Forescout

eyeExtend Connect Module: Jamf App

Configuration Guide

Version 1.0

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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

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About the Jamf App

The Jamf app is an integration of the Forescout platform with Jamf Pro, which is an Apple/iOS MDM management platform. This app lets you pull data from Jamf about the MacOS endpoints managed by the Forescout platform. It also lets you assign specific endpoints to policies on the Jamf platform.
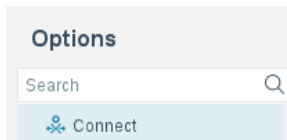
This app is for those Forescout platform users that have Jamf Pro in their environment and want to integrate it with the Forescout platform.

Requirements
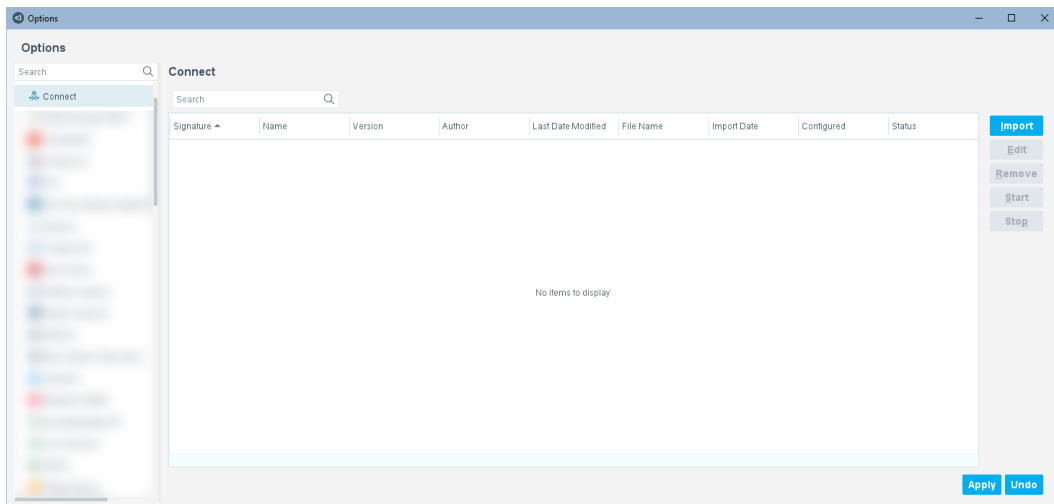
- Forescout version 8.2
- Jamf Pro

User Interface Overview

After Connect is installed, **Connect** is displayed under **Options**. See How to Install.

Connect Pane Overview

Initially, the **Connect** pane is blank. The Jamf app has not been imported yet and the system description has not been configured yet.
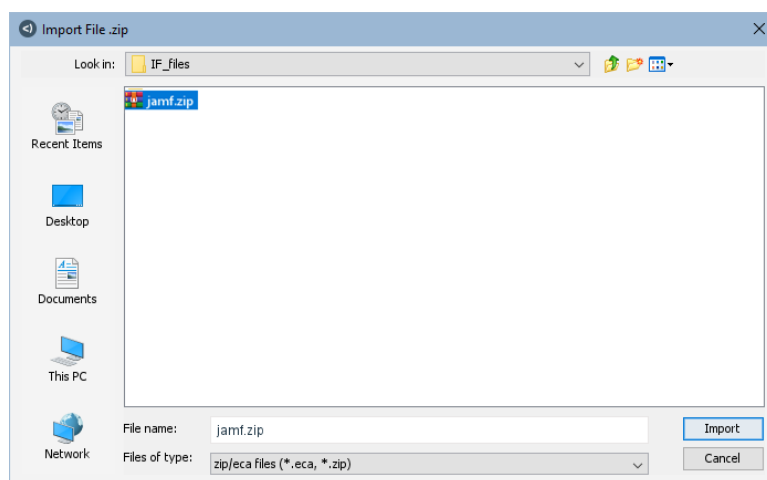
The buttons on the **Connect** pane are as follows:

Button	Description
Import	Import an app
Edit	Edit an app
Remove	Remove an app
Start	Start an app
Stop	Stop an app

The buttons are described in User Interface Details.

Select **Import** to import the app into Connect. Apps are in zip or eca format. They can be in any folder.

After an app is imported, the **System Description** dialog box opens. It is initially blank. See System Description Dialog Box Overview for configuration details.
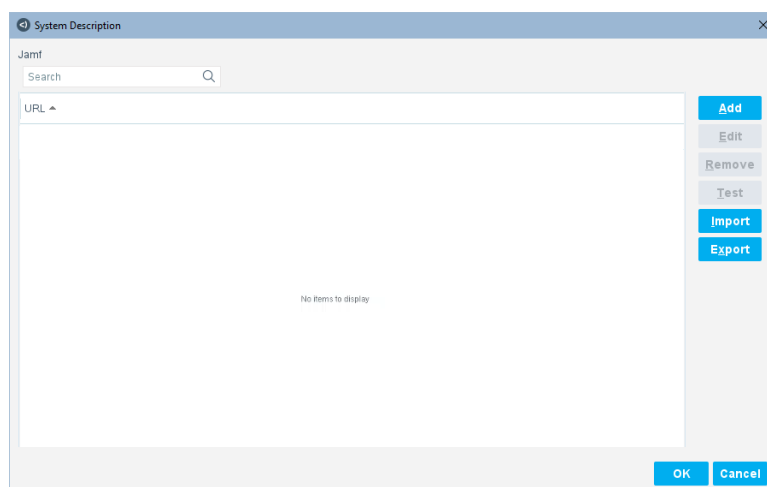
After the system description for the app is configured, it is displayed in the **Connect** pane. There can be multiple apps displayed in this pane.
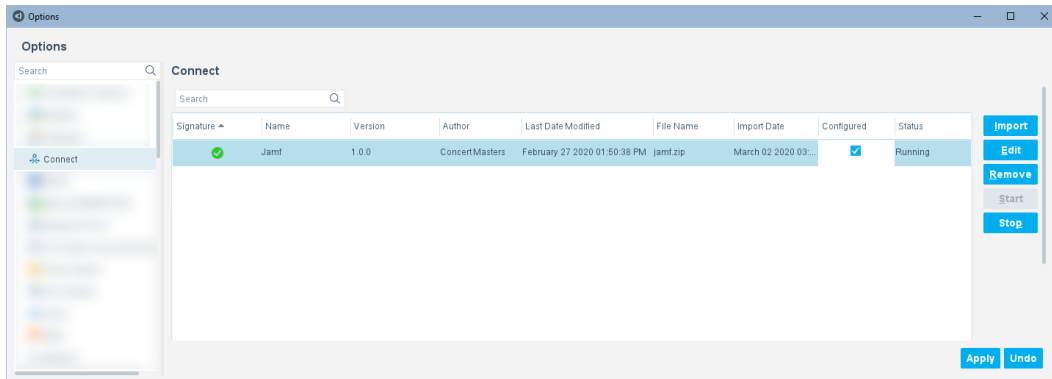

> 📄 *Third-party vendor integrations are displayed inside the **Connect** pane, not on the left under **Options**.*

If the configuration has not been saved, select **Apply** to enable the **Start** button, which starts an app and the **Stop** button, which stops an app.

You can select an existing app and then select **Edit** to open the **System Description** dialog box.

System Description Dialog Box Overview

If no system descriptions have been configured yet, the **System Description** dialog box is blank.
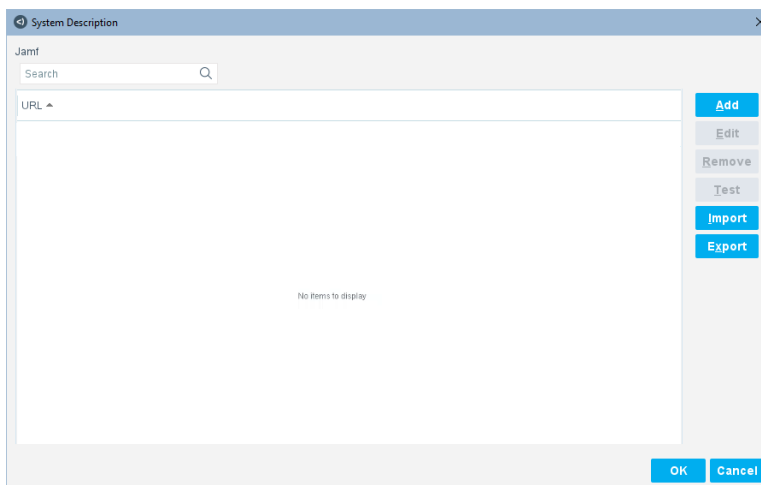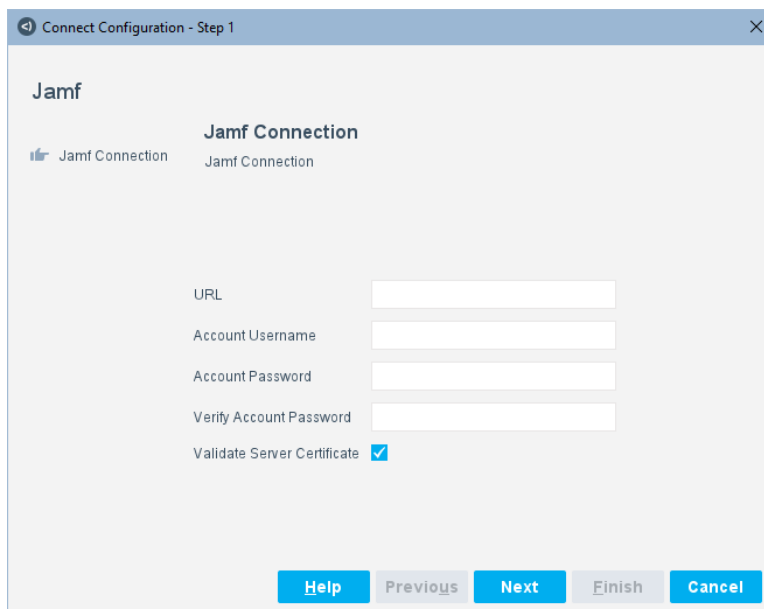

The buttons on the **System Description** dialog box are as follows:

Button	Description
Add	Add a system description
Edit	Edit a system description

Button	Description
Remove	Remove a system description
Test	Test a system description
Import	Import a system description
Export	Export a system description

The buttons are described in User Interface Details.

Select **Add** on the **System Description** dialog box to add a system description, which defines the connection to a third-party vendor.
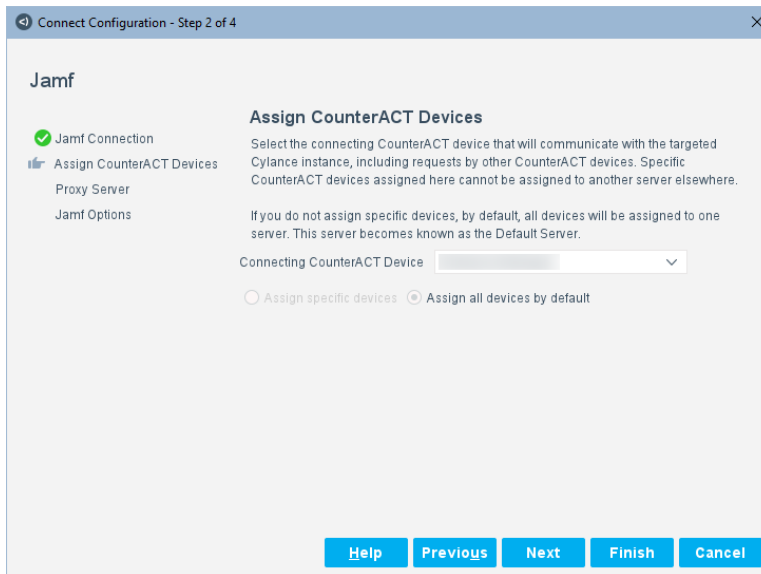

The user configuring the system description enters the information on the panel.
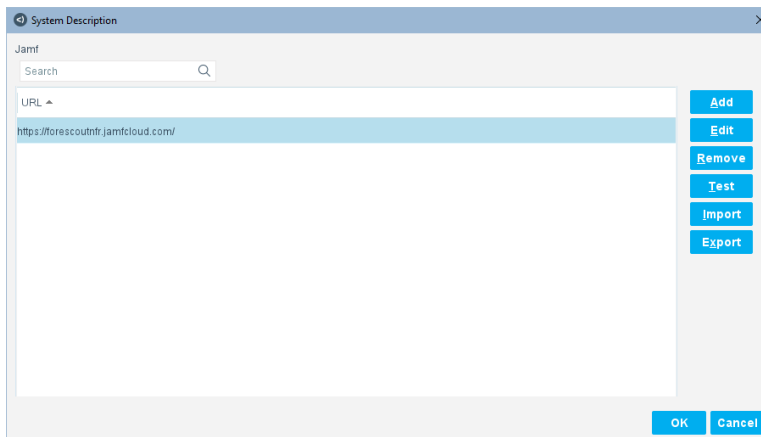
Select **Next** to display the next configuration panel.

The user configuring the system description enters the information on the panel.

Select **Next** to display the next configuration panel (there can be multiple panels), then select **Finish**.

After a system description is configured, it is displayed in the **System Description** dialog box.

How to Install

Connect is installed with an .fpi file like other eyeExtend products.

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.*

Ensure That the Component Is Running

After installing the component (and configuring it, if necessary), ensure that it is running.

To verify:

1. Select **Tools** > **Options** > **Modules**.

2. Navigate to the component and hover over the name to view a tooltip indicating if it is running on Forescout devices in your deployment. In addition, next to the component name, you will see one of the following icons:

   - – 🔵 - The component is stopped on all Forescout devices.
   - – 🔵 - The component is stopped on some Forescout devices.
   - – 🟢 - The component is running on all Forescout devices.

3. If the component is not running, select **Start**, and then select the relevant Forescout devices.
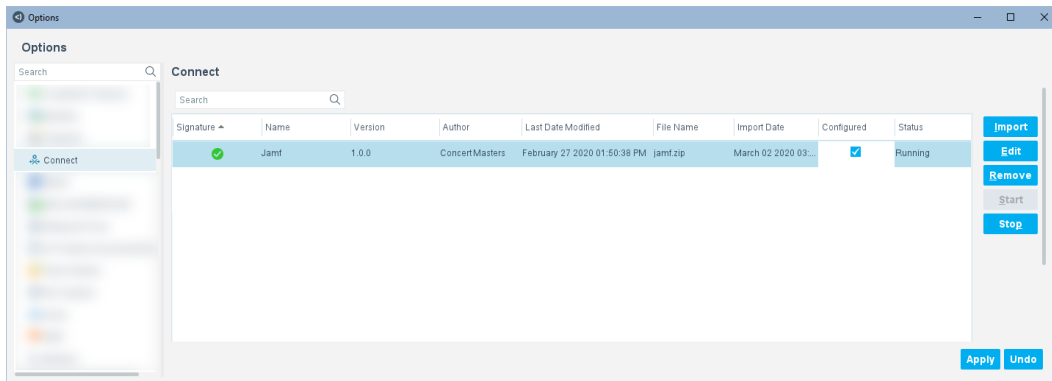
4. Select **OK**.

User Interface Details

The user interface has the following:

- Connect Pane Details
- System Description Dialog Box Details
- Configure Custom Policy Template

Connect Pane Details

The **Connect** pane displays existing apps that have been imported and system descriptions that have been configured. There can be multiple apps displayed in this pane.
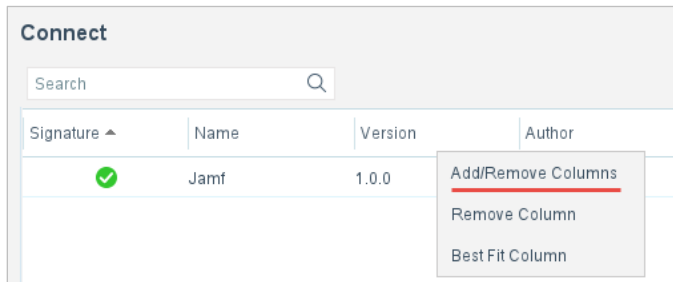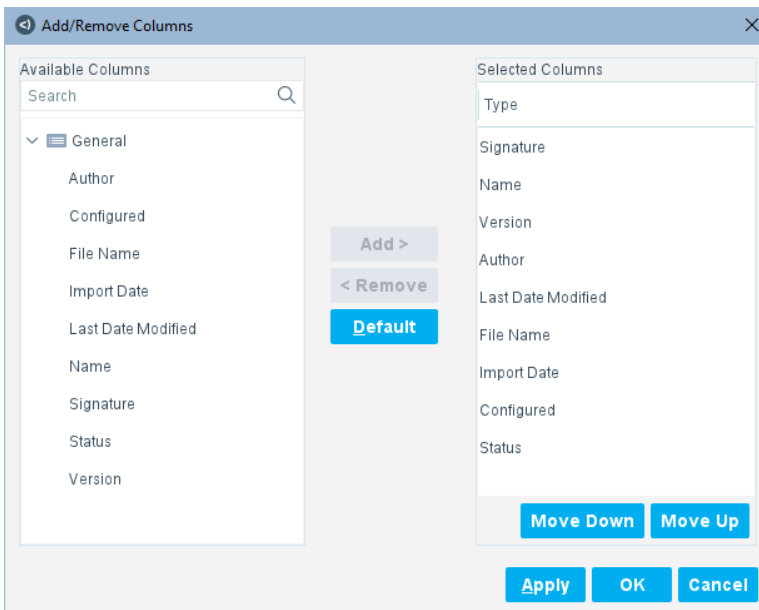

Columns in Connect Pane

There are several default columns in the **Connect** pane as follows:

- **Signature**: The signature of the imported app, which has a green checkmark if the signature is valid or an orange caution sign if the signature is not valid or is missing. Apps from Forescout are signed after their creation to ensure their authenticity and integrity.

- **Name**: The name of the third-party integration app, such as Jamf.

- **Version**: The version of the app.

- **Author**: The author of the app.

- **Last Date Modified**: The date that any file in the app was last modified.

- **File Name**: The file name of the app, such as jamf.zip.

- **Import Date**: The date the app was imported.

- **Configured**: The configuration flag, which has a checkmark if the system description is configured. If an app has been imported, but not configured, there will not be a checkmark in this column. To configure the system description, see Add a System Description.

- **Status**: The status of the app. The valid values are Running and Stopped.

When you right-click on the column titles, a menu for adding and removing columns is displayed.

To add, remove, or reorder the columns on the **Connect** pane, select **Add/Remove Columns**. You can expand the General folder.

Move columns in the lists for **Available Columns** and **Selected Columns** and use the **Move Up** and **Move Down** buttons to reorder the columns in the **Add/Remove Columns** dialog box.

To delete a column, select it and select **Remove Column** in the **Connect** pane.

To select the best fit for a column, right-click a column title and select **Best Fit Column** in the **Connect** pane.

Buttons in Connect Pane

There are several buttons on the **Connect** pane for apps as follows:

| Button	Description
Import	Import an App
Edit	Edit an App
Remove	Remove an App

Button	Description
Start	Start an App
Stop	Stop an App

There are also **Apply** and **Undo** buttons on the **Connect** pane as follows:

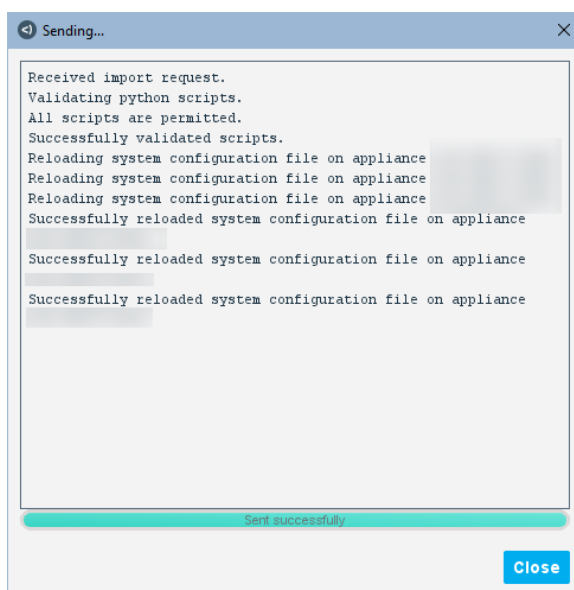| Button	Description
Apply	Save the Connect configuration to the CounterACT Appliance. See Apply Changes.
Undo	Undo the previous action performed in Connect.

Import an App

Select the **Import** button to import apps into Connect in zip or eca format.
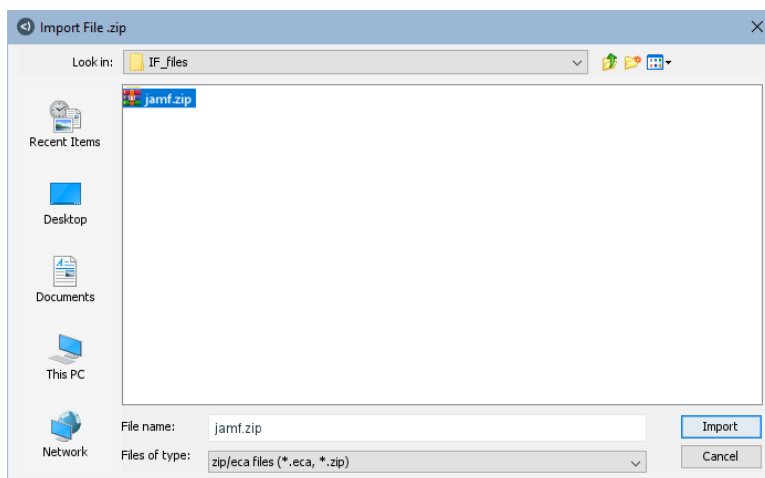
Messages are displayed as the app is imported.

If the app has been imported successfully, a message is displayed at the bottom of the **Sending** dialog box.

If the app has not been imported successfully, error messages are displayed in the **Sending** dialog box.

Select **Close** when the import has finished. If you select **Close** before the import has finished, it will fail.

The **System Description** dialog box opens. In this example, there is one column, URL.
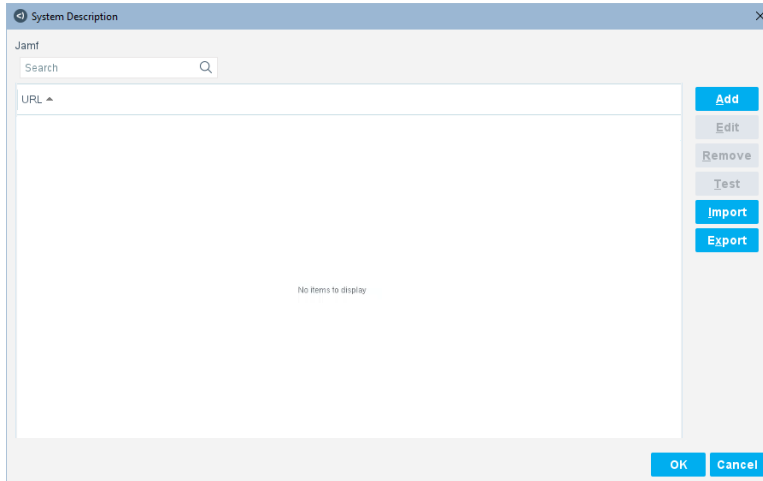

The maximum number of apps that can be imported is 22.

If a device has not been configured and you select **OK** in the **System Description** dialog box, a warning message is displayed.

To configure a system description, select **Add**. See Add a System Description.

Edit an App

Select an existing app in the **Connect** pane and select **Edit** or double-click the existing app to open the system description for it.
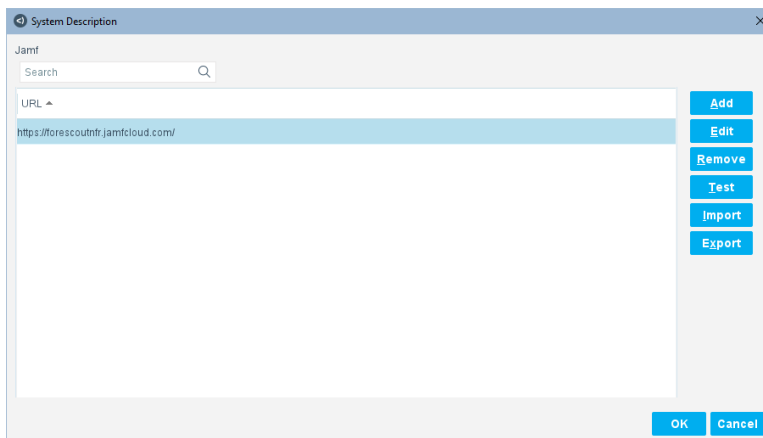
Remove an App

Remove an existing app before replacing it with an update of the same app.

Select an existing app in the **Connect** pane, select **Remove** to delete it, and then confirm the removal.

Before an app is removed, dependencies for properties and actions are checked. An error message is displayed if there are properties or actions configured in a policy when you try to remove the app.
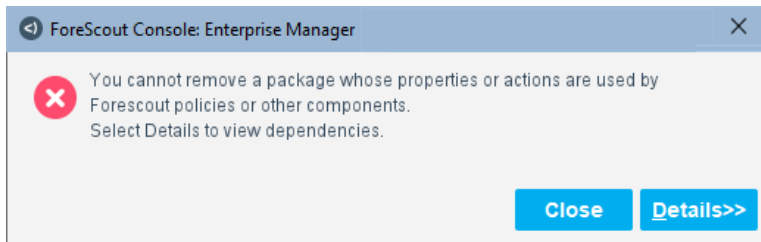
Select **Details** to view the specific properties and actions that are configured.

Start an App

Select the **Start** button to start a selected app when it is not in the Running state. Starting an app enables host discovery, property resolves, and actions (if applicable and configured).

When a selected app is running, the **Start** button is disabled. After an app is started, a status of Running is displayed in the **Connect** pane.

If an app is not selected, both the **Start** and **Stop** buttons are disabled.

If the configuration has not been saved, select **Apply** and then select **Start**.

Stop an App

Select the **Stop** button to stop a selected app when it is in the Running state.

For example, if one app has issues, select it and select **Stop**, then investigate it. The other apps continue running.

When an app is in the Stopped state, host discovery, property resolves, and actions, (if applicable and configured), are stopped.
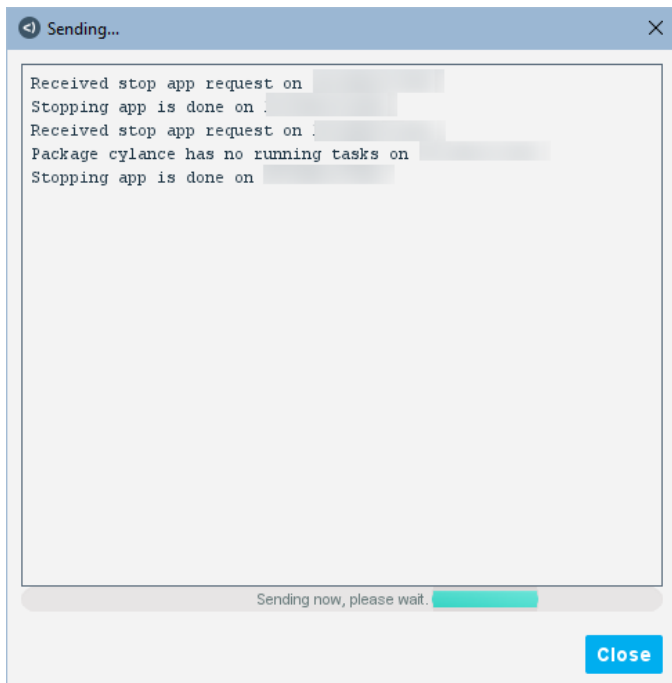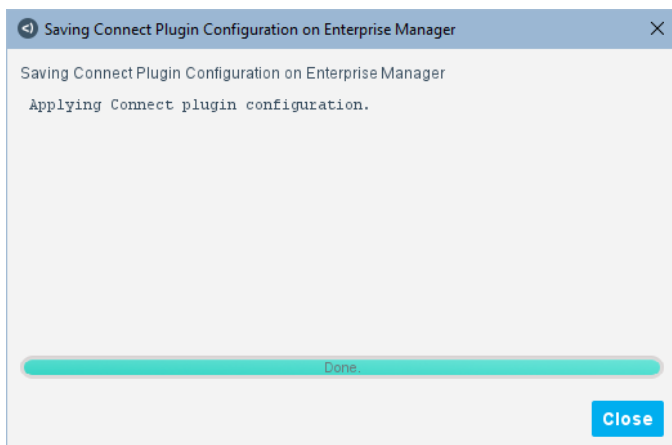

When a selected app is not running, the **Stop** button is disabled. After an app is stopped, a status of Stopped is displayed in the **Connect** pane.

If an app is not selected, both the **Start** and **Stop** buttons are disabled.
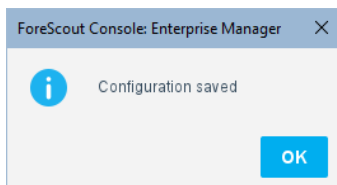
If the configuration has not been saved, select **Apply** and then select **Start**.

Apply Changes

Select the **Apply** button to save the changes to the configuration.

Select **Close**.

Select **OK**.

Upgrade an App

App upgrade is not supported in the current release. To upgrade an app to a newer version, you must **Remove** it, **Import** the newer app, and then **Add** the configuration for the system description.

An error message is displayed if you try to import an app with the same name and version as an existing app.
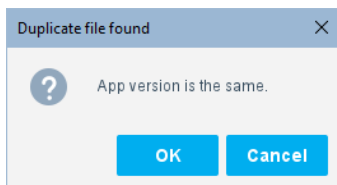
Menu in Connect Pane

There is a menu available when you right-click an existing app in the **Connect** pane.

For **Remove**, **Edit**, **Import**, **Start**, and **Stop**, see Buttons in Connect Pane.
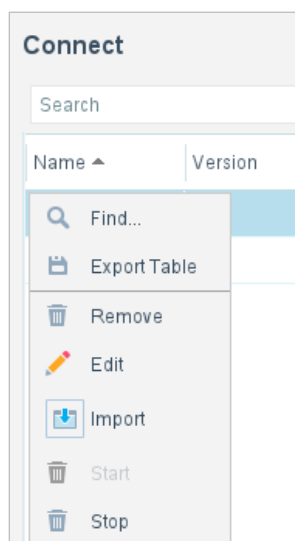
For **Find** and **Export Table**, see Find Dialog Box and Export Table Dialog Box.

Find Dialog Box

Find a string on the window.

> **To find a string:**

1. Select **Find**.
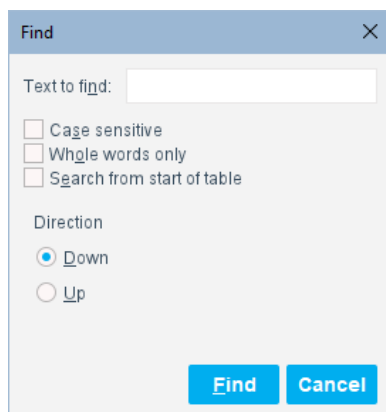
2. Enter the text to find, select options or direction, and then select **Find**.

Export Table Dialog Box

Export the window contents to a spreadsheet.

> **To export a table:**

1. Select **Export Table**.
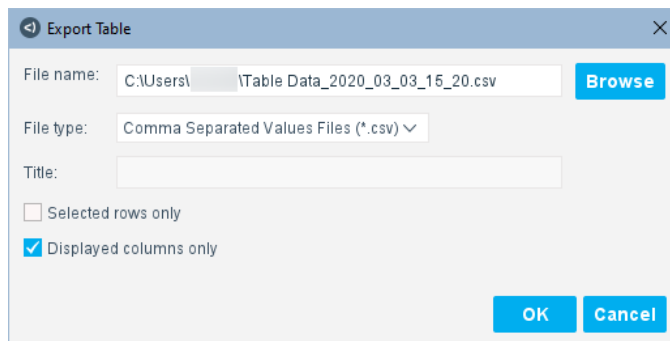
2. You can:

   – Export the **Selected rows only** and/or the **Displayed columns only**
   – Change the **File type** to either Comma Separated Values Files (*.csv) or Acrobat Reader Files (*.pdf)
   – Change the folder location using **Browse**

   📄 *You cannot enter anything in the **Title** field.*

3. Select **OK**. A confirmation is displayed.
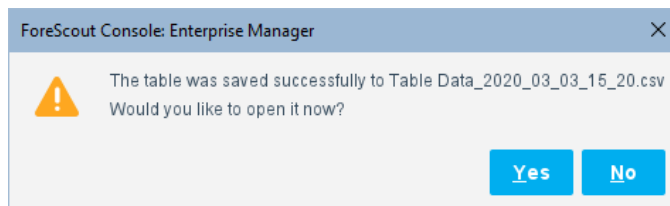
4. Select **Yes**. The table data opens in an Excel spreadsheet. The spreadsheet has a default name based on the date and time.
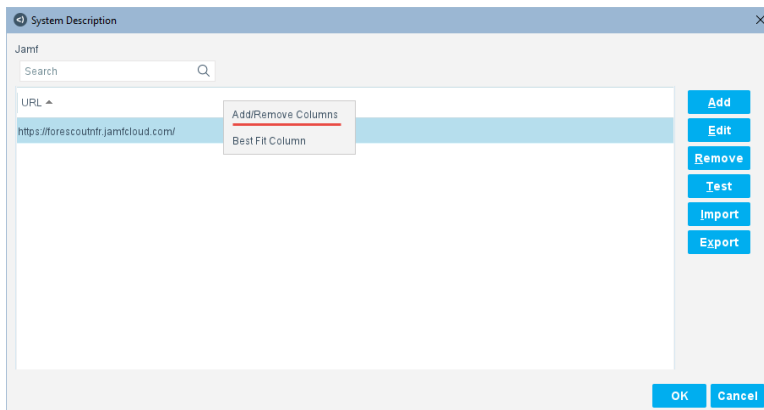

System Description Dialog Box Details

After a system description is configured, it is displayed in the **System Description** dialog box.
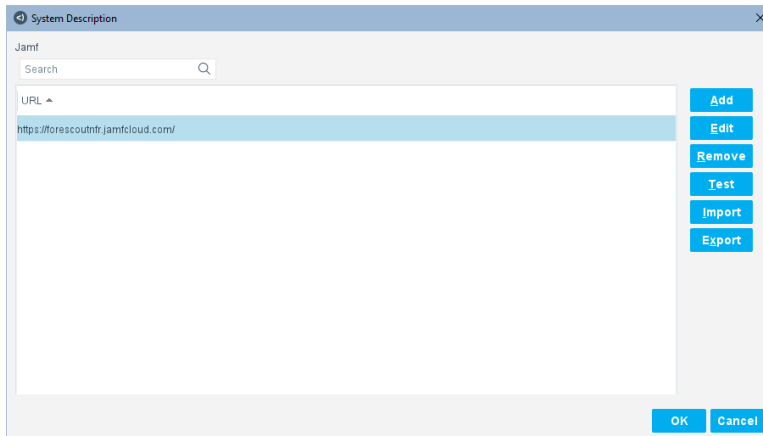
Columns in System Description Dialog Box

When you right-click on the column titles, a menu for adding and removing columns is displayed.

To add, remove, or reorder the columns on the **System Description** dialog box, select **Add/Remove Columns**. You can expand the General folder.
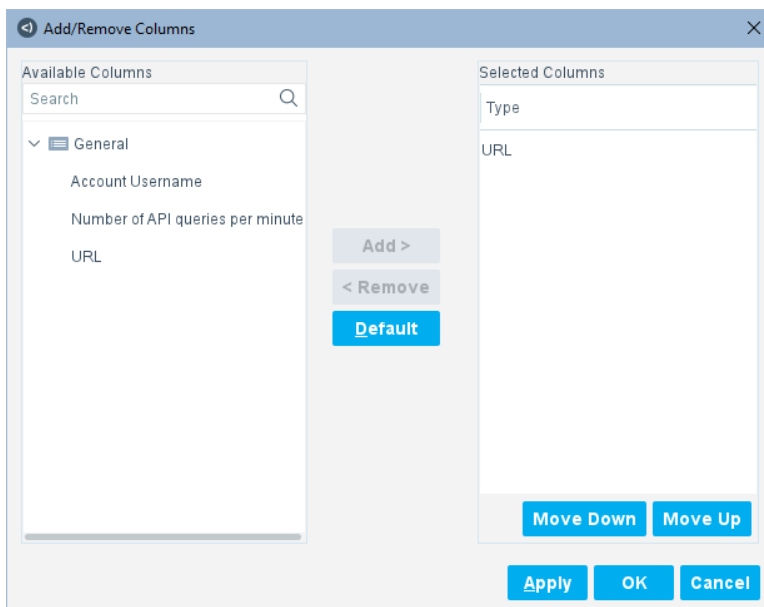
Move columns in the lists for **Available Columns** and **Selected Columns** and use the **Move Up** and **Move Down** buttons to reorder the columns in the **Add/Remove Columns** dialog box.

To delete a column, select it and select **Remove Column** in the **System Description** dialog box.

> 📄 *If there is only one column, you cannot remove it.*

To select the best fit for a column, right-click a column title and select **Best Fit Column** in the **System Description** dialog box.

Buttons in System Description Dialog Box

There are several buttons for an integration on the **System Description** dialog box as follows:

Button	Description
Add	Add a System Description
Edit	Edit a System Description
Remove	Remove a System Description
Test	Test a System Description
Import	Import a System Description
Export	Export a System Description

There are also **OK** and **Cancel** buttons on the **System Description** dialog box:

Button	Description
OK	Save the system description changes to the CounterACT Appliance.
Cancel	Cancel the previous action performed in Connect.

Add a System Description

Define a connection to Jamf, including login credentials.

> **To add a system description:**

1. Select **Add** to display the first configuration panel. There will be at least two panels.

2. Enter the following information for the custom fields on the panel:

URL	Enter the address of the Jamf cloud.

Account Username	Enter the username used to access Jamf.
Account Password	Enter the password used to access Jamf.
Verify Account Password	Re-enter the password to verify it.
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*.

3. Select **Next** to display the next configuration panel, which is the predefined Assign CounterACT Devices panel.
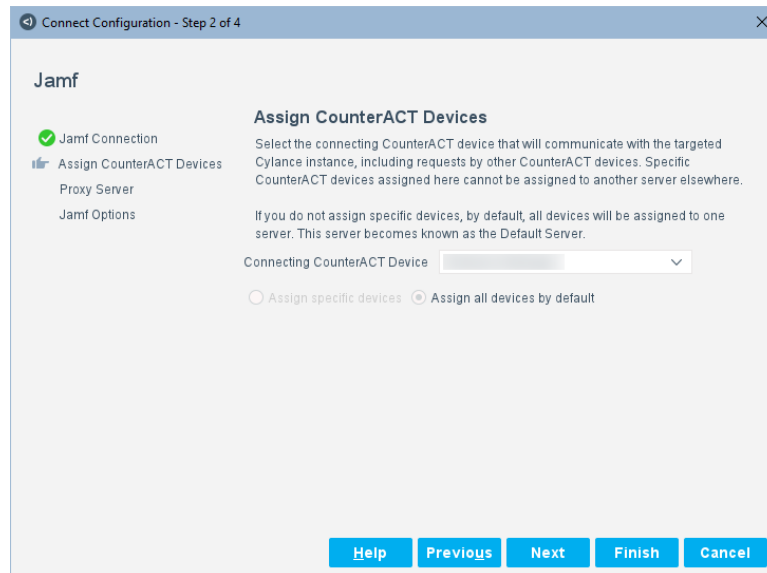
At first, the Assign CounterACT Devices panel has only one option, **Assign all devices by default**, and it is selected so that one device is added.

If you want to add a second device, the Assign CounterACT Devices panel has more options.

4. Enter the following information for the predefined fields on the panel:

Connecting CounterACT Device	Select Enterprise Manager or an IP address of the connecting CounterACT device. In an environment where more than one CounterACT device is assigned to a single third-party instance, the connecting CounterACT Appliance functions as a middleman between the third-party instance and the CounterACT Appliance. The connecting CounterACT Appliance forwards all queries and requests to and from the third-party instance.
Assign specific devices	This CounterACT Appliance is assigned to a third-party instance, but it does not communicate with it directly. All communication between the third-party instance and its assigned CounterACT Appliance is handled by the connecting CounterACT Appliance defined for the third-party instance. All the IP addresses handled by an assigned Appliance must also be handled by the third-party instance to which the Appliance is assigned. ▪ Select **Available Devices** and then select an IP address or Appliance name from the Available Devices list. ▪ Select **Add**. The selected device will send its requests to the third-party instance through the connecting Appliance.
Assign all devices by default	This is the connecting Appliance to which CounterACT Appliances are assigned by default if they are not explicitly assigned to another connecting Appliance. Select this option to make this connecting Appliance the middleman for all CounterACT Appliances not assigned to another connecting device.

Note the following:

- An error message is displayed if you try to add a device that is already used.
- The focal appliance must be the managing appliance for overlapping IPs.
- If you have apps that discover 50,000 or more endpoints, distribute them in such a way so that only up to two of them share the same focal (connecting) appliance. An alternative is to split the endpoints across multiple user accounts on multiple servers.

5. Select **Next** to display the next configuration panel, which is the predefined Proxy Server panel.

6. Enter the following information for the predefined fields on the panel:

Use Proxy Server	Select this option if your environment routes internet communications through proxy servers.
Proxy Server Host	Enter the Fully Qualified Domain Name (FQDN) of the proxy server or the IPv4 address.
Proxy Server Port	Select the port number of the proxy server.
Proxy Server Username	Enter the administrator username used to access the proxy server.
Proxy Server Password	Enter the administrator password used to access the proxy server.
Verify Password	Re-enter the administrator password to verify it.

7. Select **Next** to display the next configuration panel, which is the Jamf Options panel.
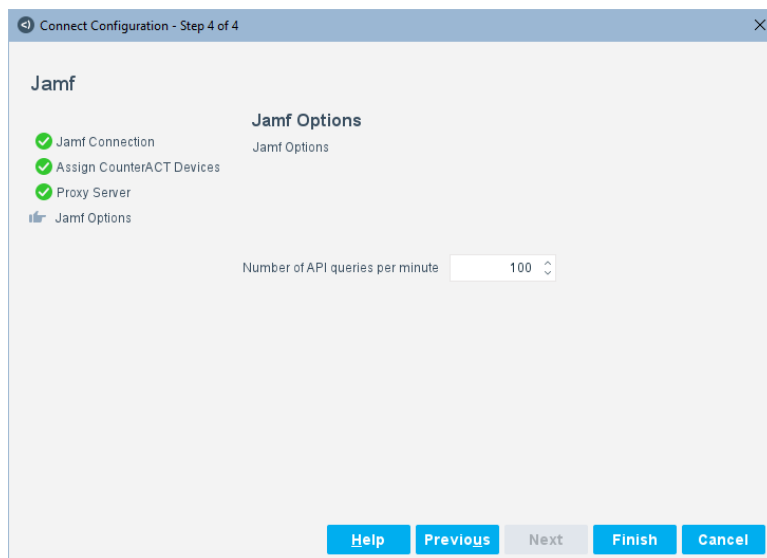
8. Enter the following information for the predefined field on the panel:

Number of API queries per minute	Select a value for the rate limiter.

9. Select **Finish**.

The configured system description is displayed in the **System Description** dialog box.
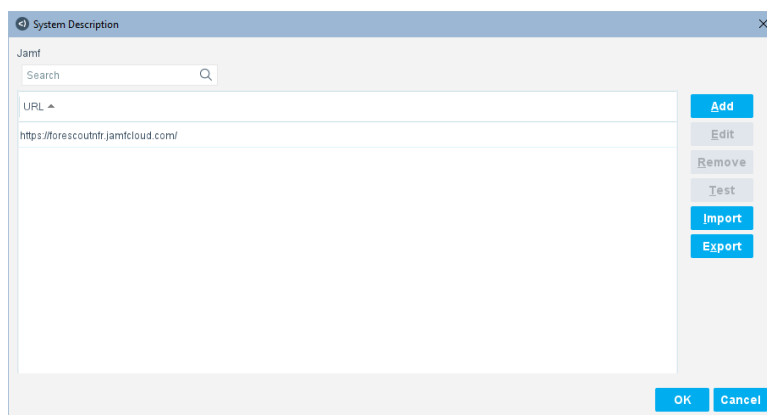
You can create multiple system descriptions. To add another system description, select **Add** and repeat Add a System Description.

Edit a System Description

Select an existing system description in the **System Description** dialog box and select **Edit** to open it. There are tabs for each panel.

Select **OK** to close the dialog box.

Remove a System Description

Select an existing system description in the **System Description** dialog box and select **Remove** to remove it. A confirmation is displayed.

Select **More** for details or select **Ok**.

Scenarios for Remove

The following table describes different scenarios for removing a system description:

Description	Result
The system description being removed has the connecting appliance as the default appliance.	If there is only one system description and it is the default, the remove is allowed.
	If there are two system descriptions, the remove is allowed and the connecting appliance is assigned as the default appliance.
	If there are more than two system descriptions, the remove is not allowed. You must select a new default before removing the system description.

Test a System Description

Select an app and select **Test** to test the connectivity of the configuration. The app must be in the Running state.

Also, the app must be saved before selecting **Test**. Select **OK** in the **System Description** pane and then select **Apply** in the **Connect** pane to save the system description configuration.

When you select **Test**, the Sending dialog box opens.
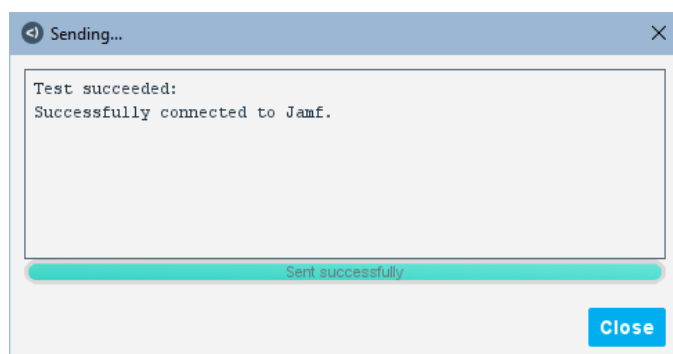
If the connectivity of the system description has been tested successfully, a success message is displayed at the bottom of the dialog box.

If the test failed, a failure message is displayed with a reason.

Import a System Description

Import a saved backup of the configuration. The only supported format is .xml.

To import a system description:

1. Select **Import**.

2. To change the folder location, select **Browse**.
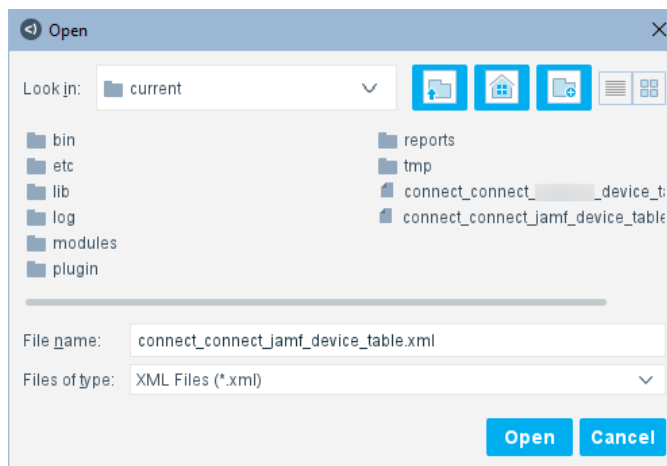
3. Select **Open**.

4. Select **OK** in the **Import** dialog box.

   a. If the device to be imported contains encrypted fields for passwords, the **Import/Export Password** dialog box opens and prompts you to enter a password with which to encrypt the data.
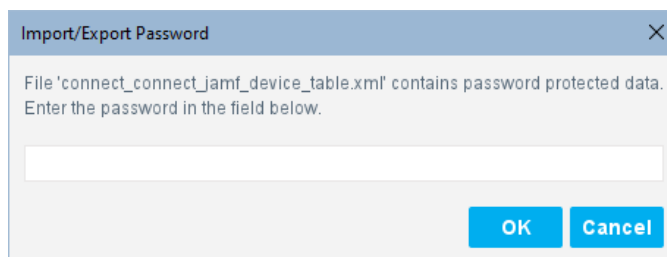

   b. Enter the password that you used when you exported the configuration and select **OK**. See Export a System Description.

5. If the system description already exists, you have the option to **Skip**, **Duplicate**, or **Overwrite** it.
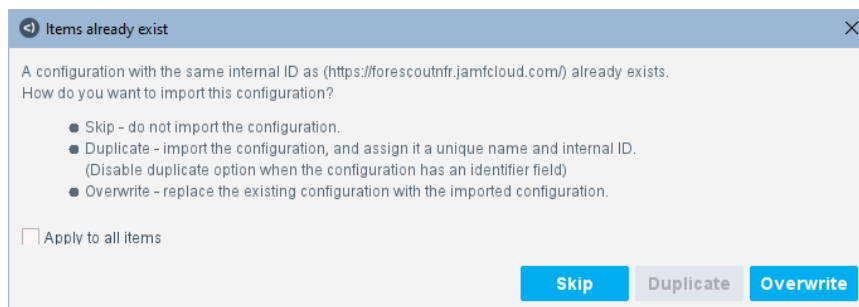
The **Duplicate** button may inactive if the configuration contains a unique field. This is because only one unique field is allowed and creating a duplicate would result in two.

6. The result of the import is displayed.
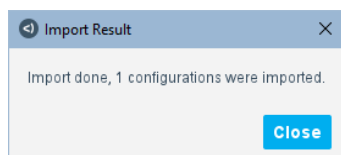
7. Select **Close**.

Scenarios for Import

The following table describes different scenarios for importing a system description:

Description	Result
The imported system description is the first configuration of this app.	The import is allowed and the imported focal appliance is set as the default.
The imported system description will overwrite the default appliance because the user selected **Overwrite** during the import.	The import is allowed and the imported focal appliance is set to the default.
The imported system description has the default appliance assigned, the default is correct, and is not a duplicate appliance.	If no system description has been configured yet, the import is allowed.
	If more than one system description is configured, the import is allowed and the imported focal appliance is switched to a specific appliance.

Description	Result
The imported system description has the default appliance assigned, but the default appliance is not found. For example, the system description might have originated elsewhere.	If no system description has been configured yet, the import is allowed and the Enterprise Manager is set as the default appliance. A warning message is displayed.
	If more than one system description is configured and if all other appliances have been assigned to other devices, the import is not allowed.
	If more than one system description is configured and if an appliance is available, one is selected at random.
The imported system description has one or more specific appliances assigned, but the appliances are not found. For example, the system description might have originated elsewhere.	If all the specific appliances are not found and if all other appliances have been assigned to other system descriptions, the import is not allowed.
	If all the specific appliances are not found and an appliance is available, one is selected at random.
	If some of the specific appliances are found, the import of the correct specific appliances is allowed.
	If some of the specific appliances are found and if all other appliances have been assigned to other system descriptions, the import is not allowed.

Export a System Description

Save a backup of the configuration. The only supported format is .xml.

To export a system description:

1. Select **Export**.

   a. If the devices contain encrypted fields for passwords, the **Import/Export Password** dialog box opens and prompts you to enter a password with which to encrypt the data.
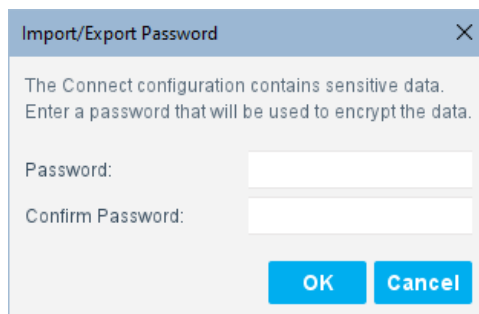
   b. Enter the password.

2. The **Export Table** dialog box opens. You can select to export the **Selected rows only**.

3. To change the folder location, select **Browse**.
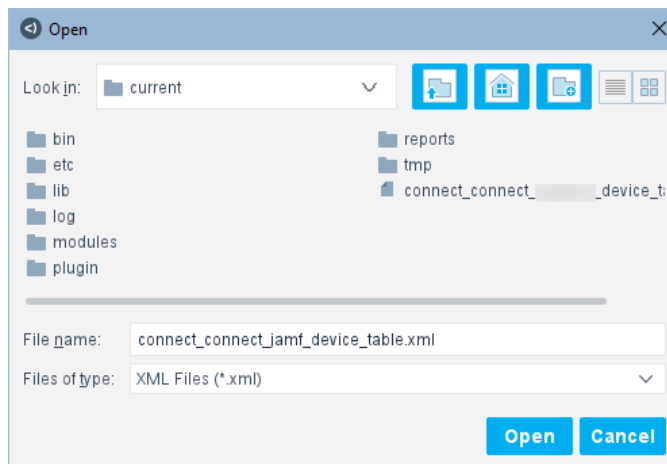
4. Select **Open**.

5. Select **OK** in the **Export Table** dialog box.
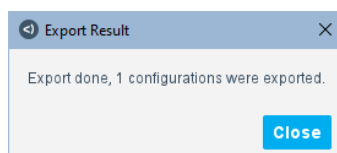
6. Select **Close**.

🖹 *There is no Export for an app.*

Menu in System Description Dialog Box

There is a menu available when you right-click an existing system description in the **System Description** dialog box.

For **Add**, **Edit**, **Remove**, **Test**, **Import**, and **Export**, see Buttons in System Description Dialog Box.
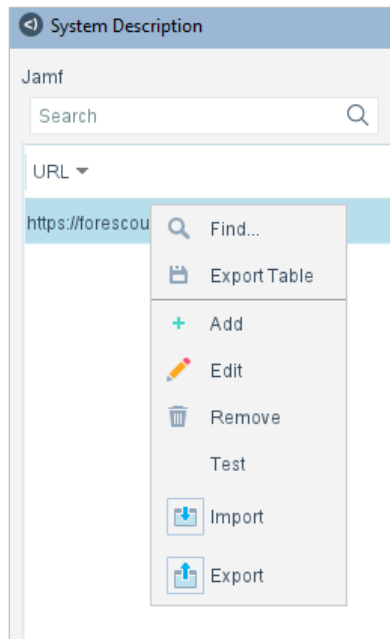
For **Find** and **Export Table**, see Find Dialog Box and Export Table Dialog Box. They work the same as in the **Connect** pane.

Configure Custom Policy Template

Configure a policy from the custom template.

To configure a custom policy:

1. In the Forescout Console, select **Policy**.

2. Select **Add** and search for **Custom**.

3. Select **Next**.

4. Enter a name for the policy. Optionally, enter a description.

5. Select **Next**. Both the IP Address Range dialog box and the Scope pane open.

6. Use the IP Address Range dialog box to define which endpoints are inspected.
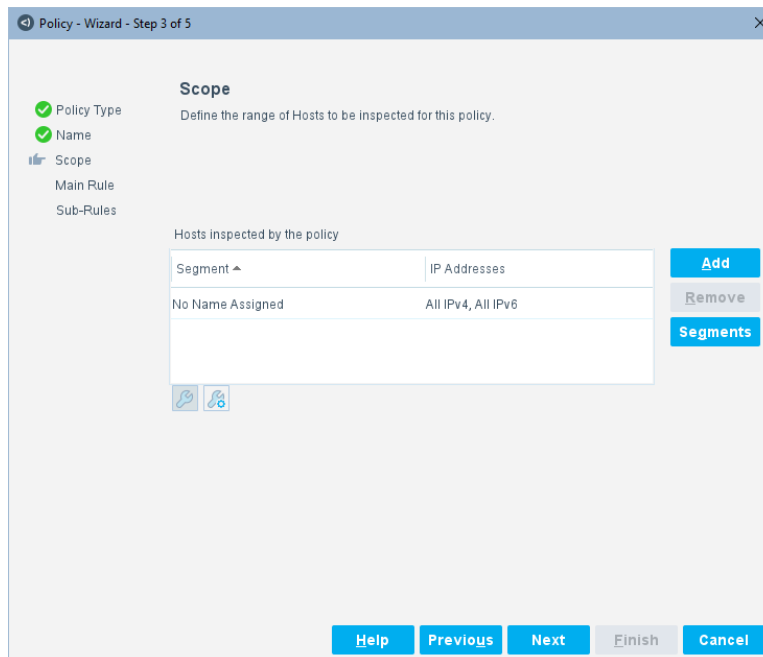
The following options are available:

- **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.

7. Select **OK**. The added range is listed in the Scope pane.

8. Select **Next**.

9. To add a condition, select **Add** in the Condition section and search for Jamf to see the properties associated with the app. See Properties for details.

10. Configure conditions for the policy and then select **OK**.

11. To add an action, select **Add** in the Actions section and search for Jamf to see the actions associated with the app. See Actions for details.
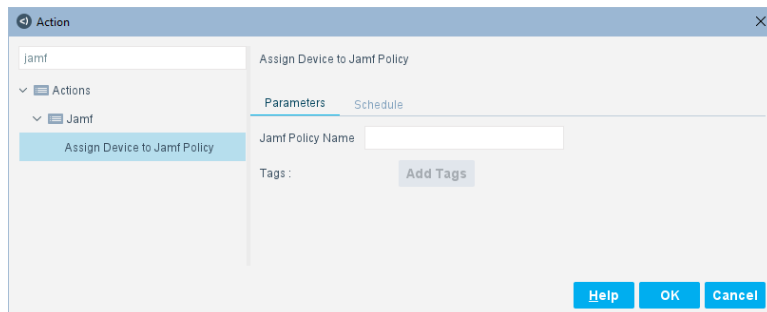
12. Configure actions for the policy and then select **OK**.

13. The configured conditions and actions are displayed in the Main Rule.
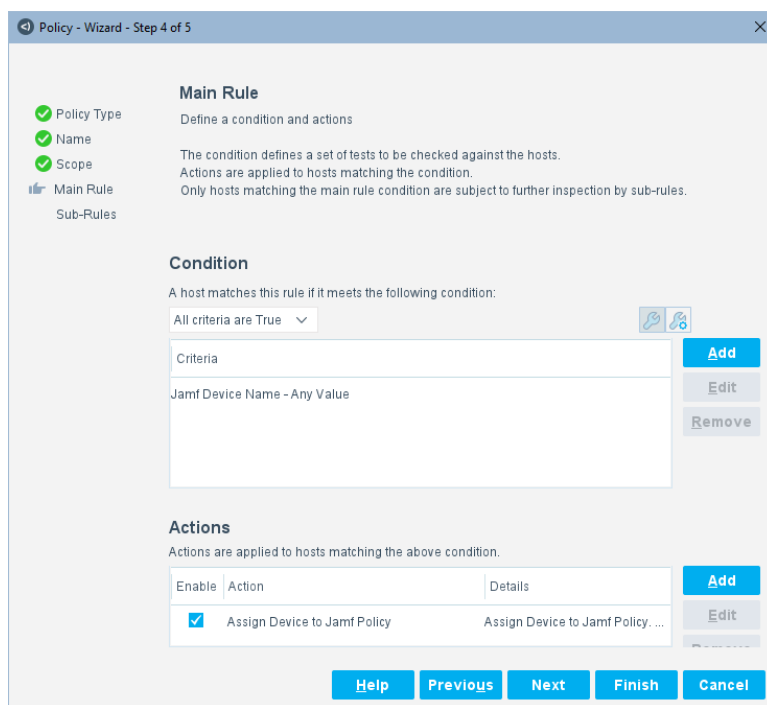
14. If finished, go to step 15 or:

    a. If you want to configure sub-rules, select **Next**.

    b. To add a sub-rule, select **Add** and give the sub-rule a name.

c. Select **OK**.

d. Configure conditions and actions for the sub-rule and select **OK**. See Properties and Actions for details.

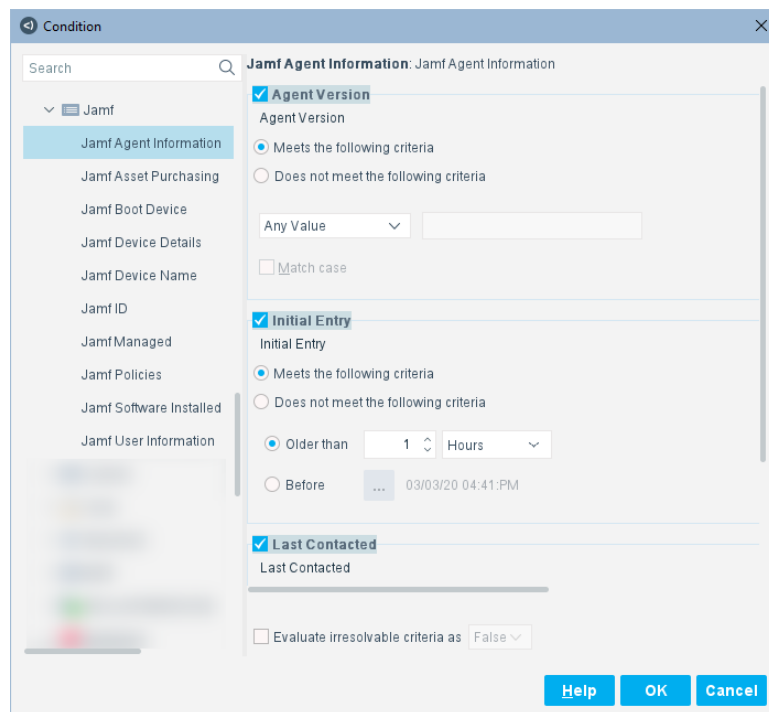**15.** Select **Finish**. The configured policy is displayed in the Policy Manager.

Properties

Jamf properties are available to be used in a policy.

To access the Jamf properties:

1. When configuring a policy, select **Add** in the Condition section of the Main Rule or Sub-Rule dialog box.

2. Expand the Jamf folder and select a property.

The following properties are available:

Jamf Agent Information	The Jamf agent information. The following sub-properties are available: ▪ Agent Version ▪ Initial Entry ▪ Last Contacted
Jamf Asset Purchasing	The Jamf asset purchasing information. The following sub-properties are available: ▪ Leased ▪ Purchased

|	
Jamf Boot Device	The Jamf boot device. The following sub-properties are available: ▪ FileVault Status ▪ Name ▪ Size ▪ FileVault Percent ▪ Percentage Full
Jamf Device Details	The Jamf device details. The following sub-properties are available: ▪ Memory (Total) ▪ Operating System ▪ Serial Number ▪ Make ▪ Battery Capacity ▪ Processor Speed ▪ Model ▪ Operating System Version ▪ Processor Type ▪ Operating System Build ▪ Processor Cores (Total) ▪ Processor Architecture ▪ Processors (Total)
Jamf Device Name	The Jamf device name.
Jamf ID	The Jamf ID, which can be entered as a single number, a list of numbers, or a range of numbers.
Jamf Managed	The device is or is not managed by Jamf.
Jamf Policies	The Jamf policies.
Jamf Software Installed	The Jamf software installed.
Jamf User Information	The Jamf user information. The following sub-properties are available: ▪ Real Name ▪ Email Address ▪ Username ▪ Phone number ▪ Position

3. Configure conditions for the policy and then select **OK**.

Actions

Jamf actions are available to be used in a policy.

To access the Jamf actions:

1. When configuring a policy, select **Add** in the Actions section of the Main Rule or Sub-Rule dialog box.
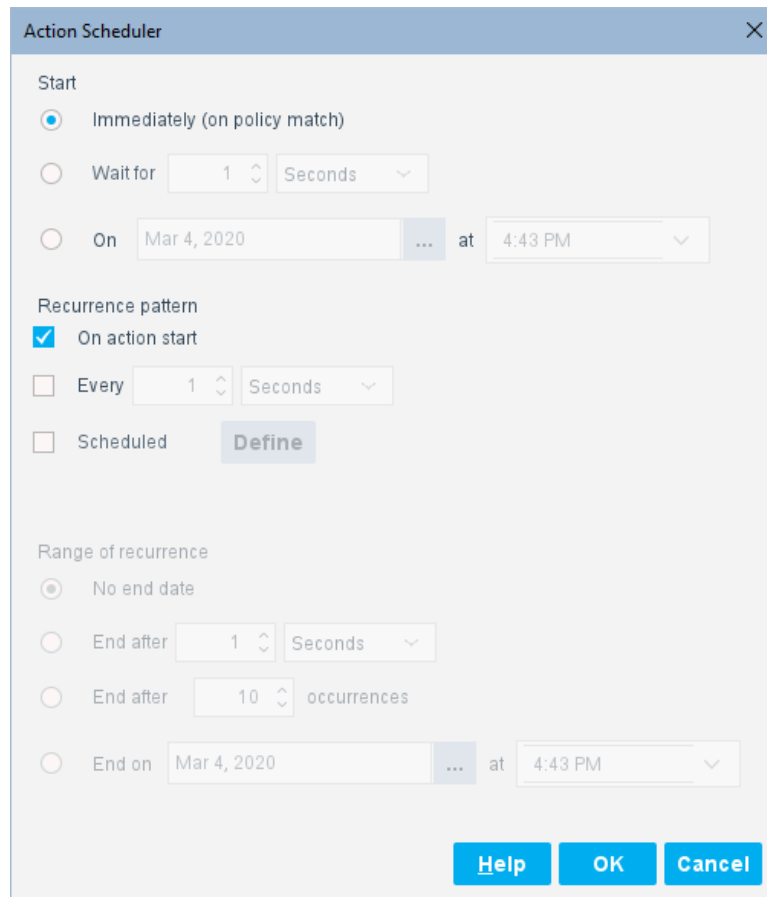
2. Expand the Jamf folder and select an action.
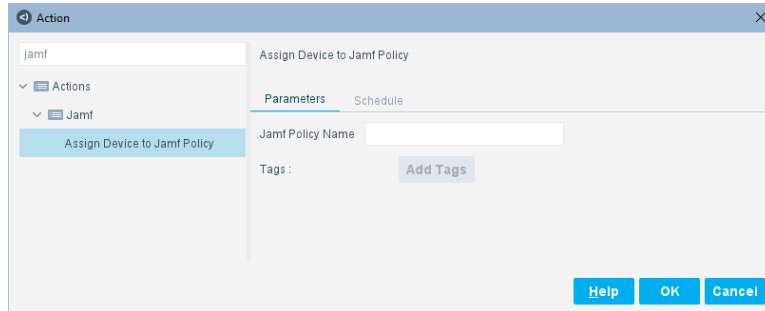
The following action is available:

Assign Device to Jamf Policy	Assign a device to a Jamf policy by inputting the policy name as a parameter in the user interface.

3. To schedule the action, select the Schedule tab.
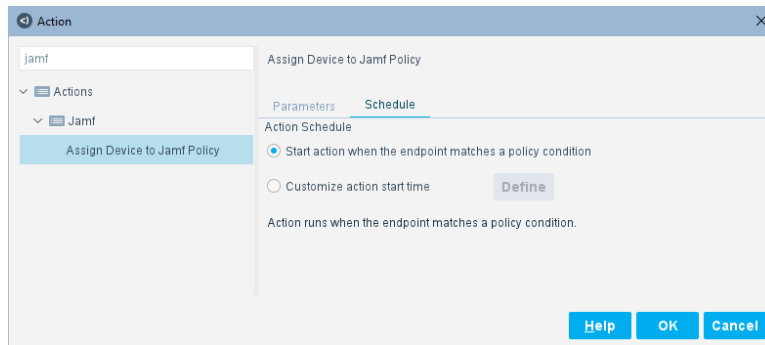
4. In the Action Schedule section, select one of the following:

    – **Start action when the endpoint matches a policy condition**, which implements the policy when the policy conditions are met by the endpoint.

    – **Customize action start time**, which opens the Action Scheduler dialog box.

5. Select **OK** in each dialog box to complete the configuration of the action.