FORESCOUT

Forescout

eyeExtend for CyberArk

Configuration Guide

Version 1.3

Contact Information

Forescout Technologies, Inc.

190 West Tasman Drive

San Jose, CA 95134 USA

https://www.Forescout.com/support/

Toll-Free (US): 1.866.377.8771

Tel (Intl): 1.408.213.3191

Support: 1.708.237.6591

About the Documentation

- Refer to the Technical Documentation page on the Forescout website for additional documentation: https://www.Forescout.com/company/technical-documentation/
- Have feedback or questions? Write to us at documentation@forescout.com

Legal Notice

2020-02-26 12:45

Table of Contents

About CyberArk Integration

Forescout eyeExtend for CyberArk® integrates with the CyberArk Privileged Account Security Solution.

Forescout integration with the CyberArk Privileged Account Security Solution eliminates the need for the Forescout platform to store privileged account credentials for Windows endpoints, and allows highly-sensitive credentials to be stored, logged, and managed by the CyberArk Enterprise Password Vault®.

This integration lets Forescout customers, who use CyberArk products, benefit from enhanced privileged account management and greater security.

These advantages include the enforcement of granular privileged access controls, automated workflows, and password rotation at regular intervals that do not require manual IT efforts, as well as enhanced security, auditing, and accountability.

The unique ability of the Forescout platform to discover privileged accounts and report them to CyberArk enhances the CyberArk solution for privileged account management by extending the visibility and coverage of managed accounts.

CyberArk integration with Forescout provides Privileged Threat Analytics™ (PTA) Alerts that can be used by the Forescout platform to take policy-based mitigating actions on accounts or endpoints that display anomalous privileged activity. For example, by isolating an endpoint reported by the CyberArk PTA Alert, so that no other machine can communicate with that endpoint.

Additional Benefits of the CyberArk Integration

Integration with the CyberArk Privileged Account Security Solution provides support for managing the credentials of Forescout users according to a defined CyberArk policy, enhancing the security of Forescout user accounts.

The Forescout platform is compatible with the CyberArk Privileged Session Manager (PSM) solution that keeps audit logs and video recordings of privileged account sessions, allowing accountability and auditing history for Forescout sessions in the CyberArk Vault.

About Certification Compliance Mode

Forescout eyeExtend for CyberArk supports Certification Compliance mode. For information about this mode, refer to the *Forescout Installation Guide.*

Use Cases

This section describes important use cases supported by Forescout eyeExtend for CyberArk. To understand how this module helps you achieve these goals, see About this Module. Be sure to review the Best Practices.

Credential Retrieval from CyberArk Enterprise Password Vault

The Forescout platform supports privileged access management through the CyberArk Application Identity Manager™ (AIM). By integrating the CyberArk Application Credential Provider, the HPS Inspection Engine can retrieve highly sensitive credentials from the CyberArk Vault. During HPS Remote Inspection of Windows endpoints, privileged account credentials are requested on a per-use basis without storing them in the Forescout system. This integration enhances the security of the sensitive credentials, as they are only stored in the CyberArk Vault.

Discover and Report Local Privileged Accounts

The Forescout platform detection capabilities enable the discovery of new devices and accounts, and in particular local privileged accounts. Every managed Windows endpoint is scanned, and the discovered privileged accounts are reported to CyberArk via an API, and stored in the CyberArk Vault Pending Account list. This enhances CyberArk's ability to be aware of and manage privileged accounts.

Receive Privileged Threat Analytics Alerts

The Forescout platform can respond to alerts from CyberArk Privileged Threat Analytics (PTA) that notify of suspicious behavior or malicious activity in privileged accounts on the network. The Forescout platform can act upon each incidence according to criteria and actions set in policies.

About this Module

Forescout eyeExtend for CyberArk lets you:

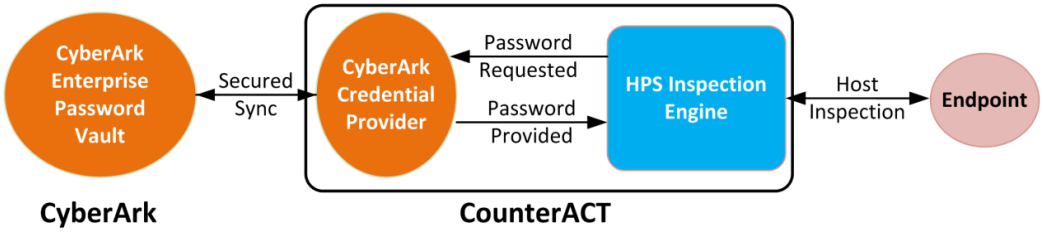
- Gain access to endpoints for Remote Inspection by the HPS Inspection Engine, without saving or managing the login credentials locally. The credentials are managed and provided on demand by the CyberArk Enterprise Password Vault. See Configure the Module for Credential Retrieval for details.
- Enhance CyberArk visibility and monitoring of privileged accounts on endpoints managed by the HPS Inspection Engine. See Create a Report Accounts to CyberArk Vault Policy for details.
- React in real-time to threats reported by the CyberArk PTA with actions defined by Forescout platform policies. See Create a CyberArk PTA Alert Policy for details.

To use the different features of this module, you should have a solid understanding of the CyberArk Privileged Account Security Solution and the functionality and terminology of the CyberArk Enterprise Password Vault.

Architecture

The basic architecture of the Forescout integration with CyberArk consists of:

- The CyberArk Enterprise Password Vault, where privileged account credentials are stored and managed.
- The HPS Inspection Engine, which detects and monitors endpoints through Remote Inspection.
- The CyberArk Credential Provider, which communicates with the HPS Inspection Engine and with the CyberArk Enterprise Password Vault to provide privileged account credentials on a per-use basis.



- CyberArk Pending Account Security Web Service and complementary SDK/API, which allows an external privilege account scanner (such as the Forescout platform) that identifies an unmanaged privileged account, to add it to the CyberArk Vault.
- CyberArk Privileged Threat Analytics (PTA), which sends detected security events to the Forescout platform as syslog messages. The PTA messages are received by the Forescout Syslog Plugin, and can be acted upon according to specifically defined Forescout platform policies.

How It Works

The integration of CyberArk with Forescout enables communication and collaboration between the two systems and enables the processes described below.

Retrieve Credentials

Whenever the Forescout platform requires credentials to access an endpoint, the HPS Inspection Engine queries the CyberArk Enterprise Password Vault. The Vault provides the needed domain credentials through the Credential Provider, which is integrated into each CounterACT® Appliance. The credentials are used to authorize access without saving them locally or at any point along the way between the Vault and the endpoint.

Discover and Report Local Privileged Accounts

Forescout endpoint detection and inspection can discover privileged accounts on endpoints where CyberArk has no visibility. The Forescout platform sends lists of the

newly discovered privileged accounts, and CyberArk adds them to a list of pending privileged accounts that are to be reviewed and approved by a CyberArk operator.

Receive Privileged Threat Analytics Alerts

CyberArk Privileged Threat Analytics (PTA) monitors the activities of privileged accounts on the network, and reports any anomalous behavior that may be a security threat by sending PTA Alerts. The PTA Alerts are received by the Forescout platform and the related endpoints are assigned to a Forescout group. The threat information related to an endpoint is processed and Forescout actions can be defined in the policy to handle the endpoint. For example, to block, isolate, or remediate the endpoint, or notify the security authority.

What to Do

Perform the following steps to set up the integration:

1. Verify that all requirements are met. See Requirements.
2. Review the Best Practices.
3. Install the Module.
4. Configure the Module.
5. Create CyberArk Policies.

Requirements

Verify that the following requirements are met:

- Forescout Requirements
- Supported Vendor Requirements
- Networking Requirements
- Endpoint Requirements

Forescout Requirements

This module requires the following Forescout releases and other components:

- Forescout version 8.2.
- A module license for Forescout eyeExtend for CyberArk. See Forescout eyeExtend (Extended Module) Licensing Requirements.
- Endpoint Module version 1.2, with the HPS Inspection Engine running.
- Core Extension Module version 1.2, with the Syslog Plugin running.

Supported Vendor Requirements

The module uses and works with the following CyberArk Privileged Account Security Solution components:

- CyberArk Enterprise Password Vault®
- CyberArk Password Vault Web Access®
- CyberArk AIM®
- CyberArk PTA™
- For information about the vendor models (hardware/software) and versions (product/OS) that are validated for integration with this Forescout component, refer to the Forescout Compatibility Matrix.

About Support for Dual Stack Environments

The Forescout platform detects endpoints and interacts with network devices based on both IPv4 and IPv6 addresses. However, ***IPv6 addresses are not yet supported by this module.*** The functionality described in this document is based only on IPv4 addresses. IPv6-only endpoints are typically ignored or not detected by the properties, actions, and policies provided by this module.

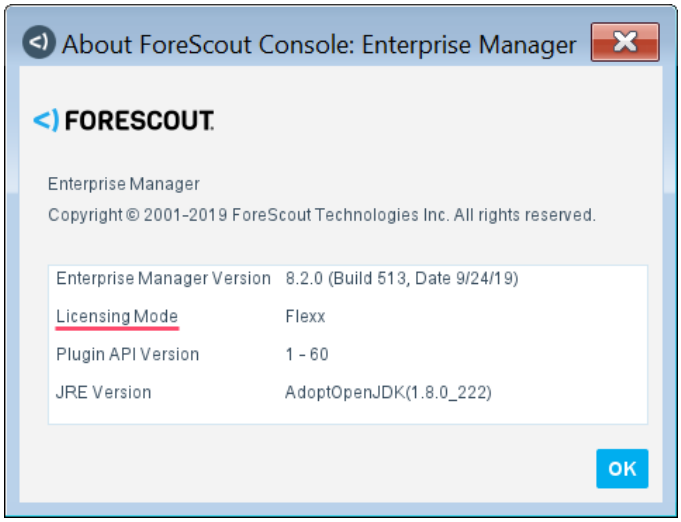
Forescout eyeExtend (Extended Module) Licensing Requirements

This Forescout eyeExtend product requires a valid license. Licensing requirements differ based on which licensing mode your deployment is operating in:

- Per-Appliance Licensing Mode
- Flexx Licensing Mode

To identify your licensing mode:

- From the Console, select **Help > About Forescout**.



Per-Appliance Licensing Mode

When installing the module, you are provided with a 90-day demo license.

If you would like to continue exploring the module before purchasing a permanent license, you can request a demo license extension. Consult with your Forescout representative before requesting the extension. You will receive email notification and alerts at the Console before the demo period expires.

To continue working with the module after the demo period expires, you must purchase a permanent module license.

Demo license extension requests and permanent license requests are made from the Console.

> *This module may have been previously packaged as a component of an Integration Module which contained additional modules. If you already installed this module as a component of an Integration Module, you can continue to use it as such. Refer to the section about module packaging in the Forescout Administration Guide for more information.*

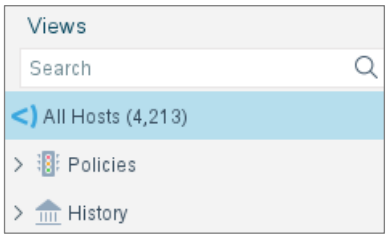
Requesting a License

When requesting a demo license extension or permanent license, you are asked to provide the device *capacity* requirements. This is the number of devices that you want this license to handle. You must define at least the number of devices currently detected by the Forescout platform. You can request a license that handles more to ensure that you are licensed for support on additional devices as your deployment grows.

Enter this number in the **Devices** pane of the Module License Request wizard, in the Console Modules pane.

To view the number of currently detected devices:

1. Select the **Home** tab.
2. In the Views pane, select the **All Hosts** folder. The number in parentheses displayed next to the **All Hosts** folder is the number of devices currently detected.



Flexx Licensing Mode

When you set up your Forescout deployment, you must activate a license file containing valid licenses for each feature you want to work with in your deployment, including eyeExtend products. After the initial license file has been activated, you can update the file to add additional eyeExtend licenses or change endpoint capacity for existing eyeExtend products. For more information on obtaining eyeExtend licenses, contact your Forescout sales representative.

No demo license is automatically installed during system installation.

License entitlements are managed in the Forescout Customer Portal. After an entitlement has been allocated to a deployment, you can activate or update the relevant licenses for the deployment in the Console.

Each eyeExtend license has an associated capacity, indicating the number of endpoints the license can handle. The capacity of each eyeExtend license varies by module but does not exceed the capacity of the Forescout eyeSight license.

*Integration Modules, which package together groups of related licensed modules, are not supported when operating in Flexx Licensing Mode. Only eyeExtend products, packaging individual licensed modules are supported. T*he Open Integration Module is an *eyeExtend* product even though it packages more than one module*.*

More License Information

For more information on eyeExtend (Extended Module) licenses:

- **Per-Appliance Licensing**. Refer to the *Forescout Administration Guide*.
- **Flexx Licensing**. Refer to the *Flexx Licensing How-to Guide*.

You can also contact your Forescout sales representative for more information.

Networking Requirements

The following ports must be open on enterprise firewalls to support communication between the Forescout platform and the CyberArk server:

- TCP 443 – The default port for communicating with the Pending Account Security Web Service.
- UDP 514 – The default listening port for the Syslog Plugin, this should also be configured on the CyberArk server as the sending port.
- TCP 1858 – The default port used by the CyberArk Credential Provider to communicate with the CyberArk Vault.

Endpoint Requirements

For credential retrieval, the endpoints to be handled must be manageable by the HPS Inspection Engine.

Install the Module

This section describes how to install the module.

To install the module:

1. Navigate to one of the following Forescout download portals, depending on the licensing mode your deployment is using:
   - Product Updates Portal - ***Per-Appliance Licensing Mode***
   - Customer Portal, Downloads Page - ***Flexx Licensing Mode***

   To identify your licensing mode, select **Help > About ForeScout** from the Console.
2. Download the module `.fpi` file.
3. Save the file to the machine where the Console is installed.

4. Log into the Console and select **Options** from the **Tools** menu.
5. Select **Modules**. The Modules pane opens.
6. Select **Install**. The Open dialog box opens.
7. Browse to and select the saved module `.fpi` file.
8. Select **Install**. The Installation screen opens.
9. Select **I agree to the License Agreement** to confirm that you have read and agree to the terms of the License Agreement and select **Install**. The installation cannot proceed unless you agree to the license agreement.

   The installation begins immediately after selecting Install and cannot be interrupted or canceled.

   In modules that contain more than one component, the installation proceeds automatically one component at a time.

10. When the installation completes, select **Close** to close the window. The installed module is displayed in the Modules pane.

    Some components are not automatically started following installation.

Configure the Module

After Forescout eyeExtend for CyberArk is installed, configure the module as follows:

- Configure the Module for Credential Retrieval
- Configure the Module to Report Discovered Privileged Accounts
- Configure the Module to Receive PTA Alerts

Configure the Module for Credential Retrieval

Configure the module to enable the Forescout platform to accomplish the following:

- Communicate with the CyberArk Enterprise Password Vault using the CyberArk Credential Provider installed in a CounterACT device.
- Query the Vault to receive credentials required by the HPS Inspection Engine to access and perform Remote Inspection on endpoints.

To configure the module for credential retrieval, perform the following tasks in the order specified:

- Install the CyberArk Credential Provider on CounterACT Devices
- Configure Users in the CyberArk Vault
- Define the HPS Inspection Engine Vault Query

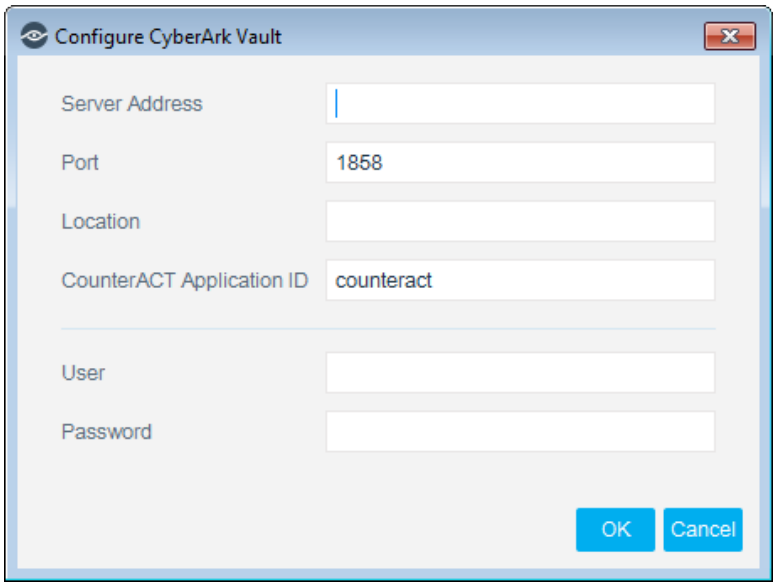
Install the CyberArk Credential Provider on CounterACT Devices

Each CounterACT Appliance retrieving passwords from the CyberArk Vault must be installed with a CyberArk Credential Provider, and uses one of the license instances provisioned in your CyberArk service. It is recommended to verify that you have enough licenses in your CyberArk Enterprise Password Vault for the number of Appliances you want to configure.

To install the CyberArk Credential Provider:

1. In the Console, select **Options** from the Tools menu, and then select **CounterACT Devices**.
2. Select the CounterACT devices to be configured, select **CyberArk** and then select **Install CyberArk Provider**.
3. When prompted for confirmation in the Enterprise Manager Console, select **Yes**.

You can select more than one device at a time. The installation process automatically installs a Provider instance for each CounterACT device.



4. Configure the following settings:

Server Address	Enter the address of the CyberArk Vault server. To access the CyberArk Vault in High Availability or Disaster Recovery scenarios, you can enter more than one IP address, using commas to separate the entries.
Port	Enter the default port (1858) for communication with the CyberArk Vault server.

Location	Enter the name of the Location in the Vault to which the CounterACT device is assigned. If the Location name is not defined, a new one is created. Make sure that the CounterACT device has not already been assigned to this Location.
CounterACT Application ID	Enter the default name used for creating a new user in the CyberArk Vault.
User	Enter the user name for logging in to the Vault. This must be an Administrator level user.
Password	Enter the password for logging in to the Vault.

The CyberArk Vault password used to install the CyberArk Credential Provider is used only during the installation stage. It is not saved by the Forescout platform.

5. Select **OK** to save the module configuration.

To ensure that the CyberArk and PrivateArk integration is successful, create an application on the Password Vault Web Access (PVWA).

To create an application on the Password Vault Web Access:

1. Create an Application on Password Vault Web Access by providing Application name (Forescout) and Location (if needed).
2. Add Enterprise Manager and Appliance IP Addresses to the Allowed Machines.

   The application is added to the Vault in the PrivateArk.

Configure Users in the CyberArk Vault

When the CyberArk Credential Provider is installed, a new CyberArk Vault *User* is created for each Appliance that is configured with the Provider. Before the Provider can retrieve passwords from the Vault, each new User must be assigned ownership to a safe or safes, and to have *Authorizations* defined for that ownership (for example, *Monitor Safe*, *Retrieve files from Safe*, or *Store files in Safe*).

The following is a general procedure. Refer to the CyberArk documentation for details.

To define safe ownership in the Vault:

1. Log in to the CyberArk PrivateArk server, and log in to the Vault.
2. Select **Tools > Administrative Tools > Users and Groups**. The Users and Groups dialog box opens.
3. Select the new User (Forescout_<*name or IP address*>) that was created by the Provider installation.
4. Select **Safe Ownership**. The Safe Ownership dialog box opens.
5. Select a safe that you want to grant ownership to, select permissions to be given to that User, and (optionally) set an expiration date for the safe ownership. Use the arrows to move the selected safe from the **Available Safes** list to the **Owner of** list.

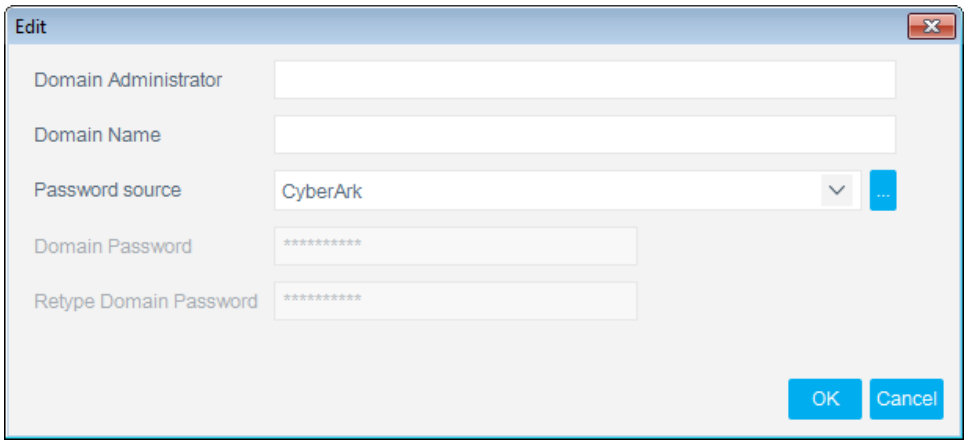
6. Select **OK** to save the settings, then close the Users and Groups dialog box.

Define the HPS Inspection Engine Vault Query

This section describes how to configure the HPS Inspection Engine to query the CyberArk Vault whenever it needs credentials to access and perform Remote Inspection on an endpoint.

To define the query:

1. In the Console, select Tools, and select **Options**.
2. Go to the **HPS Inspection Engine**.
3. In the HPS Inspection Engine pane, select the Remote Inspection tab.
4. Select **Add**.

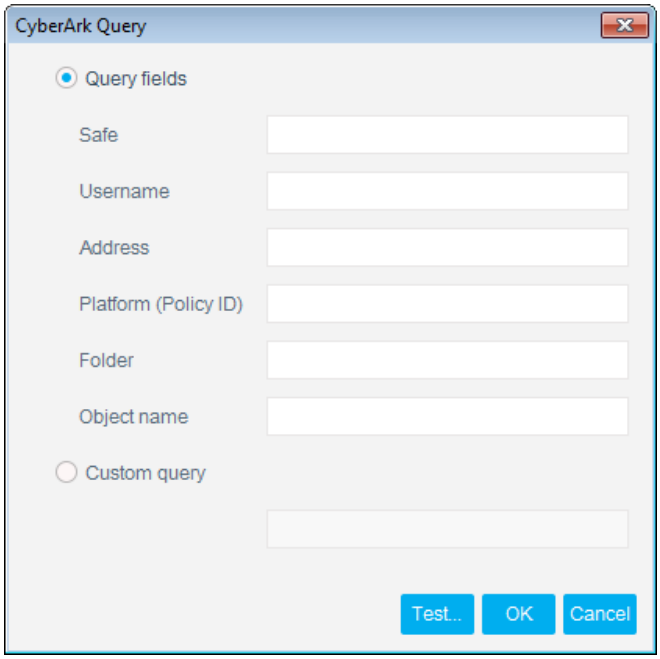


5. Configure the following settings:

Domain Administrator	Enter the domain administrator for the endpoints that are to be handled by the module.
Domain Name	Enter the domain name for the endpoints that are to be handled by the module.

The Domain Password in this dialog box is not needed when working with CyberArk as a password source.

6. In the Password Source field, select **CyberArk**.



7. Configure the following settings:

Safe	Enter the name of the safe being queried in the vault.
Username	Enter a custom property defined for an object in the safe.
Address	Enter a custom property defined for an object identifying the location of the object in the safe.
Platform (Policy ID)	Enter a custom property identifying an object in a safe.
Folder	Enter the name of the folder being queried in the safe.
Object Name	Enter the name of the object inside the queried folder.

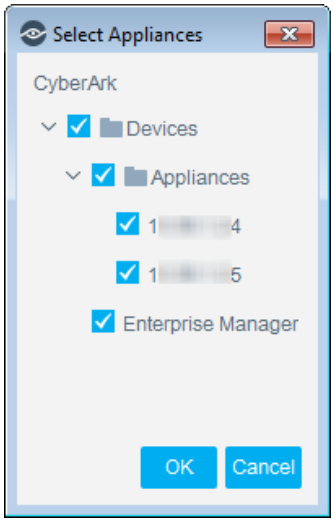
Not all fields are mandatory. The fields needed for each query depend on the definitions and structure in the safe and the set of objects in that safe. A query must be formulated so that it only returns a single object.

If you specify the safe and object, but not the folder, the root folder is used by default. Optionally, you can enter a *Custom Query* according to the following format:

- For a simple Custom Query for a single account:
  `Safe=<safe name>;Folder=<folder name>;Object=<object name>`
- For a Custom Query to a dual account:
  `Safe=<safe name>;Folder=<folder name>;VirtualUserName=<virtual user name>`

For more information, refer to the CyberArk *Credential Provider and Application Server Credential Provider Implementation Guide*.

8. Select **Test** to test the connection.



9. Select an Appliance connection to test. If there are a number of devices configured, select one device at a time to be tested.

   The test attempts to draw an object containing credentials from the Vault, if the query is not formulated correctly, or returns more than a single object, the test fails.

10. If the test is successful, select **OK**.

11. Select **Apply**.

Configure the Module to Report Discovered Privileged Accounts

This section describes how to configure the module to report changes in privileged accounts or newly discovered privileged accounts to CyberArk.

The CyberArk Vault provides an API to a Pending Account Security Web Service. The web service enables an external privileged account scanner to report privileged accounts that are not managed by the CyberArk Vault, and to add them to the Vault through the CyberArk privileged account workflow as follows:

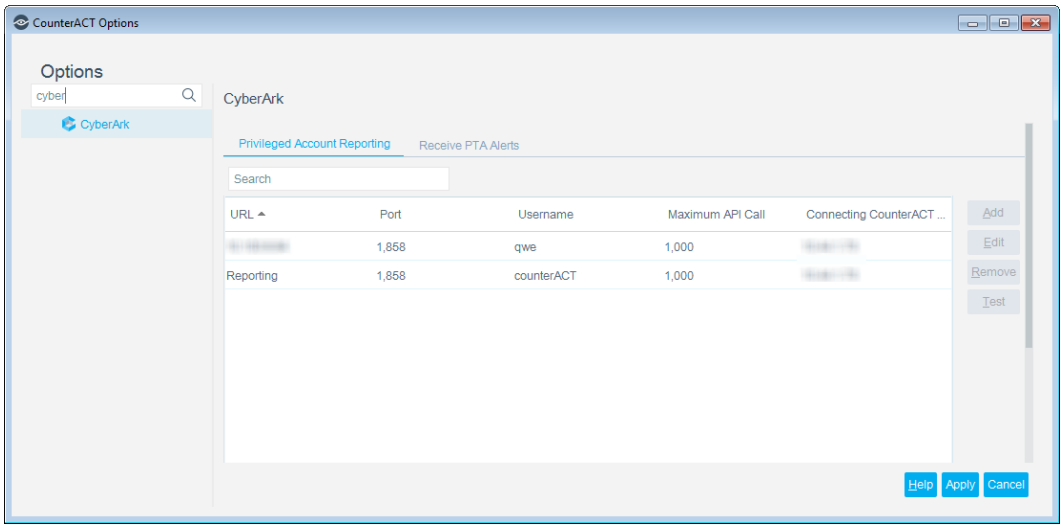
- An unmanaged privileged account is reported to the web service, and labeled as *Pending*
- The Pending account is *On Boarded* to the Vault by a Vault Admin
- The privileged account is now *managed* by the Vault.

For more information, refer to the CyberArk documentation for the *Pending Account Security Web Service*.

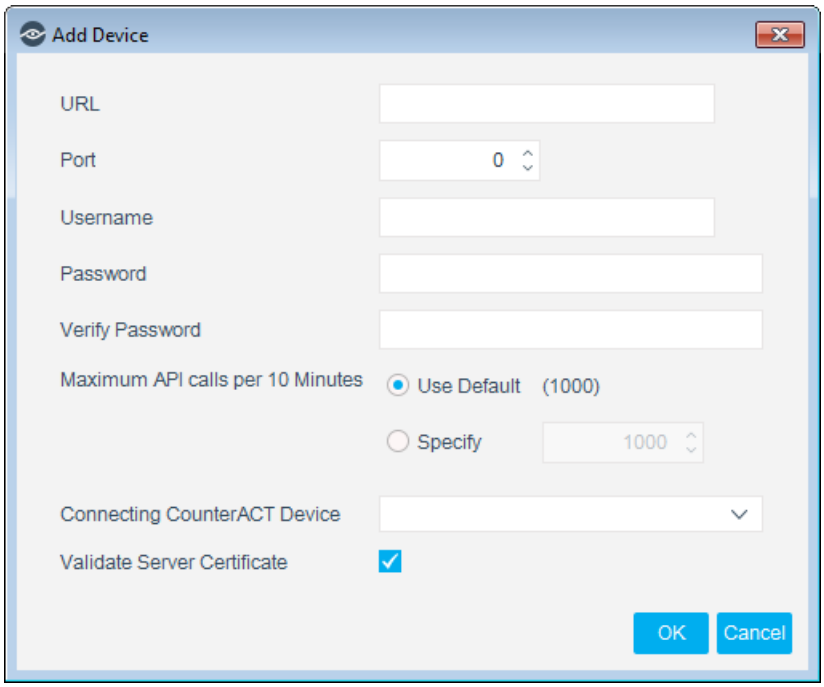
Forescout eyeExtend for CyberArk only communicates over HTTPS. Make sure that the web binding in the CyberArk installation is configured to use HTTPS for all services involved in logging into the server and receiving reports of privileged accounts.

To configure the module to report privileged accounts:

1. In the Console, select **Options** from the **Tools** menu, and then select **Modules**.
2. In the Modules pane, select **CyberArk** and then select **Configure**.



3. Select the Privileged Account Reporting tab.
4. Select **Add**.



5. Configure the device settings as follows:

URL	Enter the domain portion of the URL of the server's address (FQDN), for example, console.cyberark.local. The rest of the URL is hard-coded and provided by default by Password Vault Web Access (PVWA).
Port	Enter the default port (443) for communicating with the Pending Account Security Web Service.
Username	Enter the user name needed to log in to the Pending Account Security Web Service.
Password	Enter the password needed to log in to the Pending Account Security Web Service.
Verify Password	Re-enter the password to verify it.
Maximum API calls per 10 minutes	Select **Use Default (1000)** or select **Specify** to set a different maximum value.
Connecting CounterACT Device	Select a connecting CounterACT device from the list. This is the device that reports the newly discovered or changed accounts.
Validate Server Certificate	Select this option to validate the identity of the third-party server before establishing a connection, when the eyeExtend product communicates as a client over SSL/TLS. To validate the server certificate, either of the following certificate(s) must be installed: ▪ Self-signed server certificate – the server certificate must be installed on the CounterACT Appliance ▪ Certificate Authority (CA) signed server certificate – the CA certificate chain (root and intermediate CA certificates) must be installed on the CounterACT Appliance Use the Certificates > Trusted Certificates pane to add the server certificate to the Trusted Certificate list. For more information about certificates, refer to the appendix, "Configuring the Certificate Interface" in the *Forescout Administration Guide*.

6. Select **OK** to save the module configuration.

The best practice is to perform a test after setting up a connection.

Configure the Module to Receive PTA Alerts

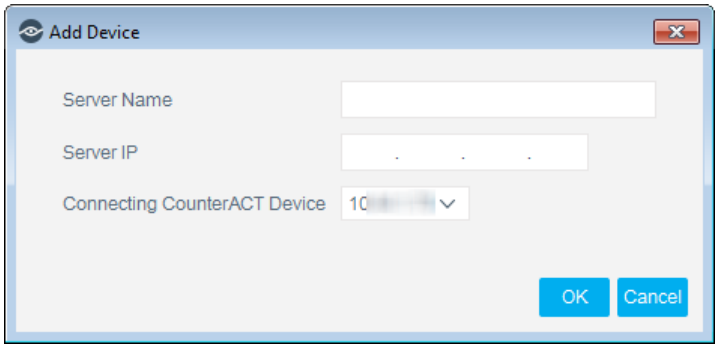
This section describes how to configure the module to receive event alerts from the CyberArk PTA. You can create Forescout platform policies that apply actions based on the information in a PTA Alert. See Create a CyberArk PTA Alert Policy.

To configure PTA alerts:

1. Before configuring Forescout eyeExtend for CyberArk, you must configure the CyberArk PTA server to send Syslog messages from a UDP port, the default port is UDP 514.

If you need to use a different port from the default, configure it in the Options > Modules > Syslog > Configure *pane.*

2. In the Console, select **Options** from the **Tools** menu, and then select **Modules**.
3. In the **Modules** pane, select **CyberArk** and then select **Configure**. The CyberArk pane opens.
4. Select the Receive PTA Alerts tab.
5. Select **Add**.



6. Configure the settings as follows:

Server Name	Enter a name to identify this server.
Server IP	Enter the IP address of the PTA Alert source.
Connecting CounterACT device	Select the CounterACT device that receives the PTA Alert.

7. Select **OK** and select **Apply** to save the configuration.

Create CyberArk Policies

Forescout templates help you quickly create important, widely used policies that easily control endpoints and can guide users to compliance.

Predefined actions – instructions regarding how to handle endpoints – are generally disabled by default when working with templates. You should only enable actions after testing and fine-tuning the policy.

The CyberArk policy templates generate the following Forescout platform policies:

- Create a Report Accounts to CyberArk Vault Policy
- Create a CyberArk PTA Alert Policy

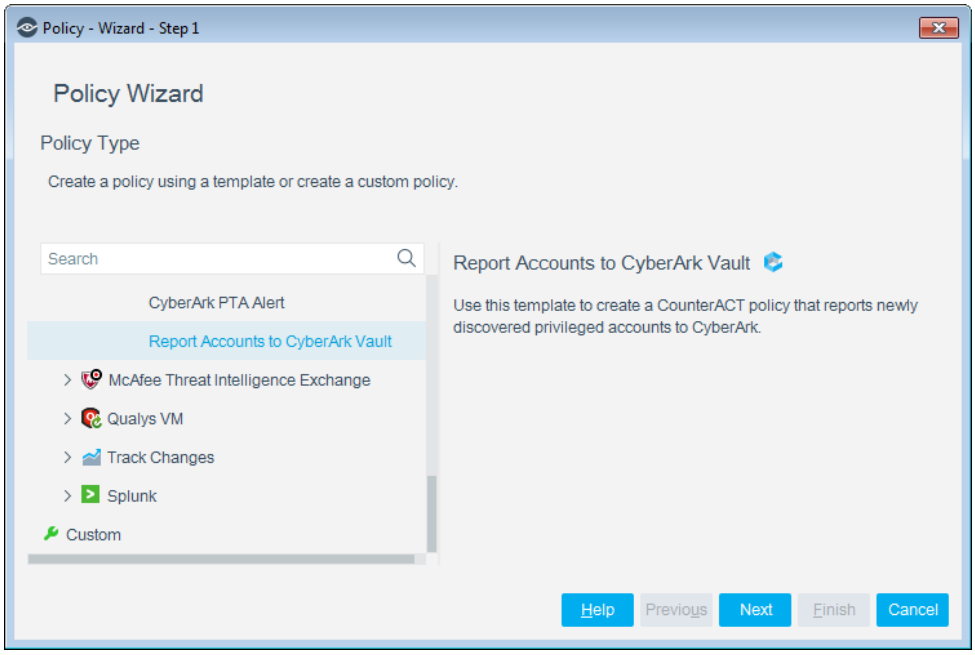
It is recommended that you have a basic understanding of Forescout platform policies before working with the templates. Refer to the Forescout Templates and Policy Management chapters in the Forescout Administration Guide or select Forescout Templates and Policy Management from the Help menu in the Console.

Create a Report Accounts to CyberArk Vault Policy

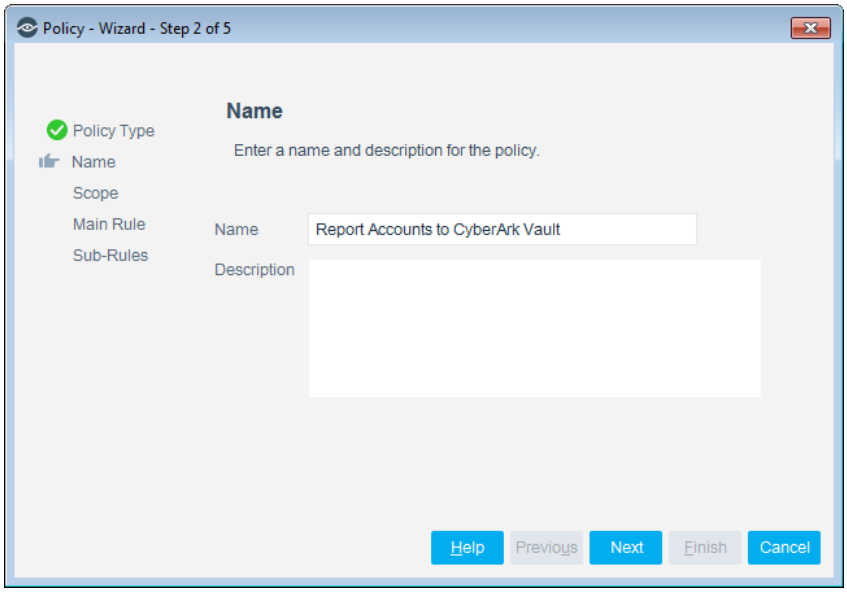
The Report Accounts to CyberArk Vault template creates a policy for reporting privileged account on endpoints that are not managed or listed by CyberArk.

To create a policy:

1. Log in to the Console and select **Policy**.
2. Select **Add** in the Policy Manager.



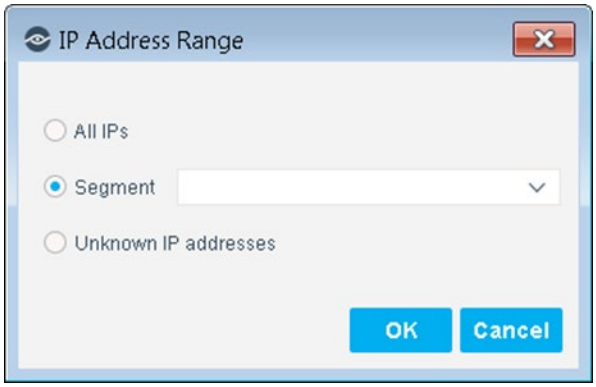
3. Expand the **CyberArk** folder and select **Report Accounts to CyberArk Vault**.
4. Select **Next**.



5. Define a unique name for the policy you are creating based on this template, and enter a description.
   - Make sure names are accurate and clearly reflect what the policy does. For example, do not use a generic name such as My_Compliance_Policy.
   - Use a descriptive name that indicates what your policy is verifying and which actions will be taken.
   - Ensure that the name indicates whether the policy criteria must be met or not met.
   - Avoid having another policy with a similar name.

Policy names are displayed in the Policy Manager, the Views pane, NAC Reports and in other features. Precise names make working with policies and reports more efficient.

6. Select **Next**. Both the Scope pane and the IP Address Range dialog box open.
7. Use the IP Address Range dialog box to define which endpoints are inspected.



The following options are available:

- **All IPs**: Include all IP addresses in the Internal Network.
- **Segment**: Select a previously defined segment of the network. To specify multiple segments, select **OK** or **Cancel** to close this dialog box, and select **Segments** from the Scope pane.
- **Unknown IP addresses**: Apply the policy to endpoints whose IP addresses are not known. Endpoint detection is based on the endpoint MAC address.

8. Select **OK**. The added range is displayed in the Scope pane.
9. Select **Next**. The Main Rule pane opens. You can add or edit conditions and actions for this rule. For details, see Main Rule.
10. Select **Next**. The Sub-Rules pane opens. There are no default Sub-Rules in this policy template.
11. Select **Finish**. The policy is created.
12. Select **Apply** to save the policy.

Main Rule

When the main rule is applied, the Forescout platform detects privileged account that have been added or removed from managed endpoints since the last recheck, and reports them to CyberArk. The default scan interval for rechecking privileged accounts is 8 hours.

The main rule of the Report Accounts to CyberArk Vault policy includes the following criteria for newly discovered privileged accounts that are reported to CyberArk:

- The discovered privileged account must belong to a Windows Managed Domain or must be managed by SecureConnector.
- The privileged account has not been reported, or exists in the pending account list.

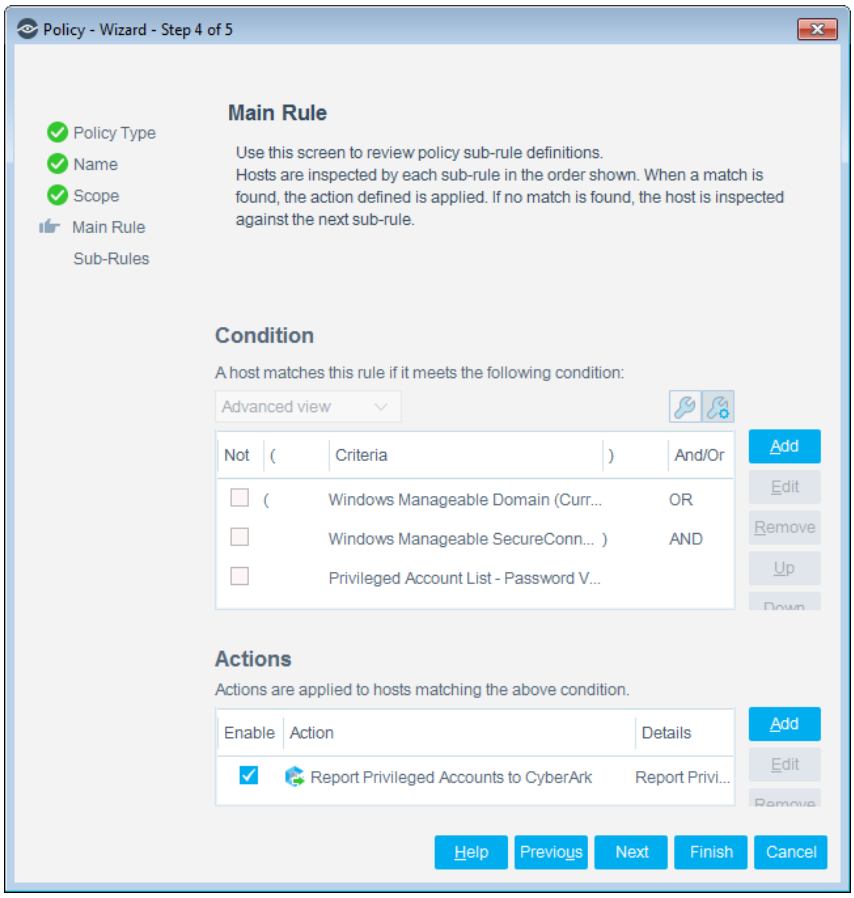
The default main rule does the following:

- The policy scans the Windows endpoint, and retrieves a list of detected local privileged accounts and their properties.
- Based on the rule definition, accounts that match the conditions are reported to CyberArk, and CyberArk Vault returns a status for each account (*not reported, exists in pending account list*, or *managed*).
- The reported accounts are updated according to their status in the *CyberArk Pending Account List* as follows:
  - Updated from *not reported* to *exists in pending account list.*

    OR
  - Updated from *exists in pending account list* to *managed.*
- Once the *CyberArk Pending Account List* is updated, the CyberArk operator needs to go to the CyberArk management console, review the newly added accounts in the *Pending Account List,* and onboard them to make them managed by CyberArk.

To edit the Main Rule:

1. Select the Report Accounts to CyberArk Vault policy and select **Edit**.



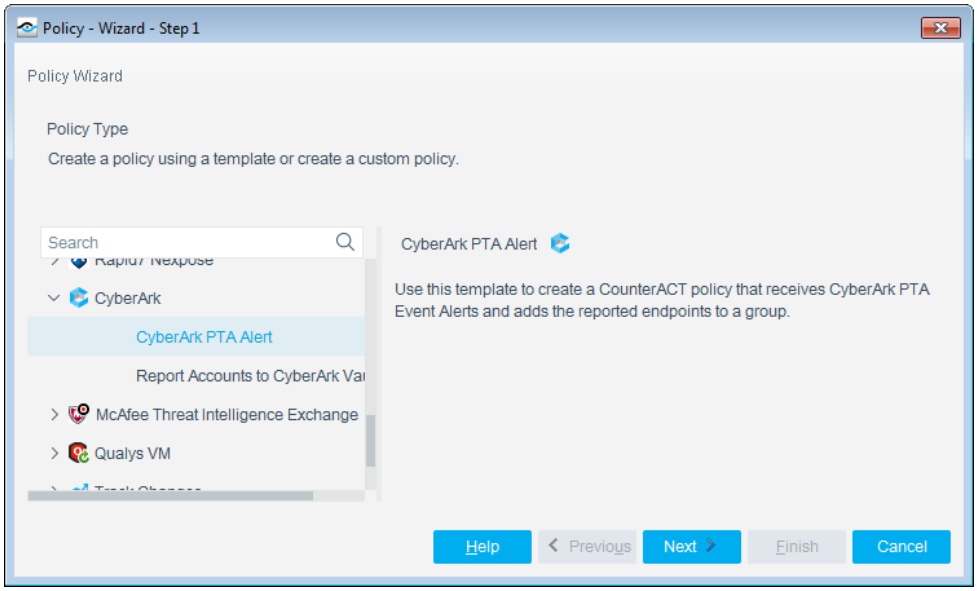
2. In the Main Rule pane, add or edit the conditions and actions for this rule.

Create a CyberArk PTA Alert Policy

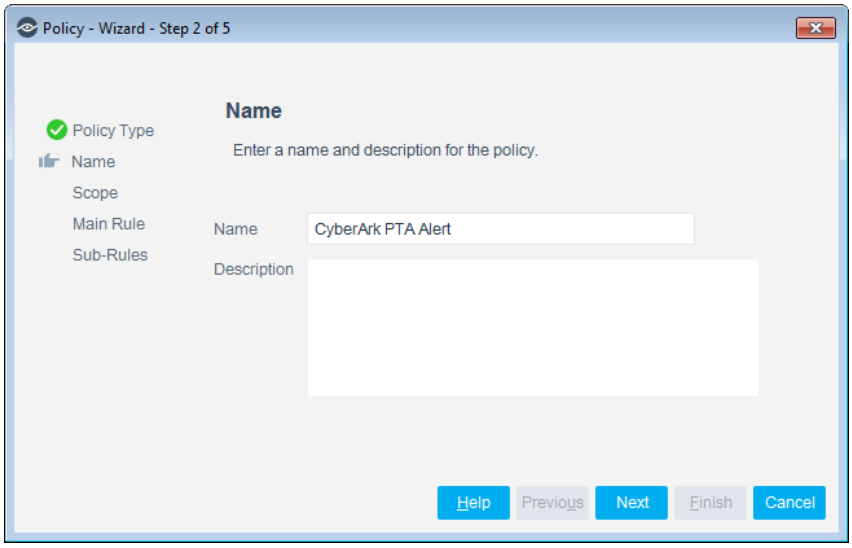
Use the CyberArk PTA Alert template to create a policy for handling Privileged Threat Analytics Alerts that arrive from the CyberArk Vault, placing all reported endpoints in a pre-defined group.

To create a policy:

1. Log in to the Console and select **Policy**.
2. Select **Add** in the Policy Manager.



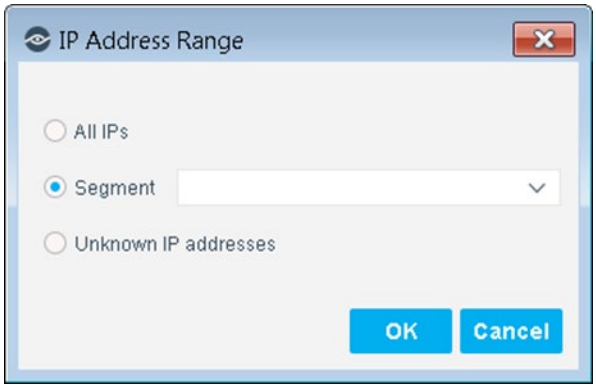
3. Expand the **CyberArk** folder and select **CyberArk PTA Alert**.
4. Select **Next**.



5. Define a unique name for the policy you are creating based on this template, and enter a description
   - Make sure names are accurate and clearly reflect what the policy does. For example, do not use a generic name such as My_Compliance_Policy.
   - Use a descriptive name that indicates what your policy is verifying and which actions will be taken.
   - Ensure that the name indicates whether the policy criteria must be met or not met.
   - Avoid having another policy with a similar name.

Policy names are displayed in the Policy Manager, the Views pane, NAC Reports and in other features. Precise names make working with policies and reports more efficient.

6. Select **Next**. Both the Scope pane and the IP Address Range dialog box open.
7. Use the IP Address Range dialog box to define which endpoints are inspected.



The following options are available:

- **All IPs**: Include all IP addresses in the Internal Network.
- **Segment**: Select a previously defined segment of the network. To specify multiple segments, select **OK** or **Cancel** to close this dialog box, and select **Segments** from the Scope pane.
- **Unknown IP addresses**: Apply the policy to endpoints whose IP addresses are not known. Endpoint detection is based on the endpoint MAC address.

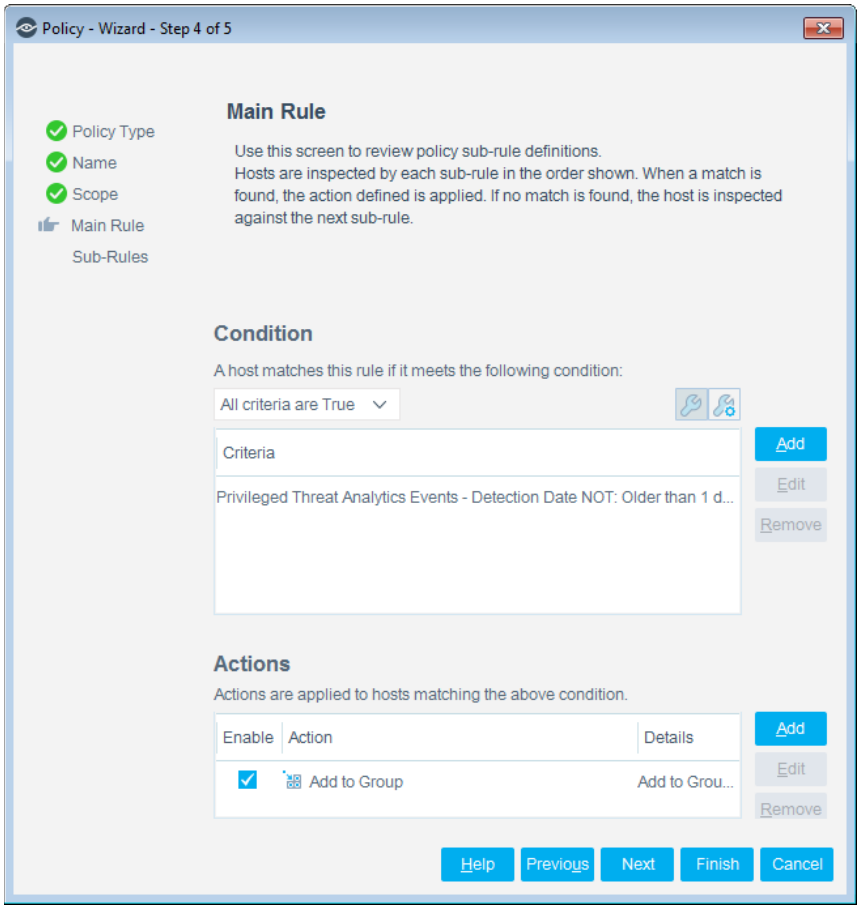
8. Select **OK**. The added range is displayed in the Scope pane.
9. Select **Next**. The Main Rule pane opens. For details, see Main Rule.
10. Select **Next**. The Sub-Rules pane opens. The PTA Alert functionality does not require a policy sub-rule.
11. Select **Finish**. The policy is created.
12. Select **Apply** to save the policy.

Main Rule

The PTA Alert Main Rule contains the following default conditions for receiving Alerts:

- Detection date is no more than one day old.
- The Severity is between 2 and 10 (CyberArk defines event severity from 1-lowest to 10-highest).

The Action taken by this policy is to add reported endpoints that match the conditions to the Forescout group *CyberArk PTA Alert Endpoints*.



Use Information from PTA Alerts

PTA Alert information received by the Forescout platform can be utilized to trigger actions on endpoints that are flagged with potential threat indicators. In addition, PTA Alert information can be combined with existing endpoint properties detected by the Forescout platform, and used to add confidence in policy rules that act on an endpoint

The following security event classifications are provided by the CyberArk PTA Alerts:

- **Suspected credential theft** – A group of suspicious activities that imply an attempt to steal credentials. For instance, a user who connects to a remote machine with a privileged account that is managed in the Vault, without retrieving the credentials beforehand.
- **Unmanaged privileged account** – A group of activities that imply that privileged accounts are not properly managed.
- **Suspicious behavior of Vault user** – A group of suspicious activities performed by a Vault user. For example, retrieving passwords from the Vault excessively.
- **Suspicious behavior of a machine** – A group of suspicious activities associated with an individual machine in the network. For instance, a machine that is accessed by an irregular source.

- **Suspicious behavior of user** – A group of suspicious activities associated with an individual user in the network. For instance, a user who accesses an unusual target machine for this user.

Working with CyberArk

This section covers how best to use Forescout eyeExtend for CyberArk.

Best Practices

Windows Endpoint Credential Management

The Forescout platform may manage Windows endpoints via remote inspection using supplied Active Directory credentials in the HPS Inspection Engine plugin. CyberArk can manage these credentials.

Password Change Frequency

The Forescout platform uses Windows credentials to verify domain membership and manage endpoints constantly. While configurable, this is multiple times per day, per endpoint. As such, it is not recommended to change the credential on each use. Not only will this conflict with the constant use of the credential, it may also create a large resource load on CyberArk. Forescout does not recommend changing the password more than once per day, or less than once per month.

Detection of CyberArk Unmanaged Local Accounts

Using remote or agent-based inspection, the Forescout platform can identify local accounts present on Windows endpoints, and compare them to accounts that exist on CyberArk. When a local account exists that is not managed by CyberArk, the Forescout platform can report it to CyberArk. There is no direct best practice guidance for this feature other than to utilize it.

CyberArk PTA Notification to the Forescout Platform of Unusual Account Use

CyberArk's feature Privilege Threat Analysis detects anomalous account behavior based on several configurable options. When anomalous behavior is detected, it can notify the Forescout platform via Syslog, creating an actionable property that the Forescout platform can use to remove or restrict network access to that device. Refer to CyberArk documentation for configuring the rules that describe the anomalous behavior.

Syslog Receptors

When designing the overall solution, take into consideration that the Forescout platform is limited to three Syslog sources. These may all be CyberArk sources, or a single CyberArk source and two other sources.

CyberArk Management of Accounts

Other than the required root access to CLI and admin access to the Console, it is best practice not to have any local accounts on the Forescout platform. Wherever possible, CyberArk should manage the accounts that Forescout uses.

Forescout Accounts

CyberArk can and should be configured to manage all CounterACT Appliance root account access via CLI over SSH.

Accounts Used by the Forescout Platform

CyberArk can and should be configured to manage the Active Directory account that the Forescout platform uses to authenticate.

Non-Administrative Accounts

Normal user access to the Forescout platform over CLI or through the Console should be managed by an external directory service such as Active Directory or TACACS.

Direct CyberArk Login to Forescout Console

Users can use the CyberArk Privileged Session Manager (PSM) to log in to the Console directly.

Requirements

The Console software must be installed on a Windows Remote Desktop Services (RDS) server. CyberArk PSM is then configured to use the RDS, automatically supplying the required login credentials to the Console.

Recommendation

To simplify access management, this is best used when local accounts must exist on the Console, or when it is preferred that no password is visualized during a one-time admin login.

CounterACT Appliance to CyberArk Mapping

Each CounterACT Appliance can point to a single CyberArk Vault. If more than one CyberArk Vault exists in the enterprise, they must be matched correctly. Appliances matched to a specific CyberArk should not manage endpoints that rely on credentials from another CyberArk. If one CyberArk manages credentials for a specific enterprise region, the CounterACT Appliance(s) should also be matched to that region, connecting to the regional CyberArk and managing endpoints in that same region.

Disassociation from CyberArk

When a CounterACT Appliance disassociates its connection to CyberArk, which can happen when the Appliance physically fails or is otherwise manually and permanently disconnected, it needs to be reconnected to CyberArk.

CyberArk Accounts

When a CounterACT Appliance initially connects to CyberArk, a unique account is created. When a CounterACT Appliance then disassociates from CyberArk, the account is left on CyberArk. This inherently disallows the Appliance from reconnecting. The account must be removed from CyberArk.

CounterACT Appliance IP Address Changes

When a CounterACT Appliance's IP address changes, this constitutes a disassociation and it must be reconnected to the CyberArk Vault. The reconnection works because of the new unique IP address, but the account created from the old IP address continues to exist on CyberArk and should be updated.

CyberArk Application ID

The CounterACT application ID must be defined in CyberArk *before* configuration. This ID is not unique among CounterACT Appliances and is used by all of them. For best security, the Application ID should be specifically locked down from access by any IP address that is not a CounterACT Appliance.

CyberArk Safe Access

Each CyberArk Vault contains Safes that hold account passwords. Safes allow CyberArk to further separate credential access. Each Safe should be configured to only allow access to CounterACT devices that need to use account passwords within that Safe.

Access the Asset Inventory

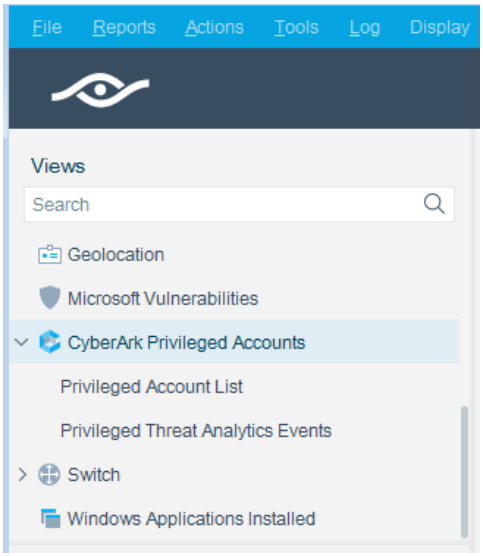
Use the Asset Inventory to view a real-time display of the module network activity at multiple levels.

The Asset Inventory lets you:

- View detected Privileged Accounts
- Incorporate inventory detections into policies

To access the inventory:

1. In the Console toolbar, select **Asset Inventory**.
2. In the Views pane, go to the CyberArk entries.



The following information is available:

- **Privileged Account List**: Displays a table of privileged accounts.
- **Privileged Threat Analytics Events**: Displays reported PTA events, and a list of hosts to which the events are attributed.

Refer to *Working at the Console > Working with Inventory Detections* in the *Forescout Administration Guide* or the Console, Online Help for information about how to work with the Inventory.

Endpoint Module Information

The Forescout Endpoint Module provides connectivity, visibility, and control to network endpoints through the following Forescout components:

- Hardware Inventory Plugin
- HPS Agent Manager
- HPS Inspection Engine
- Linux Plugin
- Microsoft SMS/SCCM Plugin
- OS X Plugin

The Endpoint Module is a Forescout Base Module. Base Modules are delivered with each Forescout release. This module is automatically installed when you upgrade the Forescout version or perform a clean installation of the Forescout platform.

Components listed above are installed and rolled back with the Endpoint Module.

Additional Forescout Documentation

For information about other Forescout features and modules, refer to the following resources:

- Documentation Downloads
- Documentation Portal
- Forescout Help Tools

Documentation Downloads

Documentation downloads can be accessed from the Forescout Technical Documentation Page, and one of two Forescout portals, depending on which licensing mode your deployment is using.

- ***Per-Appliance Licensing Mode*** – Product Updates Portal
- ***Flexx Licensing Mode*** – Customer Support Portal

Software downloads are also available from these portals.

To identify your licensing mode:

- From the Console, select **Help > About Forescout**.

Forescout Technical Documentation Page

The Forescout Technical Documentation Page provides access to a searchable, web-based Documentation Portal as well as PDF links to the full range of technical documentation.

To access the Technical Documentation Page:

- Go to https://www.Forescout.com/company/technical-documentation/

Product Updates Portal

The Product Updates Portal provides links to Forescout version releases, Base and Content Modules, and eyeExtend products, as well as related documentation. The portal also provides a variety of additional documentation.

To access the Product Updates Portal:

- Go to https://updates.forescout.com/support/index.php?url=counteract and select the version you want to discover.

Customer Support Portal

The Downloads page on the Forescout Customer Support Portal provides links to purchased Forescout version releases, Base and Content Modules, and eyeExtend products, as well as related documentation. Software and related documentation will only appear on the Downloads page if you have a license entitlement for the software.

To access documentation on the Customer Support Portal:

- Go to https://Forescout.force.com/support/ and select **Downloads**.

Documentation Portal

The Forescout Documentation Portal is a searchable, web-based library containing information about Forescout tools, features, functionality, and integrations.

To access the Documentation Portal:

- Go to https://updates.forescout.com/support/files/counteract/docs_portal/

Forescout Help Tools

Access information directly from the Console.

Console Help Buttons

Use context sensitive *Help* buttons to quickly access information about the tasks and topics you are working with.

Forescout Administration Guide

- Select **Administration Guide** from the **Help** menu.

Plugin Help Files

- After the plugin is installed, select **Tools** > **Options** > **Modules**, select the plugin and then select **Help**.

Documentation Portal

- Select **Documentation Portal** from the **Help** menu to access the Documentation Portal.