FORESCOUT

Forescout

Endpoint Module: Microsoft SMS/SCCM Plugin

Configuration Guide

Version 2.4.2

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About the Documentation

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

Legal Notice

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About the Microsoft SMS/SCCM Plugin

The Microsoft SMS/SCCM Plugin is a component of the Forescout Endpoint Module. See Endpoint Module Information for details about the module.

The Microsoft® Systems Management Server (SMS) 2003 and Microsoft® System Center Configuration Manager (SCCM) 2007, 2012, and 2016 are servers that collect information from network components, and install and update software.

This plugin lets the Forescout platform connect to an SMS or SCCM server to:

- Retrieve advertisements related to SMS/SCCM hosts.
- Update SMS/SCCM clients with new advertisements, and update the SMS/SCCM server with new host information.

To use the plugin, you should have a solid understanding of SMS/SCCM concepts, functionality, and terminology.

About Certification Compliance Mode

Forescout Endpoint Module: Microsoft SMS/SCCM Plugin supports Certification Compliance mode. For information about this mode, refer to the *Forescout Installation Guide.*

Concepts, Components, Considerations

Before configuring the plugin, you should have a basic understanding of the architecture of the SMS/SCCM and Forescout platforms.

Concepts

Integration lets you map CounterACT® Appliances or the Enterprise Manager to a unique SMS/SCCM server. When several CounterACT devices are mapped to a single SMS server, one CounterACT device functions as a proxy to handle communication between the server and the remaining CounterACT devices. Using a proxy enables the plugin to control the query rate from the Forescout platform to the SMS/SCCM server, thus ensuring more efficient traffic control.

An option is also available to work with a default server, which can be used to handle CounterACT devices that are not specifically mapped to an SMS/SCCM server. This may happen for example, if new Appliances are registered with an Enterprise Manager, but are not yet assigned to an SMS/SCCM server.

Deployment Options

The following deployment options are available:

- A unique SMS/SCCM server or server cluster associated with several CounterACT devices.
- Sets of unique SMS/SCCM servers or server clusters associated with several CounterACT devices.

- A single SMS/SCCM server or server cluster associated with a Single Appliance or Enterprise Manager.

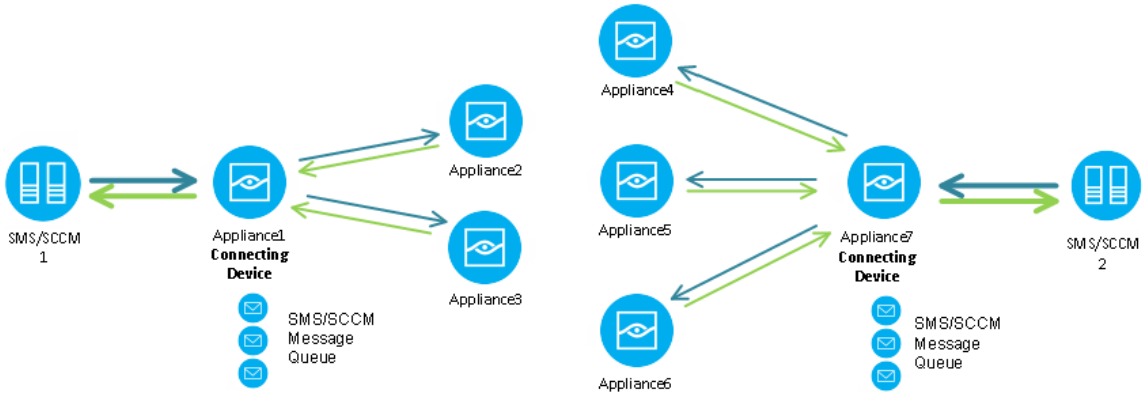
You cannot assign multiple SMS servers to a single CounterACT device.

Components

Connecting CounterACT Device: The Connecting CounterACT device communicates directly with the SMS/SCCM server and handles queries and requests submitted by the devices assigned to the SMS/SCCM server. In an environment in which more than one CounterACT device is assigned to an SMS/SCCM server, the connecting device functions as a proxy between the SMS/SCCM server and other CounterACT devices assigned to it. This means it forwards all requests by other CounterACT devices assigned to the SMS/SCCM server. The Connecting CounterACT device also functions as an Assigned CounterACT device.

Assigned CounterACT Devices: CounterACT devices assigned to a unique SMS/SCCM server. The IP address assignments in these Appliances must be IP addresses handled by the SMS/SCCM server to which the Appliances are assigned.

Default SMS/SCCM Server: The server to which all CounterACT devices are assigned by default, if they are not explicitly assigned to another SMS/SCCM server.



Considerations

Consider the following when mapping CounterACT devices to SMS/SCCM servers:

Match IP Address Ranges: Verify that the SMS/SCCM server/cluster handles the same IP address range as the CounterACT devices assigned to it.

To set IP address assignments to CounterACT devices:

1. Select **Options** from the **Tools** menu, and then select **CounterACT Devices**.
2. Select **IP Assignments**. The IP Assignments pane opens.
3. Select an item and then select **Edit**.
4. Modify the settings or select **Add** to add a new IP address.
5. Select **OK**.

Use This Plugin with the HPS Inspection Engine: Although SMS/SCCM servers store information that may overlap with the information retrieved by the HPS

Inspection Engine -, the Microsoft SMS/SCCM Plugin should not be used as a substitute for the HPS Inspection Engine Plugin because the HPS Inspection Engine - collects information that the SMS/SCCM servers do not.

What to Do

You must perform the following to work with this plugin:

- Verify that requirements are met. See Requirements for details.
- Define target SMS/SCCM servers and assign CounterACT devices to them. See Configure the Plugin for details.
- Verify communication with target SMS/SCCM servers. See Test the Plugin.
- Create Custom Policies that contain SMS/SCCM conditions or actions.

Requirements

The plugin requires the following Forescout releases and other components:

- Forescout version 8.1.2.
- If you are using Flexx licensing, ensure that you have a valid Forescout eyeControl (ForeScout CounterACT Control) license, to use enforcement actions provided by the component. Refer to the *Forescout Flexx Licensing How-to Guide* for more information about managing Flexx licenses.

Third-Party Requirements

- SMS 2003, or SCCM 2007, 2012, or 2016 Inventory Tool for Microsoft Updates SP1 or higher must be installed on the SMS/SCCM site.
- Access to the SQL database of SMS/SCCM servers/clusters. The database user account used by the Forescout platform should have Read Table permission. This is for conducting a *select* query. No write permission is required.
- If you are working with policy actions, additional requirements should be addressed. See SMS/SCCM Client Registration Status for more information.

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.

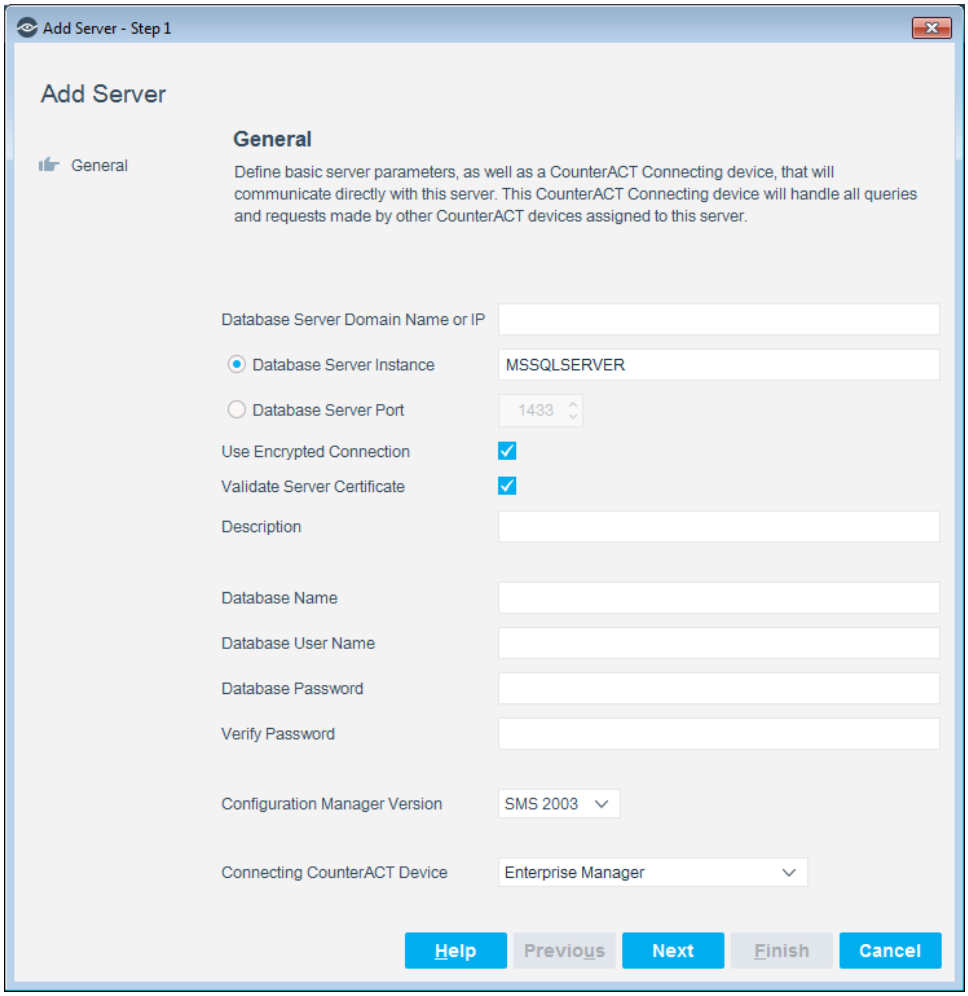
Configure the Plugin

Plugin configuration lets you define target SMS/SCCM servers and map CounterACT Appliances or the Enterprise Manager to a SMS/SCCM server. You can access the SMS/SCCM MSSQL database, which is required for retrieving properties. You can also set advanced parameters, for example, you can limit the volume of requests that the Forescout platform submits to the SMS/SCCM server.

See Concepts, Components, Considerations for more information about assigning CounterACT devices to SMS/SCCM servers.

To define SMS/SCCM server targets:

1. Select **Options** from the **Tools** menu.
2. In the Modules pane, select the Microsoft SMS/SCCM Plugin and select **Configure**.
3. In the Microsoft SMS/SCCM pane, select **Add** to add a server.

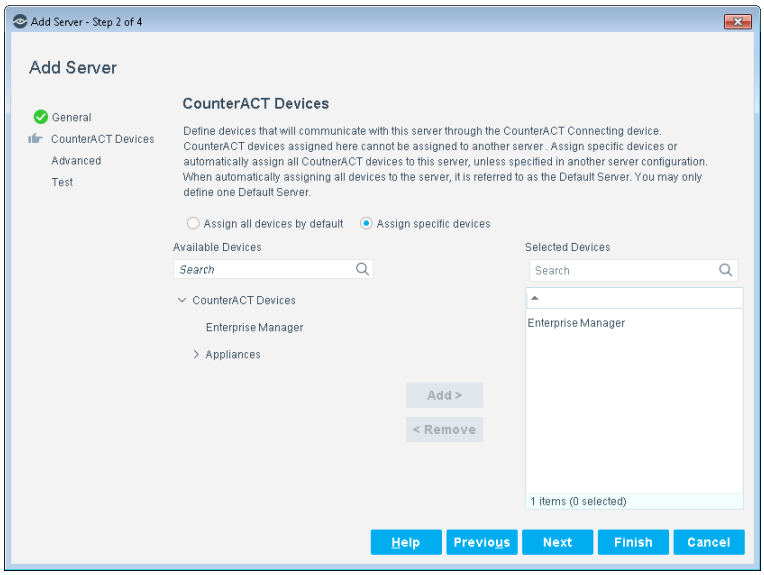


4. In the General pane, configure the following connection parameters:

Database Server Domain Name or IP	Enter the Fully Qualified Domain Name (FQDN) or IP address of the SMS/SCCM server.
Database Server Instance	Enter the name of the Microsoft SQL Database Server instance to which to connect. If you connect using a named instance, the port is detected automatically. Using a named instance requires UDP connections to the server on port 1434 as well as the port dynamically allocated for the given named instance. The default value is MSSQLSERVER. Using dynamic ports when connecting with a named instance complicates the connection because the port number may change when the Microsoft SQL server is restarted, requiring changes to the firewall settings. To avoid connection problems, configure SQL Server to use a static port. This parameter is mutually exclusive with **Database Server Port**.
Database Server Port	Enter the port used to access the SMS/SCCM server (default 1433). This parameter is mutually exclusive with **Database Server Port**.
Use Encrypted Connection	Select this option if the SQL connection to the SMS/SCCM server must be encrypted.
Validate Server Certificate	Select this option to validate the identity of the third-party server before establishing a connection, when the Plugin 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), as well as the server certificate, 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*.
Description	Enter a description of this server connection.
Database Name	Enter the full name of the target database, for example, *SCCM_CM1* or *SMS_db23.*
Database Username	Enter a username for the SQL database of the SMS/SCCM server. This user must have *Read Table* permissions. To specify an existing Windows domain user, use the full **`DOMAIN\username`** format. Windows user login is supported in environments that use NT LAN Manager (NTLM) for authentication. Authentication with Kerberos is not supported.
Database Password	Enter the password for the database user.

Verify Password	Re-enter the password to verify it.
Configuration Manager Version	Select the version of the SMS/Configuration Manager that runs on this server. The possible values are: SMS 2003, SCCM 2007, SCCM 2012, SCCM 18xx, and SCCM 19xx.
Connecting CounterACT device	Select the CounterACT device that communicates with the server. This device handles all communication with the target SMS/SCCM server, including requests by other CounterACT devices assigned to this SMS/SCCM server. This device receives SMS/SCCM requests from the other CounterACT devices assigned to this SMS/SCCM target, and passes results to them.

5. Select **Next**.



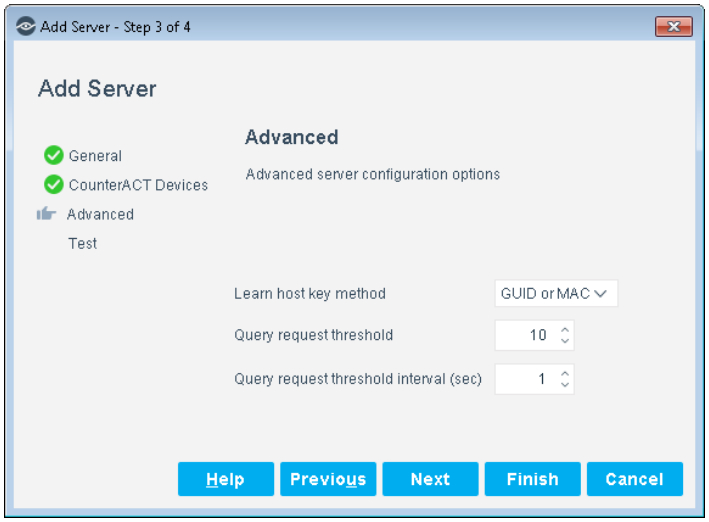
6. Select one of the following options:

   – **Is Default Server**: Makes this server the target for all CounterACT devices not assigned to another SMS/SCCM server.

   If you have only one server, it is automatically the default server. The Assign Devices option is available only if more than one server is defined in the system.

   – **Assign Devices:** Lets you specify the CounterACT devices that communicate with this server. Use the Add or Remove buttons to select devices.

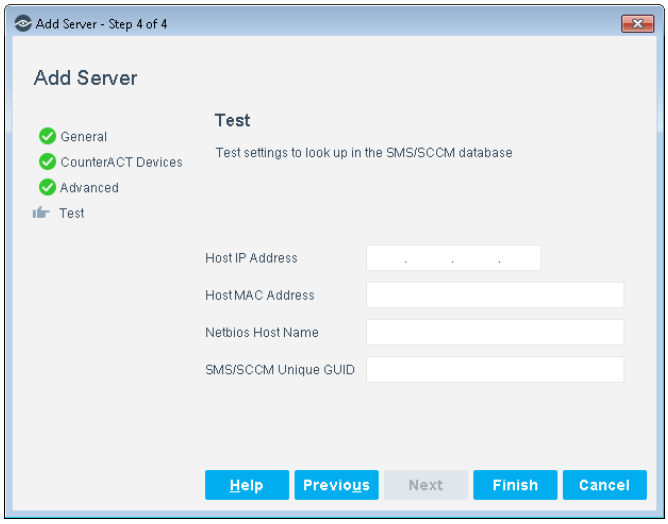
7. Select **Next**.



8. Configure the following advanced features:

Learn host key method	Select the method to use to learn the host key used to look up host properties on the SMS/SCCM server. The following options are available: ▪ GUID Only ▪ GUID or MAC ▪ MAC Only It is recommended to work with the **GUID or MAC** option. To retrieve the GUID, the host must be managed by the Forescout platform (either via remote inspection or using SecureConnector™).
Query request threshold	Together, these two parameters regulate the volume of requests submitted to the SMS/SCCM server. The **Query request threshold** defines the number of requests that can be submitted during the specified **Query request threshold interval**.
Query request threshold interval	

9. Select **Next**.



10. In the Test pane, configure endpoint information that is used to test communication with this server. Data for the endpoints identified by these fields should be present in the database of the target server, but the endpoints do not have to be connected to the SMS/SCCM server for the test.

    Each of these values is tested separately. You can specify one, two, or all values to test the SMS/SCCM query using each type of identifier.

11. Select **Finish**. The server is displayed in the Microsoft SMS/SCCM pane.
12. (Optional) Repeat this procedure to add other SMS/SCCM servers. In the Microsoft SMS/SCCM pane, select **Edit** to reassign CounterACT devices to each SMS/SCCM server, to change the default SMS/SCCM server, or to change which CounterACT devices handle SMS/SCCM communication.

Verify That the Plugin Is Running

After configuring the plugin, verify that it is running.

To verify:

1. Select **Tools**>**Options** and then select **Modules**.
2. Navigate to the plugin and select **Start** if the plugin is not running.

Test the Plugin

This section describes how to verify that the Forescout platform can connect to the SMS/SCCM database and retrieve information for a specific host. Test results indicate:

- Whether or not the host has an SMS/SCCM client installed
- Whether or not the host is known to the SMS/SCCM database

If the database access was enabled in the Add Server wizard, the test verifies that:

- The plugin can access the SMS/SCCMMSSQL database.
- Database query results on the tested host are correct.

Data for the endpoints identified by these fields should be present in the database of the target server, but the endpoints do not have to be connected to the SMS/SCCM server for the test.

To test the plugin:

1. In the Modules pane, select the Microsoft SMS/SCCM Plugin and select **Configure**.
2. In the Microsoft SMS/SCCM pane, select a configured connection to an SMS/SCCM server.
3. (Optional) To review or modify the endpoint information used for the test, select **Edit**. In the Edit SMS Server wizard, select the Test tab. Select **Cancel** or **OK** to exit the wizard.
4. Select **Test**. Confirm the test.

Troubleshooting the Test

This section shows a sample error message when the SMS/SCCM credentials are not configured correctly.

If the test returns an error similar to the following example, there is a problem with the server configuration. The IP address entered may not be an SMS/SCCM server, or the port number entered may be incorrect.

```
DBI connect('host=10.1.8.1;port=1433','wer',...) failed: OpenClient
message: LAYER = (0) ORIGIN = (0) SEVERITY = (78) NUMBER = (41)
Server , database Message String: Server is unavailable or does not exist.
at lib/fstool/commands/SMS/SCCM.pl line 165
Error: Error while executing plugin_test_cb : Unable to connect to server
OpenClient message: LAYER = (0) ORIGIN = (0) SEVERITY = (78) NUMBER = (41)
Server , database
Message String: Server is unavailable or does not exist.
, Quitting
```

If the test returns an error similar to the following example, there is a problem with the user name and password. The user name or password may be incorrect or the user may not have the required permissions.

```
message number=18456 severity=14 state=1 line=0 text=Login failed for user
'wer'.OpenClient message: LAYER = (0) ORIGIN = (0) SEVERITY = (78) NUMBER =
(46)
Server , database
Message String: Login incorrect.
 at lib/fstool/commands/SMS/SCCM.pl line 165
Error: Error while executing plugin_test_cb : Unable to connect to server
Server message number=18456 severity=14 state=1 line=0
text=Login failed for user 'wer'.OpenClient message: LAYER = (0) ORIGIN =
(0) SEVERITY = (78) NUMBER = (46)
Server , database
Message String: Login incorrect.
, Quitting
```

Create Custom Policies

Custom policy tools provide you with an extensive range of options for detecting and handling endpoints. Use policies to instruct the Forescout platform to apply actions to endpoints that match conditions based on host property values.

This section describes the properties that are available when this plugin is installed.

Policies, Properties, and Actions

This section provides a brief overview of the policy-based tools used to detect and handle endpoints.

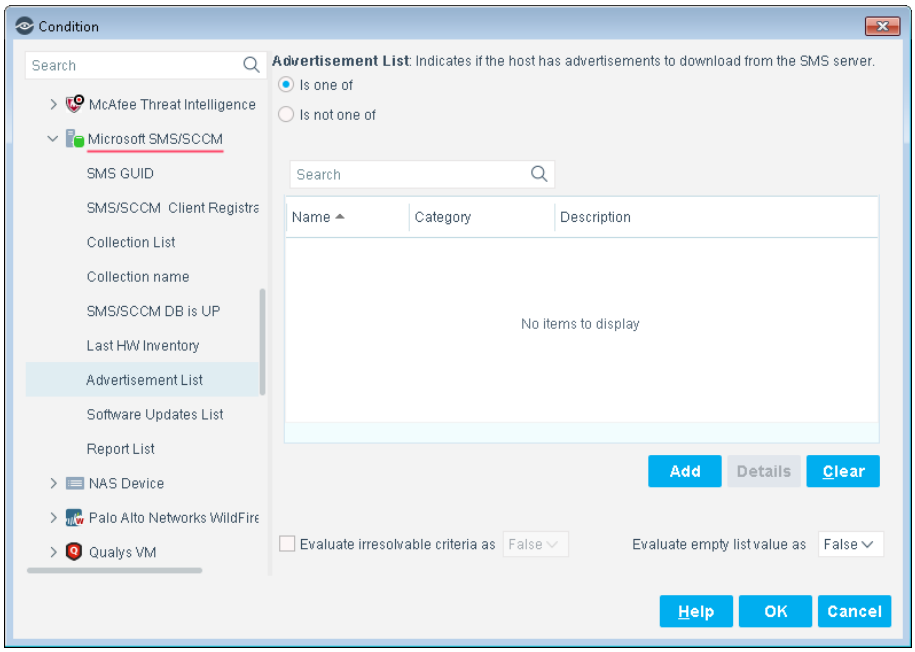
Policy rules detect and handle hosts defined in the policy scope. When an endpoint matches the conditions of a rule, the rule actions are applied to the endpoint.

Policy conditions examine host properties learned by the Forescout platform to detect hosts with specific attributes. For example, you can create a policy that instructs the Forescout platform to detect hosts running a specific operating system or with a specific application installed.

Policy actions let you instruct the Forescout platform to control detected devices. For example, assign a device that matches the conditions of a rule to quarantine a VLAN or send the device user or IT team an email.

Policy Properties - Detecting Endpoints

The following properties describe attributes that can be discovered by working with custom SMS/SCCM policies. These properties are available when the Forescout SMS/SCCM Plugin is installed.



Advertisement List	Indicates endpoints that have advertisements to download from the SMS/SCCM server.
Collection List	Indicates endpoints that are members of collections.
Collection name	Indicates endpoints that are members of a specific collection. Wildcards are supported.
Last HW Inventory	Indicates endpoints that reported a hardware inventory event to the SMS/SCCM server before a specified time.
Report List	Indicates endpoints that are members of reports. The plugin only supports reports in which the query is defined according to NetBIOS and with the following format: **`SELECT fields FROM tables WHERE sys.Netbios_Name0 = @element_name`** or **`SELECT fields FROM tables WHERE v_R_System.Netbios_Name = @element_name`** Other fixed conditions or SQL commands (such as ORDER) be added after the initial Netbios_Name condition. For example: **`SELECT fields FROM tables WHERE sys.Netbios_Name0 = @element_name and table.field = 'fixed_value'`**
SMS GUID	Indicates the SMS Client Software GUID of the endpoint.
SMS/SCCM Client Registration Status	Indicates the client registration status of the endpoint at the SMS/SCCM server.
SMS/SCCM DB is UP	Indicates that the plugin and SMS/SCCM server are connected.
Software Updates List	Indicates endpoints that are members of pending software updates.

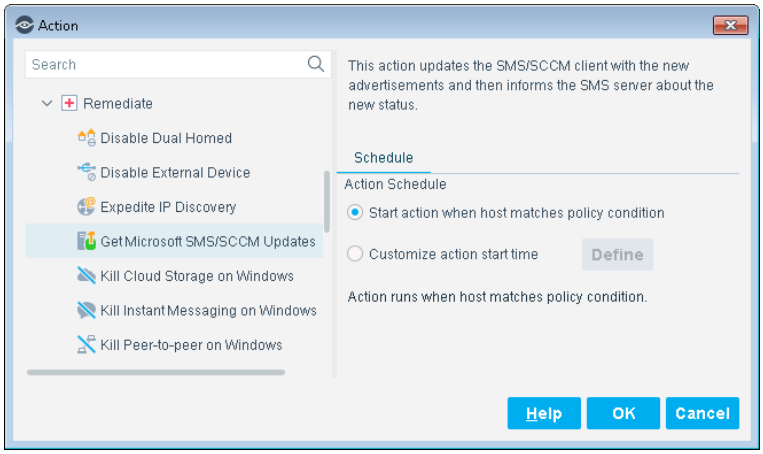
Policy Actions - Managing Endpoints

Policy actions provide a wide range of tools that assist you in handling SMS/SCCM endpoints.

If you are using Flexx licensing, ensure that you have a valid Forescout eyeControl license to use these actions. Refer to the *Forescout Flexx Licensing How-to Guide* for more information about managing licenses.

Get Microsoft SMS/SCCM Updates

Use the Get Microsoft SMS/SCCM Updates action to update the SMS/SCCM client with new advertisements and then update the SMS/SCCM server with the new status.



Action Requirements

- SMS/SCCM Advanced client must be installed on the endpoint.
- When policy rules use an SMS/SCCM collection property, and the policy implements the Get Microsoft SMS/SCCM Updates action and Assign to VLAN action, the SMS/SCCM collection should be configured to perform an SMS/SCCM recheck every minute. This ensures that the host moves into production as soon as possible.
- If the policy contains the Assign to VLAN action and the Get Microsoft SMS/SCCM Updates action, the SMS/SCCM roaming boundaries should be configured to contain the IP address ranges of the VLANS that are used in the policy.
- Use the options of the Scheduling tab to customize update retrieval.

Using SMS/SCCM

Now that you have established communication between the Forescout SMS/SCCM Plugin and a server, you can use this to collect information from network components and implement software installations and updates.

Use the Inventory tab in the Forescout platform to view a real-time display of SMS/SCCM updates.

You can browse the inventory to learn what CVEs have been detected on your network, and acquire information about endpoints with similar findings.

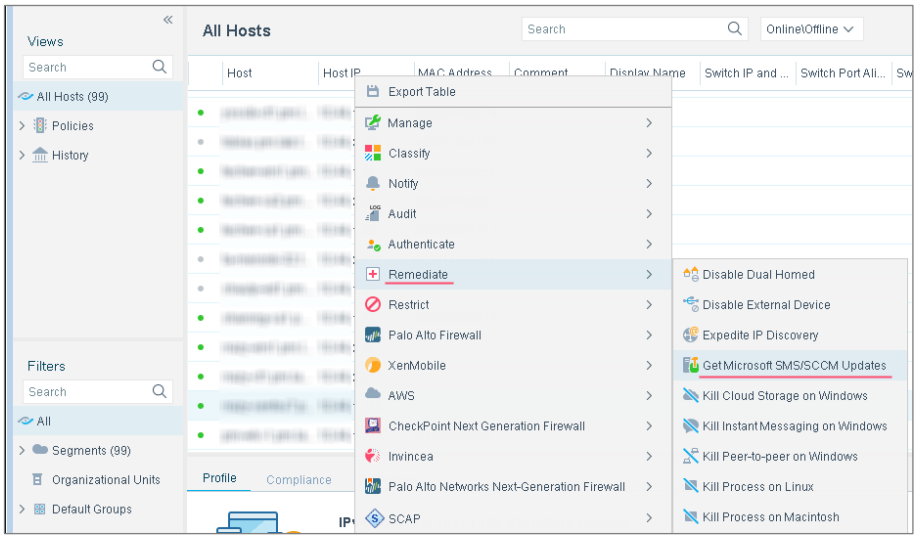
Get SMS/SCCM Updates

You can select specific IP addresses to have the SMS/SCCM Plugin get updates.

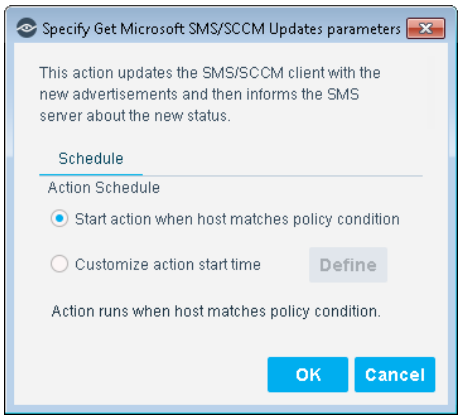
To get the SMS/SCCM updates:

1. Log in to the Console and select **Home**.

2. Right-click the IP Address and select **Remediate** > **Get Microsoft SMS/SCCM Updates**.



The Specify Get Microsoft SMS/SCCM Updates parameters dialog box opens.



3. Update the parameters and select **OK**.

Endpoint Module Information

The Microsoft SMS/SCCM Plugin is installed with the Forescout Endpoint Module.

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

- HPS Agent Manager
- HPS Inspection Engine
- Hardware Inventory Plugin
- 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

Access documentation downloads from the Forescout Resources Page, or 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 Portal

Software downloads are also available from these portals.

To identify your licensing mode:

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

Forescout Resources Page

The Forescout Resources Page provides links to the full range of technical documentation.

To access the Forescout Resources Page:

- Go to https://www.Forescout.com/company/resources/, select **Technical Documentation,** and search for documents.

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 Portal

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

To access documentation on the Forescout Customer 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.

If your deployment is using Flexx Licensing Mode, you may not have received credentials to access this portal.

To access the Documentation Portal:

- Go to https://updates.forescout.com/support/files/counteract/docs_portal/ and use your customer support credentials to log in.

Forescout Help Tools

Access information directly from the Console.

Console Help Buttons

Use context-sensitive *Help* buttons to access information about tasks and topics quickly.

Forescout Administration Guide

- Select **Forescout Help** from the **Help** menu.

Plugin Help Files

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

Online Documentation

- Select **Online Documentation** from the **Help** menu to access either the Forescout Resources Page (Flexx licensing) or the Documentation Portal (Per-Appliance licensing).
-