the endpoint agreement if it times out and allows the session the start. The value <b>reject</b> automatically rejects the endpoint agreement and stops the session from starting. The value <b>no_prompt</b> does not show an endpoint agreement even if the feature is configured. This field has no effect if the global endpoint agreement is not enabled.

**i** For more information about the global setting, please see [Jump Items: Mass Import Jump Shortcuts and Manage Jump Item Settings](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/admin/jump-items.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/admin/jump-items.htm>.


## Remote VNC Jump Shortcut

Field	Description
Hostname	The hostname of the endpoint to be accessed by this Jump Item. This string has a maximum of 128 characters.
Jumpoint	The code name of the Jumpoint through which the endpoint is accessed.
Port (optional)	A valid port number from <b>100</b> to <b>65535</b> . Defaults to <b>5900</b> .
Name	The name of the endpoint to be accessed by this Jump Item. This name identifies the item in the session tabs. This string has a maximum of 128 characters.
Jump Group	The code name of the Jump Group with which this Jump Item should be associated. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  <b>Note:</b> When using the import method, a Jump Item cannot be associated with a personal list of Jump Items.           </div>
Tag (optional)	You can organize your Jump Items into categories by adding a tag. This string has a maximum of 1024 characters.
Comments (optional)	You can add comments to your Jump Items. This string has a maximum of 1024 characters.
Jump Policy (optional)	The code name of a Jump Policy. You can specify a Jump Policy to manage access to this Jump Item.
Session Policy (optional)	The code name of a session policy. You can specify a session policy to manage the permissions available


Field	Description
	on this Jump Item.

## Remote RDP Jump Shortcut

Field	Description
Hostname	The hostname of the endpoint to be accessed by this Jump Item. This string has a maximum of 128 characters.
Jumpoint	The code name of the Jumpoint through which the endpoint is accessed.
Username (optional)	The username to sign in as.
Domain (optional)	The domain the endpoint is on.
Quality (optional)	The quality at which to view the remote system. Can be <b>low</b> (2-bit gray scale for the lowest bandwidth consumption), <b>best_perf</b> (default - 8-bit color for fast performance), <b>perf_and_qual</b> (16-bit for medium quality image and performance), <b>best_qual</b> (32-bit for the highest image resolution), or <b>video_opt</b> (VP9 codec for more fluid video). This cannot be changed during the remote desktop protocol (RDP) session.
Console Session	<b>1</b> : Starts a console session. <b>0</b> : Starts a new session (default).
Ignore Untrusted Certificate (optional)	<b>1</b> : Ignores certificate warnings. <b>0</b> : Shows a warning if the server's certificate cannot be verified.
SecureApp Type	The SecureApp launch method. Can be "none", "remote_app" (to use RDP's built-in RemoteApp functionality), "remote_desktop_agent" (to use BeyondTrust's Remote Desktop Agent), or "remote_desktop_agent_credentials" (to use BeyondTrust's Remote Desktop Agent with Credential Injection). If "remote_desktop_agent" or "remote_desktop_agent_credentials" are chosen then the BeyondTrust Remote Desktop Agent must be installed on the remote system.>
RemoteApp Name	The RemoteApp program name. This string has a maximum of 520 characters.
RemoteApp Parameters	A space-separated list of parameters to pass to the RemoteApp. Parameters with spaces can be quoted using double-quotes. This string has a maximum of 16000 characters.
Remote Executable Parameters	A space-separated list of parameters to pass to the remote executable that will be launched using the BeyondTrust Remote Desktop Agent. Parameters with spaces can be quoted using double-quotes. This can only be used if the SecureApp Type uses the BeyondTrust Remote Desktop Agent.
Remote Executable Parameters	A space-separated list of parameters to pass to the remote executable that will be launched using the BeyondTrust Remote Desktop Agent. Parameters with spaces can be quoted using double-quotes. This can only be used if the SecureApp Type uses the BeyondTrust Remote Desktop Agent.
Target System	The name of the target system being accessed by the remote application. This value is used to limit the list of injected credentials to only those that are valid on the target system. This value can only be used if the SecureApp Type uses the BeyondTrust Remote Desktop Agent with Credential injection.
Credential Type	The type of credentials that will be injected into the remote executable. This value will depend on the password vault from which credentials are retrieved. This value can only be used if the SecureApp Type uses the BeyondTrust Remote Desktop Agent with Credential injection.



Field	Description
Name	The name of the endpoint to be accessed by this Jump Item. This name identifies the item in the session tabs. This string has a maximum of 128 characters.
Jump Group	The code name of the Jump Group with which this Jump Item should be associated. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  <b>Note:</b> When using the import method, a Jump Item cannot be associated with a personal list of Jump Items.         </div>
Tag (optional)	You can organize your Jump Items into categories by adding a tag. This string has a maximum of 1024 characters.
Comments (optional)	You can add comments to your Jump Items. This string has a maximum of 1024 characters.
Jump Policy (optional)	The code name of a Jump Policy. You can specify a Jump Policy to manage access to this Jump Item.
Session Policy (optional)	The code name of a session policy. You can specify a session policy to manage the permissions available on this Jump Item.


## Shell Jump Shortcut

Field	Description
Hostname	The hostname of the endpoint to be accessed by this Jump Item. This string has a maximum of 128 characters.
Jumpoint	The code name of the Jumpoint through which the endpoint is accessed.
Username (optional)	The username to sign in as.
Protocol	Can be either <b>ssh</b> or <b>telnet</b> .
Port (optional)	A valid port number from <b>1</b> to <b>65535</b> . Defaults to <b>22</b> if the protocol is <b>ssh</b> or <b>23</b> if the protocol is <b>telnet</b> .
Terminal Type (optional)	Can be either <b>xterm</b> (default) or <b>VT100</b> .
Keep-Alive (optional)	The number of seconds between each packet sent to keep an idle session from ending. Can be any number from <b>0</b> to <b>300</b> . <b>0</b> disables keep-alive (default).
Name	The name of the endpoint to be accessed by this Jump Item. This name identifies the item in the session tabs. This string has a maximum of 128 characters.
Jump Group	The code name of the Jump Group with which this Jump Item should be associated. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  <b>Note:</b> When using the import method, a Jump Item cannot be associated with a personal list of Jump Items.         </div>
Tag (optional)	You can organize your Jump Items into categories by adding a tag. This string has a maximum of 1024 characters.


Field	Description
Comments (optional)	You can add comments to your Jump Items. This string has a maximum of 1024 characters.
Jump Policy (optional)	The code name of a Jump Policy. You can specify a Jump Policy to manage access to this Jump Item.
Session Policy (optional)	The code name of a session policy. You can specify a session policy to manage the permissions available on this Jump Item.

## Protocol Tunnel Jump Shortcut

Field	Description
Tunnel Type	The type of tunnel: TCP, SQL Server, Kubernetes Cluster, or Network (if enabled).
Hostname	The hostname of the endpoint to be accessed by this Jump Item. This string has a maximum of 128 characters.
Jumpoint	The code name of the Jumpoint through which the endpoint is accessed.
TCP Tunnels (for TCP Tunnel)	<p>The list of one or more tunnel definitions. A tunnel definition is a mapping of a TCP port on the local user's system to a TCP port on the remote endpoint. Any connection made to the local port causes a connection to be made to the remote port, allowing data to be tunneled between local and remote systems. Multiple mappings should be separated by a semicolon.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">  <b>Example:</b> <code>auto-&gt;22;3306-&gt;3306</code> </div> <p>In the example above, a randomly assigned local port maps to remote port 22, and local port 3306 maps to remote port 3306.</p>
Username and Database (for SQL Server Tunnel)	The username and database. Authentication is supported using Windows authentication and SQL login.
URL and CA Certificates (for Kubernetes Cluster Tunnel)	<p>The base URL for the Kubernetes cluster. The maximum length is 256 characters.</p> <p>For the certificates, a PEM-formatted certificate or chain of certificates used to validate the cluster URL. The maximum length is 12,288 characters.</p>
Filter Rules (for Network Tunnel)	<ul style="list-style-type: none"> <li>The IP address can be a list of addresses separated by commas, or a range of addresses separate by a dash. You cannot enter a list and a range. CIDR notation can be used. Only IPv4 is supported.</li> <li>Protocol is optional.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">  <b>Tip:</b> For information on protocols, see <a href="#">IANA Protocol Numbers</a>.         </div> <ul style="list-style-type: none"> <li>Port is optional, and may not be applicable, depending on the protocol. The port can be a list of ports, or a range, but not both.</li> </ul>
Local Address (optional)	The address from which the connection should be made. This can be any address within the 127.x.x.x subrange. The default address is 127.0.0.1.

Field	Description
Name	The name of the endpoint to be accessed by this Jump Item. This name identifies the item in the session tabs. This string has a maximum of 128 characters.
Jump Group	The code name of the Jump Group with which this Jump Item should be associated.  <div style="border: 1px solid black; background-color: #e6f2ff; padding: 5px;">  <b>Note:</b> When using the import method, a Jump Item cannot be associated with a personal list of Jump Items.         </div>
Tag (optional)	You can organize your Jump Items into categories by adding a tag. This string has a maximum of 1024 characters.
Comments (optional)	You can add comments to your Jump Items. This string has a maximum of 1024 characters.
Jump Policy (optional)	The code name of a Jump Policy. You can specify a Jump Policy to manage access to this Jump Item.
Session Policy (optional)	The code name of a session policy. You can specify a session policy to manage the permissions available on this Jump Item.

## Web Jump Shortcut

Field	Description
Name	The name of the endpoint to be accessed by this Jump Item. This name identifies the item in the session tabs. This string has a maximum of 128 characters.
Jumpoint	The code name of the Jumpoint through which the endpoint is accessed.
Jump Group	The code name of the Jump Group with which this Jump Item should be associated.  <div style="border: 1px solid black; background-color: #e6f2ff; padding: 5px;">  <b>Note:</b> When using the import method, a Jump Item cannot be associated with a personal list of Jump Items.         </div>
Tag (optional)	You can organize your Jump Items into categories by adding a tag. This string has a maximum of 1024 characters.
Comments (optional)	You can add comments to your Jump Items. This string has a maximum of 1024 characters.
Jump Policy (optional)	The code name of a Jump Policy. You can specify a Jump Policy to manage access to this Jump Item.
Session Policy (optional)	The code name of a session policy. You can specify a session policy to manage the permissions available on this Jump Item.
URL	The URL of the web site. The URL must begin with either <b>http</b> or <b>https</b> .
Verify Certificate (optional)	<b>1:</b> The site certificate is validated before the session starts; if issues are found, the session will not start. <b>0:</b> The site certificate is not validated.
Username Format	passthru: Pass the username through directly from the credential provider. username_only: If the username is in UPN (Username@Domain) or DLLN (DOMAIN\Username) format then the domain is removed. Only

Field	Description
	the username is injected.
Username Field Hint	A CSS style query selector that identifies the username field to help with the initial credential injection. If this value is provided and a matching element is not found, then the credential injection will fail.
Password Field Hint	A CSS style query selector that identifies the password field to help with the initial credential injection. If this value is provided and a matching element is not found, then the credential injection will fail.
Submit Button Hint	A CSS style query selector that identifies the submit button to help with the initial credential injection. If this value is provided and a matching element is not found, then the credential injection will fail.
Auth Timeout	The length of time the web jump client should wait for authentication to succeed before timing out. Valid values are 1, 2, 3, 5, 10, 15, 30



For more information, please see [Use a Jump Shortcut to Jump to a Remote System at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-shortcuts.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-shortcuts.htm).

## Endpoint User Agreement

### Enable Endpoint User Consent Configuration for Applicable Jump Items

Enable a dropdown in the access console which allows endpoint user agreement options to be configured for individual Jump Items.

#### Title

Customize the title of the agreement. The end-user sees this in the title bar of the prompt. You can localize this text for any languages you have enabled. To revert to the default text, delete the text from the field and then save the blank field.

#### Text

Provide the text for the agreement. You can localize this text for any languages you have enabled. To revert to the default text, delete the text from the field and then save the blank field.

### Acceptance Timeout

If the user does not accept the agreement within the set **Acceptance Timeout**, the agreement is either accepted or rejected as determined by the Jump Item properties.

### Automatic Behavior

Choose **Auto Accept** or **Auto Reject**. The **Auto Accept** option automatically accepts the endpoint agreement if it times out and allows the session to start. The **Auto Reject** option automatically rejects the endpoint agreement and stops the session from starting.

## Jump Item Settings

### Simultaneous Jumps

#### For Jump Client, Local Jump, Remote Jump, Remote VNC, and Shell Jump

Set this option to **Join Existing Session** to provide a way for multiple users to gain access to the same Jump Item without an invitation to join an active session by another user. The first user to access the Jump Item maintains ownership of the session. Users in a shared Jump session see each other and can chat.

If **Join Existing Session** is selected, there is an option to apply the setting to copies of Jump Clients.

- If checked, a user can join a session that was started from another copy of a Jump Client in a different Group. Session permissions are based on the original Jump Client that started the session.
- If not checked, a user cannot join a session that was started from another copy of a Jump Client, unless it is the same Jump Group.

Set this option to **Disallow Jump** to ensure only one user can Jump to a Jump Item at a time. Only an invitation by the user who originated the session can allow for a second user to access the session.

This setting applies to the following Jump Item types: Jump Client, Local Jump, Remote Jump, Remote VNC, and Shell Jump.

#### For Remote RDP

Set this option to **Start New Session** to provide a way for multiple users to gain access to the same Jump Item without an invitation to join an active session by another user. For Remote RDP, multiple users may gain access to a Jump Item, but each starts an independent session.

Set this option to **Disallow Jump** to ensure only one user at a time can Jump to a Jump Item. Only an invitation by the user who originated the session can allow for a second user to access the session.

This setting applies to Remote RDP Jump Item types only.

### External Tools

#### Allow Users to Open Remote RDP Jump Shortcuts with an External Tool

When enabled, you can use your own RDP tool for Remote RDP Jump shortcuts.

#### Allow Users to Open Shell Jump Shortcut with an External Tool

When enabled, you can use your own tool to open Shell Jump shortcuts.

**i** *These features must be enabled, per user, in the access console. For more information, please see [Change Settings and Preferences in the Access Console](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/settings.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/settings.htm>.*

## Shell Jump Filtering

### Recognized Shell Prompts

Enter regular expressions, one per line, that will match against the command shell prompts found on your endpoint systems. A regular expression should only attempt to match the final line of a multi-line prompt.


### Shell Prompt Matching Validation

Enter an existing endpoint's shell prompt, and the output will indicate whether it matches any regular expression in the list. This functionality will let you test your regular expressions without starting a session.




# Vault for Privileged Remote Access

## Accounts: Manage Vault Accounts


Vault

ACCOUNTS


View and manage information about all discovered and manually added accounts.



**Note:** Vault can import, rotate, and manage up to 60,000 accounts.

Available information for shared accounts includes:

- **Type:** The type of account, specifically, whether it is a domain or a local account, or a generic password account.
- **Name:** The name of the account.
- **Username:** The username associated with the account.
- **Group:** The name of the account group to which the account belongs.
- **Endpoint:** The endpoint with which the account is associated.
- **Account Policy:** The account policy the Vault account is using.
- **Description:** Short description about the account.
- **Last Checkout:** The last time the account was checked out.
- **Password Age:** The age of the password.
- **Status:** The status of the account. For example, warnings, errors, and if the account is checked out are indicated in this column. This column is auto-hidden when there aren't any statuses to indicate for any accounts. Multiple statuses are stacked and indicated in different colors. You can mouse-hover over a specific status to view more details about it.




**Tip:** You can filter the list of shared accounts displayed using the filters for **Group** and **Password Age**.

Based on this information, you can perform various actions, including credential check out, check in, and credential rotation.

Available information for personal accounts includes:

- **Type:** The type of account, specifically, whether it is a domain or a local account, or a generic password account.
- **Name:** The name of the account.
- **Owner:** The name of the person who created and owns the account.
- **Description:** Short description about the account.
- **Password Age:** The age of the password.



**Tip:** You can filter the list of personal accounts displayed by **Owner** and **Password Age**.

## Accounts

### Add Account

Click **Add**, to manually add shared or personal generic accounts to the BeyondTrust Vault.

### Rotate

Select one or more discovered (non-generic) accounts, click **Rotate**, and then click **Start Rotation**.



**Note:**

- Service accounts running in a failover cluster environment cannot be rotated. The error "Failover Cluster detected. Unable to change the run-as password for the service <service\_name>" appears when a rotation attempt is made and **Rotation Failed** is indicated in the **Status** column for the service.
- Services using a Microsoft Graph account as the Run As account cannot be rotated.
- Services that have dependent services cannot be rotated, due to the risk of services within the service chain not restarting successfully.



For more information, please see [Rotate Privileged Credentials Using BeyondTrust Vault at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/rotation.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/rotation.htm).

### Search Shared Accounts

Search for a specific shared account or a group of accounts based on **Name**, **Endpoint Name**, and **Description**.

### Select Visible Columns

Click the **Select Visible Columns** button (columns icon) above the **Accounts** grid and select the columns to display in the grid.

### Check Out and Check In a Shared Account

Click **Check Out** to view and use a shared credential. When selected, the **Account Password** prompt appears, displaying the credential for 60 seconds to allow you to copy the password. Once the prompt is closed, the **Check In** option becomes available. When finished using the account, click **Check In** to check the password back into the system.



For more information, please see [Check Out Credentials from the PRA /login Interface at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/check-out.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/check-out.htm).

### Ellipsis Menu for Shared Accounts

Click the **ellipsis (...)** to view more actions, such as **Rotate Password**, **Edit**, and **Delete**. When **Rotate Password** is selected, the system automatically rotates or changes the password. When **Edit** is selected, you can modify the account's information. The **Delete** option

removes the account from the **Accounts** list.

**Note:**

- Service accounts running in a failover cluster environment cannot be rotated. The error "Failover Cluster detected. Unable to change the run-as password for the service <service\_name>" appears when a rotation attempt is made and **Rotation Failed** is indicated in the **Status** column for the service.
- Services using a Microsoft Graph account as the Run As account cannot be rotated.
- Services that have dependent services cannot be rotated, due to the risk of services within the service chain not restarting successfully.



For more information, please see [Rotate Privileged Credentials Using BeyondTrust Vault](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/rotation.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/rotation.htm>.

## Search Personal Accounts

Search for a specific personal account or a group of accounts based on **Name** and **Description**.

## View Password for Personal Account

Click **View Password** to view and use a personal credential. When selected, the **Account Password** prompt appears, displaying the credential for 60 seconds to allow you to copy the password.

## Edit Personal Account

Click **Edit Account** to modify the account's information, specifically **Name**, **Description**, **Username**, and **Password**.

## Add Shared Account

The **Add > Shared Generic Account** option allows you to add accounts without having to run a discovery job. Instead, you can manually enter information about the account. This option is helpful in situations where a shared account or username/password combination can be used to access many different systems.

### Name

Enter a name for the account.

### Description

Enter a brief and memorable description of the account.

### Username

Provide the username for the account.

## Authentication

Select the authentication method for the account: **Password**, **SSH Private Key**, or **SSH Private Key With Certificate**.



**Note:** If you use an SSH private key for authentication, you must provide a private key for the account in OpenSSH format. Optionally, you can include the passphrase associated with the private key.

## Password

If **Password** is selected for authentication, you must enter the password for the account and confirm the password.

## SSH Private Key

If **SSH Private Key** is selected for authentication, you must enter the SSH private key for the account, and the SSH key passphrase if applicable.

## SSH Private Key With Certificate

If **SSH Private Key With Certificate** is selected for authentication, you must enter the SSH private key for the account, and the SSH key passphrase if applicable. You must also provide the SSH public certificate for the account.

## Account Policy

Select a specific policy for the account or leave **Account Policy** set to the default value of **Inherit Policy Settings**, in which case the account inherits the policy settings of the account group. If no account group is selected for the account, the account inherits the policy settings set for the global default account policy on the **Vault > Options** page.

## Account Group

Select a group from the list to add the shared account to an account group. If a group is not selected, the account is added to the **Default Group**.

## Group Policies

If the account was added to any group policies, they are listed here, along with their Vault account roles.

## Account Users

### New User Name

Select users who are allowed to access this account.

### New Member Role

Select the Vault account role for the new user, and then click **Add**. Users can be assigned one of two roles:

- **Inject:** (default value) Users with this role can use this account in Privileged Remote Access sessions.
- **Inject and Checkout:** Users with this role can use this account in Privileged Remote Access sessions and can check out the account on `/login`. The **Checkout** permission has no effect on generic SSH accounts.



**Note:** The **Vault Account Role** is visible in the list of users added to the Vault Account.



**Note:** When upgrading to a BeyondTrust Privileged Remote Access installation with the Configurable Vault Checkout feature, all existing **Vault Account Memberships** that were configured in Group Policies before the upgrade will have their **Vault Account Role** set to **Inject and Checkout** by default after the upgrade.



## IMPORTANT!

**Vault Account Role Precedence:** Vault Account Roles can be assigned to both users and group policies. This means the same user can have different roles for a single Vault account. One role can be assigned by the user's group policies, while a different role can be assigned by the user's explicit access to the Vault Account. In such cases, the system uses the most-specific role for that user. Therefore, the system will let the role assigned on the **Edit Vault Account** page override the role assigned on the user's group policy. When the role is overridden in such a way, the word **overridden** appears on the **Edit Vault Account** page for the user's group policy membership. This behavior is consistent with the order of precedence for Jump Item Roles.



**Note:** User accounts with the **Allowed to Administer Vault** permission are implicitly allowed to access every Vault account.

## Jump Item Associations

Select the type of **Jump Item Associations** for the account. The **Jump Item Associations** setting determines which Jump Items the account is associated with, so the account is available only for relevant target machines in the access console during credential injection attempts. Select one of the following associations methods:

- **Inherited from the Account Group:** Associations for this account are determined by the associations defined in this account's **Account Group**.
- **Any Jump Items:** This account can be injected within any session started from a Jump Item in which the account is applicable.
- **No Jump Items:** This account cannot be injected into any session started from a Jump Item.
- **Jump Items Matching Criteria:** This account can be injected only within sessions started from Jump Items that match the criteria you define, in which the account is applicable.
  - You can define a direct association between Vault accounts and specific Jump Items by selecting the Jump Items from the list, and then clicking **Add Jump Item**.
  - You can further define the association between Vault accounts and Jump Items by specifying matching criteria based on the following Jump Item attributes. If configured, the account is available for injection for any Jump Items that match the specified attribute criteria in addition to any specific Jump Items you added as matching criteria.
    - **Shared Jump Groups:** Select a Jump Group from the list.
    - **Name:** This filter is matched against the value that appears in the **Name** column of the jump item in the access console.

- **Hostname / IP:** This filter is matched against the value that appears in the **Hostname / IP** column of the Jump Item in the access console.
- **Tag:** This filter is matched against the value that appears in the **Tag** column of the Jump Item in the access console.
- **Comments:** This filter is matched against the value that appears in the **Comments** column of the Jump Item in the access console.



*Tip: Click the icon for each option and attribute to view more specific information about it.*



*Note: Local accounts are available for injection within the endpoints on which they were discovered.*

## Add Personal Account

The **Add > Personal Generic Account** option allows you to add accounts.

### Name

Enter a name for the account.

### Description

Enter a brief and memorable description of the account.

### Username

Provide the username for the account.

### Authentication

Select the authentication method for the account: **Password**, **SSH Private Key**, or **SSH Private Key With Certificate**.



*Note: If you use an SSH private key for authentication, you must provide a private key for the account in OpenSSH format. Optionally, you can include the passphrase associated with the private key.*

### Password

If **Password** is selected for authentication, you must enter the password for the account and confirm the password.

### SSH Private Key

If **SSH Private Key** is selected for authentication, you must enter the SSH private key for the account, and the SSH key passphrase if applicable.

## SSH Private Key With Certificate

If **SSH Private Key With Certificate** is selected for authentication, you must enter the SSH private key for the account, and the SSH key passphrase if applicable. You must also provide the SSH public certificate for the account.

## Edit Local Account

### Name

View or edit the name used for the account.

### Description

View or edit the description of the account.

### Username

View the username associated with the account.

### Password

Enter a new password for the account, or leave the field blank to keep the existing password. Confirm the password entered.

### Password Age

View the age of the existing password.

### Account Policy

Select a specific policy for the account or leave **Account Policy** set to the default value of **Inherit Policy Settings**, in which case the account inherits the policy settings of the account group. If no account group is selected for the account, the account inherits the policy settings set for the global default account policy on the **Vault > Options** page.

### Account Group

Select a group from the list to add the shared account to an account group. If a group is not selected, the account is added to the **Default Group**.

### Endpoint Name

View which endpoint or endpoints are associated with the account.

### Endpoint Hostname

View the hostname of the associated endpoints.

## Account Users

Select users who are allowed to access this account, as well as their Vault account role, and then click **Add**.



**Note:** User accounts with the **Allowed to Administer Vault** permission are implicitly allowed to access every Vault account.

## Jump Item Associations

Select the type of **Jump Item Associations** for the account. The **Jump Item Associations** setting determines which Jump Items the account is associated with, so the account is available only for relevant target machines in the access console during credential injection attempts. Select one of the following associations methods:

- **Inherited from the Account Group:** Associations for this account are determined by the associations defined in this account's **Account Group**.
- **Any Jump Items:** This account can be injected within any session started from a Jump Item in which the account is applicable.
- **No Jump Items:** This account cannot be injected into any session started from a Jump Item.
- **Jump Items Matching Criteria:** This account can be injected only within sessions started from Jump Items that match the criteria you define, in which the account is applicable.
  - You can define a direct association between Vault accounts and specific Jump Items by selecting the Jump Items from the list, and then clicking **Add Jump Item**.
  - You can further define the association between Vault accounts and Jump Items by specifying matching criteria based on the following Jump Item attributes. If configured, the account is available for injection for any Jump Items that match the specified attribute criteria in addition to any specific Jump Items you added as matching criteria.
    - **Shared Jump Groups:** Select a Jump Group from the list.
    - **Name:** This filter is matched against the value that appears in the **Name** column of the jump item in the access console.
    - **Hostname / IP:** This filter is matched against the value that appears in the **Hostname / IP** column of the Jump Item in the access console.
    - **Tag:** This filter is matched against the value that appears in the **Tag** column of the Jump Item in the access console.
    - **Comments:** This filter is matched against the value that appears in the **Comments** column of the Jump Item in the access console.



**Tip:** Click the *i* icon for each option and attribute to view more specific information about it.



**Note:** Local accounts are available for injection within the endpoints on which they were discovered.

## Edit Domain Account

### Name

View or edit the name used for the account.



## Description

View or edit the description of the account.

## Username

View the username associated with the account.

## Password

Enter a new password for the account, or leave the field blank to keep the existing password. Confirm the password entered.

## Password Age

View the age of the existing password.

## Distinguished Name

View the distinguished name for the account.

## Account Policy

Select a specific policy for the account or leave **Account Policy** set to the default value of **Inherit Policy Settings**, in which case the account inherits the policy settings of the account group. If no account group is selected for the account, the account inherits the policy settings set for the global default account policy on the **Vault > Options** page.

## Account Group

Select a group from the list to add the shared account to an account group. If a group is not selected, the account is added to the **Default Group**.

## Account Users

Select users who are allowed to access this account, as well as their Vault account role, and then click **Add**.



**Note:** User accounts with the **Allowed to Administer Vault** permission are implicitly allowed to access every Vault account.

## Jump Item Associations

Select the type of **Jump Item Associations** for the account. The **Jump Item Associations** setting determines which Jump Items the account is associated with, so the account is available only for relevant target machines in the access console during credential injection attempts. Select one of the following associations methods:

- **Inherited from the Account Group:** Associations for this account are determined by the associations defined in this account's **Account Group**.
- **Any Jump Items:** This account can be injected within any session started from a Jump Item in which the account is applicable.

- **No Jump Items:** This account cannot be injected into any session started from a Jump Item.
- **Jump Items Matching Criteria:** This account can be injected only within sessions started from Jump Items that match the criteria you define, in which the account is applicable.
  - You can define a direct association between Vault accounts and specific Jump Items by selecting the Jump Items from the list, and then clicking **Add Jump Item**.
  - You can further define the association between Vault accounts and Jump Items by specifying matching criteria based on the following Jump Item attributes. If configured, the account is available for injection for any Jump Items that match the specified attribute criteria in addition to any specific Jump Items you added as matching criteria.
    - **Shared Jump Groups:** Select a Jump Group from the list.
    - **Name:** This filter is matched against the value that appears in the **Name** column of the jump item in the access console.
    - **Hostname / IP:** This filter is matched against the value that appears in the **Hostname / IP** column of the Jump Item in the access console.
    - **Tag:** This filter is matched against the value that appears in the **Tag** column of the Jump Item in the access console.
    - **Comments:** This filter is matched against the value that appears in the **Comments** column of the Jump Item in the access console.



*Tip: Click the **i** icon for each option and attribute to view more specific information about it.*



*Note: Local accounts are available for injection within the endpoints on which they were discovered.*

## Edit Personal Generic (Password) Account

### Name

Enter a name for the account.

### Description

Enter a brief and memorable description of the account.

### Username

Provide the username for the account.

### Password and Confirm Password

If **Password** is selected for authentication, you must enter the password for the account and confirm the password.

# Account Groups: Add and Manage Account Groups



Vault

ACCOUNT GROUPS

Shared Vault accounts can be added to an account group to allow Vault admins to grant users access to multiple shared Vault accounts more efficiently. Account groups can also be used to associate a group of shared Vault accounts to a group policy.



**Note:** A shared Vault account can belong to only one group at a time and personal Vault accounts cannot be added to an account group.

## Account Groups

Add, view, and manage account groups.

### Add Account Group

Click **Add** to add an account group, add Vault accounts to the group, and grant users access to the group of shared Vault accounts.

### Search Account Groups

Search for a specific account groups based on **Name** or **Description**.

## Add Account Group

The **Add Account Group** option allows you to add account groups for the purpose of granting users access to multiple Vault accounts at once.

### Name

Enter a name for the account group.

### Description

Enter a brief and memorable description of the account group.

### Account Policy

Select a specific policy for the account group or leave **Account Policy** set to the default value of **Inherit Policy Settings**, in which case the accounts in this account group inherit the policy settings set for the global default account policy on the **Vault > Options** page.

## Group Policies

If the account group was added to any group policies, they are listed here, along with their Vault account roles.

## Accounts

### Source Account Group

Filter the list of accounts available to add to the group by selecting a group from the **Source Account Group** list.

### Search Selected Account Group

Filter the list of accounts available to add to the group by searching for an account group. You can search by **Name**, **Endpoint**, and **Description**.

### Accounts in Group "Default Group"

List of Vault accounts available to add to the account group.

### Add

Select accounts from the list of available groups, and then click **Add** to add them to the **Accounts in This Group** list.

### Remove

Select accounts from the list of **Accounts in This Group**, and then click **Remove** to remove them from the account group.

### Search This Account Group

Filter the list of **Accounts in This Group** by searching for an account group by **Name**, **Endpoint**, and **Description**.

### Accounts in This Group

List of Vault accounts that exist in this account group.

## Allowed Users

### New User Name

Select users who are allowed to access this account.

### New Member Role

Select the Vault account role for the new user, and then click **Add**. Users can be assigned one of two roles:

- **Inject:** (default value) Users with this role can use this account in Privileged Remote Access sessions.
- **Inject and Checkout:** Users with this role can use this account in Privileged Remote Access sessions and can check out the account on **/login**. The **Checkout** permission has no affect on generic SSH accounts.



**Note:** The **Vault Account Role** is visible in the list of users added to the Vault account.

## Jump Item Associations

Select the type of **Jump Item Associations** for the account group. The **Jump Item Associations** setting determines which Jump Items the accounts in this account group are associated with, so that only the accounts relevant to the target machine are available in the access console during credential injection attempts. Select one of the following associations methods:

- **Any Jump Items:** Accounts in this group can be injected into any Jump Item session in which the accounts are applicable.
- **No Jump Items:** Accounts in this group cannot be injected into any Jump Item session.
- **Jump Items Matching Criteria:** Accounts in this group can be injected only into Jump Item sessions that match the criteria you define, in which the accounts are applicable.
  - You can define a direct association between applicable accounts in this account group and specific Jump Items by selecting the Jump Items from the list, and then clicking **Add Jump Item**.
  - You can further define the association between applicable accounts in this account group and Jump Items by specifying matching criteria based on the following Jump Item attributes. If configured, accounts in this account group are available for injection for any Jump Items that match the specified attribute criteria in addition to any specific Jump Items you added as matching criteria.
    - **Shared Jump Groups:** Select a Jump Group from the list.
    - **Name:** This filter is matched against the value that appears in the **Name** column of the Jump Item in the access console.
    - **Hostname / IP:** This filter is matched against the value that appears in the **Hostname / IP** column of the Jump Item in the access console.
    - **Tag:** This filter is matched against the value that appears in the **Tag** column of the Jump Item in the access console.
    - **Comments:** This filter is matched against the value that appears in the **Comments** column of the Jump Item in the access console.



**Tip:** Click the *i* icon for each option and attribute to view more specific information about it.



**Note:** Local accounts are available for injection within the endpoints on which they were discovered.

# Account Policies: Add and Manage Account Policies



Vault

ACCOUNT POLICIES

Vault account policies provide a method to define account settings related to password rotation and credential checkout and apply those settings to multiple accounts at once.

Multiple account policies that apply to a single Vault account are applied in the following order, from top to bottom:

- The account policy associated with the Vault account
- The account policy associated with the Vault's account group
- The global default account policy settings

If multiple account policies define a setting, then the value from the first applied policy is used.

## Account Policies

Add, view, and manage account policies.

### Add Account Policy

Click **Add** to add an account policy.

### Copy Account Policy

Click **Copy** to copy an existing account policy.

### Edit Account Policy

Click **Edit** to modify an existing account policy.

## Add Account Policy

Add a new account policy.

### Display Name

Enter a name for the account policy.

### Code Name

Set a code name for integration purposes. If you do not set a code name, Privileged Remote Access creates one automatically.

## Description

Enter a brief and memorable description of the account policy.

## Permissions

### Automatic Password Management

#### Scheduled Password Rotation Rules

- Select **Allow** to schedule passwords for Vault accounts to automatically rotate when the password reaches a specified maximum age.
- Select **Deny** to disable scheduled password rotation for Vault accounts.

#### Maximum Password Age

If scheduled password rotation is enabled, specify the maximum number of days a password can be in place for Vault accounts before it is automatically rotated.

## Account Settings

### Automatically Rotate Credentials after Check In Rules

- Select **Allow** to automatically rotate passwords after a credential is checked in.
- Select **Deny** to disable the automatic rotation of passwords after a credential is checked in.

### Allow Simultaneous Checkout Rules

- Select **Allow** to enable the ability for Vault credentials to be checked out simultaneously.
- Select **Deny** to disable the ability for Vault credentials to be checked out simultaneously.



**Note:** If a setting in an account policy is not defined, it inherits the settings from the global default account policy, configured from the **Vault > Options** page in /login.

# Endpoints: View and Manage Discovered Systems



Vault

ENDPOINTS

## Endpoints

View information about all discovered endpoints, such as the name, hostname, operating system, domain, and distinguished name of the system, as well as information about the accounts and Jump Items associated with those systems.

### Search Endpoints

Search for a specific endpoint or a group of endpoints based on **Name**, **Hostname**, **Description**, or **Domain Name**.

### Select Visible Columns

Click the **Select Visible Columns** button (columns icon) above the **Endpoints** grid and select the columns to display in the grid.

### Accounts

View the number of accounts associated with each endpoint. Click the **Accounts** link to view the accounts associated with the system.

### Jump Items

View the number of Jump Items associated with each endpoint. Click the **Jump Items** link to view the Jump Items associated with the system.

You can add new or existing RDP Jump shortcuts. While viewing **Jump Items**, click **Add** and select **Add Remote RDP Jump Shortcut** or **Associate Existing RDP Jump Shortcuts**.

### Services

View the number of Windows services associated with each endpoint. Click the **Services** link to view the services associated with the system.

### Edit

Modify the endpoint's information, specifically **Name**, **Description**, and **Hostname**.



**Note:** If Windows services were discovered and imported into the Vault, any service used by the endpoint is listed and the user account that runs the service is indicated.



## Delete

Delete the endpoint from the **Endpoints** list.

## Services: View and Manage Discovered Services



Vault

SERVICES

### Services

View the list of services found during discovery along with their associated endpoints and accounts, as well as the last status for each service. You also have the option to restart the service upon rotation of the service account.

### Search Account Groups

Search for specific services or a group of services based on **Short Name**, **Description**, **Endpoint (Hostname)** or **Username**.

### Restart

Check the **Restart** box for the service to have the service restarted when the account running the service is rotated.

### Delete

Delete the service from the **Services** list.

# Domains: Add and Manage Domains



Vault

DOMAINS

Add, view, and manage information about your domains.

## Domains

### Add Domain

Click **Add** to manually add a new domain to the **Domains** list.

### Domain Name

View the name of the domain.

### Jumpoint

View the Jumpoint used to discover accounts and endpoints on the domain.

### Management Account

View the management account associated with the Jumpoint and domain.

### Discover

Click **Discover** to initiate the Jumpoint to scan and discover endpoints and accounts on the domain.

### Edit

Click **Edit** to modify domain information.

### Delete

Click **Delete** to delete this domain from the **Domains** list.

## Add or Edit Domain

### DNS Name

Enter the **DNS Name** of the domain.

## Jumpoint

Choose an existing Jumpoint located in the environment where you wish to discover accounts.

## Management Account

Select the management account needed to initiate a discovery job for this domain. Choose to use a new account, which requires a **Username**, **Password**, and **Password Confirmation**. Or choose to use an existing account discovered from a previous job or added manually in the **Accounts** section.

## Scheduled Domain Discovery

Enable and configure domain discovery to run on a set schedule.

### Enable Scheduled Discovery

Check the box to enable the **Discovery Schedule** options.

### Discovery Schedule

Select the days of the week and the time for the discovery job to run.

### Discovery Scope

Select the objects you wish Vault to discover:

- **Domain Accounts**
- **Endpoints**
- **Local Accounts**
- **Services**

You can enter a **Search Path**, or leave it blank to search all OUs and containers. You can also use an **LDAP Query** to narrow the scope of user accounts and endpoints searched.

# Discovery: Discover Accounts, Endpoints, and Services in a Domain



Vault

DISCOVERY

BeyondTrust Vault is an on-appliance credential store, enabling discovery of and access to privileged credentials. You can manually add privileged credentials, or you can use the built-in discovery tool to scan and import Active Directory and local accounts into BeyondTrust Vault.



For more information, please see [BeyondTrust Vault Technical Whitepaper](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/index.htm>.

## Discovery: Windows Domain

With the BeyondTrust Vault add-on, you can discover Active Directory accounts, local accounts, Windows service accounts, and endpoints. Jumpoints are used to scan endpoints and discover the accounts associated with those endpoints.

Click **New Discovery Job** to initiate a discovery. The options are:

- **Windows Domain:** Discover endpoints, domain accounts, and local accounts accessible from a Jumpoint on a Windows domain.
- **Local Windows Accounts on Jump Clients:** Discover local Windows accounts on machines where an active, service mode Jump Client is currently online.



**Note:** The **Local Windows Accounts on Jump Clients** option only displays if you have the **Jump Clients** permission located in **Users & Security > Users > Access Permissions > Jump Technology**. If you have any issues, contact your site administrator.

Click **Continue** to start the discovery process.

If you selected **Windows Domain**, follow the steps in the **Add Domain** section. If you selected **Local Windows Accounts on Jump Clients**, follow the steps in the **Discovery: Jump Client Search Criteria**.



For more information on Jumpoints, please see the [BeyondTrust Privileged Remote Access Jumpoint Guide](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/index.htm>.

## Add Domain

### DNS Name of the Domain

Enter the DNS name for your environment.

## Jumpoint

Choose an existing Jumpoint located in the environment where you wish to discover accounts.

## Management Account

Select the management account needed to initiate the discovery job. Choose to use a new account, which requires a **Username**, **Password**, and **Password Confirmation** to be entered. Or, choose to use an existing account discovered from a previous job or added manually in the **Accounts** section.

## Username

Enter a valid username to use for discovery (username@domain).

## Password

Enter a valid a password to user for discovery.

## Confirm Password

Re-enter the password to confirm.



**Note:** You can define which parts of a domain to run a **Discovery/Import** job. Once you select the required fields for a **Discovery Job**, you can refine the search by specifying which OU's to target or entering LDAP queries.

## Discovery Scope

Select the objects you wish Vault to discover:

- **Domain Accounts**
- **Endpoints**
- **Local Accounts**
- **Services**

You can enter a **Search Path**, or leave it blank to search all OUs and containers. You can also use an **LDAP Query** to narrow the scope of user accounts and endpoints searched.

## Discovery: Jump Client Search Criteria

Enter one or more search criteria to find active Jump Clients you'd like to use to discover local Windows accounts. All text field searches are partial and case-insensitive. Jump Clients that match all the search criteria will be displayed on the next page for you to select before discovery begins.



**Note:** The following types of Jump Clients cannot be used for local account discovery and will not be included in the search results:



- *Jump Clients that are currently offline or disabled*
- *Jump Clients that are not running as an elevated service*
- *Jump Clients that are installed in a domain controller*

## Jump Groups

Administrators can search for Jump Clients via their Jump Groups and their attributes. If the user is not a member of any Jump Group, the **Jump Groups** selection section is grayed out and either a tool tip or note is shown indicating that user must be a member of at least one Jump Group to proceed with the Jump Client discovery process. This is similar to how domain discovery works when a user is not a member of a Jumpoint during discovery or not a member of a Jump Group when importing an endpoint.

You can search **All of Your shared Jump Groups** or **Specific Jump Groups**.

## Jump Client Attributes

You can select one or more shared Jump Groups. Private Jump Groups are not supported.

One or more Jump Client attributes can be entered. If more than one search criteria is entered, only Jump Clients matching all criteria are used for discovery.

The following attributes can be used as search criteria:

- **Name:** The Jump Client's name as it appears in the **Name** column in the access console.
- **Hostname:** The Jump Client's hostname as it appears in the **Hostname/IP** column of the access console.
- **FQDN:** The Jump Client's fully qualified domain name, as it appears under the **FQDN** label of the Jump Client details pane in the access console.
- **Tag:** The Jump Client's tag as it appears in the **Tag** column of the Representative Console.
- **Public/Private IP:** The Jump Client's public and private IP addresses, as they appear under the **Public IP** label of the Jump Client details pane in the access console. Jump Clients whose IP address starts with the given search value will match.

Click **Continue** to initiate the discovery.

## Discovery: Select Jump Clients

This screen displays the Jump Clients that will be used in discovery. Select one or more and click **Start Discovery**.

## Discovery Results

The results display a list of discovered **Endpoints** and **Local Accounts**. Select one or more and click **Import Select**.

## Import Discovered Items

A list of the selections you made displays.

## Account Group

Select from which account group you want to import, then click **Start Import**. A warning display indicating this process cannot be stopped once it has started. Click **Yes** to proceed, or **No** to abort.

## Importing

A message displays indicating the import was completed successfully. A list of **Endpoints** and **Local Accounts** displays.

## Accounts

### Search Shared/Personal Accounts

If you get an extensive list of accounts discovered, use the **Search** field to search accounts by **Name**, **Endpoint**, or **Description** (by **Name** and **Description** only for personal accounts).

Toggle between **Shared** and **Personal** accounts. Select one or more accounts. Click ... to **Rotate Password**, **Edit** or **Delete** the account. You can also click **Rotate** at the top of the page to rotate the password for the select accounts.

## Discovery Jobs

View discovery jobs that are in progress for a specific domain, or review the results of successful and failed discovery jobs.

### View Results

Click **View Results** for a discovery job to view the **Discovery Results**, which includes discovered endpoints, local accounts, domain accounts, and services found in the domain.

You can filter the list of items based on their attributes using the filter box above the grid. For each tab, click the **i** next to the filter box to see which attributes can be searched.

Select which endpoints, accounts, and services to import and store in your BeyondTrust Vault instance. For each list item you wish to import, check the box beside it and click **Import Selected**.



For more information, please see [Discover Domains, Endpoints, and Privileged Accounts Using BeyondTrust Vault](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/discovery.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/discovery.htm>.



# Options: Configure Global Default Account Policy Settings and Password Length for Account Rotation



Vault

OPTIONS

## Global Options

Configure the settings for the global default account policy.

The global default account policy must define an option for each setting. If an account does not have a setting defined using a specific policy, it inherits the policy from the account group. If the account group does not have a setting defined using a specific policy, it inherits the policy from the global default account policy.

## Automatic Password Management

### Scheduled Password Rotation Rules

- Select **Allow** to schedule passwords for Vault accounts to automatically rotate when the password reaches a specified maximum age.
- Select **Deny** to disable scheduled password rotation for Vault accounts.

### Maximum Password Age

If scheduled password rotation is enabled, specify the maximum number of days a password can be in place for Vault accounts before it is automatically rotated.

## Account Settings

### Automatically Rotate Credentials after Check In Rules

- Select **Allow** to automatically rotate passwords after a credential is checked in.
- Select **Deny** to disable the automatic rotation of passwords after a credential is checked in.

### Allow Simultaneous Checkout Rules

- Select **Allow** to enable the ability for Vault credentials to be checked out simultaneously.
- Select **Deny** to disable the ability for Vault credentials to be checked out simultaneously.

## Generated Passwords for Account Rotation

Define the length of passwords generated during account rotation for domain and local accounts. You may set a minimum length of **20** characters and a maximum length of **256** characters.



**Note:** Password lengths do not apply to SSH and personal accounts.

## Password Length

Set the minimum and maximum number of characters allowed for the password generated during manual, automatic, and scheduled password rotation for accounts that are rotated through Windows API (non-Entra ID accounts).

## Password Length of Entra ID Accounts

Set the minimum and maximum number of characters allowed for the password generated during password rotation of Entra ID Domain Services accounts through MS Graph API.

## Access Console

### Access Console Settings: Manage Default Access Console Settings



Access Console

ACCESS CONSOLE SETTINGS

#### Manage Access Console Settings

You can configure the default access console settings for your entire user base, applying a consistent access console user experience and increasing team efficiency. You can force settings, allow settings to be overridden by the user, or leave settings unmanaged. If you select **Unmanaged**, the BeyondTrust default setting will be displayed alongside for your consideration.

Each **Enable** or **Disable** setting provides an administrative checkbox option to become a forced setting. Forced settings take effect on the user's next login and do not allow configuration in the console. A forced setting cannot be overridden unless an administrator deselects the **Forced** checkbox option for that setting in the /login administrative interface.

**i** For details on how a user may configure settings in the access console to their preference, please see [Change Settings and Preferences in the Access Console](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/settings.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/settings.htm>.

Choose the settings you want to be the default for your users, and click the **Save** button at the top of the page.

Note that saved settings take effect only upon login to the console. Even if you save and apply the changes by clicking the **Apply Now** button at the bottom of the page, detailed later, the user will not use the new settings until login.

If, for instance, you wish to set up default settings for new users but leave existing users' settings unchanged, save your managed settings but do not apply them. This will make it so all new access console logins will begin with your managed default settings. Existing users will have forced settings applied upon next login, but all other settings will remain unchanged.

#### Global Settings

##### Enable spell checking

From the **Global Settings** section, you can choose to enable or disable spell check for chat. Currently, spell check is available for US English only.

##### Configurable session side bar

Choose if you want the session menu icon to display, if the sidebar can be detached, and if the widgets on the session sidebar can be rearranged and resized.

## Alerts - Chat Alerts

### Audible alerts - Play a sound when a chat message is received

Choose if a sound should be played when the user receives a chat message. If unmanaged or if enabled and not forced, the user may designate a custom sound in WAV format no larger than 1MB.

### Visual alerts - Flash the application icon when a chat message is received

Choose if the application icon should flash when the user receives a chat message.

### Show status messages in team chat windows

Choose if the team chat should include status messages, such as users logging in and out, or only chats sent between team members.

## Pop-up Notifications

### Team Chat

Choose if a user should receive a pop-up notification for chat messages received in a team chat.

### Access Sessions

Choose if a user should receive a pop-up notification for chat messages received in a access session

## Alerts - Queue Alerts

### Audible alerts - Play a sound when a session enters any queue

Choose if a sound should be played when a session enters any of a user's queues.

### Pop-up Notifications

Pop-up notifications appear independent of the access console and on top of other windows. If the pop-up notification is enabled and not forced or left unmanaged, the user will be able to choose how they receive pop-up notifications.

### Personal Queue - Shared Sessions

Choose if a user should receive a pop-up notification for shared sessions in this queue.

### Team Chat - Shared Sessions

Choose if a user should receive a pop-up notification for shared sessions in this queue.

## Pop-up Behavior - Location and Duration

Set the default location and duration for pop-up notifications.

## Access Sessions

### Automatically request screen sharing

Choose if you want your users' sessions to begin with screen sharing.

### Automatically detach

Choose if you want to open sessions as tabs in the access console or to automatically detach sessions into new windows.

### Default Quality

Set the default quality for screen sharing sessions.

### Default Scaling

Set the default size for screen sharing sessions.

### Automatically enter full screen mode when screen sharing starts

When screen sharing starts, the user can automatically enter full screen mode.

### Automatically restrict endpoint visibility when screen sharing starts

When screen sharing starts, the remote system can automatically have its display, mouse, and keyboard input restricted, providing a privacy screen.

## Command Shell

### Number of lines of available command history

You can set the number of lines to save in the command shell history. The default value is 500 lines.

## Additional External Tools

You can define specific external tools that your end-users can use to connect to endpoints. This allows them to work with the tools and applications that they're most familiar with, while taking advantage of the access and security of Privileged Remote Access.

Check **Managed** to add and use session external tools.

Click **Add** to make a new external tool in the access console.

For each new tool, complete the following information:

- Enter your desired **Name** for the tool. This is the name of the tool that appears to the end-user in the dropdown list for the **Open Client** button, when starting a session.
- Select a **Platform**. This is the Platform that the tool runs on. The options are Linux, macOS, and Windows.
- Select a **Tunnel Type**. The options are MSSQL, RDP, and SSH.
- Enter the **Command**. Click the **i** icon for example of commands that can be used.
- Enter the **Arguments**. Click the **i** icon for example of commands that can be used. Enter one argument per line. Parameters normally inside quotation marks are considered a single argument.

Select any external tool in the list to view and edit its information.

## Save

Click **Save**, in the upper left, to save the profile settings you have configured. A message appears confirming settings saved or updated. Users who download the access console after you save a new profile receive the new settings as the default settings.

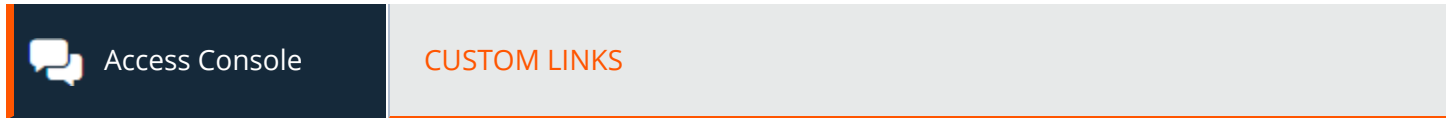
## Apply Access Console Settings

### Apply Now

To push the default settings to your users, click **Apply Now**. The page displays a confirmation message, **Settings profile was successfully applied**.

Users receive an alert dialog for confirmation when they first log in to the access console after you apply the settings. The dialog warns them that their settings have changed and prompts them with the option to acknowledge the dialog or to open their access console settings window and review the changes.

# Custom Links: Add URL Shortcuts to the Access Console



## Custom Links

Create links to sites your users can access during sessions. Examples could be a link to a searchable knowledge base, giving users a chance to look for a solution to an issue on the endpoint system, or a customer relationship management (CRM) system.

Links created here become available through the **Links** button on the access console.

### Add Custom Link, Edit, Delete

Add a new link, modify an existing link, or remove an existing link.

### Add or Edit a Custom Link

#### Name

Create a unique name to help identify this link.

#### URL

Add the URL to which this custom link should direct. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.



For more information, please see *Access Session Overview and Tools* at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/session-overview.htm>.

# Canned Scripts: Create Scripts for Screen Sharing or Command Shell Sessions



Access Console

CANNED SCRIPTS

## Canned Scripts

Create custom scripts to be used in screen sharing and command shell sessions. The script will be displayed in the screen sharing or command shell interface as it is being executed. Executing a script in the screen sharing interface displays the running script on the remote screen.



For more information, please see [Access Session Overview and Tools](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/session-overview.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/session-overview.htm>.



For more information, please see [Open the Command Shell on the Remote Endpoint Using the Access Console](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm>.

## Team Availability and Categories Filters

Filter your view by selecting a team or category from the dropdown lists.

## Add New Canned Script, Edit, Delete

Create a new script, modify an existing script, or remove an existing script.

## Add or Edit Canned Script

### Script Name

Create a unique name to help identify this script. This name should help users locate the script they wish to run.

### Description

Add a brief description to summarize the purpose of this script. This description is displayed on the prompt to confirm that the user wants to run the selected script.

### Command Sequence

Write the command sequence. Scripts must be written in command line format, similar to writing a batch file or shell script. Note that only the last line of the script may be interactive; you cannot prompt for input in the middle of the script.



Within the script, reference an associated resource file using "%RESOURCE\_FILE%", making sure to include the quotation marks. Please note that the command sequence is case sensitive.

You can access the resource file's temporary directory using %RESOURCE\_DIR%. When you run a script with an associated resource file, that file will be temporarily uploaded to the customer's computer.

## Team Availability

Select which teams should be able to use this item.

## Categories

Select the category under which this item should be listed.

## Resource File

You may select a resource file to be associated with this script.

## Categories

### Add Category, Delete

Create a new category or remove an existing category.

## Resources

### Choose and Upload Resource

Add any resource files you want to access from within your scripts. You may upload up to 100 MB to your resource file directory.

If you upload a resource file with the same name as an existing resource file, there is a prompt to confirm replacing the file.

- If you click **YES**, the updated resource file is uploaded and used for all applicable canned scripts.
- If you click **NO**, the file is not uploaded.

## Delete

Remove an existing resource file.

# Special Actions: Create Custom Special Actions



Access Console

SPECIAL ACTIONS

## Special Actions

Create special actions to speed your processes. Special actions can be created for Windows, Mac, and Linux systems.

### Add New Special Action, Edit, Delete

Create a new special action, modify an existing special action, or remove an existing special action.

### Add or Edit Special Action

#### Action Name

Create a unique name to help identify this action. During a session, a user can see this name on the special actions dropdown.

#### Command

In the **Command** field, enter the full path of the application you wish to run. Do not use quotation marks; they will be added as necessary. Windows systems may make use of the macros provided. If the command cannot be located on the remote system, then this custom special action will not appear in the user's list of special actions.

#### Arguments

If the provided command will accept command line arguments, you may enter those arguments next. Arguments may use quotation marks if necessary, and arguments for Windows systems may use the provided macros.



*For help with Windows arguments, search for "command line switches" on [docs.microsoft.com](https://docs.microsoft.com).*

#### Confirm

If you check the **Confirm** box, users will be prompted to confirm they want to run this special action before it will execute. Otherwise, selecting the special action from the menu during a session will cause that special action to run immediately.

## Special Actions Settings

### Show Built-In Special Actions

If you want to enable the default special actions provided by BeyondTrust, check **Show Built-In Special Actions**. Otherwise, to enable only your custom special actions, deselect this option.



**Note:** *The Windows Security (Ctrl-Alt-Del) special action cannot be disabled.*

# Users and Security

## Users: Add Account Permissions for a User or Admin



Users &amp; Security

USERS

### User Accounts

View information about all users who have access to your B Series Appliance, including local users and those who have access through security provider integration.

### Add User, Edit, Delete

Create a new account, modify an existing account, or remove an existing account. You cannot delete your own account.

### Search Users

Search for a specific user account based on username, display name, or email address.

### Security Provider

Select a security provider type from the dropdown to filter the list of users by security provider.

### Synchronize

Synchronize the users and groups associated with an external security provider. Synchronization occurs automatically once a day. Clicking this button forces a manual synchronization.

### Reset Failed Login Attempts and Unlock Account

If a user has one or more failed login attempts, click the **Reset** button for their user account to reset the number back to zero.

If a user becomes locked due to too many failed consecutive login attempts, click the **Unlock Account** button for their user account to reset the number back to zero and unlock their account.

### Add or Edit User

#### Username

Unique identifier used to log in.

## Display Name

User's name as shown in team chats, in reports, etc.

## Email Address

Set the email address to where email notifications are sent, such as password resets or extended availability mode alerts.

## Password

Password used with the username to log in. The password may be set to whatever you choose, as long as the string complies with the defined policy set on the **/login > Management > Security** page.

## Email Password Reset Link to User

When checked, admins can send a password reset link to a user.

## Must Reset Password at Next Login

If this option is selected, then the user must reset their password at next login.

## Password Never Expires

Check this box to set the user's password to never expire.

## Password Expiration Date

Set a date for the password to expire.

## Memberships

### Group Policy Memberships

Listing of the group policies to which the user belongs.

This section allows you to search or select from a dropdown of **Available Group Policies**, and **Add** the policy to the user. Policies selected for the user display in a list which can be filtered.

The user can be removed from one or more group policies by selecting the policy or policies and clicking **Remove**. The default policy cannot be selected.

Unsaved changes to the list are identified as **Addition** or **Removal**. Changes can be undone by selecting the policy or policies and clicking **Undo**.

If the user is a member of multiple group policies, the priority of the policies can be modified by selecting one or more policies and clicking **Priority**, at the upper right of the list.

Group policies selected for a user can be edited by clicking the name of the policy in the list.



**Note:** Other memberships do not display while a new user is being created. Once the new user has been saved, the other memberships appear, listing any to which the user may have been added, with links for updating these memberships and for reviewing or editing details about the memberships.

## Team Memberships

Listing of the teams to which the user belongs.

## Jumpoint Memberships

Listing of the Jumpoints which the user can access.

## Jump Group Memberships

Listing of the Jump Groups to which the user belongs.

## Vault Account Group Memberships

Listing of the Vault Account Groups to which the user belongs.

## Account Settings

### Two Factor Authentication

Two factor authentication (2FA) uses an authenticator app to provide a time-based, one time code to login to the administrative interface, as well as the access console. If **Required** is selected, the user will be prompted to enroll and begin using 2FA at the next login. If **Optional** is selected, the user will have the option to use 2FA, but it is not required. **Click Remove Current Authenticator App** if you want a user to stop login in with a specific authenticator.

### Account Never Expires

When checked, the account never expires. When not checked, an account expiration date must be set.

### Account Expiration Date

Causes the account to expire after a set date.

### Account Disabled

Allows you to disable the account so the user cannot log in. Disabling does NOT delete the account.

### Comments

Add comments to help identify the purpose of this object.

## Passwordless Authenticators

Listing of the passwordless authenticators registered for this user. Admins can view the name, type, registration timestamp, and last used timestamp. Admins can remove one or more authenticators from this list.

## General Permissions

### Administration

#### Administrative Privileges

Grants the user full administrative rights.

#### Allowed to Administer Vault

Enables the user access to the Vault.

#### Password Setting

Enables the user to set passwords and unlock accounts for non-administrative local users.

#### Jumpoint Editing

Enables the user to create or edit Jumpoints. This option does not affect the user's ability to access remote computers via Jumpoint, which is configured per Jumpoint or group policy.

#### Team Editing

Enables the user to create or edit teams.

#### Jump Group Editing

Enables the user to create or edit Jump Groups.

#### Canned Script Editing

Enables the user to create or edit canned scripts for use in screen sharing or command shell sessions.

#### Custom Link Editing

Enables the user to create or edit custom links.

### Allowed to View Access Session Reports

Enables the user to run reports on access session activity, viewing only sessions for which they were the primary session owner, only sessions for endpoints belonging to a Jump Group of which the user is a member, or all sessions.

### Allowed to View Access Session Recordings

Enables the user to view video recordings of screen sharing sessions and command shell sessions.

### Allowed to View Vault Reports

Enables the user to view his or her own vault events or all Vault events.

### Allowed to View Syslog Reports

Enables the user to download a ZIP file containing all syslog files available on the appliance. Admins are automatically permitted to access this report. Non-admin users must request access to view this report.

## Access Permissions

### Access

#### Allowed to access endpoints

Enables the user to use the access console in order to run sessions. If endpoint access is enabled, options pertaining to endpoint access will also be available.

### Session Management

#### Allowed to share sessions with teams which they do not belong to

Enables the user to invite a less limited set of user to share sessions, not only their team members. Combined with the extended availability permission, this permission expands session sharing capabilities.



For more information, please see [Control the Remote Endpoint with Screen Sharing at https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm).

#### Allowed to invite external users

Enables the user to invite third-party users to participate in a session, one time only.



**i** For more information, please see [Invite External Users to Join an Access Session](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/access-invite.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/access-invite.htm>.

### Allowed to enable extended availability mode

Enables the user to receive email invitations from other users requesting to share a session even when they are not logged into the access console.

**i** For more information, please see [Use Extended Availability to Stay Accessible When Not Logged In](https://www.beyondtrust.com/docs/remote-support/getting-started/rep-console/extended-availability.htm) at <https://www.beyondtrust.com/docs/remote-support/getting-started/rep-console/extended-availability.htm>.

### Allowed to edit the external key

Enables the user to modify the external key from the session info pane of a session within the access console.

**i** For more information, please see [Access Session Overview and Tools](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/session-overview.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/session-overview.htm>.

### User to User Screen Sharing

**i** For more information, please see [Share your Screen with Another User](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/user-screensharing.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/user-screensharing.htm>.

### Allowed to show screen to other users

Enables the user to share their screen with another user without the receiving user having to join a session. This option is available even if the user is not in a session.

### Allowed to give control when showing screen to other users

Enables the user sharing their screen to give keyboard and mouse control to the user viewing their screen.

## Jump Technology

### Allowed Jump Item Methods

Enables the user to Jump to computers using **Jump Clients**, **Local Jump on the local network**, **Remote Jump via a Jumpoint**, **Remote VNC via a Jumpoint**, **Remote RDP via a Jumpoint**, **Web Jump via a Jumpoint**, **Shell Jump via a Jumpoint**, and **Protocol Tunnel Jump via a Jumpoint**.

## Jump Item Roles

A Jump Item Role is a predefined set of permissions regarding Jump Item management and usage. For each option, click **Show** to open the Jump Item Role in a new tab.

The **Default** role is used only when **Use User's Default** is set for that user in a Jump Group.

The **Personal** role applies only to Jump Items pinned to the user's personal list of Jump Items.

The **Teams** role applies to Jump Items pinned to the personal list of Jump Items of a team member of a lower role. For example, a team manager can view team leads' and team members' personal Jump Items, and a team lead can view team members' personal Jump Items.

The **System** role applies to all other Jump Items in the system. For most users, this should be set to **No Access**. If set to any other option, the user is added to Jump Groups to which they would not normally be assigned, and in the access console, they can see non-team members' personal lists of Jump Items.



**Note:** A new **Jump Item Role** called **Auditor** is automatically created on new site installations. On existing installations it has to be created. This role only has a single **View Reports** permission enabled, giving admins the option to grant a user just the permission to run Jump Item reports, without the need to grant any other permission.



For more information, please see [Use Jump Item Roles to Configure Permission Sets for Jump Items](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-item-roles.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-item-roles.htm>.

## Session Permissions

Set the prompting and permission rules that should apply to this user's sessions. Choose an existing session policy or define custom permissions for this user. If **Not Defined**, the global default policy will be used. These permissions may be overridden by a higher policy.

### Description

View the description of a pre-defined session permission policy.

## Screen Sharing

### Screen Sharing Rules

Select the representative's and remote user's access to the remote system:

- If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.
- **Deny** disables screen sharing.
- **View Only** allows the representative to view the screen.
- **View and Control** allows the representative to view and take action on the system. If this is selected, endpoint restrictions can be set to avoid interference by the remote user:
  - **None** does not set any restrictions on the remote system.

- **Display, Mouse, and Keyboard** disables these inputs. If this is selected, a check box is available to **Automatically request a privacy screen on session start**. Privacy screen is applicable only for sessions started from a Jump Client, a Remote Jump item, or a Local Jump item. We recommend using privacy screen for unattended sessions. The remote system must support privacy screen.



For more information, please see [Control the Remote Endpoint with Screen Sharing](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm>.

## Clipboard Synchronization Direction

Select how clipboard content flows between users and endpoints. The options are:

- **Not allowed:** The user is not allowed to use the clipboard, no clipboard icons display in the access console, and cut and paste commands do not work.
- **Allowed from Rep to Customer:** The user can push clipboard content to the endpoint but cannot paste from the endpoint's clipboard. Only the **Send** clipboard icon displays in the access console.
- **Allowed in Both Directions:** Clipboard content can flow both ways. Both Push and Get clipboard icons display in the access console.



For more information about the Clipboard Synchronization Mode, please see ["Security: Manage Security Settings" on page 171](#).

## Application Sharing Restrictions

Limit access to specified applications on the remote system with either **Allow only the listed executables** or **Deny only the listed executables**. You may also choose to allow or deny desktop access.



**Note:** This feature applies only to Windows operating systems.

## Add New Executables

If application sharing restrictions are enforced, an **Add New Executables** button appears. Clicking this button opens a dialog that allows you to specify executables to deny or allow, as appropriate to your objectives.

After you have added executables, one or two tables display the file names or hashes you have selected for restriction. An editable comment field allows administrative notes.

## Enter file names or SHA-256 hashes, one per line

When restricting executables, manually enter the executable file names or hashes you wish to allow or deny. Click on **Add Executable(s)** when you are finished to add the chosen files to your configuration.

You may enter up to 25 files per dialog. If you need to add more, click **Add Executable(s)** and then reopen the dialog.

## Browse for one or more files

When restricting executables, select this option to browse your system and choose executable files to automatically derive their names or hashes. If you select files from your local platform and system in this manner, use caution to ensure that the files are indeed executable files. No browser level verification is performed.

Choose either **Use file name** or **Use file hash** to have the browser derive the executable file names or hashes automatically. Click **Add Executable(s)** when you are finished to add the chosen files to your configuration.

You may enter up to 25 files per dialog. If you need to add more, click **Add Executable(s)** and then reopen the dialog.



**Note:** This option is available only in modern browsers, not in legacy browsers.

## Allowed Endpoint Restrictions

Set if the user can suspend the remote system's mouse and keyboard input. The user may also prevent the remote desktop from being displayed.



For more information, please see [Control the Remote Endpoint with Screen Sharing](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm>.

## Annotations

### Annotation Rules

Enables the user to use annotation tools to draw on the remote system's screen. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.



For more information, please see [Use Annotations to Draw on the Remote Screen of the Endpoint](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/annotations.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/annotations.htm>.

## File Transfer

### File Transfer Rules


Enables the user to upload files to the remote system, download files from the remote system, or both. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

### Accessible paths on the endpoint's filesystem

Allow the user to transfer files to or from any directories on the remote system or only specified directories.

## Accessible paths on user's filesystem

Allow the user to transfer files to or from any directories on their local system or only specified directories.

 For more information, please see [File Transfer to and from the Remote System Endpoint](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/file-transfer.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/file-transfer.htm>.


## Command Shell


### Command Shell Rules

Enables the user to issue commands on the remote computer through a virtual command line interface. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

 **Note:** Command shell access cannot be restricted for Shell Jump sessions.

Configure command filtering to prevent accidental use of commands that can be harmful to endpoint systems.

 For more information on command filtering, please see [Use Shell Jump to Access a Remote Network Device](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm) at [www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm).

 For more information, please see [Open the Command Shell on the Remote Endpoint Using the Access Console](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm>.


## System Information

### System Information Rules

Enables the user to see system information about the remote computer. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

### Allowed to use system information actions

Enables the user to interact with processes and programs on the remote system without requiring screen sharing. Kill processes; start, stop, pause, resume, and restart services; and uninstall programs.

 For more information, please see [View System Information on the Remote Endpoint](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/system-info.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/system-info.htm>.

## Registry Access

### Registry Access Rules

Enables the user to interact with the registry on a remote Windows system without requiring screen sharing. View, add, delete and edit keys, search and import/export keys.



For more information, please see [Access the Remote Registry Editor on the Remote Endpoint](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/registry-editor.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/registry-editor.htm>.

## Canned Scripts

### Canned Script Rules

Enables the user to run canned scripts that have been created for their teams. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.



For more information, please see [Open the Command Shell on the Remote Endpoint Using the Access Console](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm>.

## Session Termination Behavior

If unable to reconnect within the time you set by **Reconnect Timeout**, choose what action to take. To prevent an end-user from accessing unauthorized privileges after an elevated session, set the client to automatically log the end user out of the remote Windows computer at session end, to lock the remote computer, or to do nothing. These rules do not apply to browser sharing sessions.

### Allow users to override this setting per session

You can allow a user to override the session termination setting from the **Summary** tab in the console during a session.

## Availability Settings

### Login Schedule

#### Restrict user login to the following schedule

Set a schedule to define when users can log into the access console. Set the time zone you want to use for this schedule, and then add one or more schedule entries. For each entry, set the start day and time and the end day and time.

If, for instance, the time is set to start at 8 am and end at 5 pm, a user can log in at any time during this window but may continue to work past the set end time. They will not, however, be allowed to log back in after 5 pm.

### Force logout when the schedule does not permit login

If stricter access control is required, check this option. This forces the user to log out at the scheduled end time. In this case, the user receives recurring notifications beginning 15 minutes prior to being disconnected. When the user is logged out, any owned sessions will follow the session fallback rules.

## User Account Report

Export detailed information about your users for auditing purposes. Gather detailed information for all users, users from a specific security provider, or just local users. Information collected includes data displayed under the "show details" button, plus group policy and team memberships and permissions, and passwordless authentication registration and last usage.

# User Accounts for Password Reset: Allow Users to Set Passwords



Users &amp; Security

USERS

## User Accounts

Administrators can delegate, via user permission, the task of resetting local users' passwords and locked user accounts to privileged users, without also granting full administrator permissions. Local users may continue to reset their own passwords.



**Note:** Administrators with the **Allowed to Set Passwords** permission will see no difference in the user interface.

When a privileged non-administrative user navigates to the **Users & Security > Users** page in the administrative /login interface, they will see a limited-view **User Accounts** screen containing **Change Password** buttons for non-administrative users. The privileged user will not be able to edit or delete user accounts. Privileged users are not allowed to reset administrator passwords, nor the passwords of security provider users.

## Search Users

Search for a specific user account based on username, display name, or email address.

## Reset Failed Login Attempts and Unlock Account

If a user has one or more failed login attempts, click the **Reset** button for their user account to reset the number back to zero.

If a user becomes locked due to too many failed consecutive login attempts, click the **Unlock Account** button for their user account to reset the number back to zero and unlock their account.

## Change Password

Change the password for a non-administrative user.

## Change Password

### Username

Unique identifier used to log in. This field is not editable.

### Display Names

User's name as shown in team chats, in reports, etc. This field is not editable.



## Email Address

The email address to which email notifications are sent, such as password resets or extended availability mode alerts. This field is not editable.

## Comments

Comments about the account. This field is not editable.

## Password

The new password to assign to this user account. The password may be set to whatever you choose, as long as the string complies with the defined policy set on the **/login > Management > Security** page.

## Email Password Reset Link to User

Send an email to the user containing a link to reset the password for their account. This feature requires a valid SMTP configuration for your B Series Appliance, set up on the **/login > Management > Email Configuration** page.

## Must Reset Password at Next Login

If this option is selected, then the user must reset their password at next login.

# Access Invite: Create Profiles to Invite External Users to Sessions



Users &amp; Security

ACCESS INVITE

## Access Invitation Email

With access invite, a privileged user can invite an external user to join a session one time only. When the user makes the invitation, they will select a security profile to determine what level of privileges the external user should be granted. Access invite security profiles are configured as session policies on the **Users & Security > Session Policies** page and must be enabled for access invite use.

The invitation email is sent to external users when you invite them to join a session.

### Subject

Customize the subject of this email. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.

### Body

Customize the body of this email. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.



For more information, please see [Invite External Users to Join an Access Session](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/access-invite.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/access-invite.htm>.

# Security Providers: Enable LDAP, RADIUS, Kerberos, SCIM, and SAML2 Logins



Users &amp; Security

SECURITY PROVIDERS

## Security Providers

You can configure your BeyondTrust Appliance B Series to authenticate users against existing LDAP, RADIUS, SCIM, SAML2, or Kerberos servers, as well as to assign privileges based on the preexisting hierarchy and group settings already specified in your servers. Kerberos enables single sign-on, while RSA and other two factor authentication mechanisms via RADIUS provide an additional level of security.

### Add Provider

From the **Add** dropdown, select LDAP, RADIUS, Kerberos, SCIM, or SAML2 to add a new security provider configuration.

### Change Order

Click this button to drag and drop security providers to set their priority. You can drag and drop servers within a cluster; clusters can be dragged and dropped as a whole. Click **Save Order** for prioritization changes to take effect.

### Disable

Disable this security provider connection. This is useful for scheduled maintenance, when you want a server to be offline but not deleted.

### Sync

Synchronize the users and groups associated with an external security provider. Synchronization occurs automatically once a day. Clicking this button forces a manual synchronization.

### View Log

View the status history for a security provider connection.

### Duplicate Node

Create a copy of an existing clustered security provider configuration. This will be added as a new node in the same cluster.

### Upgrade to a Cluster

Upgrade a security provider to a security provider cluster. To add more security providers to this cluster copy an existing node.

## Copy

Create a copy of an existing security provider configuration. This will be added as a top-level security provider and not as part of a cluster.

## Edit, Delete

Modify an existing object or remove an existing object.



**Note:** If you edit the local security provider and select a default policy that does not have administrator permissions, a warning message appears. Ensure other users have administrator permissions before proceeding.

## Edit Security Provider - LDAP

### Name

Create a unique name to help identify this provider.

### Enabled

If checked, your B Series Appliance searches this security provider when a user attempts to log in. If unchecked, this provider is not searched.

### User Authentication

Choose if this provider should be used for user authentication. If deselected, options specific to user authentication are disabled.

### User Provision

By default, user provisioning occurs on this provider. If you have a SCIM provider set up, you can choose to provision users through that provider instead. If this provider is not used for user authentication, then **Do not provision users** is selected.



**Note:** This setting cannot be modified after this security provider is first saved.

## Keep user information synchronized with the LDAP server

Checking this option keeps a user's display name set to the name designated on the security provider rather than allowing the display name to be modified in BeyondTrust.

## Authorization Settings

### Synchronization: Enable LDAP object cache

If checked, LDAP objects visible to the B Series Appliance are cached and synchronized nightly, or manually, if desired. When using this option, fewer connections are made to the LDAP server for administrative purposes thereby potentially increasing speed and efficiency.

If unchecked, changes to the LDAP server are immediately available without the need to synchronize. However, when you make changes on user policies through the administrative interface, several short-lived LDAP connections may occur as necessary.

For providers that have previously had the synchronization setting enabled, disabling or unchecking the synchronization option will cause all cached records that are currently not in use to be deleted.

### Lookup Groups

Choose to use this security provider only for user authentication, only for group lookups, or for both. If the **User Authentication** option above is not checked, then **Lookup groups using this provider** is selected. The option to look up groups using a different provider is available only if another provider capable of group lookup has already been created.

### Default Group Policy *(Visible Only if User Authentication is Allowed)*

Each user who authenticates against an external server must be a member of at least one group policy in order to authenticate to your B Series Appliance, logging into either the /login interface or the access console. You can select a default group policy to apply to all users allowed to authenticate against the configured server.

If a default policy is defined, any allowed user who authenticates against this server might have access at the level of this default policy. Therefore, we recommend you set the default to a policy with minimum privileges to prevent users from gaining permissions you do not wish them to have.



**Note:** If a user is in a default group policy and is then specifically added to another group policy, the settings for the specific policy always take precedence over the settings for the default, even if the specific policy is a lower priority than the default, and even if the default policy's settings are set to disallow override.

## Connection Settings

### Hostname

Enter the hostname of the server that houses your external directory store.




**Note:** If you will be using **LDAPS** or **LDAP with TLS**, the hostname must match the hostname used in your LDAP server's public SSL certificate's subject name or the DNS component of its alternate subject name.

## Port


Specify the port for your LDAP server. This is typically port **389** for LDAP or port **636** for LDAPS. BeyondTrust also supports global catalog over port **3268** for LDAP or **3269** for LDAPS.

## Encryption

Select the type of encryption to use when communicating with the LDAP server. For security purposes, **LDAPS** or **LDAP with TLS** is recommended.

 **Note:** Regular LDAP sends and receives data in clear text from the LDAP server, potentially exposing sensitive user account information to packet sniffing. Both LDAPS and LDAP with TLS encrypt user data as it is transferred, making these methods recommended over regular LDAP. LDAP with TLS uses the StartTLS function to initiate a connection over clear text LDAP but then elevates this to an encrypted connection. LDAPS initiates the connection over an encrypted connection without sending any data in clear text whatsoever.

If you select **LDAPS** or **LDAP with TLS**, you must upload the Root SSL Certificate used by your LDAP server. This is necessary to ensure the validity of the server and the security of the data. The Root Certificate must be in PEM format.

 **Note:** If the LDAP server's public SSL certificate's subject name, or the DNS component of its alternate subject name, does not match the value in the **Hostname** field, the provider will be treated as unreachable. You can, however, use a wildcard certificate to certify multiple subdomains of the same site. For example, a certificate for **\*.example.com** would certify both **access.example.com** and **remote.example.com**.

## Bind Credentials

Specify a username and password with which your B Series Appliance can bind to and search the LDAP directory store.

If your server supports anonymous binds, you may choose to bind without specifying a username and password. Anonymous binding is considered insecure and is disabled by default on most LDAP servers.

### Username

Enter a username for the bind credentials.

### Password and Confirm Password

Enter and confirm a password for the bind credentials.

## Connection Method

Downloading the Win32 connection agent enables your directory server and your B Series Appliance to communicate via an SSL-encrypted, outbound connection, with no firewall configuration. The connection agent can be downloaded to either the directory server or a separate server on the same network as your directory server (recommended).

Create a **Connection Agent Password** for use in the connection agent installation process. Then click **Download Connection Agent**, run the installer, and follow the installation wizard. During installation, you will be prompted to enter the security provider name and the connection agent password you created above.



**Note:** *BeyondTrust Cloud customers must run the connection agent in order to use an external directory store.*

## Directory Type

To aid in configuring the network connection between your B Series Appliance and your security provider, you can select a directory type as a template. This pre-populates the configuration fields below with standard data but must be modified to match your security provider's specific configuration. Active Directory LDAP is the most common server type, though you can configure BeyondTrust to communicate with most types of security providers.

## Cluster Settings (Visible Only for Clusters)

### Member Selection Algorithm

Select the method to search the nodes in this cluster.

**Top-to-bottom** first attempts the server with the highest priority in the cluster. If that server is unavailable or the account is not found, the next highest priority server is attempted. The search moves down through the list of clustered servers until either the account is found or it is determined that the account does not exist on any of the specified and available servers.

**Round-robin** is designed to balance the load between multiple servers. The algorithm chooses at random which server to attempt first. If that server is unavailable or the account is not found, another random server is attempted. The search continues at random through the remaining servers in the cluster until either the account is found or it is determined that the account does not exist on any of the specified and available servers.

### Retry Delay

Set how long to wait after a cluster member becomes unavailable before trying that cluster member again.

## User Schema Settings

### Override Cluster Values (Visible Only for Cluster Nodes)

If this option is unchecked, this cluster node will use the same schema settings as the cluster. If unchecked, you may modify the schema settings below.

### Search Base DN

Determine the level in your directory hierarchy, specified by a distinguished name, at which the B Series Appliance should begin searching for users. Depending on the size of your directory store and the users who require BeyondTrust accounts, you may improve performance by designating the specific organizational unit within your directory store that requires access. If you are not sure or if users span multiple organizational units, you may want to specify the root distinguished name of your directory store.

## User Query

Specify the query information that the B Series Appliance should use to locate an LDAP user when the user attempts to log in. The **User Query** field accepts a standard LDAP query (RFC 2254 – String Representation of LDAP Search Filters). You can modify the query string to customize how your users log in and what methods of usernames are accepted. To specify the value within the string that should act as the username, replace that value with \*.

## Browse Query

The browse query affects how results are displayed when browsing via group policies. This filters results so that only certain results display in the member selection dropdown when adding members to a group policy.

## Object Classes

Specify valid object classes for a user within your directory store. Only users who possess one or more of these object classes will be permitted to authenticate. These object classes are also used with the attribute names below to indicate to your B Series Appliance the schema the LDAP server uses to identify users. You can enter multiple object classes, one per line.

## Attribute Names

Specify which fields should be used for a user's unique ID, display name, and email address.

### Unique ID

This field requests a unique identifier for the object. While the distinguished name can serve as this ID, a user's distinguished name may change frequently over the life of the user, such as with a name or location change or with the renaming of the LDAP store. Therefore, most LDAP servers incorporate some field that is unique per object and does not change for the lifetime of the user. If you do use the distinguished name as the unique ID and a user's distinguished name changes, that user will be seen as a new user, and any changes made specifically to the individual's BeyondTrust user account will not be carried over to the new user. If your LDAP server does not incorporate a unique identifier, use a field that is least likely to have an identical entry for another user.

### E-mail

This determines which field should be used as the user's email address.

### Display Name

This determines which field should be used as the user's display name.

## Group Schema Settings *(Visible Only if Performing Group Lookups)*

## Directory Type

To aid in configuring the network connection between your B Series Appliance and your security provider, you can select a directory type as a template. This pre-populates the configuration fields below with standard data but must be modified to match your security provider's specific configuration. Active Directory LDAP is the most common server type, though you can configure BeyondTrust to communicate



with most types of security providers.

## Search Base DN

Determine the level in your directory hierarchy, specified by a distinguished name, at which the B Series Appliance should begin searching for groups. Depending on the size of your directory store and the groups that require access to the B Series Appliance, you may improve performance by designating the specific organizational unit within your directory store that requires access. If you are not sure or if groups span multiple organizational units, you may want to specify the root distinguished name of your directory store.

## Browse Query

The browse query affects how results are displayed when browsing via group policies. This filters results so that only certain results display in the member selection dropdown when adding members to a group policy.

## Object Classes

Specify valid object classes for a group within your directory store. Only groups that possess one or more of these object classes will be returned. These object classes are also used with the attribute names below to indicate to your B Series Appliance the schema the LDAP server uses to identify groups. You can enter multiple group object classes, one per line.

## Attribute Names

Specify which fields should be used for a group's unique ID and display name.

### Unique ID

This field requests a unique identifier for the object. While the distinguished name can serve as this ID, a group's distinguished name may change frequently over the life of a group, such as with a location change or with the renaming of the LDAP store. Therefore, most LDAP servers incorporate some field that is unique per object and does not change for the lifetime of the group. If you do use the distinguished name as the unique ID and a group's distinguished name changes, that group will be seen as a new group, and any group policies defined for that group will not be carried over to the new group. If your LDAP server does not incorporate a unique identifier, use a field that is least likely to have an identical entry for another group.

### Display Name

This value determines which field should be used as the group's display name.

## User to Group Relationships

This field requests a query to determine which users belong to which groups or, conversely, which groups contain which users.

## Perform recursive search for groups

You can choose to perform a recursive search for groups. This will run a query for a user, then queries for all of the groups to which that user belongs, then queries for all groups to which those groups belong, and so forth, until all possible groups associated with that user have been found.

Running a recursive search can have a significant impact on performance, as the server will continue to issue queries until it has found information about all groups. If it takes too long, the user may be unable to log in.

A non-recursive search will issue only one query per user. If your LDAP server has a special field containing all of the groups to which the user belongs, recursive search is unnecessary. Recursive search is also unnecessary if your directory design does not handle group members of groups.

## Test Settings

### Username and Password

Enter a username and password for an account that exists on the server you are testing. This account must match the criteria for login specified in the configuration above.

### Try to obtain user attributes and group memberships if the credentials are accepted

If this option is checked, your successful credential test will also attempt to check user attributes and group lookup. Note that for these features to be successfully tested, they must be supported and configured in your security provider.

### Start Test

If your server is properly configured and you have entered a valid test username and password, you will receive a success message. Otherwise, you will see an error message and a log that will help in debugging the problem.

## Edit Security Provider - RADIUS

### Name

Create a unique name to help identify this provider.

### Enabled

If checked, your B Series Appliance searches this security provider when a user attempts to log in. If unchecked, this provider is not searched.

### Keep display name synchronized with remote system

Checking this option keeps a user's display name set to the name designated on the security provider rather than allowing the display name to be modified in BeyondTrust.

## Authorization Settings

### Only allow the following users

You can choose to allow access only to specified users on your RADIUS server. Enter each username separated by a line break. Once entered, these users will be available from the **Add Policy Member** dialog when editing group policies on the **/login > Users & Security > Group Policies** page.

If you leave this field blank, all users who authenticate against your RADIUS server will be allowed; if you allow all, you must also specify a default group policy.

### LDAP Group Lookup

If you want users on this security provider to be associated with their groups on a separate LDAP server, choose one or more LDAP group servers to use for group lookup.

### Default Group Policy

Each user who authenticates against an external server must be a member of at least one group policy in order to authenticate to your B Series Appliance, logging into either the **/login** interface or the access console. You can select a default group policy to apply to all users allowed to authenticate against the configured server.

If a default policy is defined, any allowed user who authenticates against this server might have access at the level of this default policy. Therefore, we recommend you set the default to a policy with minimum privileges to prevent users from gaining permissions you do not wish them to have.



**Note:** If a user is in a default group policy and is then specifically added to another group policy, the settings for the specific policy always take precedence over the settings for the default, even if the specific policy is a lower priority than the default, and even if the default policy's settings are set to disallow override.

## Connection Settings

### Hostname

Enter the hostname of the server that houses your external directory store.

### Port

Specify the authentication port for your RADIUS server. This is typically port **1812**.

### Timeout (seconds)

Set the length of time to wait for a response from the server. Note that if the response is **Response-Accept** or **Response-Challenge**, then RADIUS will wait the entire time specified here before authenticating the account. Therefore, it is encouraged to keep this value as low as reasonably possible given your network settings. An ideal value is 3-5 seconds, with the maximum value at three minutes.

## Connection Method

Downloading the Win32 connection agent enables your directory server and your B Series Appliance to communicate via an SSL-encrypted, outbound connection, with no firewall configuration. The connection agent can be downloaded to either the directory server or a separate server on the same network as your directory server (recommended).

Create a **Connection Agent Password** for use in the connection agent installation process. Then click **Download Connection Agent**, run the installer, and follow the installation wizard. During installation, you will be prompted to enter the security provider name and the connection agent password you created above.

## Shared Secret

Provide a new shared secret so that your B Series Appliance and your RADIUS server can communicate.

## Cluster Settings *(Visible Only for Clusters)*

### Member Selection Algorithm

Select the method to search the nodes in this cluster.

**Top-to-bottom** first attempts the server with the highest priority in the cluster. If that server is unavailable or the account is not found, the next highest priority server is attempted. The search moves down through the list of clustered servers until either the account is found or it is determined that the account does not exist on any of the specified and available servers.

**Round-robin** is designed to balance the load between multiple servers. The algorithm chooses at random which server to attempt first. If that server is unavailable or the account is not found, another random server is attempted. The search continues at random through the remaining servers in the cluster until either the account is found or it is determined that the account does not exist on any of the specified and available servers.

### Retry Delay

Set how long to wait after a cluster member becomes unavailable before trying that cluster member again.

## Test Settings

### Username and Password

Enter a username and password for an account that exists on the server you are testing. This account must match the criteria for login specified in the configuration above.

### Try to obtain user attributes and group memberships if the credentials are accepted

If this option is checked, your successful credential test will also attempt to check user attributes and group lookup. Note that for these features to be successfully tested, they must be supported and configured in your security provider.

## Start Test

If your server is properly configured and you have entered a valid test username and password, you will receive a success message. Otherwise, you will see an error message and a log that will help in debugging the problem.

## Edit Security Provider - Kerberos

### Name

Create a unique name to help identify this provider.

### Enabled

If checked, your B Series Appliance searches this security provider when a user attempts to log in. If unchecked, this provider is not searched.

### Keep display name synchronized with remote system

Checking this option keeps a user's display name set to the name designated on the security provider rather than allowing the display name to be modified in BeyondTrust.

### Strip realm from principal names

Select this option to remove the REALM portion from the User Principal Name when constructing the BeyondTrust username.

## Authorization Settings

### User Handling Mode

Select which users can authenticate to your B Series Appliance. **Allow all users** allows anyone who currently authenticates via your KDC. **Allow only user principals specified in the list** allows only user principles explicitly designated. **Allow only user principals that match the regex** allows only users principals who match a Perl-compatible regular expression (PCRE).

### SPN Handling Mode: Allow only SPNs specified in the list

If unchecked, all configured Service Principal Names (SPNs) for this security provider are allowed. If checked, select specific SPNs from a list of currently configured SPNs.

If you want users on this security provider to be associated with their groups on a separate LDAP server, choose one or more LDAP group servers to use for group lookup.

## Default Group Policy

Each user who authenticates against an external server must be a member of at least one group policy in order to authenticate to your B Series Appliance, logging into either the /login interface or the access console. You can select a default group policy to apply to all users allowed to authenticate against the configured server.

If a default policy is defined, any allowed user who authenticates against this server might have access at the level of this default policy. Therefore, we recommend you set the default to a policy with minimum privileges to prevent users from gaining permissions you do not wish them to have.



**Note:** If a user is in a default group policy and is then specifically added to another group policy, the settings for the specific policy always take precedence over the settings for the default, even if the specific policy is a lower priority than the default, and even if the default policy's settings are set to disallow override.

## Edit Security Provider - SAML2

### Name

Enter a unique name to identify the provider.

### Enabled

If checked, your B Series Appliance searches this security provider when a user attempts to log in. If unchecked, this provider is not searched.

### User Provision

By default, user provisioning occurs on this provider. If you have a SCIM provider set up, you can choose to provision users through that provider instead.



**Note:** This setting cannot be modified after this security provider is first saved.

## Associated Email Domains

This setting only applies if you have more than one active SAML provider and is ignored otherwise.

Add any email domains that should be associated with this SAML provider, one per line. When authenticating, users are asked to enter their email. The domain of their email is matched against this list, and they are redirected to the appropriate identity provider for authentication.

If multiple SAML providers are configured and the user's email does not match any of the associated domain on any provider, then they are not allowed to authenticate.

## Identity Provider Settings

### Identity Provider Metadata

The metadata file contains all the information needed for the initial setup of your SAML provider and must be downloaded from your identity provider. Save the XML file, and then click **Choose File** to select and upload the selected file.



*Note: The fields for **Entity ID**, **Single Sign-On Service URL**, and **Certificate** are automatically populated from the identity provider's metadata file. If you cannot get a metadata file from your provider, this information can be entered manually.*

### Entity ID

This is the unique identifier for the identity provider you are using.

### Single Sign-On Service URL

This is the URL where you are automatically redirected to log in to BeyondTrust Privileged Remote Access using SAML.

### SSO URL Protocol Binding

This determines whether an HTTP POST occurs or whether the user is redirected to the sign-on URL. Choose HTTP redirect if not specified by the provider.

If request signing is enabled (under Service Provider settings), protocol binding is limited to redirect only.

### Server Certificate

This certificate is used to verify the signature of the assertion sent from the identity provider. Click **+UPLOAD** to open a file browse window, navigate to the certificate, and click Open.

## Service Provider Settings

### Service Provider Metadata

Download the BeyondTrust metadata, which you then need to upload to your identity provider.

### Entity ID

This is your BeyondTrust URL. It uniquely identifies your site to the identity provider.

## Private Key

If necessary, you can decrypt messages sent by the identity provider, if they support and require encryption. Click **CHOOSE FILE** to upload the private key necessary to decrypt the messages sent from the identity provider.

## Signed AuthnRequest

Check to enable request signing. If enabled, SSO URL protocol binding is limited to redirect only. The SSO URL protocol binding field is updated automatically, if necessary.

A private key and signing certificate is required for request signing.

## User Attribute Settings *(Visible Only if This Provider is Used for User Provisioning)*

### User SAML Attributes

These attributes are used to provision users within BeyondTrust. The default values match BeyondTrust-certified applications with various identity providers. If you are creating your own SAML connector, you may need to modify the attributes to match what is being sent by your identity provider.

## Authorization Settings *(Visible Only if This Provider is Used for User Provisioning)*

### Lookup Groups Using This Provider

Enabling this feature allows faster provisioning by automatically looking up groups for this user, using **Group Lookup Attribute Name** and **Delimiter**. We recommend enabling this feature. If not used, SAML users must be manually assigned to group policies after their first successful authentication.

### Group Lookup Attribute Name

Enter the name of the SAML attribute that contains the names of groups to which users should belong. If the attribute value contains multiple group names, then specify the **Delimiter** used to separate their names.

If left blank, SAML users must be manually assigned to group policies after their first successful authentication.

### Group Lookup Delimiter

If the **Delimiter** is left blank, then the attribute value may contain multiple XML nodes with each one containing a different name.

## Available Groups

This is an optional list of SAML groups always available to be manually assigned to group policies. If left blank, a given SAML group is made available only after the first successful authentication of a user member of such group. Please enter one group name per line.



## Default Group Policy

Each user who authenticates against an external server must be a member of at least one group policy in order to authenticate to your B Series Appliance, logging into either the /login interface or the access console. You can select a default group policy to apply to all users allowed to authenticate against the configured server.

If a default policy is defined, any allowed user who authenticates against this server might have access at the level of this default policy. Therefore, we recommend you set the default to a policy with minimum privileges to prevent users from gaining permissions you do not wish them to have.



**Note:** If a user is in a default group policy and is then specifically added to another group policy, the settings for the specific policy always take precedence over the settings for the default, even if the specific policy is a lower priority than the default, and even if the default policy's settings are set to disallow override.



For more information, please see [SAML for Single Sign-On Authentication](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/security-providers/saml/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/security-providers/saml/index.htm>.

## Edit Security Provider - SCIM



**Note:** For SCIM to function, the SCIM API must be enabled on an API account, and the API must be configured on your SCIM provider. API accounts are managed at **/login > Management > API Configuration**. At this time, only one SCIM provider can be created. Once a SCIM provider has been created, the SCIM option is no longer available from the **Create Provider** dropdown. SCIM user provisioning utilizes SCIM 2.0 Users and Group objects. For more information about the SCIM 2.0 standard, please see <https://scim.cloud/>.



**Note:** Privileged Remote Access now supports SCIM APIs for groups of users. Once you have configured a SCIM provider in /login and configured users and groups in your SCIM solution, PRA reflects the same groups as what is present in your SCIM solution, allowing you to select group policies by SCIM group.

### Name

Create a unique name to help identify this provider.

### Enabled

If checked, your B Series Appliance searches this security provider when a user attempts to log in. If unchecked, this provider is not searched.

### SCIM User Query ID

From the dropdown, select the unique ID that SCIM should use for user queries.

## SCIM Group Query ID

From the dropdown, select the unique ID that SCIM should use for group queries.

## User Provision Settings

### User Attribute

These attributes are used to provision users within BeyondTrust. The default values match BeyondTrust-certified applications with various identity providers.

## Authorization Settings

### Unique ID

Enter the SCIM attribute to use as the user's unique ID within BeyondTrust.

### Default Group Policy

Each user who authenticates against an external server must be a member of at least one group policy in order to authenticate to your B Series Appliance, logging into either the /login interface or the access console. You can select a default group policy to apply to all users allowed to authenticate against the configured server.

If a default policy is defined, any allowed user who authenticates against this server might have access at the level of this default policy. Therefore, we recommend you set the default to a policy with minimum privileges to prevent users from gaining permissions you do not wish them to have.



**Note:** If a user is in a default group policy and is then specifically added to another group policy, the settings for the specific policy always take precedence over the settings for the default, even if the specific policy is a lower priority than the default, and even if the default policy's settings are set to disallow override.

### Attribute Name

Enter the name of the SCIM attribute that identifies users uniquely.

The groups provisioned with SCIM are always uniquely identified case-insensitively through their name for Group Lookup purposes.

# Vendor Groups



Users &amp; Security

VENDORS

Create vendor groups to allow third-party users controlled access to systems. This may be needed to provide support, maintenance, or any other task that requires access to the system. You can configure up to 150 vendor groups.

## Add New Vendor Group

### Name

Enter a name for this vendor group.

## Authorization Settings

### Group Policy

The selected group policy defines the permissions, memberships, and other settings to all users authenticating with this vendor. These settings cannot be changed on a per-user basis. Select a policy from those available, or go to **Users and Security > Group Policies** to create a new one.



**Note:** Group policies that grant administrative permissions are not available for vendors.

### Account Expires After

Set the number of days after which the account will be deactivated.

### PRA User

Click to select an admin or a user from the list. The selected user can manage vendor users in this group and some self-registration settings. This user receives all configured admin notifications for this vendor group and should have a valid email address.



**Note:** Any PRA user can be assigned by a PRA administrator to take over the management of that vendor group after it has been created. The PRA user does not have permission/rights to change security settings specific to the vendor—rather, the PRA user is the designated approver, receiver of notifications, and has visibility and edit privileged regarding the vendor users themselves.

### Notify the PRA User When a User is Added to This Vendor Group

If this box is checked, an email is sent to the PRA admin or user in charge of the group each time a new user is added. You can require PRA approval for new members. If approval is required, a message displays next to the new member's name in the group member's list,

indicating that the user **Needs Approval**.

## Notify the PRA User When a User has Expired in This Vendor Group

If this box is checked, the admin or user in charge of the group users receives an email whenever a user has expired, as well as a link to reactivate the user, if so desired.

## Require PRA User Approval to Activate Users in This Vendor Group

If this box is checked, a PRA admin or user in charge of the group must approve new members.

## Require PRA User Approval to Extend or Reactivate Users in This Vendor Group

If this box is checked, a PRA admin or user in charge of the group must approve extension or reactivation of users in this vendor group.

## Email PRA User if Users Are Awaiting Action After

If this box is checked, the PRA admin or user in charge of the group receives an email notification if users are awaiting action after a selected time period. The default is one day, but time periods from one hour to one week are available in the dropdown list below the check box.

## Network Restrictions

### Network Address Allow List

Enter network address prefixes, one per line, in the formats shown in the examples. Netmasks are optional, and they can be given in either dotted-decimal or integer bitmask format. Entries that omit a netmask are assumed to be single IP addresses.

## Users Requiring Action

Users requiring an action from the admin or user in charge of the vendor group are listed here. Under **Action Required** you find the issue requiring attention. The listed issues are **Disabled**, **Expired**, **Failed Login**, **Locked**, **Needs Approval**, and **Pending**.

## Users

Click **Add** to add members to an existing group. You can use the search box to search for listed users under **Last Authenticated As**, **Display Name**, and **Email Address**. You can select which column categories with user information to display from the settings icon on the right. The options are **Last Authenticated As**, **Display Name**, **Email Address**, **Last Authentication Date**, **Administrator**, and **Expiration Date**.

## Vendor Portal Settings

You can customize the vendor self-registration portal users see when they register. Changes are not applied until after the vendor group is saved.

## Enable Vendor Portal

Check the box to enable the vendor portal. This feature can only be turned on after selecting a group policy under **Authorization Settings**.

## Upload Logo

Click to upload a logo. This can be your logo, or the vendor's logo, depending on your needs and preferences. For best results use an image that is 128x128 pixels. You can apply two accent colors and one background color:

- **Accent Color 1:** Controls the section header background color, border color, and dark text color.
- **Accent Color 2:** Controls the link color, button background color, and the language globe color.

Click **Revert to Default** if you do not want to keep the changes you made.

## Portal Instructions

Enter the text to be displayed to users when they register in the self-registration portal.

## Email Subject

This is the email subject that users see when they receive their confirmation email, after they have registered through the self-registration portal.

## Email Body

Enter the text for the confirmation email sent to users after they submit the registration form.

## Vendor Portal URL

Enter the URL for the users' registration site.

## Email Domain Allow List

You can restrict email addresses to the domains listed here when users register through the portal. Enter one email domain per line. Commas and spaces are prohibited. If not provided, there are no restrictions on allowed email addresses.

## Configurable Slug

Enter the URL slug for your site.

When done click **Preview Vendor Portal** to see how the portal will look.

## Add Vendor Administrator

### Vendor Administrators

After clicking **Save** on the newly created vendor group, you are notified that all vendor groups must have one user assigned as vendor administrator. You can either click **Proceed** to assign a vendor administrator or add the admin user later from the **Vendors** page.

All Vendor Groups must have at least 1 admin user.

You can click Proceed to add the admin user now. You can also add the admin user later from the Vendors page.

[BACK TO VENDORS](#)[PROCEED](#)

**Note:** Vendor admins cannot add other vendor admins.

### Add User

When adding a vendor admin, ensure the **Vendor Group Administrator** box is checked.

#### ADD USER

• Required field

<input type="text" value="Username"/>	<input type="text" value="Email Address"/>
<input type="text" value="Display Name"/>	<input type="text" value="Preferred Email Language"/>
<input checked="" type="checkbox"/> Vendor Group Administrator	<input type="text" value="Password"/>
<input type="checkbox"/> Account Disabled	<input type="text" value="Confirm Password"/>
	<input type="checkbox"/> Email Password Reset Link to User
	<input type="checkbox"/> Must Reset Password at Next Login
	<input checked="" type="checkbox"/> Password Never Expires

# Session Policies: Set Session Permission and Prompting Rules



Users &amp; Security

SESSION POLICIES

## Session Policies

With session policies, you can customize session security permissions to fit specific scenarios. Session policies can be applied to users and all Jump Items.

The **Session Policies** section lists available policies. Click the arrow by a policy name to quickly see where that policy is being used; its availability for users, access invites, and Jump Clients; and the tools configured.

### Add, Edit, or Delete Session Policy

Create a new policy, modify an existing policy, or remove an existing policy.

### Copy

To expedite the creation of similar policies, click **Copy** to create a new policy with identical settings. You can then edit this new policy to meet your specific requirements.

## Add or Edit Session Policy

### Display Name

Create a unique name to help identify this policy. This name helps when assigning a session policy to users and Jump Clients.

### Code Name

Set a code name for integration purposes. If you do not set a code name, PRA creates one automatically.

### Description

Add a brief description to summarize the purpose of this policy. The description is seen when applying a policy to user accounts, group policies, and access invites.

## Availability

### Users

Choose if this policy should be available to assign to users (user accounts and group policies).

## Access Invite

Choose if this policy should be available for users to select when inviting an external user to join a session.

## Jump Items

Choose if this policy should be available to assign to Jump Items.

## Dependents

If this session policy is already in use, you will see the number of users and Jump Clients using this policy.

## Permissions

For all of the permissions that follow, you can choose to enable or disable the permission, or you can choose to set it to **Not Defined**. Session policies are applied to a session in a hierarchical manner, with Jump Clients taking the highest priority, then users, and then the global default. If multiple policies apply to a session, then the policy with the highest priority will take precedence over the others. If, for example, the policy applied to a Jump Client defines a permission, then no other policies may change that permission for the session. To make a permission available for a lower policy to define, leave that permission set to **Not Defined**.

Set which tools should be enabled or disabled with this policy.

## Allow Elevated Access to Tools and Special Actions on the Endpoint

If enabled, access to elevated functionality is provided in the access console for this session without needing the explicit rights of a logged-in user on the remote endpoint.

If disabled, this setting restricts users from gaining full access to the file transfer and command shell functions when they jump to an elevated Jump Item but do not have elevated rights. To do this, special actions and power control actions are hidden and not available. It also restricts **File Transfer**, **Command Shell**, and **Registry Access** when there is no user present in the session. This setting applies where allowed by the endpoint's platform.

## Screen Sharing

### Screen Sharing Rules

Select the representative's and remote user's access to the remote system:

- If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.
- **Deny** disables screen sharing.
- **View Only** allows the representative to view the screen.
- **View and Control** allows the representative to view and take action on the system. If this is selected, endpoint restrictions can be set to avoid interference by the remote user:
  - **None** does not set any restrictions on the remote system.
  - **Display, Mouse, and Keyboard** disables these inputs. If this is selected, a check box is available to **Automatically request a privacy screen on session start**. Privacy screen is applicable only for sessions started from a Jump Client, a Remote Jump item, or a Local Jump item. We recommend using privacy screen for unattended sessions. The remote system must support privacy screen.



## Allowed Endpoint Restrictions

Set if the user can suspend the remote system's mouse and keyboard input. The user may also prevent the remote desktop from being displayed.

## Clipboard Synchronization Direction


Select how clipboard content flows between users and endpoints. The options are:

- **Not allowed:** The user is not allowed to use the clipboard, no clipboard icons display in the access console, and cut and paste commands do not work.
- **Allowed from Rep to Customer:** The user can push clipboard content to the endpoint but cannot paste from the endpoint's clipboard. Only the **Send** clipboard icon displays in the access console.
- **Allowed in Both Directions:** Clipboard content can flow both ways. Both Push and Get clipboard icons display in the access console.

 For more information about the Clipboard Synchronization Mode, please see "[Security: Manage Security Settings](#)" on page [171](#).

## Application Sharing Restrictions

Limit access to specified applications on the remote system with either **Allow only the listed executables** or **Deny only the listed executables**. You may also choose to allow or deny desktop access.

 **Note:** This feature applies only to Windows operating systems.

## Add New Executables

If application sharing restrictions are enforced, an **Add New Executables** button appears. Clicking this button opens a dialog that allows you to specify executables to deny or allow, as appropriate to your objectives.

After you have added executables, one or two tables display the file names or hashes you have selected for restriction. An editable comment field allows administrative notes.

## Enter file names or SHA-256 hashes, one per line

When restricting executables, manually enter the executable file names or hashes you wish to allow or deny. Click on **Add Executable(s)** when you are finished to add the chosen files to your configuration.

You may enter up to 25 files per dialog. If you need to add more, click **Add Executable(s)** and then reopen the dialog.

## Browse for one or more files

When restricting executables, select this option to browse your system and choose executable files to automatically derive their names or hashes. If you select files from your local platform and system in this manner, use caution to ensure that the files are indeed executable files. No browser level verification is performed.

Choose either **Use file name** or **Use file hash** to have the browser derive the executable file names or hashes automatically. Click **Add Executable(s)** when you are finished to add the chosen files to your configuration.

You may enter up to 25 files per dialog. If you need to add more, click **Add Executable(s)** and then reopen the dialog.



**Note:** This option is available only in modern browsers, not in legacy browsers.

## Allowed to log in using credentials from an Endpoint Credential Manager

Enable connection of a user to your Endpoint Credential Manager to use credentials from your existing password stores or vaults.

Use of the Endpoint Credential Manager requires a separate services agreement with BeyondTrust. Once a services agreement is in place, you may download the required middleware from the BeyondTrust Support Portal.



**Note:** Prior to 15.2, this feature is available only in sessions started from an elevated Jump Client on Windows®. Starting with 15.2, you also may use an Endpoint Credential Manager in Remote Jump sessions, Microsoft® Remote Desktop Protocol sessions, VNC sessions, and Shell Jump sessions. You may also use this feature with the Run As special action in a screen sharing session on a Windows® system.

## Annotations

### Annotation Rules

Enables the user to use annotation tools to draw on the remote system's screen. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

## File Transfer

### File Transfer Rules

Enables the user to upload files to the remote system, download files from the remote system, or both. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

### Accessible paths on the endpoint's filesystem

Allow the user to transfer files to or from any directories on the remote system or only specified directories.

### Accessible paths on user's filesystem

Allow the user to transfer files to or from any directories on their local system or only specified directories.

## Command Shell

### Command Shell Rules

Enables the user to issue commands on the remote computer through a virtual command line interface. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.



**Note:** Command shell access cannot be restricted for Shell Jump sessions.

Configure command filtering to prevent accidental use of commands that can be harmful to endpoint systems.



For more information on command filtering, please see [Use Shell Jump to Access a Remote Network Device at www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm).

## System Information

### System Information Rules

Enables the user to see system information about the remote computer. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

### Allowed to use system information actions

Enables the user to interact with processes and programs on the remote system without requiring screen sharing. Kill processes; start, stop, pause, resume, and restart services; and uninstall programs.

## Registry Access

### Registry Access Rules

Enables the user to interact with the registry on a remote Windows system without requiring screen sharing. View, add, delete and edit keys, search and import/export keys.

## Canned Scripts

### Canned Script Rules

Enables the user to run canned scripts that have been created for their teams. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

## Session Termination Behavior

If unable to reconnect within the time you set by **Reconnect Timeout**, choose what action to take. To prevent an end-user from accessing unauthorized privileges after an elevated session, set the client to automatically log the end user out of the remote Windows computer at session end, to lock the remote computer, or to do nothing. These rules do not apply to browser sharing sessions.

### Allow users to override this setting per session

You can allow a user to override the session termination setting from the **Summary** tab in the console during a session.

## Export Policy

You can export a session policy from one site and import those permissions into a policy on another site. Edit the policy you wish to export and scroll to the bottom of the page. Click **Export Policy** and save the file.

## Import Policy

You may import those policy settings to any other BeyondTrust site that supports session policy import. Create a new session policy and scroll to the bottom of the page. Browse to the policy file and then click **Import Policy**. Once the policy file is uploaded, the page will refresh, allowing you to make modifications. Click **Save Policy** to make the policy available.

## Save

Click **Save** to make this policy available.

## Session Policy Simulator

Because layering policies can be complex, you can use the **Session Policy Simulator** to determine what the outcome will be. Additionally, you could use the simulator to troubleshoot why a permission is not available when you expected it to be.

## User

Start by selecting the user performing the session. This dropdown includes both user accounts and access invite policies.

## Session Start Method

Select the session start method.

## Jump Client / Jump Shortcut

Search for a Jump Client or Jump Shortcut by name, comments, Jump Group, or tag.

## Simulate

Click **Simulate**. In the area below, the permissions configurable by session policy are displayed in read-only mode. You can see which permissions are allowed or denied as a result of the stacked policies, as well as which policy set each permission.

# Group Policies: Apply User Permissions to Groups of Users



Users &amp; Security

GROUP POLICIES

## Group Policies

The **Group Policies** page enables you to set up groups of users who will share common privileges.

### Add New Policy, Edit, Delete

Create a new policy, modify an existing policy, or remove an existing policy.



**Note:** If you edit the group policy that is the default for the local provider, or has local administrator users, and remove administrator permissions, a warning message appears. Ensure other users have administrator permissions before proceeding.

### Change Order

Click the **Change Order** button to drag and drop group policies to set their priority. Click **Save Order** for prioritization changes to take effect. When multiple policies apply to a given user, the permissions take effect by starting at the top of the **Group Policies** list, and then moving down the list. If a permission conflicts with a permission applied by a group policy higher in the list, then the lower permission will overwrite the higher, unless the higher was set as **Final**. In short, group policies that appear lower in the list have a higher functional priority than those that are higher.

### Search Group Policies

To quickly find an existing policy in the list of **Group Policies**, enter the name, or part of the name. The list filters to all policies with a name containing the entered search term. The list remains filtered until the search term is removed, even if the user goes to other pages or logs out. To remove the search term, click the **X** to the right of the search box.

If you click the **Change Order** button after searching the list, all group policies appear. You can drag and drop group policies to set their priority. When you click **Save Order**, the changes take effect and the list returns to policies with a name containing the entered search term.

### Expand All / Collapse All

To assist with searching and navigating the group policies, click the **Expand All** link above the grid to expand the details of all listed group policies. Click **Collapse All** to return to the unexpanded list of group policies.

### Copy

To expedite the creation of similar policies, click **Copy** to create a new policy with identical settings. You can then edit this new policy to meet your specific requirements.

## Add or Edit Policy

### Policy Name

Create a unique name to help identify this policy.

### Available Members and Policy Members

To assign members, select a member from the **Available Members** list and click **Add** to move it to the **Policy Members** box. Use the **Search** box to find existing members.

You can select users from your local system, or select users or entire groups from configured security providers. To add users or groups from an external directory store such as LDAP, RADIUS, or Kerberos, you must first configure the connection on the **/login > Users & Security > Security Providers** page. If an attempt to add a user from a configured security provider is invalid, the synchronization log error message appears here as well as in the log.

### Account Settings

#### Which account settings should this Group Policy control?

For each setting, select whether it should be defined in this policy or left available for configuration for individual users. If it is defined, you will be unable to modify that privilege for an individual user from their user account page.

If you have a policy that defines a permission and you do not want any policy to be able to replace that permission, then you must select that the permission cannot be overridden, and the policy must be a higher priority than other policies that additionally define that setting.

### Two Factor Authentication

Two-factor authentication (2FA) uses an authenticator app to provide a time-based, one-time code to log into the administrative interface, as well as the access console. If **Required** is selected, the user will be prompted to enroll and begin using 2FA at the next login. If **Optional** is selected, the user has the option to use 2FA, but it is not required.

### Account Expiration

When checked, the account never expires. When not checked, an account expiration date must be set.

### Account Disabled

Allows you to disable the account so the user cannot log in. Disabling does NOT delete the account.

### Comments

Add comments to help identify the purpose of this object.

## General Permissions

### Which general settings should this Group Policy control?

For each setting, select whether it should be defined in this policy or left available for configuration for individual users. If it is defined, you will be unable to modify that privilege for an individual user from their user account page.

If you have a policy that defines a permission and you do not want any policy to be able to replace that permission, then you must select that the permission cannot be overridden, and the policy must be a higher priority than other policies that additionally define that setting.

## Administration

### Administrative Privileges

Grants the user full administrative rights.

### Vault Administrative Privileges

Enables the user access to the Vault.

### Password Setting

Enables the user to set passwords and unlock accounts for non-administrative local users.

### Jumpoint Editing

Enables the user to create or edit Jumpoints. This option does not affect the user's ability to access remote computers via Jumpoint, which is configured per Jumpoint or group policy.

### Team Editing

Enables the user to create or edit teams.

### Jump Group Editing

Enables the user to create or edit Jump Groups.

### Canned Script Editing

Enables the user to create or edit canned scripts for use in screen sharing or command shell sessions.

### Custom Link Editing

Enables the user to create or edit custom links.

## Reporting

### Session and Team Report Access

Enables the user to view access session reports. Depending on the option selected, users can view their sessions, their jump group sessions, or all sessions.

### Allowed to View Access Session Reports

Enables the user to run reports on access session activity, viewing only sessions for which they were the primary session owner, only sessions for endpoints belonging to a Jump Group of which the user is a member, or all sessions.

### Allowed to View Access Session Recordings

Enables the user to view video recordings of screen sharing sessions and command shell sessions.

### Vault Report Access

Enables the user to view Vault reports. Depending on the option selected, users can view their sessions, or all sessions.

### Allowed to View Vault Reports

Enables the user view his or her own vault events or all Vault events.

### Allowed to View Syslog Reports

Enables the user to download a ZIP file containing all syslog files available on the appliance. Admins are automatically permitted to access this report. Non-admin users must request access to view this report.

## Access Permissions

### Allowed to Access Endpoints

Enables the user to use the access console in order to run sessions. If endpoint access is enabled, options pertaining to endpoint access will also be available.

## Session Management

### Allowed to share sessions with teams which they do not belong to

Enables the user to invite a less limited set of user to share sessions, not only their team members. Combined with the extended availability permission, this permission expands session sharing capabilities.



### Allowed to invite external users

Enables the user to invite third-party users to participate in a session, one time only.

### Allowed to enable extended availability mode

Enables the user to receive email invitations from other users requesting to share a session even when they are not logged into the access console.

### Allowed to edit the external key

Enables the user to modify the external key from the session info pane of a session within the access console.

## User to User Screen Sharing

### Allowed to show screen to other users

Enables the user to share their screen with another user without the receiving user having to join a session. This option is available even if the user is not in a session.

### Allowed to give control when showing screen to other users

Enables the user sharing their screen to give keyboard and mouse control to the user viewing their screen.

## Jump Technology

### Allowed Jump Item Methods

Enables the user to Jump to computers using **Jump Clients**, **Local Jump on the local network**, **Remote Jump via a Jumpoint**, **Remote VNC via a Jumpoint**, **Remote RDP via a Jumpoint**, **Web Jump via a Jumpoint**, **Shell Jump via a Jumpoint**, and **Protocol Tunnel Jump via a Jumpoint**.

### Jump Item Roles

A Jump Item Role is a predefined set of permissions regarding Jump Item management and usage. For each option, click **Show** to open the Jump Item Role in a new tab.

The **Default** role is used only when **Use User's Default** is set for that user in a Jump Group.

The **Personal** role applies only to Jump Items pinned to the user's personal list of Jump Items.

The **Teams** role applies to Jump Items pinned to the personal list of Jump Items of a team member of a lower role. For example, a team manager can view team leads' and team members' personal Jump Items, and a team lead can view team members' personal Jump Items.

The **System** role applies to all other Jump Items in the system. For most users, this should be set to **No Access**. If set to any other option, the user is added to Jump Groups to which they would not normally be assigned, and in the access console, they can see non-team members' personal lists of Jump Items.

## Session Permissions

Set the prompting and permission rules that should apply to this user's sessions. Choose an existing session policy or define custom permissions for this user. If **Not Defined**, the global default policy will be used. These permissions may be overridden by a higher policy.

### Description

View the description of a pre-defined session permission policy.

## Screen Sharing

### Screen Sharing Rules

Select the representative's and remote user's access to the remote system:

- If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.
- **Deny** disables screen sharing.
- **View Only** allows the representative to view the screen.
- **View and Control** allows the representative to view and take action on the system. If this is selected, endpoint restrictions can be set to avoid interference by the remote user:
  - **None** does not set any restrictions on the remote system.
  - **Display, Mouse, and Keyboard** disables these inputs. If this is selected, a check box is available to **Automatically request a privacy screen on session start**. Privacy screen is applicable only for sessions started from a Jump Client, a Remote Jump item, or a Local Jump item. We recommend using privacy screen for unattended sessions. The remote system must support privacy screen.



For more information, please see [Control the Remote Endpoint with Screen Sharing at https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm).

## Clipboard Synchronization Direction

Select how clipboard content flows between users and endpoints. The options are:

- **Not allowed:** The user is not allowed to use the clipboard, no clipboard icons display in the access console, and cut and paste commands do not work.
- **Allowed from Rep to Customer:** The user can push clipboard content to the endpoint but cannot paste from the endpoint's clipboard. Only the **Send** clipboard icon displays in the access console.
- **Allowed in Both Directions:** Clipboard content can flow both ways. Both Push and Get clipboard icons display in the access console.



For more information about the Clipboard Synchronization Mode, please see ["Security: Manage Security Settings" on page 171](#).

## Application Sharing Restrictions

Limit access to specified applications on the remote system with either **Allow only the listed executables** or **Deny only the listed executables**. You may also choose to allow or deny desktop access.



**Note:** This feature applies only to Windows operating systems.

## Add New Executables

If application sharing restrictions are enforced, an **Add New Executables** button appears. Clicking this button opens a dialog that allows you to specify executables to deny or allow, as appropriate to your objectives.

After you have added executables, one or two tables display the file names or hashes you have selected for restriction. An editable comment field allows administrative notes.

## Enter file names or SHA-256 hashes, one per line

When restricting executables, manually enter the executable file names or hashes you wish to allow or deny. Click on **Add Executable(s)** when you are finished to add the chosen files to your configuration.

You may enter up to 25 files per dialog. If you need to add more, click **Add Executable(s)** and then reopen the dialog.

## Browse for one or more files

When restricting executables, select this option to browse your system and choose executable files to automatically derive their names or hashes. If you select files from your local platform and system in this manner, use caution to ensure that the files are indeed executable files. No browser level verification is performed.

Choose either **Use file name** or **Use file hash** to have the browser derive the executable file names or hashes automatically. Click **Add Executable(s)** when you are finished to add the chosen files to your configuration.

You may enter up to 25 files per dialog. If you need to add more, click **Add Executable(s)** and then reopen the dialog.



**Note:** This option is available only in modern browsers, not in legacy browsers.

## Allowed Endpoint Restrictions

Set if the user can suspend the remote system's mouse and keyboard input. The user may also prevent the remote desktop from being displayed.



For more information, please see [Control the Remote Endpoint with Screen Sharing](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/screen-sharing.htm>.

## Annotations

### Annotation Rules

Enables the user to use annotation tools to draw on the remote system's screen. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.



For more information, please see *Use Annotations to Draw on the Remote Screen of the Endpoint* at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/annotations.htm>.

## File Transfer

### File Transfer Rules

Enables the user to upload files to the remote system, download files from the remote system, or both. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

#### Accessible paths on the endpoint's filesystem

Allow the user to transfer files to or from any directories on the remote system or only specified directories.

#### Accessible paths on user's filesystem

Allow the user to transfer files to or from any directories on their local system or only specified directories.



For more information, please see *File Transfer to and from the Remote System Endpoint* at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/file-transfer.htm>.

## Command Shell

### Command Shell Rules

Enables the user to issue commands on the remote computer through a virtual command line interface. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.



**Note:** Command shell access cannot be restricted for Shell Jump sessions.

Configure command filtering to prevent accidental use of commands that can be harmful to endpoint systems.



For more information on command filtering, please see *Use Shell Jump to Access a Remote Network Device* at [www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/shell-jump.htm).



For more information, please see [Open the Command Shell on the Remote Endpoint Using the Access Console at https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm).

## System Information

### System Information Rules

Enables the user to see system information about the remote computer. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.

### Allowed to use system information actions

Enables the user to interact with processes and programs on the remote system without requiring screen sharing. Kill processes; start, stop, pause, resume, and restart services; and uninstall programs.



For more information, please see [View System Information on the Remote Endpoint at https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/system-info.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/system-info.htm).

## Registry Access

### Registry Access Rules

Enables the user to interact with the registry on a remote Windows system without requiring screen sharing. View, add, delete and edit keys, search and import/export keys.



For more information, please see [Access the Remote Registry Editor on the Remote Endpoint at https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/registry-editor.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/registry-editor.htm).

## Canned Scripts

### Canned Script Rules

Enables the user to run canned scripts that have been created for their teams. If **Not Defined**, this option is set by the next lower priority policy. This setting may be overridden by a higher priority policy.



For more information, please see [Open the Command Shell on the Remote Endpoint Using the Access Console at https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/command-shell.htm).

## Session Termination Behavior

If unable to reconnect within the time you set by **Reconnect Timeout**, choose what action to take. To prevent an end-user from accessing unauthorized privileges after an elevated session, set the client to automatically log the end user out of the remote Windows computer at session end, to lock the remote computer, or to do nothing. These rules do not apply to browser sharing sessions.

### Allow users to override this setting per session

You can allow a user to override the session termination setting from the **Summary** tab in the console during a session.

## Availability Settings

### Login Schedule

#### Restrict user login to the following schedule

Set a schedule to define when users can log into the access console. Set the time zone you want to use for this schedule, and then add one or more schedule entries. For each entry, set the start day and time and the end day and time.

If, for instance, the time is set to start at 8 am and end at 5 pm, a user can log in at any time during this window but may continue to work past the set end time. They will not, however, be allowed to log back in after 5 pm.

#### Force logout when the schedule does not permit login

If stricter access control is required, check this option. This forces the user to log out at the scheduled end time. In this case, the user receives recurring notifications beginning 15 minutes prior to being disconnected. When the user is logged out, any owned sessions will follow the session fallback rules.

## Memberships

### Add Team Membership

Search for teams to which members of this group policy should belong. You can set the role as **Team Member**, **Team Lead**, or **Team Manager**. These roles play a significant part in the **Dashboard** feature of the access console. Click **Add**.

Added teams are shown in a table. You can edit the role of members in a team or delete the team from the list.

### Remove Team Membership

Search for teams from which members of this group policy should be removed, and then click **Add**. Removed teams are shown in a table. You can delete a team from the list.

### Add Jumpoint Membership

Search for Jumpoints which members of this group policy should be allowed to access, and then click **Add**. Added Jumpoints are shown in a table. You can delete a Jumpoint from the list.

## Remove Jumpoint Membership

Search for Jumpoints from which members of this group policy should not be removed, and then click **Add**. Removed Jumpoints are shown in a table. You can delete a Jumpoint from the list.

## Add Jump Group Memberships

Search for Jump Groups to which members of this group policy should belong. You can set each user's [Jump Item Role](#) to set their permissions specific to Jump Items in this Jump Group, or you can use the user's default Jump Item Roles set in this group policy or on the **Users & Security > Users** page. A Jump Item Role is a predefined set of permissions regarding Jump Item management and usage.



For more information, please see [Use Jump Item Roles to Configure Permission Sets for Jump Items at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-item-roles.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/jump-item-roles.htm).

You can also apply a [Jump Policy](#) to manage user access to the Jump Items in this Jump Group. Selecting **Set on Jump Items** instead uses the Jump Policy applied to the Jump Item itself. Jump Policies are configured on the **Jump > Jump Policies** page and determine the times during which a user can access this Jump Item. A Jump Policy can also send a notification when it is accessed or can require approval to be accessed. If neither the user nor the Jump Item has a Jump Policy applied, this Jump Item can be accessed without restriction.



For more information, please see [Create Jump Policies to Control Access to Jump Items at https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/policies.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/jumpoint/policies.htm).

Added Jump Groups are shown in a table. You can edit a Jump Group's settings or delete the Jump Group from the list.

## Remove Jump Group Memberships

Search for Jump Groups from which members of this group policy should be removed, and then click **Add**. Removed Jump Groups are shown in a table. You can delete a Jump Group from the list.

## Add Vault Account Memberships

Search for an account, select the **Vault Account Role**, and then click **Add** to grant members of the policy access to the selected vault account. Users may have memberships added by other group policies. View **Vault > Accounts** to see all members within each account. Users may be assigned one of two roles for using the vault account:

- **Inject:** (default value) Users with this role can use this account in Privileged Remote Access sessions.
- **Inject and Checkout:** Users with this role can use this account in Privileged Remote Access sessions and can check out the account on **/login**. The **Checkout** permission has no affect on generic SSH accounts.



**Note:** Enable the **Add Vault Account Memberships** permission to assign a **Vault Account Role** to a vault account in a group policy. The **Vault Account Role** is visible in the list of accounts added to the group policy.

## Add Vault Account Group Memberships

Search for an account group, select the **Vault Account Role**, and then click **Add** to grant members of the policy access to the group of vault accounts. Users may have memberships added by other group policies. View **Vault > Account Groups** to see all members within each group. Users may be assigned one of two roles for using the group of vault accounts:

- **Inject:** (default value) Users with this role can use this account in Privileged Remote Access sessions.
- **Inject and Checkout:** Users with this role can use this account in Privileged Remote Access sessions and can check out the account on `/login`. The **Checkout** permission has no affect on generic SSH accounts.



**Note:** Enable the **Add Vault Account Group** permission to assign a **Vault Account Role** to a group of vault accounts in a group policy. The **Vault Account Role** is visible in the list of account groups added to the group policy.

## Save

Click **Save** to put the policy into effect.

## Export Policy

You can export a group policy from one site and import those permissions into a policy on another site. Edit the policy you wish to export and scroll to the bottom of the page. Click **Export Policy** and save the file.



**Note:** When exporting a group policy, only the policy name, account settings, and permissions are exported. Policy members, team memberships, and Jumpoint memberships are not included in the export.

## Import Policy

You may import exported group policy settings to any other BeyondTrust site that supports group policy import. Create a new group policy or edit an existing policy whose permissions you wish to overwrite, and then scroll to the **Import Policy** section at the bottom of the page. Click **Select Policy File**, locate the policy file, and then click **Open**. Once the policy file is uploaded, the page will refresh, allowing you to make modifications; click **Save** to put the group policy into effect.

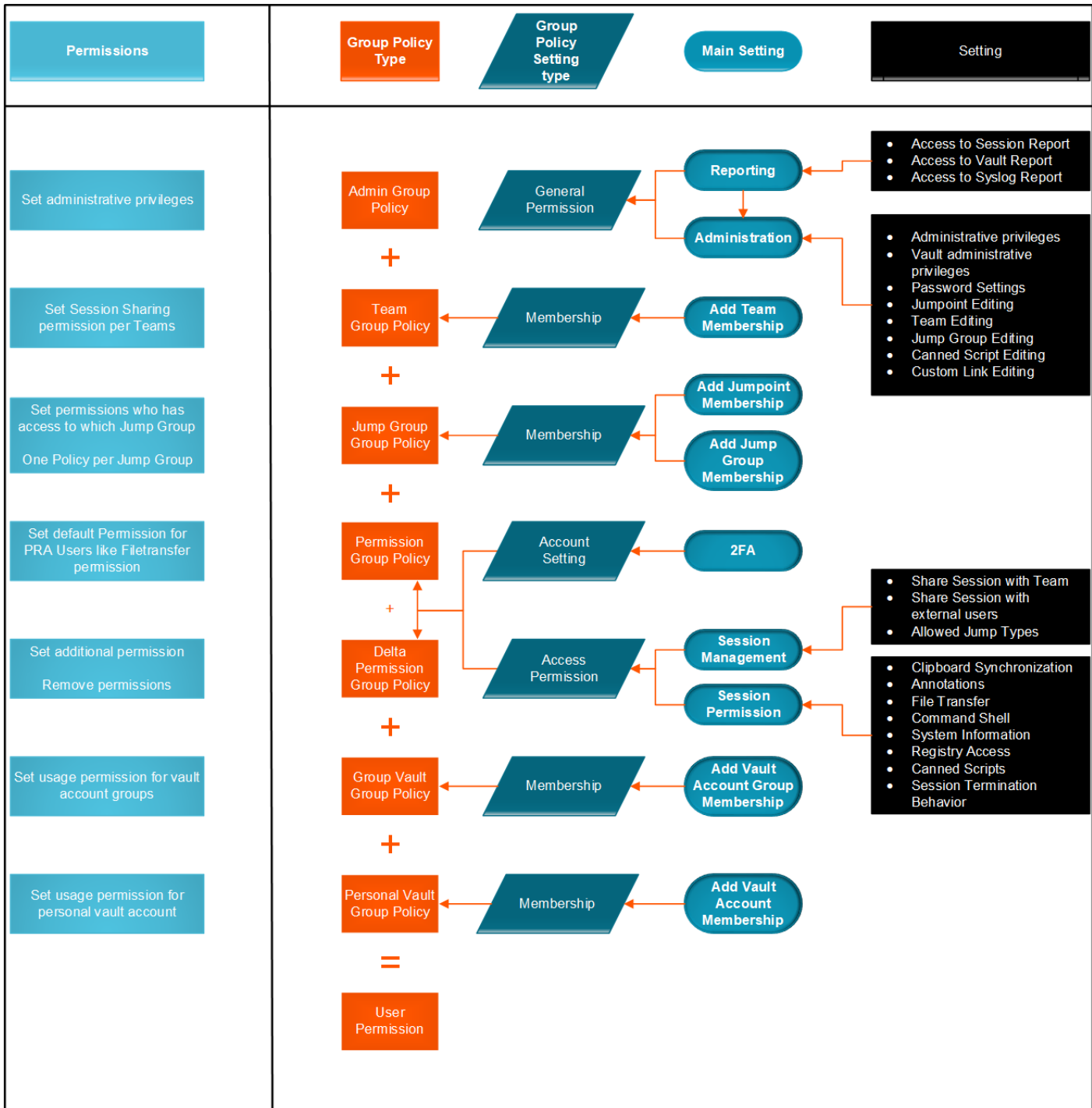


**Note:** Importing a policy file to an existing group policy will overwrite any previously defined permissions, with the exception of policy members, team memberships, and Jumpoint memberships.

## Sample Policy Matrix

The diagram below is an example of how multiple policies can work together.





# Kerberos Keytab: Manage the Kerberos Keytab



Users &amp; Security

KERBEROS KEYTAB

## Kerberos Keytab Management

BeyondTrust supports single sign-on functionality using the Kerberos authentication protocol. This enables users to authenticate to the B Series Appliance without having to enter their credentials. Kerberos authentication applies both to the /login web interface and to the access console.

To integrate Kerberos with your B Series Appliance, you must have a Kerberos implementation either currently deployed or in the process of being deployed. Specific requirements are as follows:

- You must have a working Key Distribution Center (KDC) in place.
- Clocks must be synchronized across all clients, the KDC, and the B Series Appliance. Using a Network Time Protocol server (NTP) is an easy way to ensure this.
- You must have a Service Principal Name (SPN) created on the KDC for your B Series Appliance.

## Configured Principles

The **Configured Principals** section lists all of the available SPNs for each uploaded keytab.

Once you have available SPNs, you can configure a Kerberos security provider from the **Security Providers** page and define which user principals may authenticate to the B Series Appliance via Kerberos.

## Import Keytab

### UploadChoose File

Export the keytab for the SPN from your KDC and upload it to the B Series Appliance via the **Import Keytab** section of this page.

## Reports

### Access: Report on Session Activity



Reports

ACCESS

#### Access Reports

Administrators and privileged users can generate broad, comprehensive reports and also apply specific filtering to customize reported information based on clear-cut needs.

#### Report Type

Generate activity reports according to three separate report types: **Session**, **Summary**, and **Session Forensics** (if enabled).

#### Session Report

View all access sessions that match the criteria you specify in report filters. Session reports include basic session information along with links to session details, chat transcripts, and video recordings of screen sharing, Protocol Tunnel Jumps, and command shells.

Session reports detail a record of the full chat transcript, the number of files transferred (and details on failed file transfers), and specific actions that took place during the session. Windows events that present obvious visual changes within a session are captured as events in the session details. This primarily includes changes to the foreground window, with the executable name and its window title.

Specific command information relevant to *Run As* commands, including credentials, is also provided, but this reporting can be disabled in ["Security: Manage Security Settings" on page 171](#).

Other session information includes the session duration, local and remote IP addresses, and remote system information (if enabled). Reports can be viewed online or downloaded to your local system.

If session recording is enabled, view a video playback of individual sessions, including captions of who was in control of the mouse and keyboard at any given point during the session. If Protocol Tunnel Jump recording is enabled, view video recordings of the user's entire desktop. If command prompt recording is enabled, view recordings and/or text transcripts of all command shells run during the session. All recordings are stored on the B Series Appliance in raw format and are converted to compressed format when viewed or downloaded.

#### Summary Report

Summary reports provide an overview of session activity over time, categorized by user. Statistics include the total number of sessions run, the average number of sessions per weekday, and the average duration of sessions.

#### Session Forensics Report

Access sessions forensics reports allow you to search for session events across all access sessions, as well as find sessions containing the given text or phrase provided in the filter. This searches chat messages, command shell commands, file transfers, file system modifications, registry modifications, and foreground window titles.

## Filters

Apply filtering options as needed to derive more customized reports from the basic report types. Enable one or more filters as you wish, but only sessions that match all filters selected will be shown.

### Session ID or Sequence Number

This unique identifier requires that you specify the ID (LSID) or sequence number for the single session you seek. This is often helpful if you have an external ticketing system or CRM integration. You cannot combine this filter with others.

### Date Range

Select a start date for which to pull reporting data. Then select either the number of days for which to pull your report or an end date.

### Endpoint

Filter sessions by computer name, public IP, or private IP.

### Jump Group

Filter sessions by Jump Items belonging to a certain Jump Group. If selected, the following options are available:

- Find all sessions started from Jump Items belonging to a specific Jump Group.
- Find all sessions started from personal Jump Items for a specific user.
- Find all sessions in your personal Jump Group.

### User

Select a user from the **Search for a user** box to filter sessions where a specific user participated. Check **Match only if the selected user is the primary user for the session** to find sessions only where the user was the primary user.

### Vendor Group

Find all sessions in which any users of a vendor group participated. A search box allows you to search for a specific vendor group.

### External Key

Filter to report sessions that used the same specific external key.

### Include only completed sessions

Filter to include only sessions that have been completed. This excludes sessions that are still running.

## Team Activity Report

### Date Range

Select a start date for which to pull reporting data. Then select either the number of days for which to pull your report or an end date.

### Filters

Select either **Team** or **User** to view all activity that matches the provided criteria. Team and User activity reports include information about users as they log in or out of the access console, chat messages sent between team members, user-to-user screen sharing actions as logged in chat, and files shared and downloaded.



**Note:** All items listed within Privileged Remote Access reports are ordered from newest to oldest, with the exception of session forensics reports.

# Vault: Report on Vault Account and User Activity



Reports

VAULT

## Vault Account Activity Report

### Date Range

Select a start date for which to pull reporting data. Then select either the number of days for which to pull your report or an end date.

### Account

To see all events involving a specific BeyondTrust Vault stored account, type in the account name, or select the account from the dynamic pop-up list.

### Performed By

To see all events involving a specific privileged user, API account, or the System, type in the account name, or select the account name from the dynamic pop-up list.

### Include Windows Services Events

Check the **Include Windows services events** option to include events related to service account rotation.

**i** For more information, please see *BeyondTrust Vault Technical Whitepaper* at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/vault/index.htm>.

**Note:** If a user has been anonymized in an effort to follow compliance standards, the **Vault Account Activity** report might display pseudonyms for user data or may indicate that information has been deleted. To learn more about data anonymization and deletion for compliance efforts, please see *Compliance: Anonymize Data to Meet Compliance Standards* at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/admin/reports-compliance.htm>.

## Vault Account Activity Report Results

Because users can be granted separate access to use and check out accounts, the **Vault Account Activity Report** distinguishes between the two. This allows administrators to tell the difference between a user who is able to view the account's password and a user who is only able to inject credentials in a session.

In the **Vault Account Activity Report Results**, the **Data** column shows information associated with the event. The **Credentials Checked Out** event contains a **Details** link in the **Data** column when credentials are checked out while in a session. This link redirects to the **Support Session Detail Report** in which the credentials were used.



**Note:** *If the credentials are checked out from `/login`, then no **Details** link is present in the **Data** column.*

The **Data Service** column appears in the reporting results when the **Include Windows services events** option is enabled. Any errors that occur with service account rotation events are shown in this column.

## Vendors: Report on Vendor Accounts and User Activity



Reports

VENDORS

### Vendor Account Activity Report

#### Date Range

Select a start date for which to pull reporting data. Then select either the number of days for which to pull your report or an end date.

#### Vendor Group

Find all events involving a specific vendor. Reports include **Timestamp**, **Vendor Group**, **Event Type**, **Performed By**, and associated **Data**. **Event Types** cover **Vendor Group** or **Vendor User Requested/Created/Deleted/Denied**.



## Jump Item: Report on Jump Item Activity



Reports

JUMP ITEM

Administrators and privileged users can generate broad, comprehensive reports and also apply specific filtering to customize reported information based on clear-cut needs. All Jump Item events are logged. By default, logs are saved for 90 days, although this limit can be modified in **Days to Keep Jump Item Logging Information** in **Management > Security > Miscellaneous**.



**Note:** Make sure the **View Reports** permission is enabled in **Jump > Jump Item Roles > Permissions**. This option is enabled by default for all built-in administrators (the first admin account created on new site installs).



**Note:** A new **Jump Item Role** called **Auditor** is automatically created on new site installations. On existing installations it has to be created. This role only has a single **View Reports** permission enabled, giving admins the option to grant a user just the permission to run Jump Item reports, without the need to grant any other permission.

Users can view the following events related to Jump Items on Jump Groups (Personal or Shared):

- Jump Item Created
- Jump Item Deleted
- Jump Item Copied From
- Jump Item Copied To
- Jump Item Moved From
- Jump Item Moved To
- Jump Item Session Started

The following information is included as part of the event:

- The time at which the event occurred.
- If the event was initiated by a user, the user's identifying information is associated to that event. This could be a user, API account, or system information. The data in this column is shown as a hyperlink for **User** and **API Account** generated events. When clicked, it links to that **User** or **API Account** edit page, assuming that the user or API account has appropriate permission to view the report.
- The event type.
- Jump Item Type, which is one of the supported Jump Item types, for example, Jump Client, Remote Jump, Remote RDP, etc.
- Name of the Jump Item. The data in this column is shown as a hyperlink. When clicked, the reporting view changes to show the events belonging to only that specific Jump Item. The title of the page also changes to **All Jump Item Events for: <Jump Item Name>**.
- Name of the Jump Group. This is the source Jump Group for **Jump Item Copied From** and **Jump Item Moved From** events, and destination Jump Group for **Jump Item Copied To** and **Jump Item Moved To** events.
- Any additional data that is specific to the logged event. This field can be used to store the destination Jump Group for the events related to Jump Items **Copy** and **Move**.

Reporting data is included in backups.



For more information, please see ["Days to Keep Jump Item Logging Information" on page 175.](#)

## Filters

You can find Jump Item events that match the following filters. You may use multiple filters, but only Jump Item events matching all the filters you enable are retrieved.

### Date Range

Select a start date for which to pull reporting data. Then select either the number of days for which to pull your report or an end date.

### Jump Group

Filter sessions by Jump Items belonging to a certain Jump Group. If selected, the following options are available:

- Find all sessions started from Jump Items belonging to a specific Jump Group.
- Find all sessions started from personal Jump Items for a specific user.
- Find all sessions in your personal Jump Group.

### Jump Item

Click on the search field to find all events involving a specific Jump Item.

### Performed by

Click on the search field to find all events involving a specific user, API account, or the system.

Click **Show Report** when done.

# Syslog: Download Report Containing All Syslog Files on the Appliance



Reports

SYSLOG

## Syslog Report

### Download Syslog Files

Click the **Download Syslog Files** button to download a ZIP file containing all syslog files available on the Appliance

# Compliance: Make Privileged Remote Access Data Anonymous to Meet Compliance Standards



Reports

COMPLIANCE



IMPORTANT!

By default, the **Compliance** tab is disabled. If your organization wishes to have this functionality, please contact BeyondTrust Support at [www.beyondtrust.com/docs/index.htm#support](http://www.beyondtrust.com/docs/index.htm#support).

## User Anonymization

Information about users as well as the actions performed during access sessions can be made anonymous to meet privacy regulations and compliance standards.

To make data anonymous, type the username, display name, or email address and then select the user from the list. Click **Search Representative Activity**. If data is found, the system returns a list of the information found for the user, along with a randomly-generated, proposed replacement term for the information. The proposed term is click-able, allowing the **Edit Replacement** prompt to appear. Within the prompt, the data can be made anonymous by entering in a preferred replacement term for the data. When finished, click **Edit Replacement Term in All History** to replace the term in the section.

The list updates with the new replacement term and displays "All access sessions and team activity events for this user will be marked as anonymized at: (date and time)." After reviewing the replacement terms and time stamp, click **Delete User and Anonymize** to begin the anonymizing process for the entire software. Before stating the anonymization process, you are required to enter your display name.



IMPORTANT!

All session recordings are deleted as part of the anonymization request.

## Endpoint Anonymization

Information about endpoints being accessed as well as the actions performed during access sessions can be made anonymous to meet privacy regulations and compliance standards.

To make data anonymous, enter the endpoint's name, hostname, or IP address into the field. Select the **Partial match** checkbox if partial matches should be listed. Then click **Search Customer Activity**. If data is found, the system returns a list of the information found for the endpoint along with a randomly-generated, proposed replacement term for the information. The proposed term is clickable, allowing the **Edit Replacement** prompt to appear. Within the prompt, the data can be made anonymous by entering in a preferred replacement term for the data. When finished, click **Edit Replacement Term in All History** to replace the term in the section.

The list updates with the new replacement term and displays "The selected access sessions will be marked as anonymized at: (date and time)." After reviewing the replacement terms and time stamp, click **Anonymize Selected Sessions** to kick-start the anonymizing process for the entire software. Before stating the anonymization process, you are required to enter your display name.

You can also choose to **Add Custom**. This allows you to enter and to search for customized information, such as account numbers.

**IMPORTANT!**

*All session recordings are deleted as part of the anonymization request.*

## Status

Review information about anonymization jobs, including the found and replacement terms, the type of data being anonymized, and the status of the job.

The job status is automatically refreshed every 15 seconds, and the status for completed requests remains available for 24 hours.



**Note:** *This status information is also available in session reports.*



**Note:** *For environments where failover or Atlas is configured, the anonymization of data is not complete until synchronization across all nodes or backup B Series Appliances has occurred.*

## Languages: Manage Installed Languages



Localization

LANGUAGES

### Languages

BeyondTrust currently supports English, German, Finnish, EU French, Italian, Dutch, Polish, Brazilian Portuguese, EU Portuguese, Swedish, Turkish, Japanese, Simplified Chinese, Traditional Chinese, and Russian. BeyondTrust supports international character sets.



**Note:** Because of translation scheduling, language packs trail slightly behind the English release of any new software version. Also note that for some features localization is limited to 1-byte characters. The use of 2-byte characters (certain language packs) may change expected behavior of some features. The BeyondTrust Jumpoint Configuration interface is not available in translation at this time.

### Enabled

If more than one language package is installed, check the box for each language you want to enable. Checking the option makes that language available from the dropdown in the administrative interface and the access console.

### Default Language

If more than one language package is installed, select a language to be displayed by default. Click **Update Languages** to save changes.

### Installing Language Packs

Language packs must be installed and enabled by the BeyondTrust admin. BeyondTrust Support can build language packs into software updates when requested to do so by customers. Before requesting language packs, check to make sure that they are not already installed and that the active release version supports them. To check for languages and get the necessary update(s), follow these steps:

1. Log in to the BeyondTrust **/login** web interface as an admin user.
2. Navigate to the **Localization** tab and check for the necessary languages.
3. If the languages are listed, check the box for the ones you want to install.
4. If the languages are not listed, contact Support to have a new update built for them.
5. Install any necessary updates and test to see if the desired language(s) appear in BeyondTrust.

Representatives can select the necessary language at the login screen. Admins and reps can select their languages from the dropdown menu in **/login** and **/appliance**.

## Languages: Manage Installed Languages



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LANGUAGES

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4. If the languages are not listed, contact Support to have a new update built for them.
5. Install any necessary updates and test to see if the desired language(s) appear in BeyondTrust.

Representatives can select the necessary language at the login screen. Admins and reps can select their languages from the dropdown menu in **/login** and **/appliance**.

# Management

## Software: Download a Backup, Upgrade Software



Management

SOFTWARE

### Backup Settings

It is an important disaster recovery best practice to save a backup copy of your software settings regularly. BeyondTrust recommends backing up your B Series Appliance configuration each time you change its settings. In the event of a hardware failure, a backup file speeds time-to-recovery and, if necessary, allow BeyondTrust to provide you access to temporary hosted services while retaining the settings from your most recent backup.

### Backup Password

To password protect your software backup file, create a password. If you do choose to set a password, you cannot revert to the backup without providing the password.

### Include Logged History Reporting Data

If this option is checked, your backup file includes session logs. If unchecked, session reporting data is excluded from the backup.

### Download Backup

Save a secure copy of your software configuration. Save this file in a secure location.

### Backup Vault Encryption Key

The Vault encryption key is used to encrypt and decrypt all the Vault credentials stored on the B Series Appliance. If you are ever required to restore configuration data from a backup onto a new B Series Appliance, you must also restore the Vault encryption key from a backup to be able to use the encrypted Vault credentials contained in the configuration backup.

### Restore Settings

#### Configuration and Vault Encryption Key Backup File

Should you need to revert to a backup, browse to the latest backup file that you saved.


#### Configuration and Vault Encryption Key Backup Password

If you created a password for your backup file, enter it here.




## Upload Backup

Upload the backup file to your B Series Appliance and restore your site's settings to those saved on the backup.

 For more information, please see [Back Up Procedures](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/disaster-recovery/back-up-procedures.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/disaster-recovery/back-up-procedures.htm>.

## Upload Update

Select a software update file to manually upload new software packages from BeyondTrust. You must confirm that you wish to upload the software package. The **Uploaded Update** section displays additional information to verify your uploaded package. Click **Install** if you wish to complete the installation process, or **Delete Update** if you wish to clear the update staging area. If your update package only contains additional licenses, you can install the update without restarting the B Series Appliance. After confirmation that you wish to install, the page displays a progress bar to notify you of the overall installation progress. Updates made here automatically update all sites and licenses on your B Series Appliance.

 **Note:** Your B Series Appliance administrator can also use the **Check for Updates** feature of the B Series Appliance interface to automatically search for and install new software packages.

## Site Migration

Site migration allows you to migrate configuration settings and data from another BeyondTrust Privileged Remote Access site. For example, migration can be used to move from an on-premises installation to a cloud installation. Migration uses an API account to automatically download and restore a backup.

## Preparation for Migration

Before migrating the data, please observe these prerequisites and conditions:

- The API account needs read-only or higher access to the command API, and access to the backup and Vault encryption key APIs.
- The administrator needs access to the local admin account to log in, in case security providers do not reconnect properly after the migration.
- If the source site version is earlier than 21.2, the Vault encryption key must be migrated manually.
- Recordings are not included as part of migration. To retain access to existing recordings, keep the source online with a different host name or use the integration client to back up the recordings before migration.
- After the data has been migrated, additional steps are required to make the new instance fully functional. These steps are listed on the **Site Migration** panel, and are summarized below:
  - Create a new DNS entry for the host name to access the old site.
  - Add the new host name to the old site public portal.
  - Confirm access to the old site.
  - Allow time for DNS entries to propagate across networks.
  - Click the **Restart Software** button on the old site to upgrade clients to use the new site.

## Data Migration

1. Enter the following information about the source site to start a migration:
  - **Hostname**
  - **OAuth Client ID**
  - **OAuth Client Secret**
2. Once the information is entered, click **Verify Connection**.
  - A pop-up notification verifies the connection and that the site version is supported.
  - **Reset** can be clicked at any time before starting the migration, if changes are required.
3. If applicable, click **+Choose Certificate** to select the **SSL Certificate** for a self-signed SSL certificate.



**Note:** Certificates must be in PEM, DER, or CRT format.



**Tip:** An option to **Automatically begin site migration** is available once the connection is verified. Check this option to bypass some of the steps and notifications that follow. If checked, click **Retrieve Backup** and respond to the notifications to complete the migration.

4. Review displayed information, and if correct, click **Retrieve Backup**. If not correct, click **Reset**.
5. Pop-up confirmation messages appear for the backup file and, if applicable for your version, the Vault encryption key. The file names display on the panel, as well as a **Migrate Site** button.
6. Click **Migrate Site**.
7. A pop-up notification warns that a local account is required, and a second pop-up warns that the migration overwrites data on the current site. Then a **Migration in Process** message displays.
8. When the migration completes, click **Yes** in the pop-up notification to reset the site. Log in again to view the migrated data.
9. Complete the post-migration steps listed on the **Site Migration** panel.

# Security: Manage Security Settings



Management

SECURITY

## Authentication

### Default Authentication Method

The default authentication method is **Username & Password**. If passwordless authentication is enabled, Passwordless FIDO2 can be selected as the default authentication method. If passwordless authentication is enabled, either authentication method can be selected when logging in.

### Enable Passwordless FIDO2 Authentication

This feature allows users from the local security provider or vendor users to register and log in with FIDO2-certified authenticators rather than a password. FIDO2 authenticator devices must support CTAP2 and be able to perform user verification using biometrics or a PIN.

This feature is enabled by default. Uncheck to disable the feature. If unchecked:

- The **Passwordless Authenticators** section of **My Account > Security** is hidden.
- The **Passwordless FIDO2** option is not available at the login dropdowns.
- Users are unable to log in using previously registered authenticators.

Unchecking this feature does not remove previously registered authentications. If it is necessary to remove those, they must be deleted before the feature is disabled.

Users with registered passwordless authentication can continue to log in using their username and password. This can be useful if they need to log in using a device that does not support passwordless authentication.

This feature cannot be limited to specific users or user groups.



*For more information, and to register authenticators, please see ["Passwordless Authenticators" on page 28](#).*

### Account Lockout After

Set the number of times an incorrect password can be entered before the account is locked out.

### Account Lockout Duration

Set how long a locked-out user must wait before being allowed to reattempt login. Alternatively, require an admin to unlock the account.

## Passwords

### Minimum Password Length

Set rules for local user accounts regarding the length of passwords.

### Require Complex Passwords

Set rules for local user accounts regarding the complexity of passwords.

### Default Password Expiration

Set rules for local user accounts regarding how often passwords expire.

### Enable Password Reset

Allow users with configured email addresses to reset passwords. The link provided in password reset emails are valid until one of the following events occurs:

- 24 hours has elapsed.
- The link is clicked, and the password is successfully reset.
- The system sends another link to the email address.

## Access Console

### Terminate Session If Account Is In Use

If a user tries to log into the access console with an account already in use, a checked **Terminate Session** box disconnects the previous connection in order to allow the new login.

### Enable Saved Logins

Allow or disallow the access console to remember a user's credentials.

### Log Out Idle User After

Set the length of time after which an inactive user is logged out of the access console to free the license for another user.

### Enable Warning and Logout Notification on Idle Timeout

Set this option to show a notification to an idle user 30 seconds before a logout is set to occur. The user will also receive another notification when the logout has occurred.

## Remove User from Session After Inactivity

This option effectively pushes a user out of a session after the period of inactivity you select. This helps BeyondTrust customers meet compliance initiatives with inactivity requirements. The user is notified 1 minute prior to removal and may reset the timeout.

A user is considered active in a session if any files are being transferred, whether through the file transfer tab or the chat interface, or if they click the mouse or press a key in the session tab. Mouse movement by itself does not count as activity. As soon as activity stops, the inactivity timer begins.

## Allow Mobile Access Console and Privileged Web Access Console to Connect

Give users the option of accessing remote systems through the BeyondTrust access console app for iOS and Android, as well as through the privileged web access console, a browser-based access console.

## Allow the Access Console CLI tool

Check this option to allow users to use the Access Console Command Line Interface (CLI) tool.

## Clipboard Synchronization Mode

**Clipboard Synchronization Mode** determines how users are allowed to synchronize clipboards within a screen sharing session. The available settings are as follows:

- **Automatic:** The endpoint and user's clipboards are automatically synchronized when one or the other changes.
- **Manual:** The user has to click one of the clipboard icons on the access console to either send content to or pull content from the endpoint's clipboard

You **MUST** restart the software on the status page for this setting to take effect.

Admins can prevent users from accessing the clipboard, can allow users to send data to the endpoint, or can allow users to have access in both directions (send and receive data). These settings control which clipboard icons the user sees in the access console when **Manual** mode is selected, as well as how the synchronization flows in **Automatic** mode.

Granular control of access to the clipboard can be set for session policies and group policies, as well as granted to specific users. Please see the links below for each particular case:

- **Users: Add User Permissions for a User or Admin:** Users and Security > Users > Add > Session Permissions > Screen Sharing
- **Session Policies: Set Session Permission and Prompting Rules:** Users and Security > Session Policies > Add > Permission > Screen Sharing
- **Group Policies: Apply User Permissions to Groups of Users:** Users and Security > Group Policies > Add > Session Permissions [defined]



**Note:** You must restart the software on the **Status** page for this setting to take effect.

## Allow Search for External Jump Items

This enables Jump item searching in Password Safe, when Privileged Remote Access (PRA) has a Password Safe integration and a fully configured Endpoint Credential Manager (ECM).



**Note:** You must restart the software for this setting to take effect. When enabling or disabling this setting, you are prompted to restart now or restart later from the **Status** page in /login.

## Jumpoint for External Jump Item Sessions

This field is available only when the **Allow Search for External Jump Items** option is checked. All sessions started from external Jump items are performed through the Jumpoint selected here, or in the case where multiple Jumpoints are deployed on endpoints across segmented networks, the Jumpoint used may be selected automatically by matching against an External Jump Item's Network ID. A Jumpoint must be positioned on the network to have connectivity to potentially any of the External Jump Items returned by the ECM.

Select the Jumpoint to use for external Jump Item sessions from the dropdown list of available Jumpoints, or leave the default selection of **Automatically Selected by External Jump Item Network ID** to allow PRA to determine which Jumpoint handles the session.

The **External Jump Item Network ID** is an attribute you must set on the Jumpoint from **Jump > Jumpoint** in /login. It is equivalent to the **Workgroup** attribute on managed systems in Password Safe. Its value is matched against the **Network ID** property for external Jump Items returned by the ECM to determine the Jumpoint to handle a session.

## External Jump Item Group Name

This field is available only when the **Allow Search for External Jump Items** option is checked. Optionally, enter a name for the external Jump Group, or leave the default option of **External Jump Items**. This name displays as the Jump Group name when viewing Jump Items in the access console or the web access console. Click **Save** if you have modified the default group name.

## Log "Run As" Special Action Commands in Session Reports

Uncheck this option to stop logging and reporting all *Run As* commands. Since the entire command is logged, any credentials passed as a command parameter are logged.

## Miscellaneous

### Days to Keep Logging Information

In **Days to Keep Logging Information**, you can set how long logging information should be stored on the B Series Appliance. This information includes the session reporting data and recordings. The maximum duration for which session reporting data and recordings can be retained on a B Series Appliance is 90 days. This is the default value in a new installation. It is possible that session recordings for some sessions within the retention time frame are not available. This could be caused by disk space constraints or the **Days to Keep Logging Information** setting.

The B Series Appliance runs a maintenance script every day that ensures disk usage does not exceed 90%. Should this be exceeded, the script begins deleting session recordings based on a formula until the disk usage is less than 90%. If the **Days to Keep Logging Information** setting was recently changed, the new setting may take up to 24 hours to go into effect.



If data or recordings must be retained beyond the configured limit, BeyondTrust recommends using the [Reporting API](http://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/reporting) ([www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/reporting](http://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/reporting)).

## Days to Keep Jump Item Logging Information

Choose how long Jump Item reporting data will be accessible from the appliance. Because data is purged only once a day, it may actually be accessible for up to 24 hours beyond what is selected here.

## Network Restrictions

Determine which IP networks should be able to access /login, /api, and the BeyondTrust access console on your B Series Appliance. If you enable network restrictions, you can also enforce the networks on which access consoles may be used.

## Admin Interface (/login) and API Interface (/api)

- **Always apply network restrictions:** when selected, you have the option of creating either an Allow list containing only allowed networks, or a Deny list containing networks that are denied access. When this option is selected, you can determine which restrictions, if any, should apply to the desktop, mobile, and web access consoles.
- **Never apply network restrictions:** when selected, no restrictions are applied and no other options are available to apply restrictions to the desktop, mobile, and web console.

## Desktop and Mobile Access Console

- **Always apply network restrictions:** when selected, it inherits the network restrictions entered for the Admin interface.
- **Never apply network restrictions:** when selected, no restrictions are applied to the desktop and mobile consoles, but you have the option to apply restrictions to the web access console.
- **Only apply network restrictions for user's first authentication:** this applies restrictions selected above, but only when the user first logs in.

## Web Console (/console)

- **Always apply network restrictions:** when selected, the web access console inherits the restrictions entered for the admin interface.
- **Never apply network restrictions:** when selected, no restrictions are applied to the web access console, even if restrictions are in effect for the other access console methods.

**i** For more information, please see [Privileged Web Access Console Guide](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/web-access/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/access-console/web-access/index.htm>.

## Proxy Configuration

Configure a proxy server to control the dataflow for information sent from the B Series Appliance. This applies to outbound events and API calls.

## Proxy Protocol

Configure HTTP or HTTPS proxy types for outbound connectivity from the B Series Appliance.

## Enable Proxy Configuration

Check the box to enable the outbound proxy settings.

### Proxy Host

Enter the IP address or hostname of your proxy server.

### Proxy Port

Enter the port your proxy server uses. The default port is **1080**.

### Proxy Username and Password

If your proxy server requires authentication, enter a username and password.

### Test

Click **Test** to ensure configuration settings are entered correctly. The current test result is displayed in the **Last Test Result** area. Error messages indicate where configuration settings must be corrected.

## ICAP Configuration

You can configure file transfers to pass through the Secure Remote Access Appliance and be scanned by an Internet Content Adaptation Protocol (ICAP) server. If the ICAP server indicates that a file is malicious, it is not sent to the destination.



### IMPORTANT!

*File transfers cannot be sent to an ICAP server in the following scenarios: Protocol Tunnel Jump-based file transfers, clipboard file transfers within RDP sessions, and external tool file transfers within RDP or Shell Jump sessions. Even with ICAP enabled, these transfers are not scanned.*



**Note:** Enabling ICAP or changing the ICAP URL requires restarting the appliance to ensure clients are reconnected and properly configured. In an Atlas environment, a sync is required.

*Using ICAP reduces the performance of file transfers due to the added steps and scanning. If the ICAP server is down, file transfers fail.*

*Improper ICAP configuration prevents Jumpoints from working correctly.*

## ICAP Settings

Enter the **ICAP Server URL**. This is supplied by your ICAP server vendor. The default port is 1344. If you are using another port, it must be entered with the URL, in this format: **icap://example.com:0000** or **icaps://example.com:0000**.

If the protocol is **icaps://**, check **Use a CA Certificate**. Then click **Choose a Certificate** and upload the certificate.





**Note:** *If you use a self-signed ICAPS certificate and you do not provide a CA certificate that can validate it, all session file transfers will fail.*

*Expired or invalid certificates cause session file transfers to fail, regardless of whether a CA certificate is provided.*

**Save** the ICAP settings before testing.

## Test ICAP Connection

After entering and saving the ICAP settings, click **TEST WITH A FILE** and select a file to upload. There are three possible results:

- A connection error. An error header and ICAP logs display (if available).
- A malicious file is detected. A warning header and response details display. The exact nature of the malicious content does not display.
- No problems are detected. The response details display.

# Site Configuration: Set HTTP Ports, Enable Prerequisite Login Agreement



Management

SITE CONFIGURATION

## Prerequisite Login Agreement

### Enable Login Agreement for the administrative interface/Access Console

You can enable a login agreement that users must accept before accessing either the /login administrative interface, the access console, or both. The configurable agreement allows you to specify restrictions and internal policy rules before users are allowed to log in.

#### Agreement Title

Customize the title of the agreement.

#### Agreement Text

Provide the text for the login agreement.

# Email Configuration: Configure the Software to Send Emails



Management

EMAIL CONFIGURATION

## Email Address



**Note:** If a B Series Appliance is designated as a backup B Series Appliance or a traffic node, the email configuration for that B Series Appliance will be overwritten with the email configuration defined on the primary B Series Appliance.

## From Address

Set the email address from which automatic messages from your B Series Appliance will be sent.

## SMTP Relay Server

Configure your B Series Appliance to work with your SMTP relay server in order to send automatic email notifications of certain events.

### SMTP Relay Server

Enter the hostname or IP address of your SMTP relay server.

### SMTP Port

Set the SMTP port to contact this server on.

### SMTP Encryption

If your SMTP server supports TLS encryption, choose **TLS** or **STARTTLS**. Otherwise, select **None**.

### SMTP Authentication Type

To use a form of authentication with this server, select either **Username and Password** or **OAuth2**. Otherwise, select **None**.

#### Username and Password

Enter a username and password to configure this form of authentication.

#### OAuth2



For more information, please see the following:



- ["Configure OAuth2 for Entra ID" on page 181](#)
- ["Configure OAuth2 for Google" on page 182](#)

## Admin Contact

### Default Admin Contact Email Addresses

Enter one or more email addresses to which emails should be sent. Separate addresses with a space.

### Send Daily Communication Notice

You can have the B Series Appliance send a daily notification to ensure that alert communication is working correctly.

In addition to the test email and daily communication notices that can be configured above, emails are sent for the following events:

- During any failover operation, the product version on the primary node does not match the product version on the backup node.
- During a failover status check, any of the following problems are detected.
  - The current B Series Appliance is the primary node and a shared IP address is configured in /login, but its network interface is not enabled.
  - A shared IP address is configured in /login but is not listed as an IP address in /appliance.
  - The backup node could not contact the primary node, and it also could not contact any of the test IP addresses configured on the **Management > Failover** page.
  - The backup node could not contact any of the test IP addresses configured on the **Management > Failover** page.
  - The backup node's backup operations are disabled on the **Management > Failover** page.
  - The backup node unexpectedly failed to perform a probe of itself, indicating that it is malfunctioning.
  - The backup node failed to contact the primary node using the primary node's hostname.
  - Automatic failover is disabled, and the backup node failed to probe the primary node.
  - Automatic failover is enabled, and the backup node failed to probe the primary node. The backup node will automatically become the primary node if the primary node remains unresponsive.
  - Automatic failover is enabled, and the backup node is automatically becoming the primary node because the primary node was down for too long.
  - The primary node failed to perform a data sync with the backup node sometime in the past 24 hours.

### Send a test email when the settings are saved

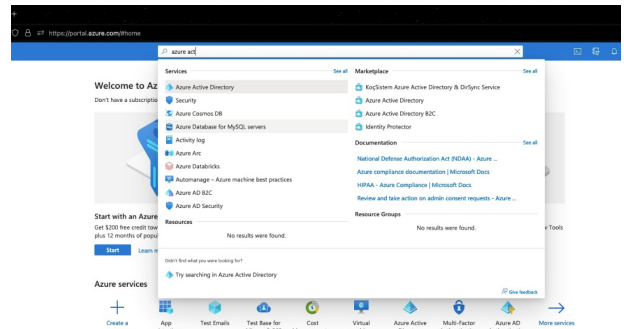
If you wish to receive an immediate test email to verify that your SMTP settings are accurately configured, check this option before clicking the **Save** button.

## Configure OAuth2 for Entra ID

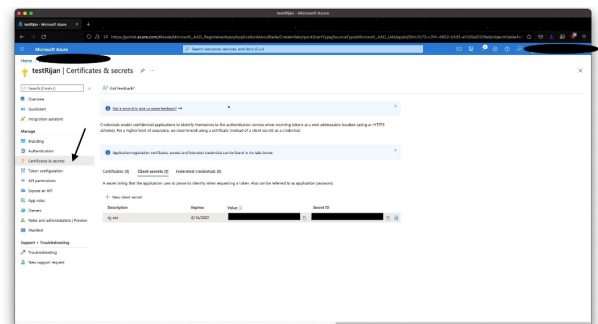
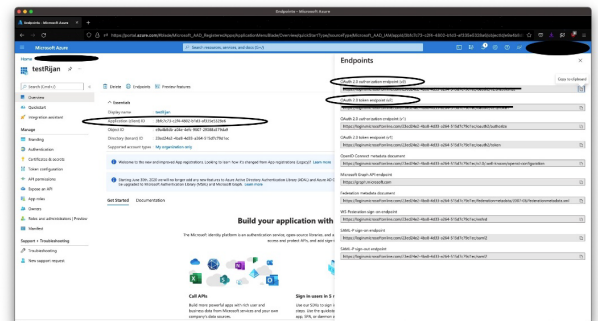
**Note:** Before starting configuration on Entra ID, an Azure/Office 365 Administrator must enable **Authenticated SMTP** for each account on Exchange online. To do this, go to **Office 365 Admin Portal (admin.microsoft.com) > Active Users > Mail > Manage Email apps** and check **Authenticated SMTP**.

### Configure Entra ID

1. Log into your Azure console ([portal.azure.com](https://portal.azure.com)), and navigate to **Entra ID**.
2. Go to **App registrations**, and select **New registration**.
  - Enter a name, such as **Appliance-OAuth2**.
  - Select the types of account you want to be able to log in to the application through OAuth2. Select **Single Tenant** for internal only.
  - Enter the **Redirect URI** in the form of `https://{URL OF YOUR APPLIANCE}/login/smtplib-verification`.
  - Click **Register**.
3. On the **Overview Page** (selected from the left menu), note the **Application (client) ID**. It is required later.
4. Click **Endpoints** (above the **Application (client) ID**).
5. Note the **OAuth2.0 authorization endpoint (v2)** URI and the **OAuth token endpoint (v2)** URI. These are required later.




6. On the **Certificates & secrets** page (selected from the left menu), note the **Client secret**. It is required later. If you do not have a **Client secret**, click **New client secret** to create one.



### Provide Credentials to the SMTP Relay Server

1. Within the Privileged Remote Access admin interface, navigate to **Management > Email Configuration**.
2. Under **SMTP Authentication Type**, select **OAuth2**, and enter the following information:
  - **Email:** The email address for the SMTP relay.
  - **SMTP OAuth Provider ID:** The application ID noted earlier.
  - **SMTP OAuth Client Secret:** The client secret noted earlier.

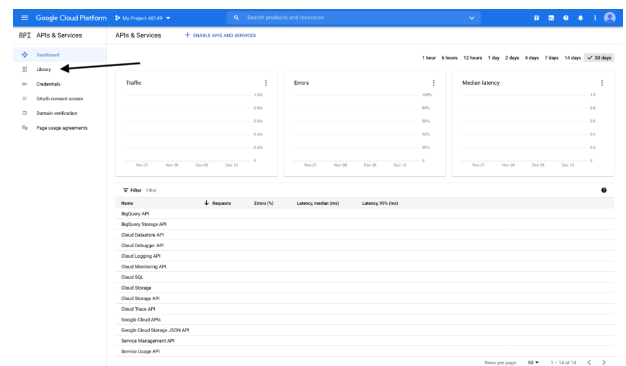
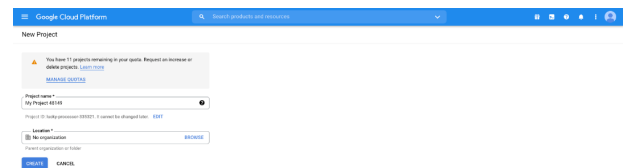
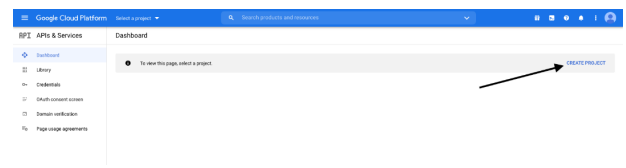
- **SMTP OAuth Scopes:** Enter `https://outlook.office.com/SMTP.Send offline_access`.
  - **SMTP OAuth Authentication Endpoint:** The authorization endpoint noted earlier.
  - **SMTP OAuth Token Endpoint:** The token endpoint noted earlier.
3. Click **Save**.
  4. Now you can verify and connect the provider account. Click **Verify Oauth2 Provider**.

 **Note:** Ensure you are logged into the provider portal as the email address for the SMTP relay, entered above, in the same browser session. You may need to log out of your personal or admin account.

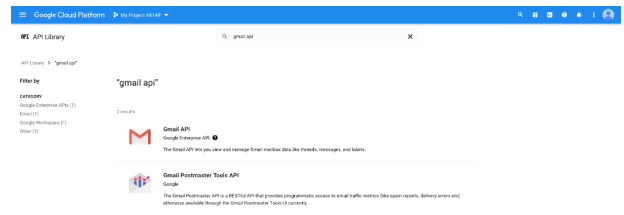
## Configure OAuth2 for Google

### Configure Google Cloud

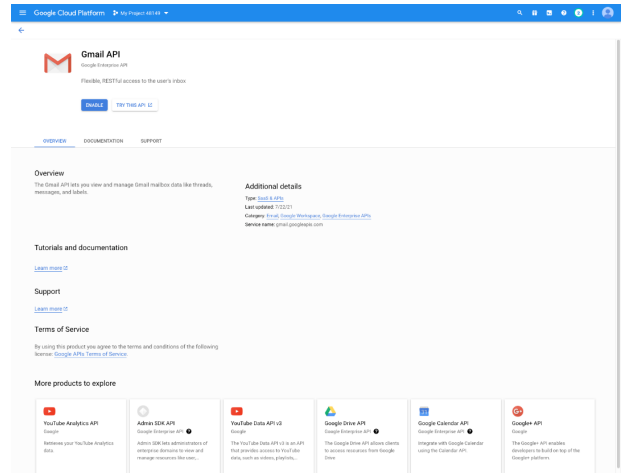
1. Log in to your Google Cloud Platform console (Google Dev Console) ([console.cloud.google.com](https://console.cloud.google.com)). Use the correct Gmail account, as only the owner of the project is able to work with the project. If you do not already have a paid account, you might choose to purchase an account by clicking **Activate** in the top banner. BeyondTrust cannot provide assistance with purchasing an account. Click **Learn More** in the top banner for information regarding the limitations of free accounts.
2. Click **CREATE PROJECT**. You can also use an existing project.
3. Accept the default **Project Name**, or enter a new name.
4. Accept the default **Location**, or select a folder from those available for your organization.
5. Click **CREATE**.
6. The **APIs and services** page appears. Click **Library** in the left menu.



7. Search or browse for the **Gmail API** in the library, and click it.

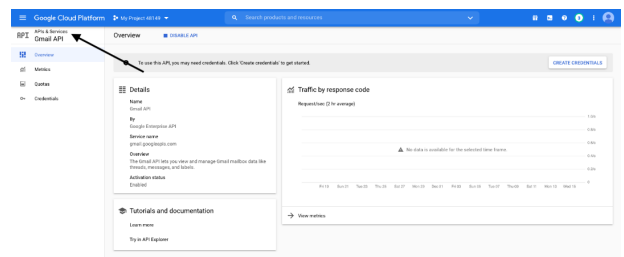


8. The **Gmail API** appears on its own page. Click **ENABLE**.



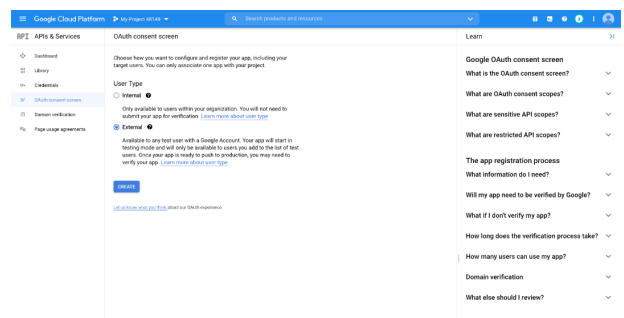
9. The **Gmail API Overview** page appears. Click **APIs & services** in the upper left.

10. The **APIs and services** page appears again. Click **OAuth consent screen** in the left menu.

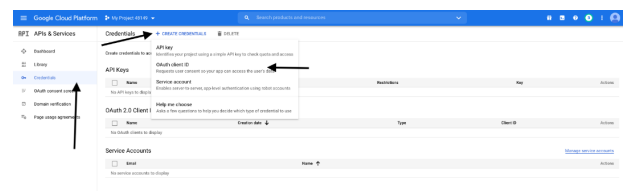
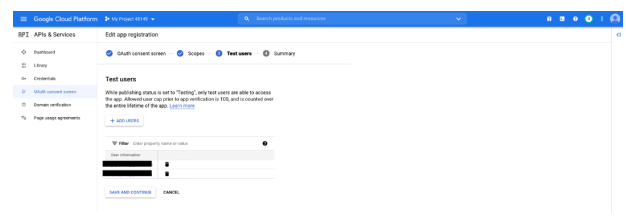
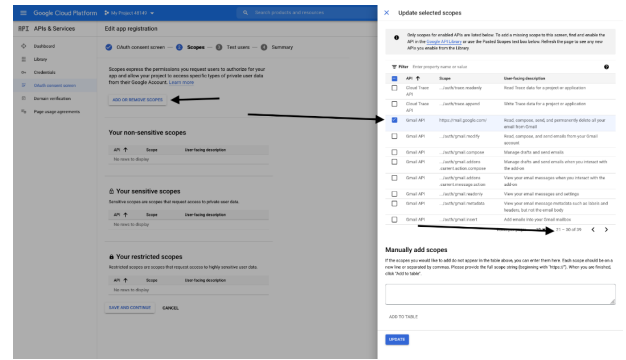
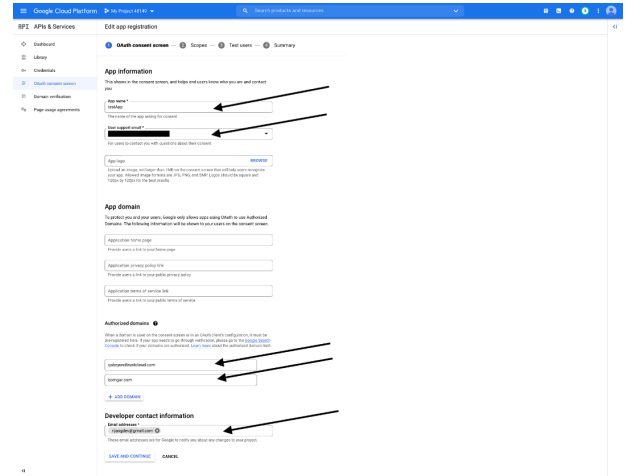


11. Select the **User Type**. Internal allows only users from within the organization, but requires a Google Workspace account.

12. Click **CREATE**.



13. Enter the **App name**.
14. Enter a **User support email** address. This may default to the address you are using to create the project.
15. Enter a logo for the app, if desired. The **App domain** section is also optional.
16. Add the **Authorized domains**. For BeyondTrust test appliances, these are:
  - qabeyondtrustcloud.com
  - bomgar.com
17. Enter the **Developer contact information**. This is the email address you are using to create the project.
18. Click **SAVE AND CONTINUE**.
19. Under the **Scopes** tab, click **ADD OR REMOVE SCOPES**. This opens the **Update selected scopes** window.
20. Locate and check the scope **https://mail.google.com/** for the Gmail API.

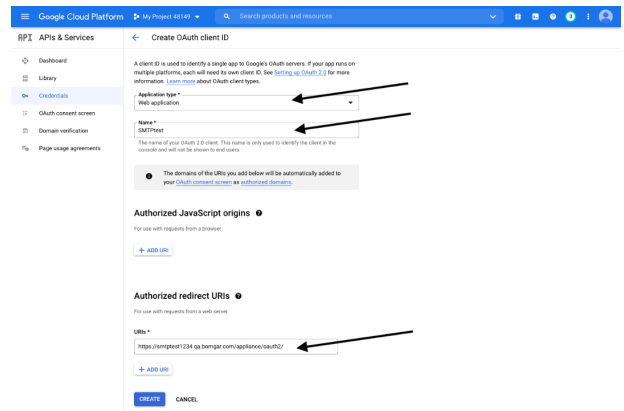


**Note:** The API does not appear if it has not been enabled.

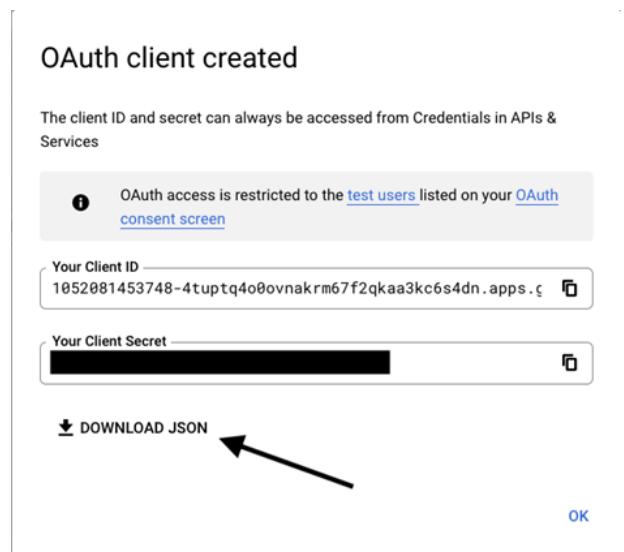
21. Click **UPDATE**. The **Update selected scopes** window closes.
22. Click **SAVE AND CONTINUE**.
23. Under the **Test users** tab, click **ADD USERS**. This opens the **Add Users** window. Add the users that have access to the application and click **ADD**. Note the limits on test user access and related restrictions.
24. Click **SAVE AND CONTINUE**.
25. Review the Summary, and make any necessary changes or corrections.
26. Click **BACK TO DASHBOARD**.
27. Click **Credentials** in the left menu.
28. Click **CREATE CREDENTIALS** in the top banner and select **OAuth client ID**.



29. On the create credentials page, select **Web application** for the **Application type**. Additional fields appear when this is selected.
30. Enter a name for the application.
31. Scroll down to **Authorised redirect URIs** and click **ADD URI**.
32. Enter the **Authorization Redirect URI** in the form of *https://{URL OF YOUR APPLIANCE}/login/smtp-verification*.
33. Click **CREATE**.



34. A window confirms creation of the OAuth client, and shows the **Client ID** and **Client Secret**. Click to download a JSON file. The file contains information that is needed in the next steps.
35. Click **OK** to return to the APIs and services page.



## Provide Credentials to the SMTP Relay Server

1. Within the Privileged Remote Access admin interface, navigate to **Management > Email Configuration**.
2. Under **SMTP Authentication Type**, select **OAuth2**, and enter the following information:
  - **Email:** The email address for the SMTP relay.
  - **SMTP OAuth Provider ID:** The **client\_id** from the JSON file generated during the Google configuration.
  - **SMTP OAuth Client Secret:** The **client\_secret** from the JSON file generated during the Google configuration.
  - **SMTP OAuth Scopes:** Enter *https://mail.google.com/*.
  - **SMTP OAuth Authentication Endpoint:** The **auth\_uri** from the JSON file generated during the Google configuration.
  - **SMTP OAuth Token Endpoint:** The **token\_uri** from the JSON file generated during the Google configuration.
3. Click **Save**.
4. Now you can verify and connect the provider account. Click **Verify Oauth2 Provider**.



**Note:** *Ensure you are logged into the provider portal as the email address for the SMTP relay, entered above, in the same browser session. You may need to log out of your personal or admin account.*

# Outbound Events: Set Events to Trigger Messages



Management

OUTBOUND EVENTS

## HTTP Recipients

You can configure your BeyondTrust Appliance B Series to send messages to an HTTP server or to an email address when different events are triggered.

The variables sent by the B Series Appliance arrive as an HTTP POST method and can be accessed by calling the method used to retrieve POST data in your coding language. If the server does not respond with an HTTP 200 to indicate success, the B Series Appliance will re-queue the current event and retry it later.

### Add New HTTP Recipient, Edit, Delete

Create a new recipient, modify an existing recipient, or remove an existing recipient.

### Add or Edit HTTP Recipient

#### Name

Create a unique name to help identify this outbound event.

#### URL

Enter the destination URL for this outbound event handler.



**Note:** BeyondTrust Cloud customers must use of URLs beginning with HTTPS; only port 443 is supported.

#### Enabled

Check **Enabled** to enable the event handler. Uncheck **Enabled** to quickly stop the messages for the event handler you set up, as in the event of planned integration testing.

#### Use a CA Certificate

When operating over an HTTPS connection, you must upload the certificate authority's root certificate advertised by the outbound event server.

#### Send Custom Fields

When enabled, all custom fields configured on the **Custom Fields** page will be included in the outbound event.

## Events to Send

Choose which events should trigger messages to be sent.

## Retry Interval

Set how often to retry a failed attempt.

## Retry Duration

If an event continues to retry and fail, set how long it should continue to retry before being dropped.

## Email Contact

Enter one or more email addresses to which notification should be sent if an error should occur.

## Send Email Alert After

Set how long after an error the email should be sent; if the problem is resolved before this time is reached and the event succeeds, no error notification will be sent.

## Resend Email Alerts

Set how often error emails should be sent if a failed status should continue.

## Email Recipients

### Add New Email Recipient, Edit, Delete

Create a new recipient, modify an existing recipient, or remove an existing recipient.

## Current Status

Displays a brief status message from the SMTP relay server. As long as the B Series Appliance is able to send messages to the relay server, the status will show **OK**. Otherwise, review your SMTP relay server settings.

## Retry Duration

If an event continues to retry and fail, set how long it should continue to retry before being dropped.

## Add Email Recipient

Before you set up your B Series Appliance to send event messages to an email address, verify that your B Series Appliance is configured to work with your SMTP relay server. Go to the **Management > Email Configuration** page to verify settings.

## Enabled

Check **Enabled** to enable the event handler. Uncheck **Enabled** to quickly stop the messages for the event handler you set up, as in the event of planned integration testing.

## Name

Create a unique name to help identify this outbound event.

## Email Address

Enter the email address to receive notice of the selected events. You can configure up to ten email addresses, separated by commas.

## Require External Key

If this option is checked, emails will be sent only for sessions which have an external key at the time the event occurs.

## Events to Send

Choose which events should trigger messages to be sent.

## Subject

Customize the subject of this email. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.

## Body

Customize the body of this email. Click the link below the **Body** field to view the macros that can be used to customize the text in your emails for your purposes.

# Cluster: Configure Atlas Cluster Technology for Load Balancing



Management

CLUSTER

## Status

Large-scale geographic deployments benefit from BeyondTrust Atlas Cluster technology, establishing a single BeyondTrust site across multiple B Series Appliances, which are termed nodes in a cluster. The primary B Series Appliance/primary node is the site of most administration tasks. The traffic node is a B Series Appliance that participates in effectively routing your support traffic.

On the primary node, you will configure both the primary itself and the traffic nodes.



Find more information about Atlas in the [BeyondTrust Atlas Technology Guide](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/atlas/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/atlas/index.htm>.

## Current Status

Confirms the role of the site instance from which you accessed the page.

## Sync Now

Synchronize the clustered B Series Appliances.

## Disband Cluster

Disband the cluster, effectively removing each B Series Appliance from its role in the cluster.

## Status History

Show or hide the log of clustered B Series Appliance messages.

## Traffic Nodes

### Method for Choosing Traffic Nodes

This selector is used to define how a traffic node is chosen for a user or endpoint client connection. The available methods for defining the connection are **Random**, **A Record Lookup**, **SRV Record Lookup**, **IP Anycast**, and **Timezone Offset**. Your choice of connection method is highly dependent upon your network infrastructure, among other complex considerations.

## Add New Traffic Node, Edit Node, Remove Node

Create a new node, modify an existing node, or remove an existing node.

## Accepting New Client Connections

Be sure this is checked; otherwise, clients will not be able to use the traffic node.

## Add Traffic Node

## Accepting New Client Connections

Be sure this is checked; otherwise, clients will not be able to use the traffic node.

### Name

Create a unique name to help identify this node.

### Timezone Offset

Used only if **Method for Choosing Traffic Nodes** is set to **Timezone Offset**. This process involves detecting the time zone setting of the host machine and using that setting to match the appropriate traffic node that has the closest time zone offset. The time zone offset is derived from the customer time zone setting relative to Coordinated Universal Time (UTC).

### Public Address

Enter the hostname you set up in DNS for this node, and enter the port over which clients will communicate with the node.

### Internal Address

This can be the same as the public address. Advanced configurations can optionally set this to a different hostname for inter-appliance communication.

### Network Address Prefixes

You may leave this blank.

For advanced configurations, enter network address prefixes, one per line, in the form of **ip.add.re.ss[/netmask]**. Netmask is optional and can be given in either dotted-decimal format or as an integer bitmask. If netmask is omitted, as single IP address is assumed.

When this field is populated, the primary node attempts to assign a client to this traffic node if the client's IP address matches one of the network address prefixes. If the client's IP address matches more than one traffic node's network address prefixes, the client is assigned to the traffic node with the longest matching prefix. If the matching prefixes are of equal length, one of the matching traffic nodes is chosen at random. If a client's IP address does not match any network address prefixes, the client is assigned using the method configured.

## Primary Node Configuration

### Primary node

#### Name

Create a unique name to help identify this node.

#### Public Address

Enter the hostname you set up in DNS for this node, and enter the port over which clients will communicate with the node.

#### Internal Address

This can be the same as the public address. Advanced configurations can optionally set this to a different hostname for inter-appliance communication.

#### Maximum Client Fallback to Primary

Allows the number of clients you set to fall back to using the primary for traffic control if necessary.




# Failover: Set Up a Backup B Series Appliance for Failover



Management

FAILOVER

 **Note:** This feature is available only to customers who own an on-premises B Series Appliance. BeyondTrust Cloud customers do not have access to this feature.



For more information, please see *Privileged Remote Access Failover Configuration* at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/failover/index.htm>.

## Configuration

### New Backup Site Connection Details

#### Host Name or IP Address

Enter the host name or IP address of the B Series Appliance you wish to use as the backup in a failover relationship.

#### Port

Enter the TLS port allowing this primary B Series Appliance to connect to the backup B Series Appliance.

### Reverse Connection Details To This Primary Site

#### Host Name or IP Address

Enter the host name or IP address of this B Series Appliance, which you wish to use as the primary in a failover relationship.

#### Port

Enter the TLS port allowing the backup B Series Appliance to connect to this primary B Series Appliance.

## Status

### This host's status

View the host name of this site, along with its status of primary site instance or backup site instance.

## Peer host's status

View the host name of this site, along with its status of primary site instance or backup site instance. Also view the date and time of the last status check.

## Status History

Expand or collapse a table of status events that have occurred.

## Primary or Backup Site Instance Status

Text confirms that you are either on the primary or backup site instance for your host site.

## Sync Now

Manually force a data sync from the primary B Series Appliance to the backup B Series Appliance.

## Become Backup/Primary

Switch roles with the peer B Series Appliance, essentially forcing a failover for planned maintenance or a known failover event.

## Check this box to pull a data-sync from the site instance at example.com while becoming the backup/primary.

If you want to synchronize data from the peer B Series Appliance prior to swapping roles, select this checkbox. If this option is selected, all users on the existing primary B Series Appliance will be disconnected during the data sync, and no other operations will be available until the swap is complete.

## Check this box to become a backup even if the peer site instance at example.com cannot be contacted.

On the primary site instance, you have the option to become the backup even if the peer B Series Appliance cannot be contacted. If this option is unchecked, failover will be canceled if both B Series Appliances cannot be kept in sync in terms of their failover roles (one primary and one backup).

For example, if you know the current backup B Series Appliance is online but cannot be reached by the primary due to a network connection issue, you may wish to check this option to make the primary the backup before the network connection is restored. In this example, you would also need to access the current backup and make it the primary.

## Break Failover Relationships

Break the failover relationship, removing each B Series Appliance from its role as primary or backup.

## Primary or Backup Site Instance Configuration

### Shared IPs

Control the shared IP address the site instance uses in the event of a failover by selecting the checkbox for the failover IP address. If you change the relationship between the sites, the checked IP addresses will disable when a primary site becomes a backup, and will enable when a backup becomes a primary site. You should manually mirror the setting on the peer site, as the setting is not shared.

### Backup Settings

The settings you configure here will be enabled only when the site instance you are configuring is in a backup role.

When on the primary site instance, select **Backup Settings >** to expand or collapse the page displaying the configuration fields.

### Enable Backup Operations

Enable or disable site backups.

### Automatic Data-Sync Interval

You can control the timing details of the automatic data-sync interval.

### Data-Sync Bandwidth Limit

Set bandwidth parameters for data-sync.

### Enable Automatic Failover

Quickly enable or disable automatic failover.

### Primary Site Instance Timeout

Set how long the primary site must be unreachable before failing over.

### Network Connectivity Test IPs

Enter IP addresses for the backup site to check to determine whether the backup's inability to reach the primary is because the primary is offline or the backup has lost its network connection.

# API Configuration: Enable the XML API and Configure Custom Fields



Management

API CONFIGURATION

## API Configuration

### Enable XML API

Choose to enable the BeyondTrust XML API, allowing you to run reports and issue commands such as starting or transferring sessions from external applications, as well as to automatically back up your software configuration.

### CLI Client Download

The Command Line Interface (CLI) tool can be downloaded to make it easier to use and configure APIs and automation scripts, and integrate them with your BeyondTrust Privileged Remote Access installation. The CLI tool is available for Windows (x64), macOS, and Linux (x64) platforms. Select the appropriate platform and click **Download BTAPI CLI Client**.

The download is a compressed executable file. Extract the file, and save or link it from an executable area (in your PATH).

- For Windows systems: Open the file in a terminal such as Windows Command Prompt or Windows PowerShell.
- For macOS systems: Run the file in the terminal.

The Help information, including options, commands, and variable instructions, display when the program opens.



For more information on creating APIs with CLI, please see [Use Cases examples in the BeyondTrust Privileged Remote Access API Guide](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/use-cases.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/use-cases.htm>.

## API Accounts

An API account stores all of the authentication and authorization settings for the API client. At least one API account is required to use the API, either in conjunction with the Integration Client, with a third-party app, or with your own in-house developed software.

### Add an API Account, Edit, Delete

Create a new account, modify an existing account, or remove an existing account.

## Add or Edit an API Account

### Enabled

If checked, this account is allowed to authenticate to the API. When an account is disabled, all OAuth tokens associated with the account are immediately disabled.

### Name

Create a unique name to help identify this account.

### Comments


Add comments to help identify the purpose of this object.


### OAuth Client ID

The OAuth client ID is a unique ID generated by the B Series Appliance. It cannot be modified. The client ID is considered public information and, therefore, can be shared without compromising the security of the integration.

### OAuth Client Secret

The OAuth client secret is generated by the B Series Appliance using a cryptographically secure pseudo-random number generator.

 **Note:** The client secret cannot be modified, but it can be regenerated on the **Edit** page. Regenerating a client secret and then saving the account immediately invalidates any OAuth tokens associated with the account. Any API calls using those tokens cannot access the API.

 **Note:** The OAuth client ID and client secret are used to create OAuth tokens, necessary for authenticating to the API.

 For more information, please see the [API Guide](http://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/index.htm) at [www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/index.htm](http://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/index.htm).

## Permissions

Select the areas of the API this account is allowed to use.

For the **Command API**, choose to deny access, to allow read-only access, or to allow full access.

For the **Reporting API**, check the allowed permissions:

- **Allow Access to Access Session Reports and Recordings**
- **Allow Access to License Usage Reports**

- **Allow Access to Vault Account Activity Reports**
- **Allow Access to Syslog Reports**

For the **Backup API**, check to **Allow Access** and to **Allow Vault Encryption Key Access**.

The **Configuration API** allows for the management and configuration of common tasks in **/login**, which can be automated and work with your orchestration processes. Check to **Allow Access** and, if access is allowed, check if this API can **Manage Vault Accounts**.

Check to allow access to the **Endpoint Credential Manager API**.

If ECM groups are enabled on the site, select which ECM group to use. ECMs that are not associated with a group come under **Default**.

The **SCIM API** allows the option to provision users from a different security provider. If you allow access to the SCIM API, the option **Allow long-lived bearer token** becomes available. Allowing long-lived tokens is not recommended unless it is required by your SCIM client, as these bearer tokens never expire. Because all other API permissions require tokens with a one-hour expiry, enabling long-lived tokens for SCIM disables all other API permissions.



For more information, please see [Vault Account Configuration APIs at www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/configuration-api.htm](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/integrations/api/configuration-api.htm).

## Network Restrictions

List network address prefixes from which this account can authenticate.



**Note:** API accounts are not restricted by the network prefixes configured on the **/login > Management > Security** page. They are restricted only by the network prefixes configured for the API account.

## ECM Groups



**Note:** This feature is only present if enabled when your site is built. If it is not present, please contact your site administrator.

The ECM Groups feature provides support for multiple disconnected credential providers. It allows a single PRA deployment to integrate with multiple external credential providers like Password Safe or Privileged Identity. These can be located at various remote locations through multiple ECM instances.

## New ECM Group Name

Create a unique name to help identify this ECM group. You can configure up to fifty ECM groups.

## Support: Contact BeyondTrust Technical Support



Management

SUPPORT

### BeyondTrust Support Contact Information

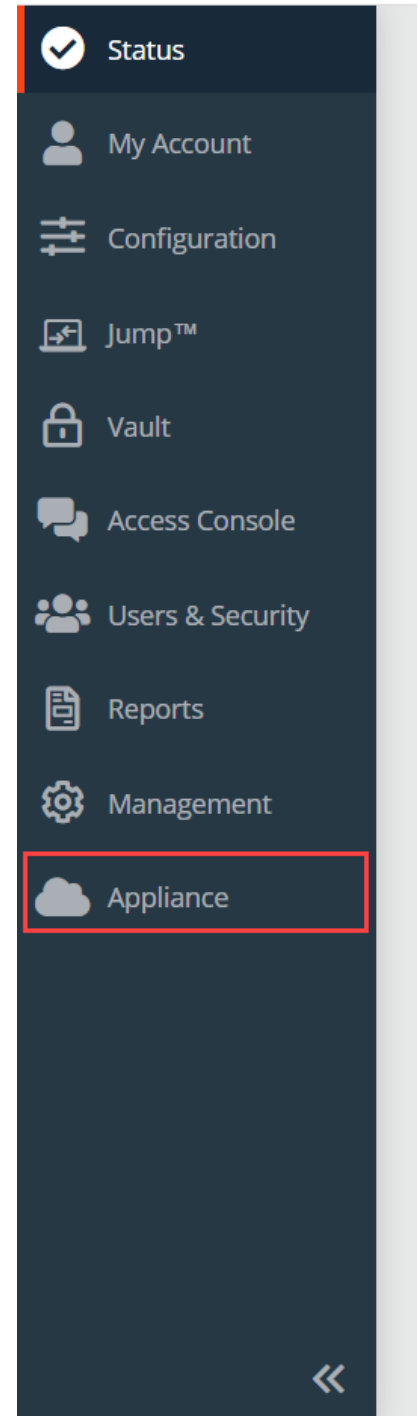
The support page provides contact information should you need to contact a BeyondTrust Technical Support representative.

### Advanced Technical Support from BeyondTrust

In the event that a BeyondTrust Technical Support representative should need access to your B Series Appliance, they will provide you with support, access, and override codes to enter on this page to create a B Series Appliance-initiated, fully encrypted support tunnel back to BeyondTrust for quick resolution of complex issues.

## B Series Appliance Login: Manage Your Privileged Remote Access Cloud Appliance

BeyondTrust Cloud customers access B Series Appliance settings from the left navigation **Appliance** option of the /login interface. Clicking the /login > **Appliance** option opens a new browser tab, where you have access to a select set of B Series Appliance features.





# Status Basics: View Privileged Remote Access Cloud Appliance Details



The **Basics** section gives you information about your B Series Appliance and allows you to monitor your system.

In the **Appliance Statistics** section, you can learn important information about your B Series Appliance, including the model number and serial number. You can also set your local time to any valid global time zone. The system time will always be displayed in UTC.

Appliance Statistics	
Appliance Model	Virtual Appliance (br v2)
Host Hypervisor	VMware
Serial Number	4C7F1-D823B-6D38E-E90C8
System GUID	a5e2c48d8-4a4057ba3d2ea0f3a12332
Base Software Version	0.1.1 (44144-e72d3cca2a9c3302c538f1923693c2b787e121)
Service Pack	31
System Architecture	x64
Firmware Version	0
Firmware Build Date	Fri, Jan 29, 2021 02:32:40 UTC
System Up-Time	51 days, 8:28
Processes	0/20, 0/18, 0/18 (0)
System Time	Thu, Oct 14, 2021, 9:27:04 PM UTC
Time Zone	UTC

## Storage Encryption: Encrypt Session Data



The **Encryption** section allows you to encrypt session data stored on your B Series Appliance. When first encrypting your data, you are limited to 4GB or less of data; however, after the initial encryption, this 4GB limit no longer applies.

If you have not already added a secret store, go to **Security > Secret Store** to add one.

 For more information, please see "[Secret Store: Store and Access Secrets in Privileged Remote Access Cloud](#)" on page 219.



**Note:** If you have more than 4GB of data to initially encrypt, please contact BeyondTrust Technical Support at [www.beyondtrust.com/support](http://www.beyondtrust.com/support).

### Storage :: Encryption

Storage Encryption Status: **Not Encrypted**

[Encrypt](#)

*Encryption keys are managed by Secret Store*

# Certificates: Create and Manage TLS Certificates

STATUS	STORAGE	SECURITY	UPDATES	SUPPORT
<b>CERTIFICATES</b>	TLS CONFIGURATION	APPLIANCE ADMINISTRATION	EMAIL CONFIGURATION	SECRET STORE

Manage TLS certificates, create certificate requests, and import certificates signed by a certificate authority.

## Certificate Installation

The BeyondTrust Cloud Appliance comes with a pre-installed certificated signed by a certificate authority (CA). This certificate validates the \*.beyondtrustcloud.com domain. If you wish to change the fully qualified domain name (FQDN) of your Cloud Appliance, you must install a CA-signed certificate which validates your new FQDN. To do this, you must create a certificate signing request (CSR) from the BeyondTrust Cloud Appliance as described below, or use Let's Encrypt to obtain a certificate. If you choose a custom hostname for your Cloud Appliance, you may use the built-in Let's Encrypt functionality for your SSL certificate.



For more information on certificates, see [SSL Certificates and BeyondTrust Privileged Remote Access at www.beyondtrust.com/docs/privileged-remote-access/how-to/sslcertificates](https://www.beyondtrust.com/docs/privileged-remote-access/how-to/sslcertificates).

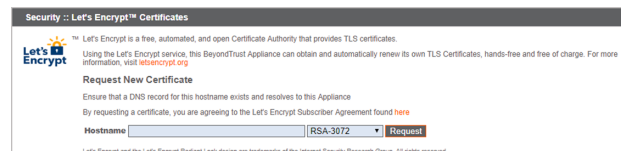
## Let's Encrypt

Let's Encrypt issues signed certificates that are valid for 90 days at a time, and can automatically renew themselves indefinitely. In order to request or renew a Let's Encrypt certificate, you must meet the following requirements:

- The DNS for the hostname you are requesting must resolve to the B Series Appliance.
- The B Series Appliance must be able to reach Let's Encrypt on TCP 443.
- Let's Encrypt must be able to reach the B Series Appliance on TCP 80.

To implement a Let's Encrypt certificate, in the **Security :: Let's Encrypt™ Certificates** section complete the following:

- **Hostname:** Enter the fully qualified domain name (FQDN) of the B Series Appliance.
- Use the dropdown to choose the certificate key type.
- Click **Request**.



As long as the above requirements are met, you will be provided a certificate that will automatically renew every 90 days once the validity check with Let's Encrypt has completed.



**Note:** The B Series Appliance starts the certificate renewal process 30 days before the certificate is due to expire and requires the same process as the original request process does. If it has been unsuccessful 25 days prior to expiry, the B Series Appliance sends daily admin email alerts (if email notifications are enabled). The status will show the certificate in an error state.

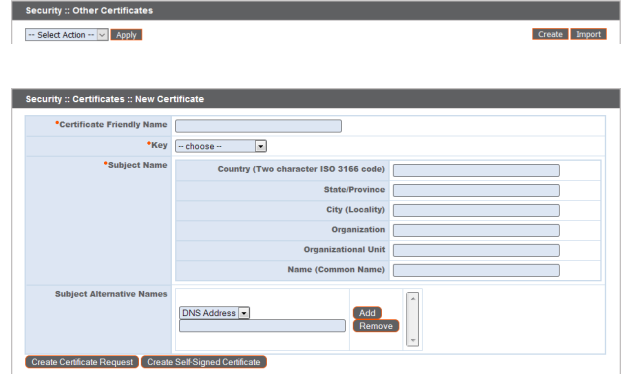


For more information, please see [letsencrypt.org](https://letsencrypt.org).

## Other CA-Issued Certificates

To create a certificate request:

- Locate the **Security :: Other Certificates** section and click **Create**.
- In **Certificate Friendly Name**, enter a name you will use to identify this certificate.
- From the **Key** dropdown, choose the **Existing Key** of your \*.beyondtrustcloud.com certificate or select a new key type.
- Enter the remaining information pertaining to your organization.
- In the **Name (Common Name)** field, enter a descriptive title for your BeyondTrust site.
- In the **Subject Alternative Names** section, enter your BeyondTrust site hostname and click **Add**. Add a SAN for each DNS name or IP address to be protected by this SSL certificate.



**Note:** DNS addresses can be entered as fully qualified domain names, such as *access.example.com*, or as wildcard domain names, such as *\*.example.com*. A wildcard domain name covers multiple subdomains, such as *access.example.com*, *remote.example.com*, and so forth.

Click **Create Certificate Request**.

To use a CA-signed certificate, contact a certificate authority of your choice and purchase a new certificate from them using the CSR you created in BeyondTrust. Once the purchase is complete, the CA sends you one or more new certificate files, each of which you must install on the B Series Appliance.

To upload your new certificate files, click **Import**. Browse to the first file and upload it. Repeat this for each certificate sent by your CA. Often, a CA does not send their root certificate, which must be installed on your B Series Appliance. If the root is missing, a warning appears beneath your new certificate: "The certificate chain appears to be missing one or more certificate authorities and does not appear to terminate in a self-signed certificate."

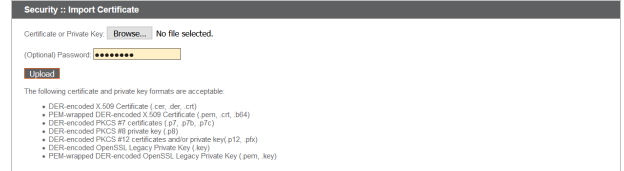
To download the root certificate for your B Series Appliance certificate, check the information sent from your CA for a link to the appropriate root. If there is none, contact the CA to obtain it. If this is impractical, search their web site for their root certificate store. This contains all the root certificates of the CA, and all major CAs publish their root store online.

Usually, the easiest way to find the correct root for your certificate is to open the certificate file on your local machine and inspect its **Certification Path** or **Certificate Hierarchy**. The root of this hierarchy or path is typically shown at the top of the tree. Locate this root certificate. Once done, download it from the CA's root store and import it to your B Series Appliance as described above.

## Certificates

View a table of SSL certificates available on your B Series Appliance.

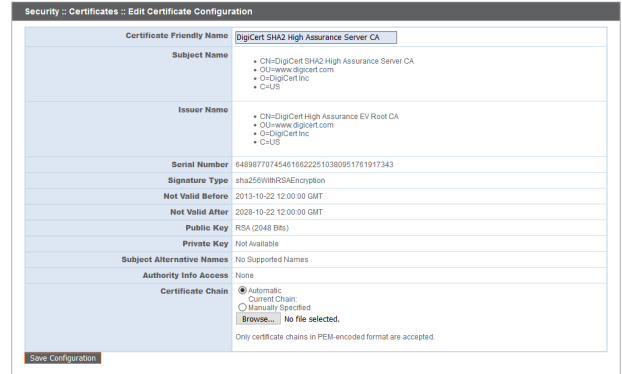
For connections that do not supply a Server Name Indication (SNI) or supply an incorrect SNI, select a default SSL certificate from the list to provide for these connections by clicking the button under the **Default** column. The default SSL certificate cannot be a self-signed certificate nor the default B Series Appliance certificate provided for initial installation.



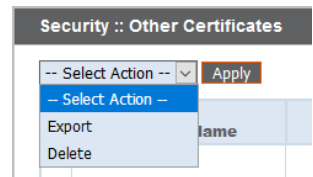
Security :: Other Certificates						
Select Action: Apply						
	Friendly Name	Issued To	Issued By	Expiration	Alternative Name(s)	Private Key?
<input type="checkbox"/>	*example.com	*example.com	DigiCert SHA2 High Assurance Server CA	2019-09-18 12:00:00 GMT	dNSName - *example.com dNSName - example.com	Yes
<input type="checkbox"/>	Bomgar Appliance	Bomgar Appliance	Bomgar Appliance	2019-10-25 13:50:00 GMT	No Supported Names	Yes
<input type="checkbox"/>	DigiCert SHA2 High Assurance Server CA	DigiCert SHA2 High Assurance Server CA	DigiCert High Assurance EV Root CA	2028-10-22 12:00:00 GMT	No Supported Names	No

**i** To learn more about SNI, please see [Server Name Indication](https://cio.gov/sni/) at <https://cio.gov/sni/>.

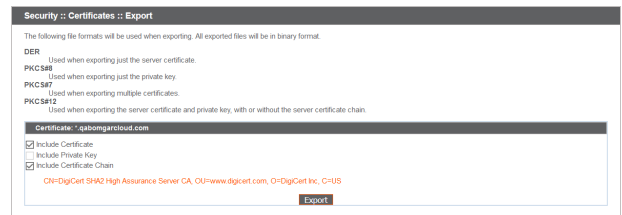
Click a certificate name to view details and manage its certificate chain.



To export one or more certificates, check the box for each desired certificate, select **Export** from the dropdown at the top of the table, and then click **Apply**.

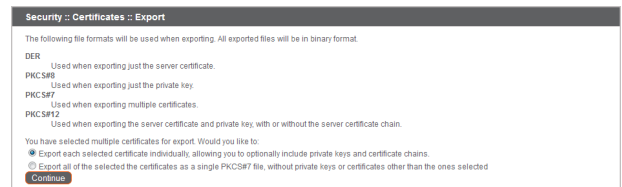


If you are exporting only one certificate, you immediately can choose to include the certificate or the certificate chain if available. Click **Export** to start the download.

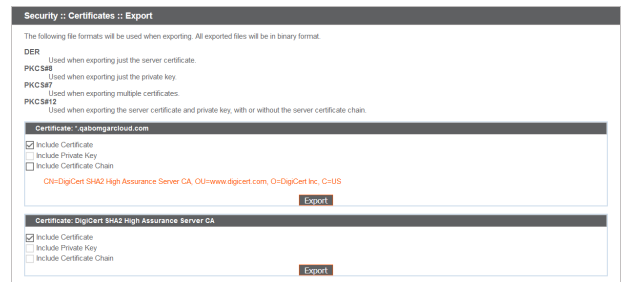


If you are exporting multiple certificates, you have the option to export each certificate individually or in a single PKCS#7 file.

When selecting to export multiple certificates as one file, click **Continue** to start the download. With this option, only the actual certificate files will be exported, without any certificate chains.



To include certificate chains in the export, select individual export and click **Continue** to view all selected certificates. For each listing, choose to include the certificate and/or the certificate chain if available. Click **Export** to start the download.





# Create a Custom Hostname for Your BeyondTrust Cloud Site

STATUS	STORAGE	SECURITY	UPDATES	SUPPORT
CERTIFICATES	TLS CONFIGURATION	APPLIANCE ADMINISTRATION	EMAIL CONFIGURATION	SECRET STORE

To configure your BeyondTrust Cloud Appliance with a custom URL that matches your domain name, please follow the steps below.

1. Register your custom CNAME in DNS (internal and external web host, if necessary), and point it to the BeyondTrust-supplied URL of your Cloud Appliance.
2. Once the site is online, create a certificate signing request (CSR) for submission to your certificate authority.



**Note:** If you are using an existing wildcard SSL certificate, you can skip to step 5.

- To create the CSR, log in to the /login web interface of your BeyondTrust Cloud Appliance and go to **Appliance > Security > Certificates**.
  - In the **Security :: Certificate Installation** section, click **Create**, and then fill out the CSR form.
    - **Certificate Friendly Name:** Enter your requested CNAME URL.
    - **Key:** Select a key from the dropdown list. Verify with your certificate authority which key strengths they support. Larger key sizes normally require more processing overhead and may not be supported by older systems. However, smaller key sizes are likely to become obsolete or insecure sooner than larger ones.
    - **Country:** Enter your organization's two-character Country code. If you are unsure of your country code, please visit [ISO 3166 country codes](http://www.iso.org/iso-3166-country-codes.html) at [www.iso.org/iso-3166-country-codes.html](http://www.iso.org/iso-3166-country-codes.html).
    - **State/Province:** Enter your jurisdiction name, if applicable. Enter the full name, as some certificate authorities do not accept an abbreviation.
    - **City (Locality):** Enter your city or town.
    - **Organization:** Enter the name of your company.
    - **Organizational Unit:** Enter the name of the group or department within the company than manages the certificate and/or the BeyondTrust deployment for the organization.
    - **Name (Common Name):** Enter your requested CNAME URL.
    - **Subject Alternative Name:** Enter your requested CNAME URL, and then click **Add**.
  - Click **Create Certificate Request** and wait for the page to refresh.
3. Export your new CSR.
    - Once back at the **Certificates** page, scroll down to the **Security :: Certificate Requests** section.
    - Click the subject of your new certificate request.
    - Select and copy the **Request Data**, including ----- BEGIN CERTIFICATE REQUEST ----- and ----- END CERTIFICATE REQUEST -----.
    - Copy the text to a text editor, and do not adjust formatting.
    - Save the document to your workstation as a plain text document such as **BeyondTrustCertRequest.txt**.
  4. Obtain your SSL certificate from a certificate authority.
    - Log in to your certificate authority's web site to obtain your SSL certificate.
    - When asked to submit your CSR, paste the entire text of your BeyondTrust CSR into their site.
    - If required to select a web server type, submit that the server is **Apache-compatible**. If given more than one Apache type as options, select **Apache/ModSSL**.

5. Import your entire SSL certificate chain to your BeyondTrust Cloud Appliance.
  - Log in to your /login web interface and navigate to **Appliance > Security > Certificates**.
  - Click **Import**.
  - Browse to each of your SSL certificate files, one at a time (unzipped).
  - Click **Install Certificate**, if prompted.



**Note:** If you are importing an SSL certificate from another server, you must import its associated private key file as well.

6. Send your SSL certificate chain to BeyondTrust Support. BeyondTrust needs this data to rebuild your site software.
  - Log in to your /login web interface and navigate to **Appliance > Security > Certificates**.
  - Find the certificate that is **Issued To** the new CNAME of your Cloud Appliance.
  - Check the box on the left of this particular certificate.
  - Click the dropdown above, select **Export**, and then click **Apply**.
  - On the next page, uncheck the **Private Key** box. Make sure check boxes entitled **Include certificate** and **Include certificate chain** are checked.
  - Click **Export** once more.
  - Send an email to BeyondTrust Support with the downloaded SSL certificate file attached.



**Note:** If you are unable to check the box **Include certificate chain**, then you might be missing one or more certificate segments. Please contact BeyondTrust Support for assistance.



## IMPORTANT!

**DO NOT** send your private key to BeyondTrust! Private key files usually have a **.p12** extension.

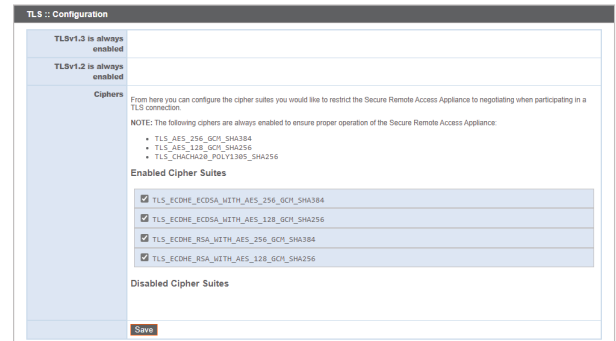
7. BeyondTrust Support uses your new SSL certificate data to build a custom software update. When this is ready, BeyondTrust sends you an email with installation instructions.
8. Select the default SSL certificate.
  - After you apply the custom software update, log in to your /login interface and navigate to **Appliance > Security > Certificates**.
  - Select the **Default** radio button next to your new certificate.
9. The custom CNAME accesses your BeyondTrust Cloud site.



# TLS Configuration: Choose TLS Ciphers in Privileged Remote Access Cloud



Select which cipher suites should be enabled or disabled on your B Series Appliance. Drag and drop cipher suites to change the order of preference. Changes to cipher suites do not take effect until the **Save** button is clicked.

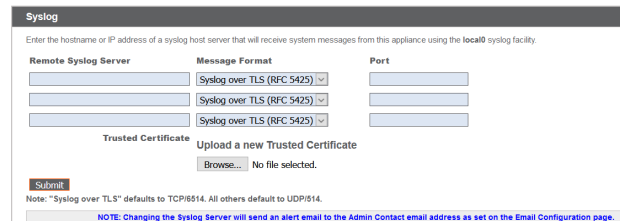


# Appliance Administration: Set Syslog over TLS

STATUS	STORAGE	SECURITY	UPDATES	SUPPORT
CERTIFICATES	TLS CONFIGURATION	APPLIANCE ADMINISTRATION	EMAIL CONFIGURATION	SECRET STORE

You can send syslog messages over an encrypted TLS connection to one or more syslog servers.

Enter the hostname or IP address of a syslog host server receiving system messages from this B Series Appliance using the **local0** syslog facility. You may enter up to three comma-separated servers.




**Note:** Syslog over TLS always uses TCP port 6514.

Next, click **Browse** to locate and upload a new trusted certificate. When finished, click **Submit**.



## IMPORTANT!

*You must upload a new certificate whenever your current certificate expires. Otherwise you may experience a disruption in the syslog events being captured.*


# Email Configuration: Configure Privileged Remote Access Cloud Appliance to Send Email Alerts

<b>STATUS</b>	<b>STORAGE</b>	<b>SECURITY</b>	<b>UPDATES</b>	<b>SUPPORT</b>
CERTIFICATES	TLS CONFIGURATION	APPLIANCE ADMINISTRATION	<b>EMAIL CONFIGURATION</b>	SECRET STORE

Your B Series Appliance can send you automatic email notifications. Emails are sent for the following events:

- **Syslog Server has been Changed:** A user on /appliance has changed the syslog server parameter.
- **RAID Event:** One or more RAID logical drives is not in Optimum state (Degraded or Partially Degraded).
- **SSL Certificate Expiration Notice:** An in-use SSL certificate (include either end-entity certificates or any CA certificate in the chain) expires in 90 days or less.

## Configure via SMTP

 **Note:** This method does not work for some email services. Please see "[Configure via OAuth2 for Microsoft Entra ID](#)" on page 211 or "[Configure via OAuth2 for Google](#)" on page 213 for alternate configurations.

After entering the email addresses for the administrator contacts, save your settings and send a test email to ensure everything works correctly.

**Security :: Admin Contact**

**Admin Contact Email**  
Enter email addresses, one per line, to be notified of important System events

Send a test email when the settings are saved.

**Save Changes**

## Configure via OAuth2 for Microsoft Entra ID

Configuration requires changing settings on the BeyondTrust appliance and the Microsoft 365 subscription with Entra ID.

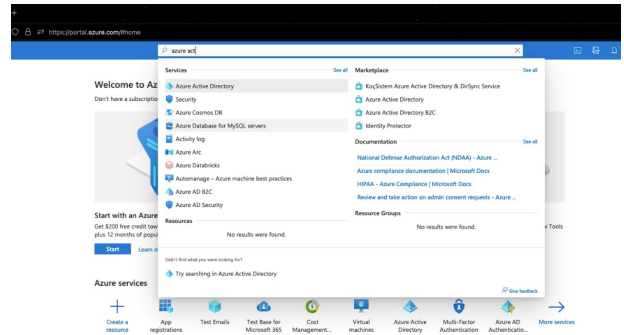
Start by changing settings on the BeyondTrust appliance:

1. Go to **Appliance**, click the **Security** tab and click **Email Configuration**.
2. Change the **Authentication Method** to OAuth2
3. Note the **Authorization Redirect URI**. It is required later.

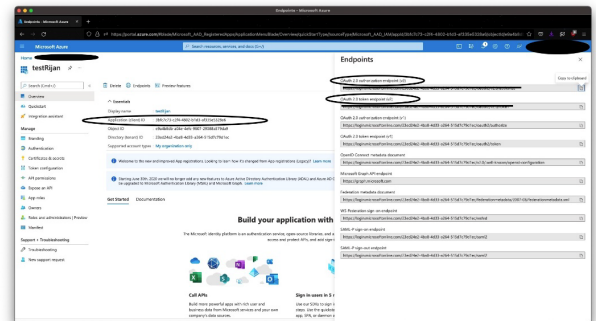
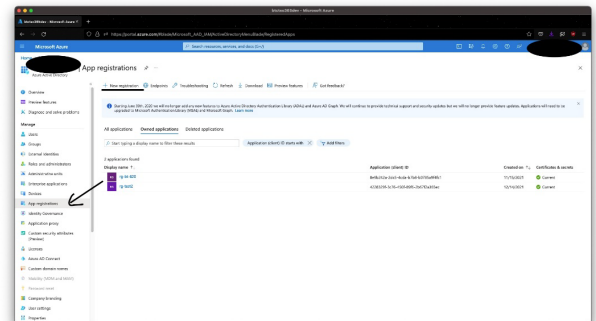
Before starting configuration on Entra ID, an Azure/Office 365 Administrator must enable Authenticated SMTP for each account on Exchange online. To do this, go to **Office 365 Admin Portal ([admin.microsoft.com](https://admin.microsoft.com)) > Active Users > Mail > Manage Email apps** and check **Authenticated SMTP**.

Once **Authenticated SMTP** is enabled, perform the following steps in the Azure console:

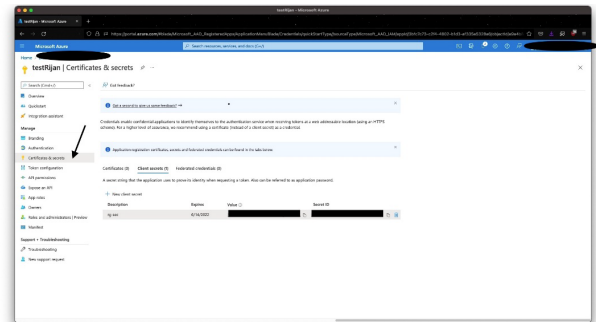
4. Log in to your Azure console ([portal.azure.com](https://portal.azure.com)).
5. Go to **Entra ID**.



6. Go to **App registrations** and select **New registration**.
7. Enter a name, such as **Appliance-OAuth2**.
8. Select the types of account you want to be able to log in to the application through OAuth2. Select **Single Tenant** for internal only.
9. Enter the **Redirect URI**. This is the **Authorization Redirect URI** obtained from the BeyondTrust appliance at the start of this process.
10. Click **Register**.
11. On the **Overview Page** (selected from the left menu), note the **Application (client) ID**. It is required later.
12. Click **Endpoints** (above the **Application (client) ID**).
13. Note the **OAuth2.0 authorization endpoint (v2) URI** and the **OAuth token endpoint (v2) URI**. These are required later.



14. On the **Certificates & secrets** page (selected from the left menu), note the **Client secret**. It is required later. If you do not have a **Client secret**, click **New client secret** to create one.



The remaining steps are done on the BeyondTrust appliance.

15. Go to **Appliance**, click the **Security** tab, and click **Email Configuration**.
16. Enter the following information noted earlier:
  - **Authorization Endpoint**
  - **Token Endpoint**
  - **Client ID**
  - **Client Secret**
17. Enter the email address for this service as the **Send from Email Address** and the **User email**.



**Note:** These addresses must match and be a valid account for Entra ID. If you have Anonymous Email (Send Email as Anyone) enabled for the Entra ID Tenant, you can add anything in the send email field. If not, use the username of the application owner and the Allowed Users.

18. Enter data for the **Host**, **Encryption**, and **Port** fields.
  - **Host:** smtp.office365.com
  - **Encryption:** STARTTLS
  - **Port:** 587



**Note:** Default data for Entra ID is shown, but your installation may use a different host or encryption method. The port is applicable for STARTTLS, but other encryption methods may use a different port.

19. Upload the SMTP server's Root CA Certificate, if required. This step is not required for most large email vendors.
20. Enter the following for **Scopes:** https://outlook.office.com/SMTP.Send offline\_access
21. Click **Save Changes**.
22. Click **Authorize**. At the sign in page that appears, accept the permissions request. The mail setting page reloads, and the authorization button is replaced by an authorized message.
23. To test the configuration:
  - Add an **Admin Contact Email**.
  - Check **Send a test email**.
  - Click **Save Changes**.



**Note:** Azure AD has been renamed Microsoft Entra ID.

## Configure via OAuth2 for Google

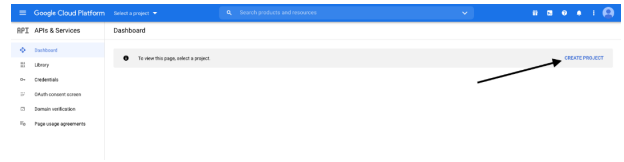
Configuration requires changing settings on the BeyondTrust appliance and the Google Cloud Platform.

Start by changing settings on the BeyondTrust appliance:

1. Go to **Appliance**, click the **Security** tab and click **Email Configuration**.
2. Change the **Authentication Method** to OAuth2
3. Note the **Authorization Redirect URI**. It is required later.

Now log in to your Google Cloud Platform console (Google Dev Console) ([console.cloud.google.com](https://console.cloud.google.com)). Use the correct gmail account, as only the owner of the project is able to work with the project. If you do not already have a paid account, you may choose to purchase an account by clicking **Activate** in the top banner. BeyondTrust cannot provide assistance with purchasing an account. Click **Learn More** in the top banner for information regarding the limitations of free accounts.

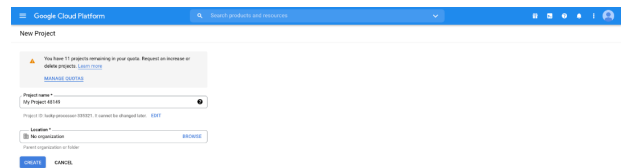
4. Click **CREATE PROJECT**. You can also use an existing project.



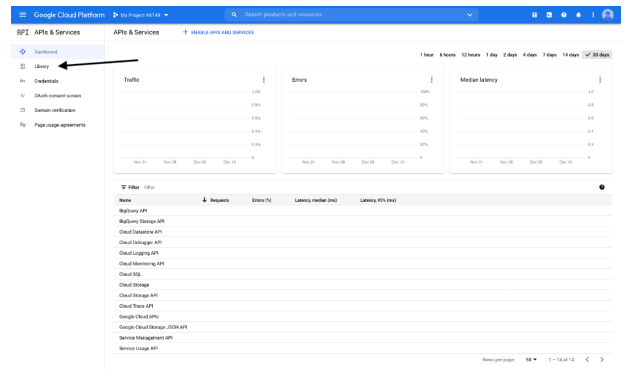
5. Accept the default **Project Name** or enter a name.

6. Accept the default **Location** or select a folder from those available for your organization.

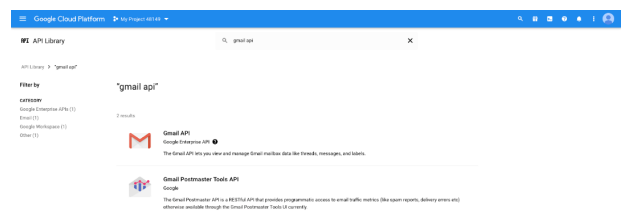
7. Click **CREATE**.



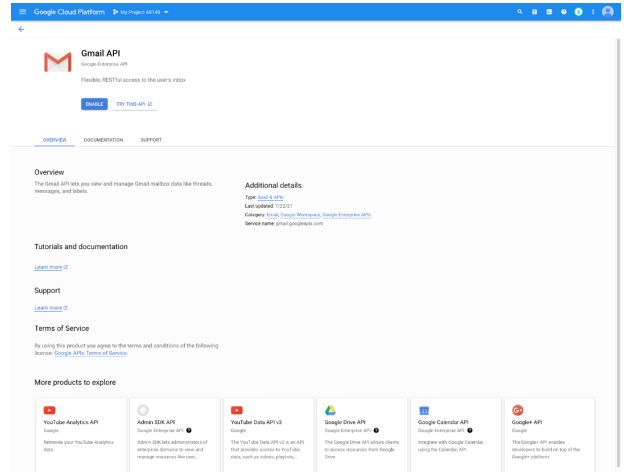
8. The **APIs and services** page appears. Click **Library** in the left menu.



9. Search or browse for the **Gmail API** in the library, and click it.

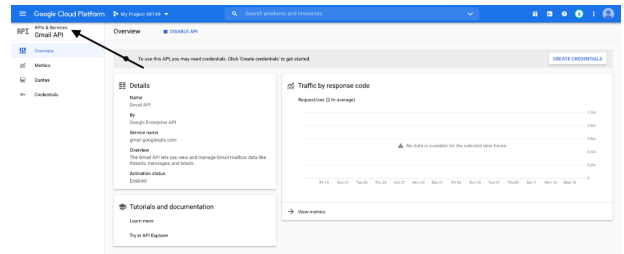


10. The **Gmail API** appears on its own page. Click **ENABLE**.



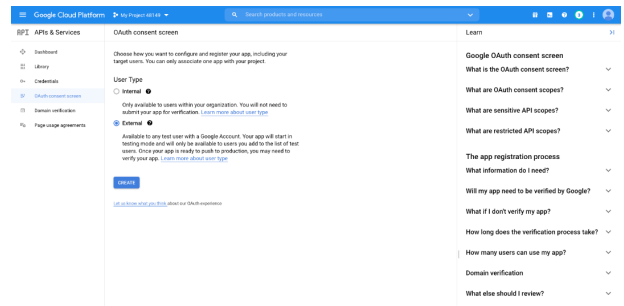
11. The **Gmail API Overview** page appears. Click **APIs & services** in the upper left.

12. The **APIs and services** page appears again. Click **OAuth consent screen** in the left menu.



13. Select the **User Type**. Internal allows only users from within the organization, but requires a Google Workspace account.

14. Click **CREATE**.



15. Enter the **App name**.

16. Enter a **User support email** address. This may default to the address you are using to create the project.

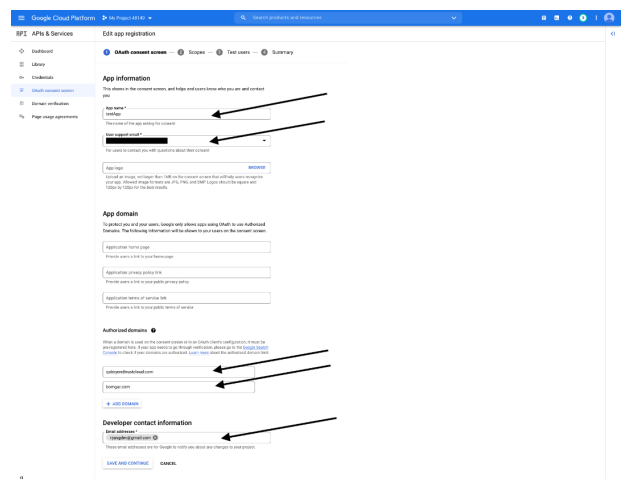
17. Enter a logo for the app, if desired. The **App domain** section is also optional.

18. Add the **Authorized domains**. For BeyondTrust test appliances, these are:

- qabeyondtrustcloud.com
- bomgar.com

19. Enter the **Developer contact information**. This is the email address you are using to create the project.

20. Click **SAVE AND CONTINUE**.

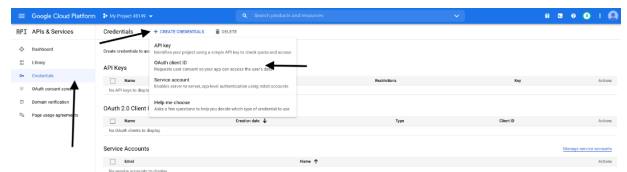
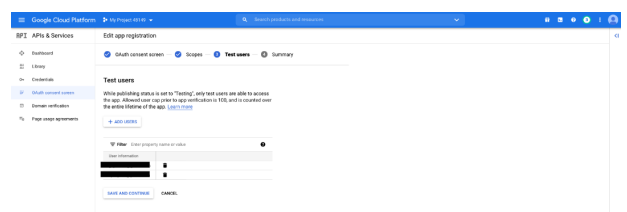
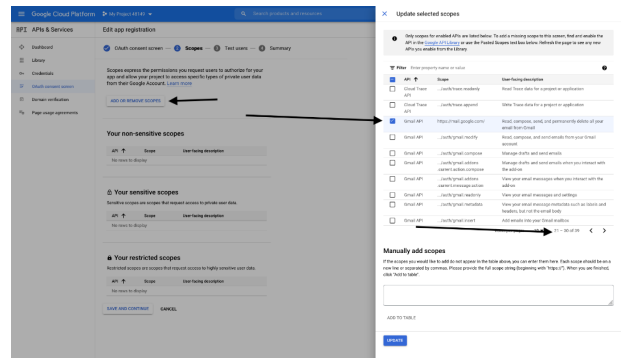


21. Under the **Scopes** tab, click **ADD OR REMOVE SCOPES**. This opens the **Update selected scopes** window.
22. Locate and check the scope **https://mail.google.com/** for the Gmail API.

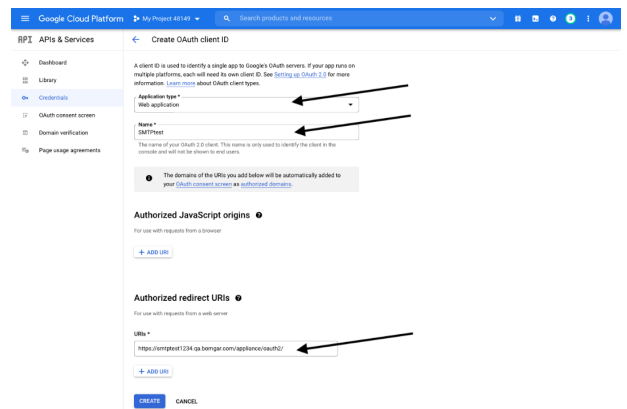
 **Note:** The API does not appear if it has not been enabled.

23. Click **UPDATE**. The **Update selected scopes** window closes.
24. Click **SAVE AND CONTINUE**.

25. Under the **Test users** tab, click **ADD USERS**. This opens the **Add Users** window. Add the users that have access to the application and click **ADD**. Note the limits on test user access and related restrictions.
26. Click **SAVE AND CONTINUE**.
27. Review the Summary, and make any necessary changes or corrections.
28. Click **BACK TO DASHBOARD**.
29. Click **Credentials** in the left menu.
30. Click **CREATE CREDENTIALS** in the top banner and select **OAuth client ID**.

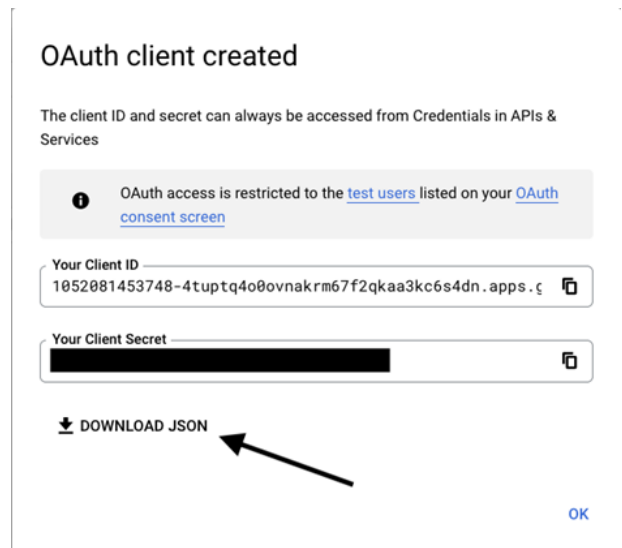


31. On the create credentials page, select **Web application** for the **Application type**. Additional fields appear when this is selected.
32. Enter a name for the application.
33. Scroll down to **Authorized redirect URIs** and click **ADD URI**.
34. Enter the **Authorization Redirect URI** obtained from the BeyondTrust appliance at the start of this process.
35. Click **CREATE**.





36. A window confirms creation of the OAuth client, and shows the **Client ID** and **Client Secret**. Click to download a JSON file. The file contains information that is needed in the next steps.
37. Click **OK** to return to the APIs and services page.



The remaining steps are done on the BeyondTrust appliance.

38. Go to **Appliance**, click the **Security** tab and click **Email Configuration**.
39. Enter the following information, found in the downloaded JSON file:
  - **Authorization Endpoint**
  - **Token Endpoint**
  - **Client ID**
  - **Client Secret**
40. Enter any email address for this service as the **Send from Email Address**.
41. Enter the **User email**. This must be an email address entered as a **Test user** with access to the application, when you completed the OAuth consent screens.
42. Enter data for the **Host**, **Encryption**, and **Port** fields.
  - **Host:** smtp.gmail.com
  - **Encryption:** TLS
  - **Port:** 465



**Note:** Default data for Google is shown, but your installation may use a different host or encryption method. The port is applicable for TLS, but other encryption methods may use a different port.

43. Enter your TLS certificate if one is provided by Google. If not, check **Ignore TLS certificate errors**.
44. Enter the following for **Scopes:** https://mail.google.com
45. Click **Save Changes**.
46. Click **Authorize**. After the sign in page that appears, you may receive the warning **Google has not verified this message**, if you have not published the application. The consent page reloads, and the authorization button is replaced by an authorized message.

47. To test the configuration:

- Add an **Admin Contact Email**.
- Check **Send a test email**.
- Click **Save Changes**.

# Secret Store: Store and Access Secrets in Privileged Remote Access Cloud

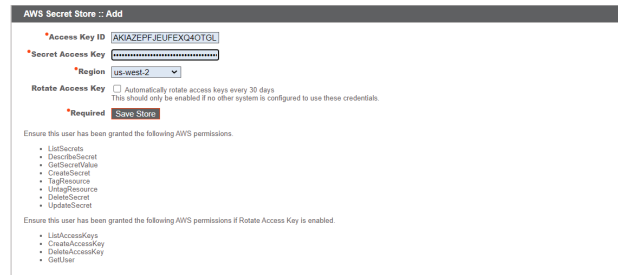
<b>STATUS</b>	<b>STORAGE</b>	<b>SECURITY</b>	<b>UPDATES</b>	<b>SUPPORT</b>
CERTIFICATES	TLS CONFIGURATION	APPLIANCE ADMINISTRATION	EMAIL CONFIGURATION	<b>SECRET STORE</b>

Create and manage secret keys stored in AWS to securely store encryption keys and site data. To add a secret store, select the store from the dropdown, and then click **Add Store**. Provide and save the information for the store as shown in the steps below.



## Add AWS Secret Store

1. Provide the **Access Key ID**, **Secret Access Key**, and **Region**.
2. Check the **Rotate Access Key** box only if you are not using any of the same IAM user's credentials in any other system.
3. Click **Save Store**.
4. It is also necessary for any firewall to allow outbound traffic to the IP addresses associated with the region endpoint used for the secret store.



**Note:** IP addresses may change. Please see the current list of IP addresses at [AWS IP address ranges at https://docs.aws.amazon.com/general/latest/gr/aws-ip-ranges.html](https://docs.aws.amazon.com/general/latest/gr/aws-ip-ranges.html).



For the list of endpoints, please see [AWS Secrets Manager endpoints and quotas at https://docs.aws.amazon.com/general/latest/gr/asm.html](https://docs.aws.amazon.com/general/latest/gr/asm.html).



**Note:** For added security, configure your AWS Identity and Access Management (IAM) Policy to limit access to resources matching **BeyondTrust\*** on the following permissions:

- DescribeSecret
- GetSecretValue
- TagResource
- UntagResource
- CreateSecret
- DeleteSecret
- UpdateSecret

For more information on managing AWS IAM Policies, see [Managing IAM Policies at https://docs.aws.amazon.com/IAM/latest/UserGuide/access\\_policies\\_manage.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies_manage.html).



**Note:** *If you delete the last remote store, a message displays indicating secrets will be moved locally.*

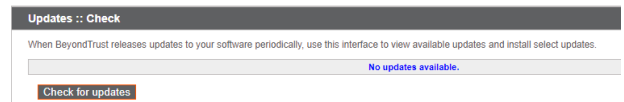
# Updates: Check for Update Availability and Install Software on Privileged Remote Access Cloud



It is good practice to subscribe to the changelog for notifications of new releases. You can check for new releases at any time by clicking **Check for Updates**.

If multiple software packages have been built for your B Series Appliance, each one is listed separately in the list of available updates. Your new software is automatically downloaded and installed when you click the appropriate **Install This Update** button.

If no update packages or patches are available for your B Series Appliance, a message stating *No updates available* is displayed. If an update is available but an error occurred when distributing the update to your B Series Appliance, an additional message is displayed, such as, *An error occurred building your update. Please visit [www.beyondtrust.com/support](http://www.beyondtrust.com/support) for more information.*



## IMPORTANT!

*Please be prepared to install software updates directly after download. Once an update has been downloaded, it no longer appears in your list of available updates. Should you need to re-download a software update, contact BeyondTrust Technical Support.*

When the BeyondTrust End User License Agreement (EULA) screen appears, fill out the required contact information and click the **Agree-Begin Download** button to accept the EULA and continue the installation.

Note that if you chose to decline the EULA, an error message displays and you are not able to update your BeyondTrust software.

If you have any issues updating after accepting the EULA, please contact BeyondTrust Technical Support at [www.beyondtrust.com/support](http://www.beyondtrust.com/support).

During the installation process, the **Updates** page displays a progress bar to notify you of the overall update progress. Updates made here automatically update all sites and licenses on your B Series Appliance.

If you are installing a software update, logged-in users temporarily lose connection to any access sessions and the access console; therefore, schedule software updates for non-peak hours. However, if your update package contains only additional licenses, you can install the update without interrupting user connections.

**Please wait while the software is updating.**

**Note that installation progress may stop for long periods of time while data is being backed up.**

**You will be automatically redirected when the update is finished.**

**Do not refresh this page.**

**Do not reboot the appliance.**

**If an error occurs, please contact [BeyondTrust Support](#)**



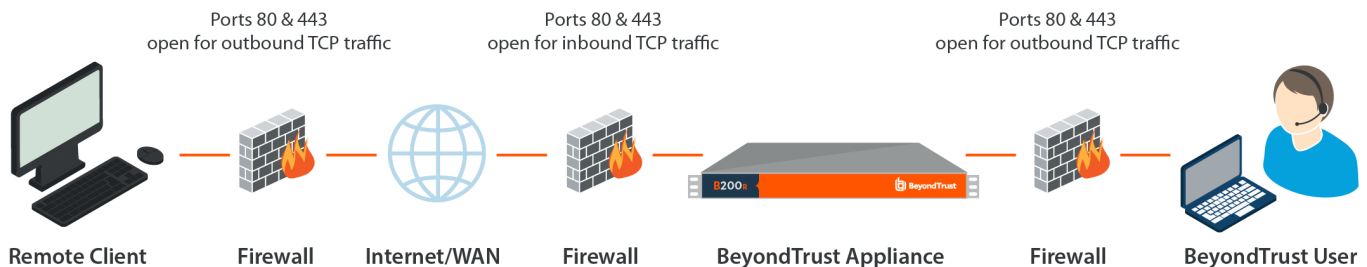
Find current information about the latest BeyondTrust updates and subscribe at <https://www.beyondtrust.com/docs/release-notes/index.htm>.



## Ports and Firewalls

BeyondTrust solutions are designed to work transparently through firewalls, enabling a connection with any computer with internet connectivity, anywhere in the world. However, with certain highly secured networks, some configuration may be necessary.

### TYPICAL NETWORK SETUP



- Port 443 must be open for outbound TCP traffic on the remote system's and local user's firewalls. More ports may be available depending on your build. The diagram shows a typical network setup; more details can be found in the [BeyondTrust Appliance B Series Hardware Installation Guide](https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/deployment/hardware-sra/index.htm) at <https://www.beyondtrust.com/docs/privileged-remote-access/getting-started/deployment/hardware-sra/index.htm>.
- Internet security software such as software firewalls must not block BeyondTrust executable files from downloading. Some examples of software firewalls include McAfee Security, Norton Security, and Zone Alarm. If you do have a software firewall, you may experience some connection issues. To avoid such issues, configure your firewall settings to allow the following executables, wherein {uid} is a unique identifier consisting of letter and numbers:
  - bomgar-scc-{uid}.exe
  - bomgar-scc.exe
  - bomgar-pac-{uid}.exe
  - bomgar-pac.exe
  - bomgar-pec-{uid}.exe
  - bomgar-pec.exe

For assistance with your firewall configuration, please contact the manufacturer of your firewall software.

- Example firewall rules based on B Series Appliance location can be found at [www.beyondtrust.com/docs/privileged-remote-access/getting-started/deployment/dmz/firewall-rules.htm](http://www.beyondtrust.com/docs/privileged-remote-access/getting-started/deployment/dmz/firewall-rules.htm).

If you should still have difficulty making a connection, contact BeyondTrust Technical Support at [www.beyondtrust.com/support](http://www.beyondtrust.com/support).