BeyondTrust

Privilege Management for Mac BeyondInsight Integration Guide

TC:4/21/2021

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Integrate BeyondTrust Privilege Management for Mac with BeyondInsight

Overview

Privilege Management combines privilege management and application control technology in a single lightweight agent. This scalable solution allows global organizations to eliminate admin rights across the entire business. With the integration between BeyondInsight and Privilege Management, you have a proven privilege management solution that transmits data about your endpoints and policies to a centralized management console with the reporting and analytics capabilities needed to effectively operate your business in a secure fashion.

Network Considerations

TCP Port 443	An event service is used to communicate between PM and BeyondInsight using port 443. Events from PM are sent to BeyondInsight using this service. Communications over this channel is secured by means of a client certificate.

Prerequisites

- BeyondInsight version 6.9.0.712 or later
- Privilege Management for Mac 5.4.51.0 or later

Note: *The reporting component is available in BeyondInsight versions 6.10 and later.*

For information on integrating BeyondTrust Privilege Management for Windows with BeyondInsight, please see the Privilege Management for Windows Integration Guide, at www.beyondtrust.com/docs/privilege-management/windows.htm.

Steps to Integrate Privilege Management for Mac with BeyondInsight

Once you have BeyondInsight and Endpoint Privilege Management installed in your environment, you need to configure both instances to communicate with each other. Below is a list of high level steps needed to complete the integration.

- Create and deploy the BeyondInsight client certificate to all potential Privilege Management for Mac endpoints or policy editor machines.
- Using Mobile Device Management (MDM) or your method of choice, deploy the Privilege Management for Mac client and BeyondInsight adapter on all endpoints.
- Configure the **settings_app.xml** file on the endpoints with the BeyondInsight Server information.
- Verify BeyondInsight is receiving heartbeats and information from Privilege Management for Mac endpoints.
- Configure the policy editor to communicate with BeyondInsight and test the connection.
- Create a new policy in the editor.
- Create a Smart Rule in BeyondInsight.
- Assign and deploy a policy from BeyondInsight.

Installation Information for BeyondInsight and Privilege Management for Mac

Prior to integration, verify all BeyondInsight and Privilege Management components are properly installed in your environment.

IMPORTANT!

To complete this integration, please make sure you have the necessary software installed and configured as indicated in this guide, as well as any network considerations.

BeyondInsight Installation

For detailed instructions on installing BeyondInsight in your environment, please see the BeyondInsight Installation Guide at https://www.beyondtrust.com/docs/beyondinsight-password-safe/bi/index.htm.

Privilege Management for Mac Installation

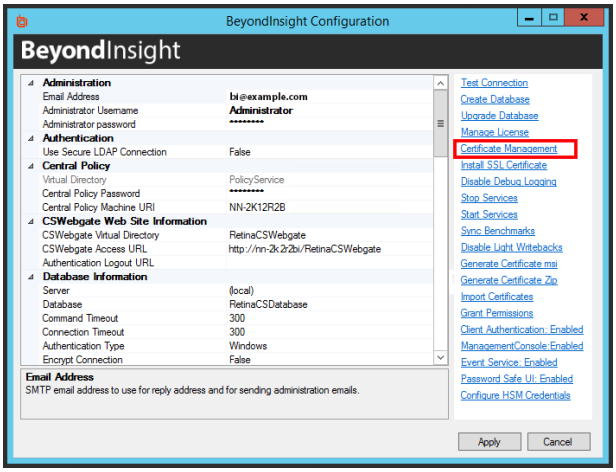
For detailed instructions on installing Privilege Management for Mac, please see the Mac Administration Guide at https://www.beyondtrust.com/docs/privilege-management/mac/index.htm.

Create and Deploy the BeyondInsight Client for Privilege Management for Mac

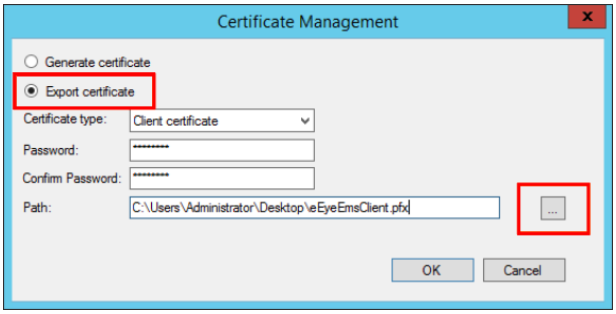
To establish communication between BeyondInsight and Privilege Management for Mac clients, a client certificate must be generated from BeyondInsight, and then installed on every Privilege Management for Mac client needing to transmit information to BeyondInsight.

Generate Client Certificate ZIP

1. On the BeyondInsight Server, go to **C:\Program Files (x86)\eEye Digital Security\Retina CS**.
2. Run **REMEMConfig.exe**, which opens the **BeyondInsight Configuration Tool**.
3. Click on the **Certificate Management** link.



4. In the **Certificate Management** dialog window, select **Export Certificate**.
5. Select **Client Certificate** as the **Certificate type**.
6. Enter a chosen **Password**. We recommend that you use the existing BeyondInsight Central Policy password.
7. Click the ellipses (**…**) to browse to the desired location.
    - Enter a **File name** and select **Certificate files (*.pfx)** as the **Save as type**. We recommend that you name the certificate **eEyeEmsClient.pfx**.
    - Click **Save**.
    - Verify the **Path** has been filled in correctly.



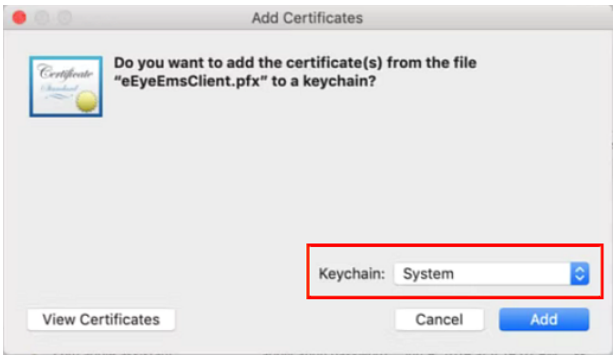
8. Click **OK**. A notification appears, stating *The Client certificate has been exported*. Click **OK** again.

Install the BeyondInsight Client Certificate on the Endpoint

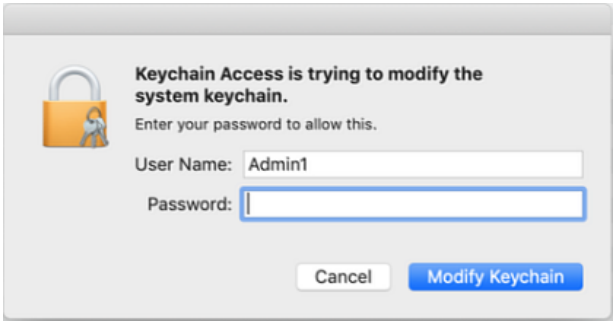
You may use the deployment method of your choice to get the client certificate to your endpoints, whether that be Mobile Device Management methods (such as Jamf or AirWatch), manual configuration, download from a shared resource, etc.

1. On the endpoint, locate and double-click the **eEyeEmsClient.pfx** file.

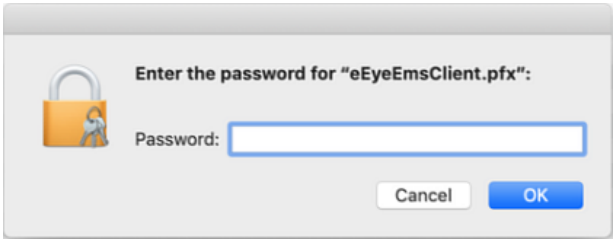
2. In the **Add Certificates** dialog box, make sure that **System** is selected in the **Keychain** field.
3. Click **Add**.



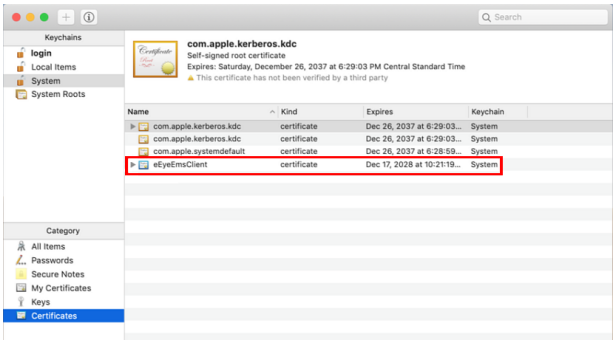
4. Enter the admin username and password to authorize the change, and click **Modify Keychain**.



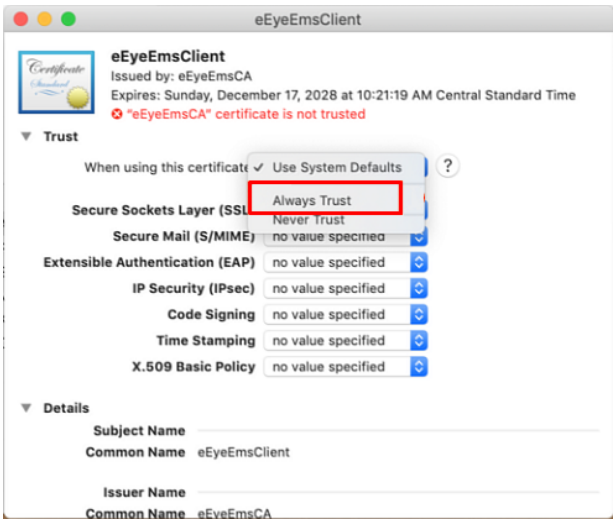
5. In the next window, enter the certificate password and click **OK**.



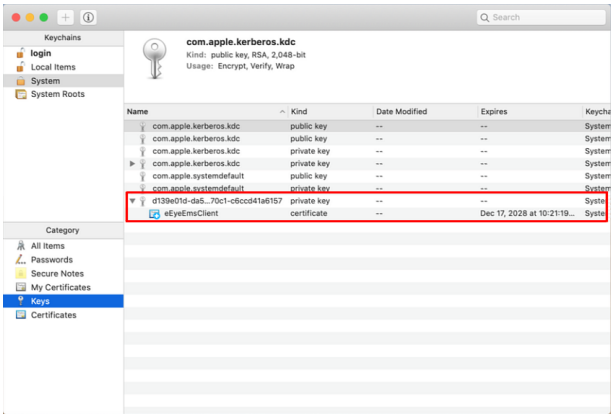
6. The new certificate will appear in the **Category** section. Choose one and double-click the certificate. This step also adds a private key to the **Keys** category.



7. In the certificate window, expand the **Trust** section and choose **Always Trust** from the **When using this certificate** field. Then close the window.



8. In the **Keys** window, double-click the private key.



9. Select the **Access Control** tab in the private key window.
10. Select **Allow all applications to access this item** and click **Save Changes**.

Install the Privilege Management for Mac Client

The client and the adapter are obtained from BeyondTrust after purchasing Privilege Management with BeyondInsight, and may be distributed to the endpoints using the method of your choice, including Mobile Device Management (MDM), such as Jamf or AirWatch.

You can also use the Privilege Management for Mac Rapid Deployment Tool to install the adapter.

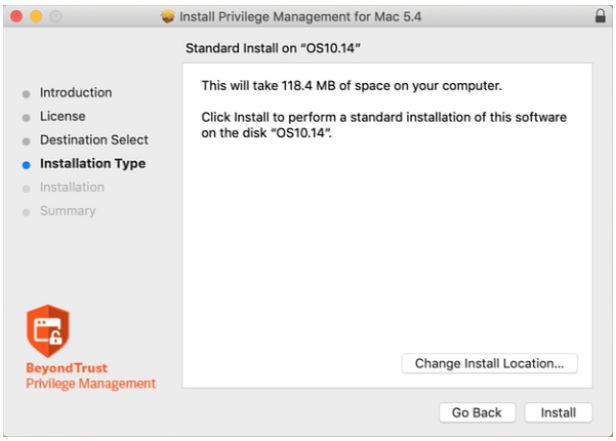
> *For more information, please see the Rapid Deployment Tool Guide at https://www.beyondtrust.com/docs/privilege-management/documents/windows-mac/pm-mac-rapid-deployment-tool.*

The filenames are as follows, where **x.x.x.x** represents the version:

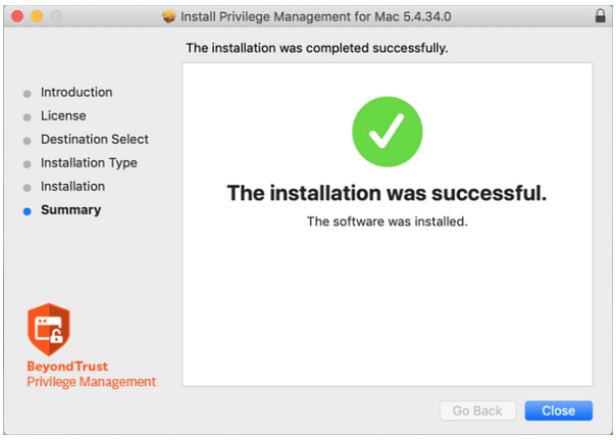
- **PrivilegeManagementForMac_x.x.x.x.pkg**
- **BIAdapter_x.x.x.x.pkg**

To install the Privilege Management for Mac client:

1. Double-click the **PrivilegeManagementForMac_x.x.x.x.pkg** file.
2. Click **Continue** on the **Introduction** page.
3. On the **Software License Agreement** page, click **Continue** and then click **Agree** to agree to the terms and conditions.
4. (Optional) To change the installation destination, click the **Change Install Location** button. The **Destination Select** page will allow you to choose from viable installation location options. Click **Continue**.
5. Click the **Install** button on the **Installation Type** page. If prompted, enter your admin credentials to continue. Click **OK** if the **Installer.app** needs permission to modify passwords, networking, or system settings.



6. The **Summary** page shows that the installation was successful. Click **Close** to complete the installation.

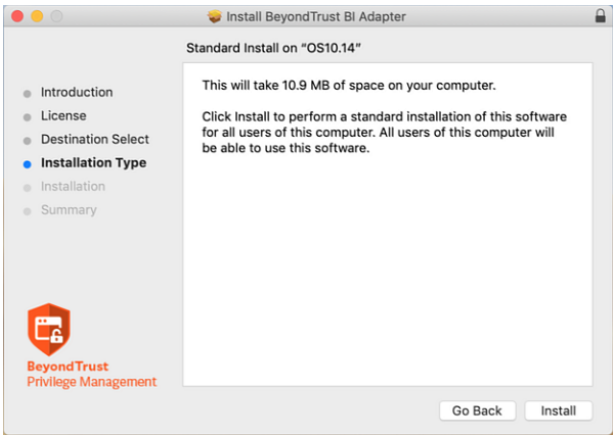


Install the BeyondInsight Adapter

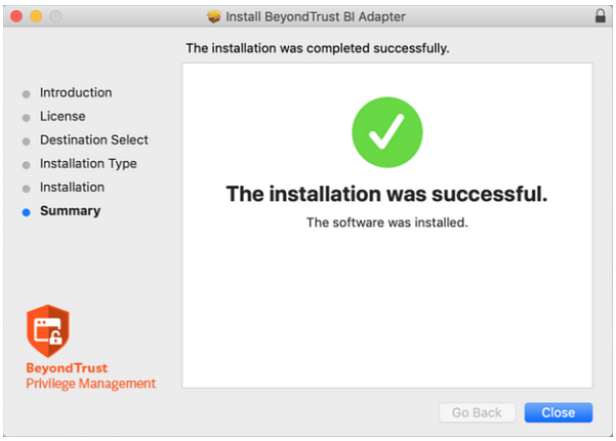
You may use the deployment method of your choice to get the BeyondInsight adapter to your endpoints, whether that be Mobile Device Management methods (such as Jamf or AirWatch), manual configuration, download from a shared resource, etc.

1. Double-click the **BIAdapter_x.x.x.x.pkg** file.
2. Click **Continue** on the **Introduction** page.
3. On the **Software License Agreement** page, click **Continue** and then click **Agree** to agree to the terms and conditions.

4. Click the **Install** button on the **Installation Type** page. If prompted, enter your admin credentials to continue. Click **OK** if **Installer.app** needs permission to modify passwords, networking, or system settings.

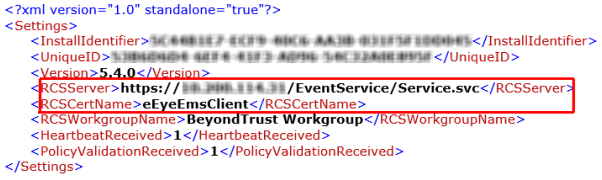


5. The **Summary** page shows that the installation was successful. Click **Close** to complete the installation.



Edit the Settings File

Once the BeyondInsight adapter is installed, modify the settings file, located at **/Library/Application Support/BeyondTrust/Defendpoint/settings_app.xml**, to include the server URI and certificate name as follows:




```
<RCSServer>example.com</RCSServer>
<RCSCertName>eEyeEmsClient</RCSCertName>
```

> ***Note:*** *The adapter, when installed, creates the* ***settings_app.xml*** *file with some default values pre-populated. Only the* ***RCSServer*** *field is empty, to be configured by the user.*

Check to See if the Endpoint has Connected

After the settings file has been configured, the Privilege Management endpoint is capable of checking into BeyondInsight and sending events to BeyondInsight. If you have access to the machine running the BeyondInsight Server, you can determine if the endpoint has checked in by using either of the following methods:

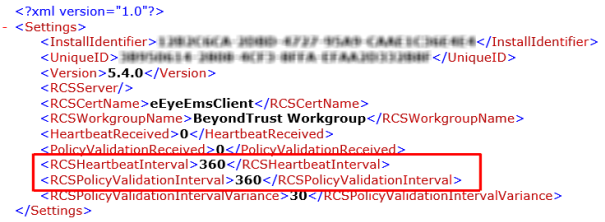
1. The endpoint is visible on the **Assets** page, at **Assets > Endpoint Privilege Management**.

> ***Note:*** *Configure the **Activity Monitor** to show all processes, as **BIAdapter** runs as user **_defendpoint**.*

2. Run the following SQL query:

```
select * from Asset_PBDInfo
select * from Asset_PBDInfoEx
```

> ***Tip:*** *If you want to force a policy update for a client getting an update for the first time, you can restart the BeyondInsight adapter. In the **Activity Monitor**, restart the **BIAdapter** process.*
>
> *The default time for the policy update and for the heartbeat is six hours. These values can be changed on the BeyondInsight Server, and the policy can be applied to the endpoint, but this policy would not be applied until the initial 6 hour period has elapsed. Manually changing the **RCSHeartbeatInterval** and **RCSPolicyValidationInterval** values in the settings file will also cause the endpoint to check in more often. Enter the values in minutes.*



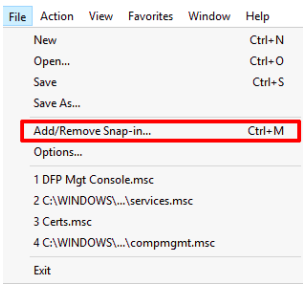
If you have access to the endpoints, you can use either of the following methods to determine if they have checked in:

- Open **Console** and filter on **subsystem: com.beyondtrust.BIAdapter**. Ensure that **Info** and **Debug Messages** are on. Logs about the connection will be displayed in real time. You can check when the next policy validation is scheduled, as well as the next heartbeat request.
- Open **Activity Monitor**. The **BIAdapter** service is displayed as running.

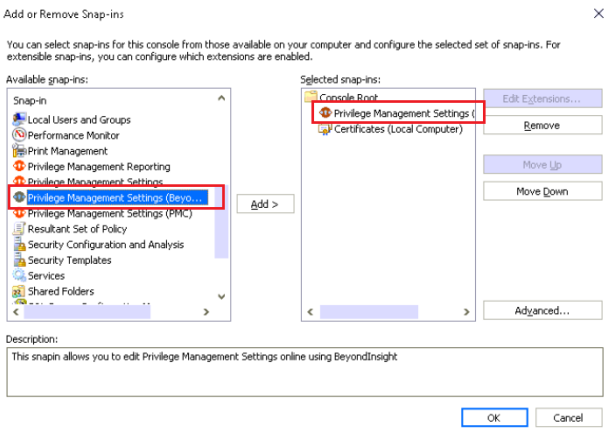
Configure the Privilege Management Policy Editor

After you deploy the client certificate to your Privilege Management Policy Editor machines, you can set up the Privilege Management Policy Editor and configure the editor to work with BeyondInsight.

1. Launch the Microsoft Management Console (**mmc.exe**) as an admin and go to **File > Add/Remove Snap-in**.



2. In the **Available snap-ins** menu, locate and select the **Privilege Management Settings (BeyondInsight)** snap-in.
3. Click **Add >**, and then click **OK**. The **Privilege Management Settings (BeyondInsight)** snap-in appears in the **Console Root** menu.

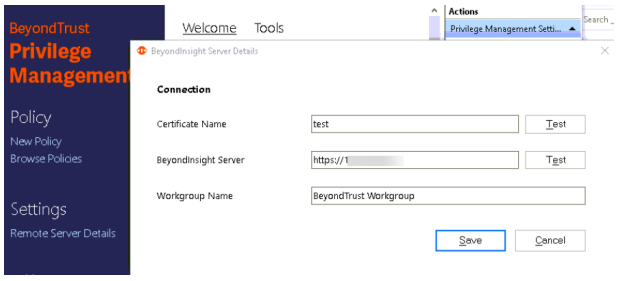


Test the Connection

Before continuing on with the remainder of the integration setup, you should test the following:

- Test to ensure that a client certificate of the correct name is available in the certificate store.
- Test to ensure the policy editor can reach the BeyondInsight Server.

To test, click on **Remote Server Details** from the **Welcome** page. From the **BeyondInsight Server Details** dialog, enter the server details. Then click **Test** by **Certificate Name** and **BeyondInsight Server** to check each component.



> ***Note:*** *The **Certificate Name** and **Workgroup Name** fields are populated with default values.*

If a certificate of the correct name is found, a message appears stating *Valid certificate found in certificate store*.

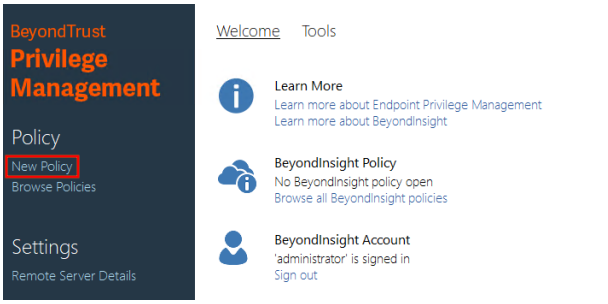
If the BeyondInsight Server can be reached, a message appears stating *The server was reached successfully*.

When finished testing, click **Save**.

Create a New Policy in the Privilege Management Policy Editor

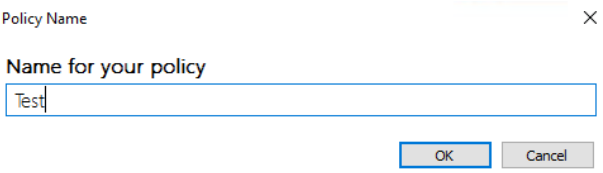
Once you have established communication between the Privilege Management Policy Editor and the BeyondInsight Server, you can create a new policy from the editor.

1. From the **Welcome** page, click **New Policy**.



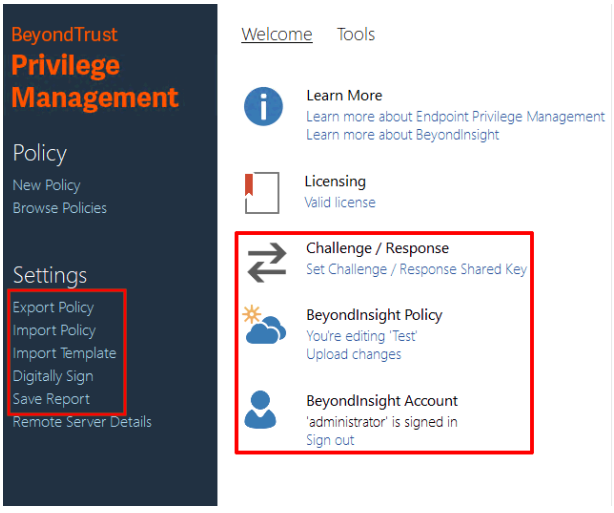
2. Enter the credentials used to log in to your BeyondInsight instance.

3. Type in a name for your new policy, and then click **OK**.



The **Welcome** page updates to show more options, including:

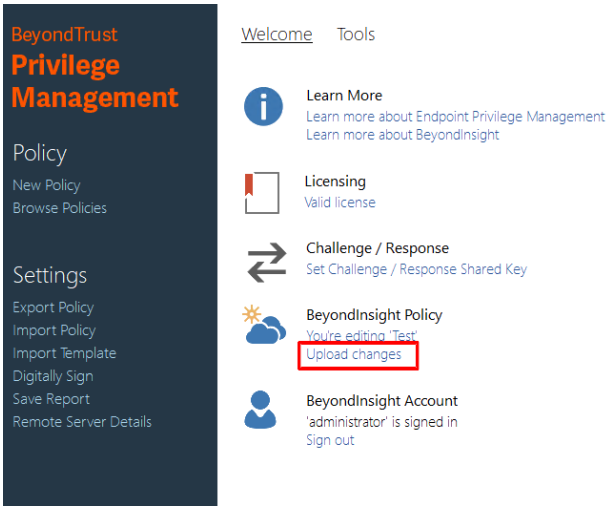
- **Export Policy**
- **Import Policy**
- **Import Template**
- **Digitally Sign**
- **Save Report**
- **Challenge / Response**
- **BeyondInsight Policy**
- **BeyondInsight Account**



For more information on policy creation and best practices, please see the Privilege Management for Mac Admin Guide at https://www.beyondtrust.com/docs/privilege-management/mac/index.htm.

Upload Changes

Once you have created and modified your policy, you can upload your changes to BeyondInsight by clicking **Upload Changes** on the **Welcome** page.



After you have uploaded your policy to the BeyondInsight Server, you can view it in BeyondInsight Server from **Menu > Configuration > Privilege Management Policies**.

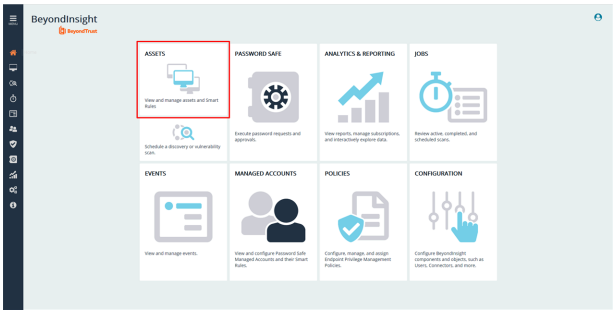
Create a Smart Rule and Assign Policy in BeyondInsight

After you have added and uploaded a policy to BeyondInsight from the Policy Editor, log in to your BeyondInsight instance to create Smart Rules and assign policies for assets and users.

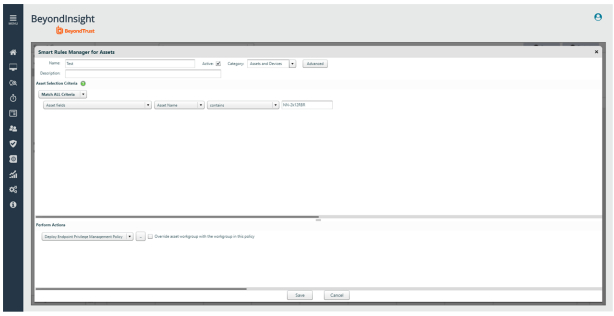
> ***Tip:*** *If BeyondInsight and Privilege Management for Mac are successfully communicating, the Endpoint Privilege Management option becomes available under* ***Menu > Assets****.*

Create a Smart Rule for Assets

1. In your BeyondInsight instance, click on **Assets**.



2. Click **Manage Smart Rules**.
3. Click **New**.
4. From the **Smart Rules Manager for Assets** dialog, type a name for the Smart Rule.
5. Check **Active**.
6. From the **Category** dropdown, select **Assets and Devices**.
7. Enter a description, if needed.
8. In the **Asset Selection Criteria** section, design a query to pull in the assets you wish to assign policy to.



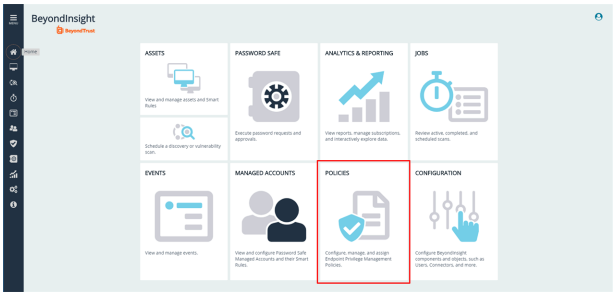
> ***Tip:*** *For this example, we can narrow down the results of our query to locate our test system, NN-1K12RBR. Choose* ***Match ALL Criteria****. Select* ***Asset fields > Asset Name > contains > NN-1K12RBR****.*

9. From the **Perform Actions** dropdown, select **Deploy Endpoint Privilege Management Policy**.
10. Click the **..** button.
11. Select an option from the policy you uploaded from Privilege Management for Mac .
12. Click **Save**.

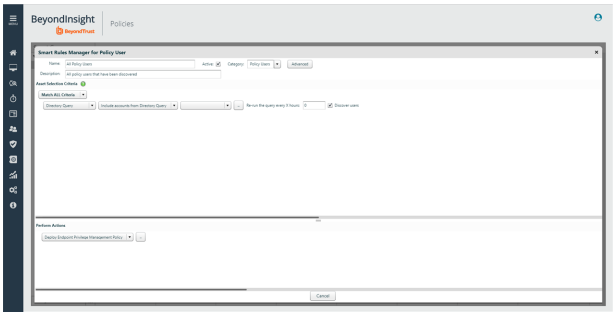
> *For more information about creating and organizing Smart Rules, please see Use Smart Rules to Organize Assets in the BeyondInsight User Guide at https://www.beyondtrust.com/docs/beyondinsight-password-safe/bi/index.htm.*

Create a Smart Rule for Users

1. In your BeyondInsight instance, click on **Policies**.



2. Click **Manage Smart Rules**.
3. Click **New**.
4. From the **Smart Rules Manager for Assets** dialog, type a name for the Smart Rule.
5. Check **Active**.
6. From the **Category** dropdown, select **Policy Users**.
7. Enter a description, if needed.
8. In the **Selection Criteria** section, design a query to pull in the users you wish to assign policy to.
9. Click the **..** button to build your query.
10. When finished, click **Save**.



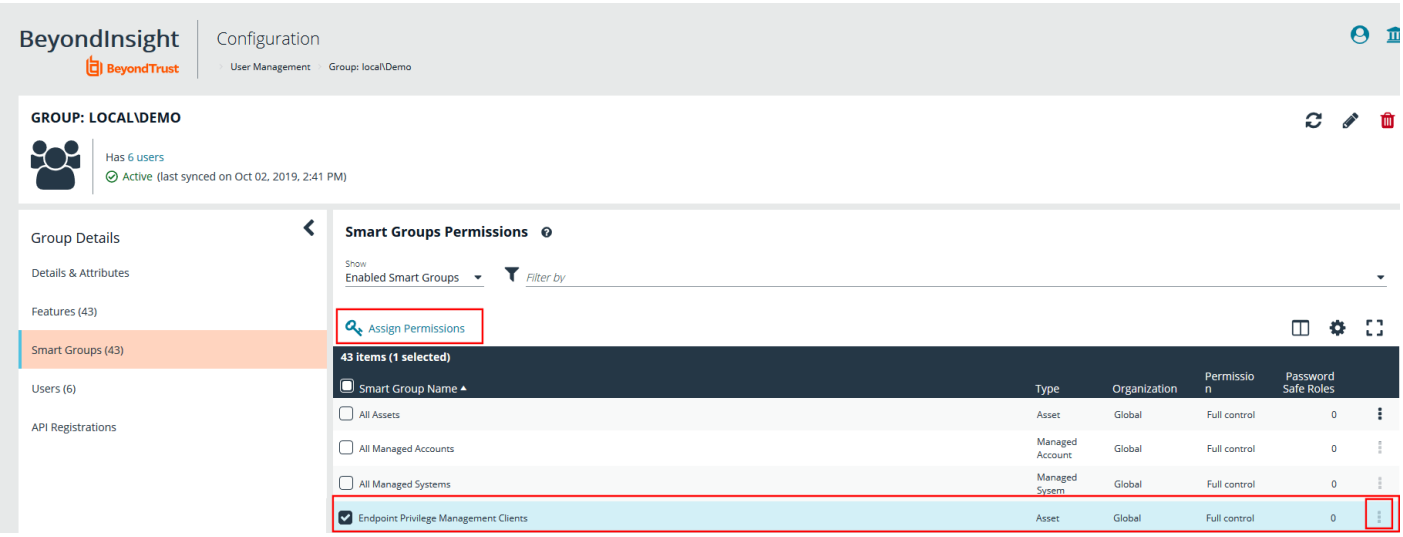
11. From the dropdown, choose the query.
12. Check **Discover Users**.
13. From the **Perform Actions** section, choose the policy users and policies you wish to apply. Order policies as needed.
14. Select **Show as Group**.
15. Click **OK**.
16. Click **Save**.

> *For more information about managing policies for EPM, please see **Manage User Policies** in the BeyondInsight User Guide at https://www.beyondtrust.com/docs/beyondinsight-password-safe/bi/index.htm.*

Grant Users Permissions to Log in to the Policy Editor

If you would like to grant additional users access to log in to the Policy Editor, read and write access needs to be included on the Privilege Management for Mac assets. This access is included by including permissions in the Smart Rule.

1. On the BeyondInsight **Home** page, click **Configuration**.
2. On the **Configuration** grid, select **Role Based Access > User Management**.
3. Locate the group you wish to edit and click the vertical ellipsis button to the far right.
4. Select **View Group Details**.
5. In the **Group Details** pane, click **Smart Groups**.
6. In the **Smart Groups Permissions** pane, select the appropriate Smart Group.



7. Click either the vertical ellipsis button to the far right or the **Assign Permissions** button at the top of the list.
8. Click **Assign Permissions Full Control**.

Install and Configure Privilege Management Reporting

For assistance installing and configuring Privilege Management Reporting with BeyondInsight, please contact your BeyondTrust representative.

Password Safe Integration

You can integrate Privilege Management for Mac and Password Safe to rotate passwords on your macOS endpoints.

Prerequisites

- BeyondInsight Adapter 21.2

Configure the BeyondInsight Adapter Settings

BeyondInsight Adapter installation instructions are provided earlier in the guide.

For more information, please see "Create and Deploy the BeyondInsight Client for Privilege Management for Mac" on page 6.

Configure the following settings in the **settings_app.xml**:

- **PasswordSafeState**: The state of the feature: **Enabled**, **Disabled**, and **Not_Configured** (case sensitive). The default is **Not_Configured**.
- **PasswordSafeHeartBeatInterval**: The time span, in minutes, the endpoint polls Password Safe checking for updated passwords. Valid values are 1 to <max unsigned 32 bit integer>. The default is 60 minutes.

You can change settings in two ways:

- Add the settings
- Send a Privilege Management for Mac policy that contains Password Safe settings. When an asset has multiple policies, the first policy with valid settings is used. The policy's settings are written to **settings_app.xml**.

Example section of the Password Safe settings in Privilege Management for Mac policy:

```
<Configuration>
    <!-- Omitted usual nodes -->
    <PasswordSafeLocalRotation>
        <State>Enabled</State>
        <PasswordHeartbeatInterval>60</PasswordHeartbeatInterval>
    </PasswordSafeLocalRotation>
</Configuration>
```

Configure Password Safe

The macOS endpoints must be added to Password Safe as assets.

For more information, please see Add Assets to Password Safe in the Password Safe Administration Guide at https://www.beyondtrust.com/docs/beyondinsight-password-safe/documents/ps/ps-admin.pdf.