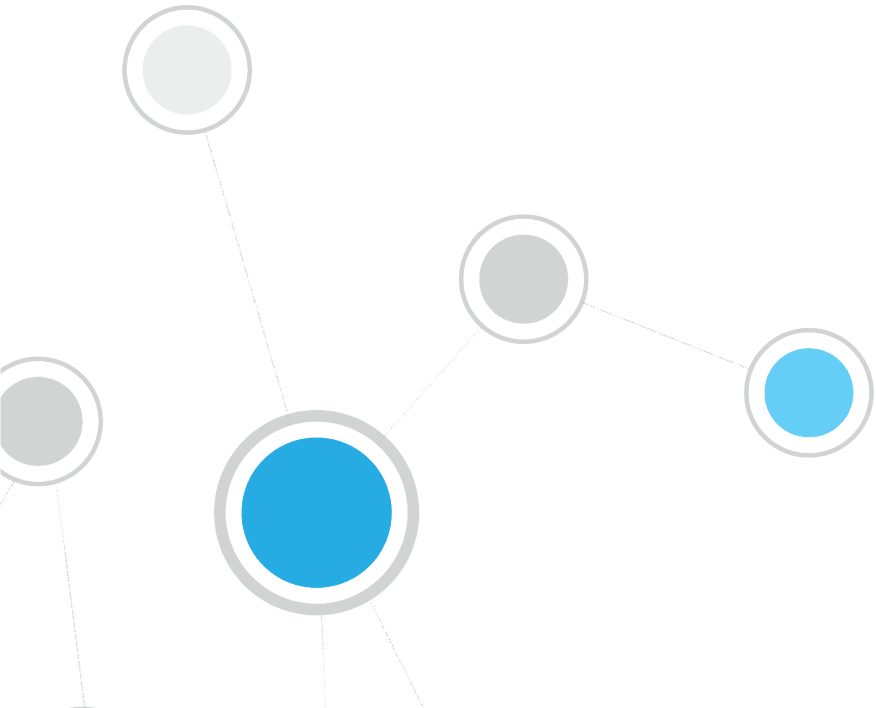
ForeScout® Extended Module for MaaS360®

Configuration Guide

Version 1.8



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About MaaS360 Integration

ForeScout CounterACT® integration with MaaS360 helps IT administrators streamline the process to provision, manage and secure today's expanding suite of smartphones and tablets, all from a single portal. CounterACT/MaaS360 integration yields an easy to use platform that includes all of the essential functionality for end-to-end management of mobile devices. You can secure and manage apps, docs, and devices for global organizations, and support both corporate and individual owned devices.

MaaS360 is available as both an *on premise* system and a *cloud service*. This means with a single unified security management and reporting system, you can ensure that your network is secured, regardless of the type of device a user may be carrying. Instead of implementing new security silos that are limited to mobile devices, you can extend your PC and network security systems to encompass mobile devices.

CounterACT integration with MDM services provides a whole new level of centralized visibility and control for actionable insights into your entire computing landscape.

- ***Secure all Mobile Devices***: supports all major smartphone and tablet platforms including iOS and Android - in both Exchange and Lotus Notes environments.
- ***Manage Devices Outside the Corporate Network:*** leverage integration with MDM services to manage devices even when they are not in the corporate network.
- ***Embrace BYOD***: provides workflows to discover, enroll, manage and report on personally owned devices as part of your mobile device operations.
- ***Experience simple device enrollment and approval***: provides auto-quarantine for Exchange, and alerts IT personnel to approve all new devices. Additionally it provides for easy user self-enrollment via web, email or SMS.

Additional ForeScout MDM Documentation

Refer to the documents linked from the following file for more technical information about the ForeScout MDM solution.
http://updates.forescout.com/online/help/mdm/ForeScout_MDM_doc.pdf

About this Module

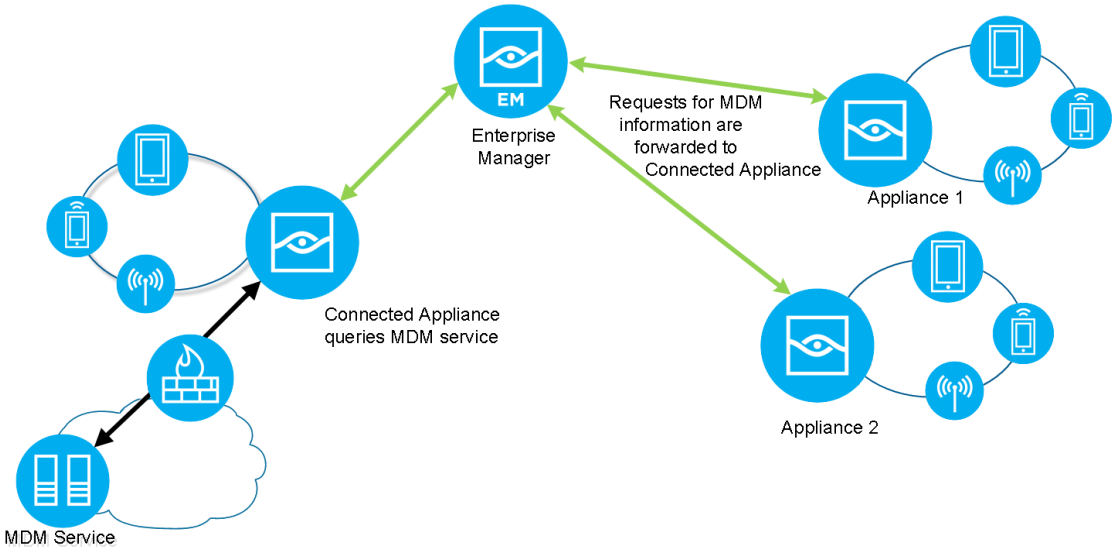
Integration with CounterACT lets you deliver a comprehensive MDM solution that provides powerful monitoring and enforcement capabilities not available when working solely with the MaaS360 solution. Use the MaaS360 MDM Module to complete the cycle of security by obtaining valuable capabilities:

- Automated real-time, continuous detection and compliance of mobile devices the moment they try to connect to your network, including unmanaged and unknown devices.

- Unified network access control policy enforcement options:
  - Allow compliant and managed devices on the network.
  - Limit network access based on device type, device ownership, time of day, and device compliance. The limited access network can allow access to a subset of applications and data, blocking access to more sensitive corporate resources.
  - Block noncompliant devices or specific types of devices from your network completely.
- Tag devices at the MaaS360 console, based on CounterACT detections.
- Enhance CounterACT inventory by populating it with MaaS360 information.

How it Works

The MaaS360 Module queries the MaaS360 Cloud Service for device attributes, for example core attributes, security and compliance information, hardware inventory and network information. All MaaS360 queries are performed by a single CounterACT Appliance that is designated for this purpose. This designated CounterACT Appliance, the *MaaS360 Connected Appliance*, retrieves information from other CounterACT Appliances and the CounterACT Enterprise Manager and forwards the information to the MaaS360 Cloud Service. Similarly, the MaaS360 Connected Appliance retrieves information from the MaaaS360 service and forwards it to other CounterACT Appliances and the CounterACT Enterprise Manager.



Continuous Query Refresh

MaaS360 query mechanisms recheck endpoint attributes at a static frequency—approximately once a day. However, after module installation, querying of endpoint properties is based on CounterACT policy *recheck* definitions that define the conditions under which to recheck hosts that match a policy. Specifically, you can specify:

- How often hosts are rechecked once they match a policy
- Under what conditions to carry out the recheck

This ensures continuous, real-time endpoint evaluation that can be customized for each CounterACT policy.

Queries for device core attributes are initiated on the basis of the endpoint MAC address. Core attribute results return the device ID, which is used for further queries. As such, the module must learn endpoint MAC addresses in order to initiate the query process.

Offsite Device Management

The module leverages integration with MaaS360 to manage devices even when they are not in the corporate network. The module retrieves updated host information for offsite devices through the MaaS360 service platform. Offsite endpoints are identified and managed based on their MAC addresses.

For more information, see Managing Offsite Devices.

Supported Devices

The following devices are supported by MaaS360:

- iOS
- Android
- BlackBerry
- Windows Mobile
- Windows Phone
- Symbian

The following devices are supported by the MaaS360 MDM Module:

- iOS
- Android

For exact OS version support, refer to the MaaS360 documentation:
http://updates.forescout.com/online/help/mdm/ForeScout_MDM_doc.pdf

Supported Network Infrastructure

Devices connected to a network via a WiFi connection.

What to Do

To use the MaaS360 MDM Module, perform the following tasks:

1. Verify that you have met software and networking requirements. See Requirements.

   Install, configure and test the module. See Install the Module and Configure and Test the Module. Once installed, the module automatically adds an HTTP Redirect exception to the CounterACT NAC Redirect Exception list. CounterACT NAC HTTP redirect exceptions are designed to ensure users can access business essential Internet sites or important files on the Internet while allowing required HTTP blocking and redirection. This exception ensures that devices can enroll with the MDM service and still receive required HTTP notifications.

2. Configure the Module.
3. Create CounterACT policies that detect, manage and remediate devices. See Run MaaS360 Policy Templates and Working with CounterACT Policies.
4. Connect to the ForeScout MaaS360 Console to configure device policies: http://mdm.forescout.com/login

Refer to the documents at the following location for more technical information about the ForeScout MDM solution.
http://updates.forescout.com/online/help/mdm/ForeScout_MDM_doc.pdf

Requirements

This section describes system requirements and recommendations.

- CounterACT Software Requirements
- ForeScout Extended Module License Requirements
- Registration and Activation Requirements
- Networking Requirements
- Endpoint Requirements
- Additional Deployment Recommendations

CounterACT Software Requirements

The following CounterACT releases can work with this module.

- CounterACT version 8.0

ForeScout Extended Module License Requirements

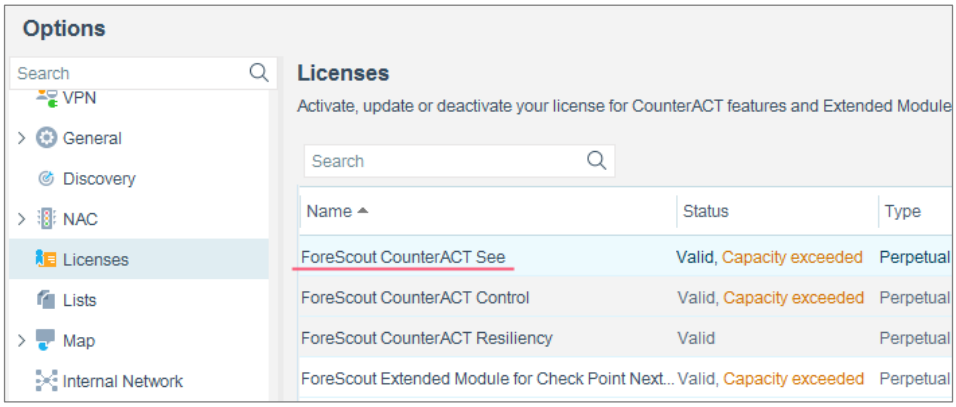
This ForeScout Extended Module requires a valid license. Licensing requirements differ based on which licensing mode your deployment is operating in:

- Per-Appliance Licensing Mode
- Centralized Licensing Mode

Identifying Your Licensing Mode in the Console

If your Enterprise Manager has a *ForeScout CounterACT See* license listed in the Console, your deployment is operating in Centralized Licensing Mode. If not, your deployment is operating in Per-Appliance Licensing Mode.

Select **Options > Licenses** to see whether you have a *ForeScout CounterACT See* license listed in the table.



Contact your ForeScout representative if you have any questions about identifying your licensing mode.

Per-Appliance Licensing Mode

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

When the demo period expires, you will be required to purchase a permanent module license. *In order to continue working with the module, you must purchase the license*.

Demo license extension requests and permanent license requests are made from the CounterACT 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 CounterACT 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. Licenses for this module are based on the number of mobile devices managed by CounterACT via the MDM service.

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

Centralized Licensing Mode

When you set up your CounterACT deployment, you must activate a license file containing valid licenses for each feature you want to work with in your deployment, including Extended Modules. After the initial license file has been activated, you can update the file to add additional Extended Module licenses or change endpoint capacity for existing Extended Modules. For more information on obtaining Extended Module licenses, contact your ForeScout 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 Extended Module license has an associated capacity, indicating the number of endpoints the license can handle. The capacity of each Extended Module license varies by module, but does not exceed the capacity of the *See* license.

Integration Modules, which package together groups of related licensed modules, are not supported when operating in Centralized Licensing Mode. Only Extended Modules, packaging individual licensed modules are supported. The Open Integration Module is an Extended Module even though it packages more than one module.

More License Information

Refer to the *CounterACT Administration Guide* for information on Extended Module licenses. You can also contact your ForeScout representative or license@forescout.com for more information.

Registration and Activation Requirements

Register for access to the MaaS360 Cloud Service at:

http://mdm.forescout.com

The MaaS360 Cloud Service is available as a 30-day free trial. After registering, you are sent a confirmation email; ***keep this email for future reference*** as it provides information required for configuring the MaaS360 Module.

Networking Requirements

The following ports must be open on enterprise firewalls to support communication between CounterACT and the MaaS360 service:

- 443/TCP
- The port used to communicate with a proxy server, if one is used. Specify this port when you configure the module. See Configure and Test the Module.

In addition, define exceptions to the Virtual Firewall action for these ports. See Configuring Virtual Firewall Actions.

Endpoint Requirements

Queries to MDM services are based on endpoint MAC addresses. As such, CounterACT must learn endpoint MAC addresses in order to initiate the query process. MAC addresses can be learned from the following sources:

- Wireless Plugin (Client table)
- Packet-Engine (ARP and DHCP traffic)
- L3 switches (ARP table)

Additional Deployment Recommendations

- Run the DHCP Classify Plugin (recommended to accelerate asset classification).
- Verify that HTTP Redirect actions, for example the *HTTP Notification* action, are working in your environment. Refer to the CounterACT Console online help for information about working with HTTP actions.

About Support for Dual Stack Environments

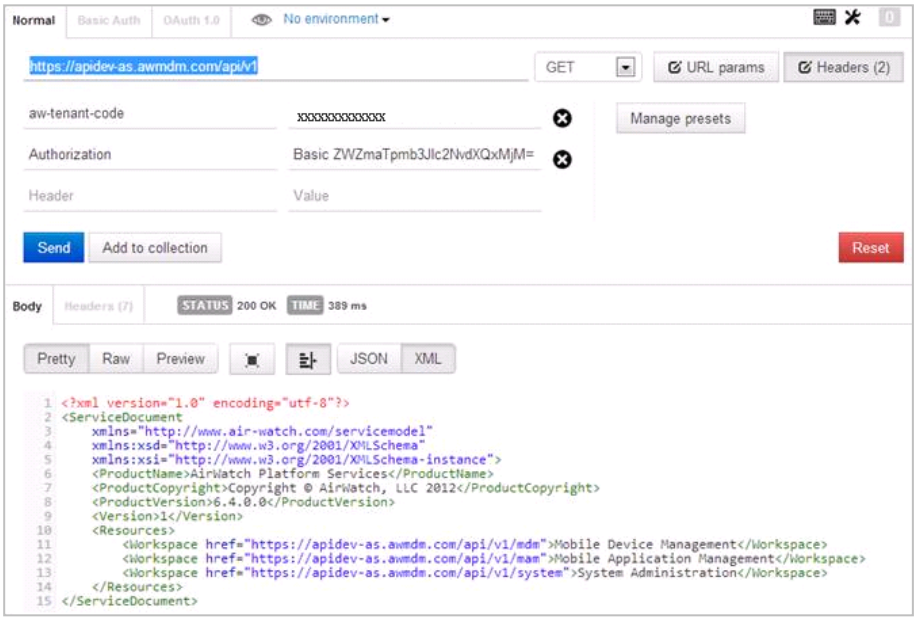
CounterACT version 8.0 detects endpoints and interacts with network devices based on both IPv4 and IPv6 addresses. However, ***IPv6 addresses are not yet supported by this component.*** The functionality described in this document is based only on IPv4 addresses. IPv6-only endpoints are typically ignored or not detected by the properties, actions, and policies provided by this component.

MDM Web Service Verification

This section describes how to verify that the Web service is properly set up. To verify setup, test REST API calls on the MaaS360 Server by verifying that the MaaS360 console supports Web services.

1. Install the Firefox *RESTClient* plugin from the following URL: http://addons.mozilla.org/en-US/firefox/addon/restclient/
2. Launch the *RESTClient* plugin by selecting **Tools -> RESTClient.**
3. In the REST client user interface, enter the URL of the REST API on the MaaS360 server, as follows: https://services.fiberlink.com (*default*). The provided URL must be the same as the **MaaS360 Web Service URL Name** that will be defined in Configure and Test the Module.
4. Verify that you have defined user authentication using MaaS360 credentials.
5. Select **Send**.

   The REST client user interface displays the returned *Response* body; this information is provided in XML format.



Install the Module

This section describes how to install the MaaS360 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 - ***Centralized Licensing Mode***

   To find out which licensing mode your deployment is working with, see Identifying Your Licensing Mode in the Console.
2. Download the module **`.fpi`** file.
3. Save the file to the machine where the CounterACT Console is installed.
4. Log into the CounterACT 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 will not proceed if you do not agree to the license agreement.

The installation will begin 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.

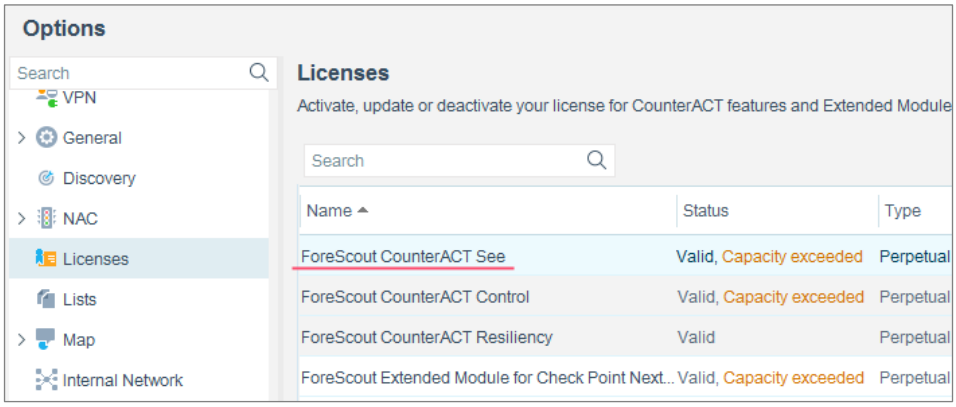
10. When the installation completes, select **Close** to close the window. The installed module is displayed in the Modules pane.

Some components are not automatically started following installation.

Identifying Your Licensing Mode in the Console

If your Enterprise Manager has a *ForeScout CounterACT See* license listed in the Console, your deployment is operating in Centralized Licensing Mode. If not, your deployment is operating in Per-Appliance Licensing Mode.

Select **Options > Licenses** to see whether you have a *ForeScout CounterACT See* license listed in the table.



Contact your ForeScout representative if you have any questions about identifying your licensing mode.

Once installed, the module automatically adds an HTTP Redirect exception to the CounterACT NAC Redirect Exception list. CounterACT NAC HTTP redirect exceptions are designed to ensure users can access business essential Internet sites or important files on the Internet while allowing required HTTP blocking and redirection. This exception ensures that devices can enroll with the MDM service and still receive required HTTP notifications.

Configure and Test the Module

This section describes how to configure and test the MaaS360 Module.

Configure the Module

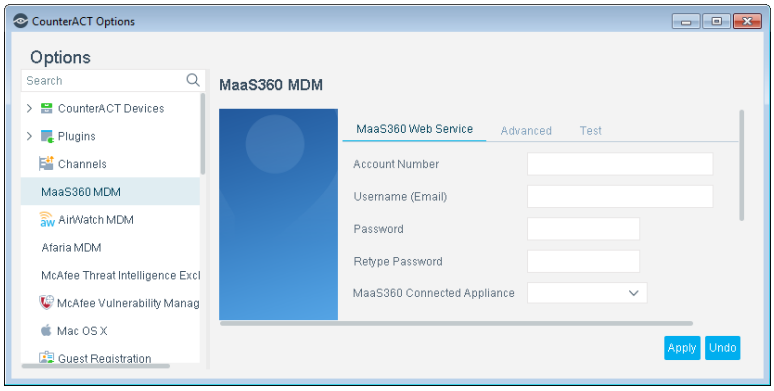
Configure the module to communicate with the MaaS360 Cloud Service.

To configure the module:

1. In the CounterACT console, select **Options** from the **Tools** menu.
2. Select **Modules**.
3. Select **MaaS360 MDM** from the **Options** pane and then select **Configure**.
4. Enter the following information about the MaaS360 Cloud Service:

For the information to enter, refer to the confirmation email you received after registering at http://mdm.forescout.com for access to the MaaS360 Cloud Service.

- **Account Number** (This information is used in the Manageability template, HTTP notification actions when redirecting endpoint Web sessions to the MDM enrollment site. See the MaaS360 Enrollment Policy for details.)
- **Username (Email)**
- **Password**
- In the **MaaS360 Connected Appliance** drop-down list, select the name of an Appliance that will service as a proxy between the MaaS service and the Enterprise Manager and enterprise Appliances. The CounterACT device listed here is the only device that will communicate directly with the MaaS360 Cloud Service. An Enterprise Manager may not be selected here.

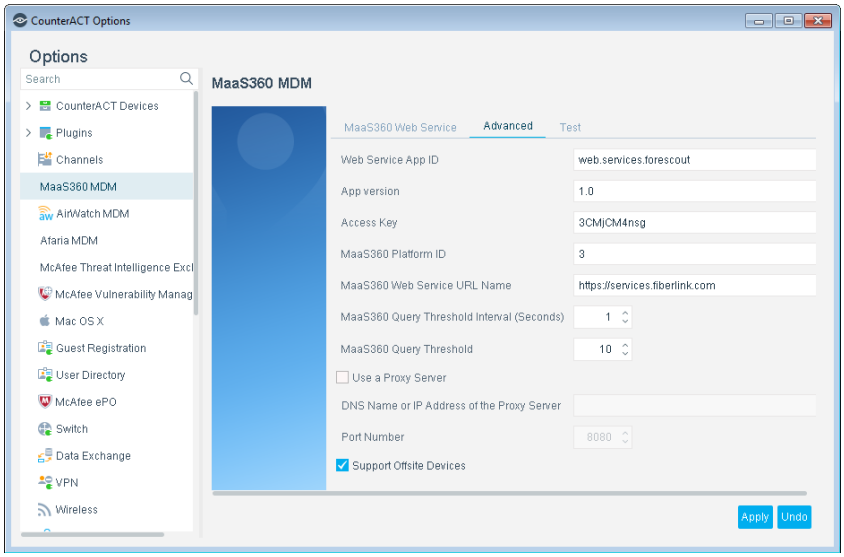


5. Select the **Advanced** tab. The following fields display default values:
   - **Web Service App ID**
     Default: web.services.forescout
   - **App version**
     Default: 1.0
   - **Access Key**
     Default: 3CMjCM4nsg
   - **MaaS360 Platform ID**
     Default: 3
   - **MaaS360 Web Service URL Name**
     Default: https://services.fiberlink.com

   Edit the values as necessary.

If you are upgrading from a previous version of the module, the default values displayed reflect your existing service settings. Use the existing values.

- In the **MaaS360 Query Threshold Interval (Seconds)** field, specify the frequency that the module should query the MaaS360 Cloud Service.
- In the **MaaS360 Query Threshold** field, define the maximum number of query requests to the MaaS360 Cloud Service per threshold interval (defined in the preceding field).
- Select **Use a Proxy Server** if there is a proxy between the MaaS360 Connected Appliance and the MaaS360 Cloud Service.
- Enter the IP address of the proxy server in the **DNS Name or IP Address of the Proxy Server** field.
- Enter the required proxy server port in the **Port Number** field.
- To manage mobile devices not in the Internal Network Range of the network, select the **Support Offsite Devices** option. The module retrieves updated host information for off-site devices through the service platform.



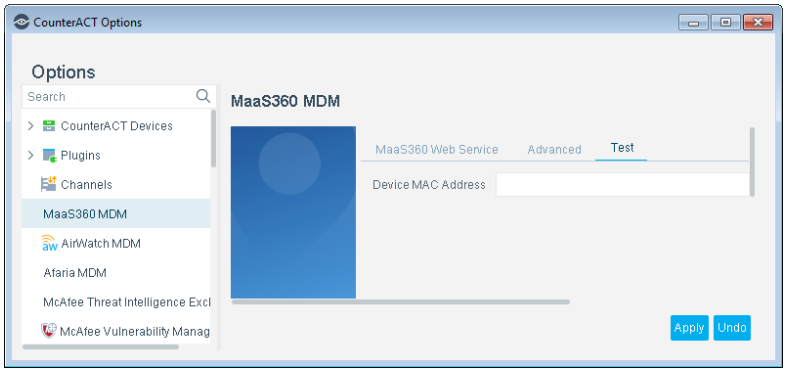
6. Select **Apply** to save configuration changes.

Test Module Communication with the Service

Test the module communication with the MaaS service.

To test communication:

1. Select the **Test** tab.



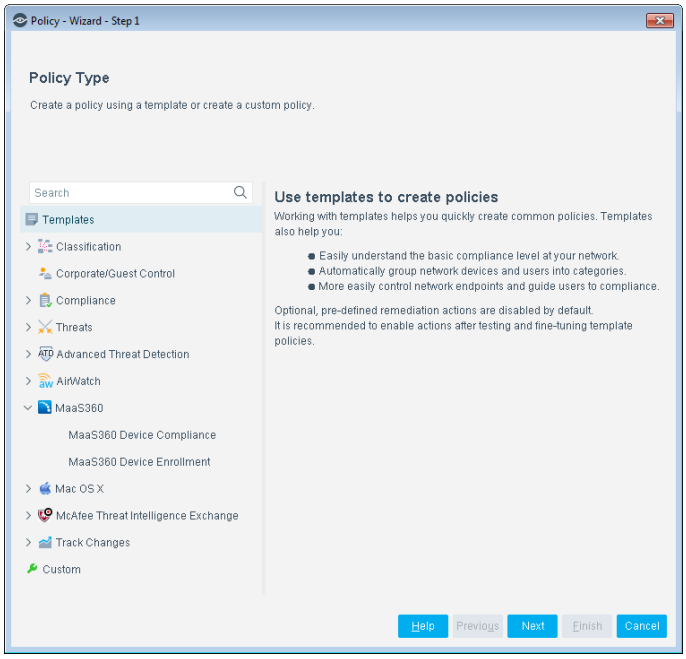
2. In the **Device MAC Address** field, type the MAC address of the device to test module communication with the MaaS service. Do not enter colons. Use lower case.

Run MaaS360 Policy Templates

This module provides the following policy templates to detect, manage and remediate mobile devices in a MaaS360 environment.

- The *MaaS360 Device Enrollment* policy template generates the following CounterACT policies:
  - MaaS360 Enrollment Policy - this policy detects corporate hosts not enrolled with the MaaS360 service, and prompts host users to enroll.
  - MDM Classification Policy – this policy classifies all mobile devices into groups. All plugins in the MDM Integration Module use this policy. If another plugin of this module is already installed, this policy was probably already created, and the existing version of the policy is retained.
- The MaaS360 Device Compliance Policy Template generates a policy that detects and remediates non-compliant devices.

It is recommended that you have a basic understanding of CounterACT policies before working with the templates. See the CounterACT Templates and Policy Management chapters of the CounterACT Administration Guide.



MaaS360 Enrollment Policy Template

Use this policy to detect corporate devices that have not enrolled with the MaaS360 portal and prompt users to enroll. Devices are redirected to an enrollment interaction when they browse in the corporate network. By default, users cannot browse the Internet until enrollment is complete. A restrictive action blocks corporate network access to users not enrolled. This action is disabled by default.

Prerequisites

Prior to running a policy based on this template, run policies based on the *Asset Classification*, *Mobile Classification*, *iOS Classification* and *Android Classification* templates. Policies based on these templates create groups and classify devices into groups. The MaaS360 Enrollment Policy uses these groups to filter and select devices.

Multiple MDM Service Enrollment

When additional MDM services are active in the network environment, other plugins of the MDM module may be installed. By default, this policy only checks whether endpoints were previously enrolled in the MaaS360 service. It does not check for enrollment in other MDM services. When additional plugins of the MDM module are installed, edit this and other enrollment policies to omit endpoints that are already enrolled in another active MDM service.

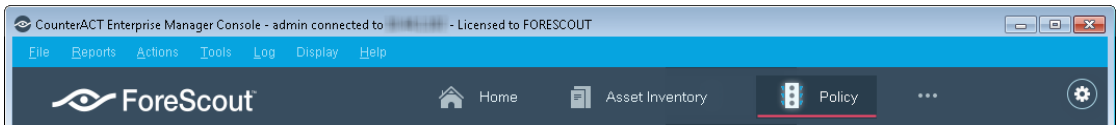
- If MDM services are deployed by geographical region or network segment, see Which Endpoints are Inspected - Policy Scope.
- To add a general rule that checks for previously enrolled endpoints, see Detecting and Handling Devices Not Qualified for Enrollment.

Running the Template

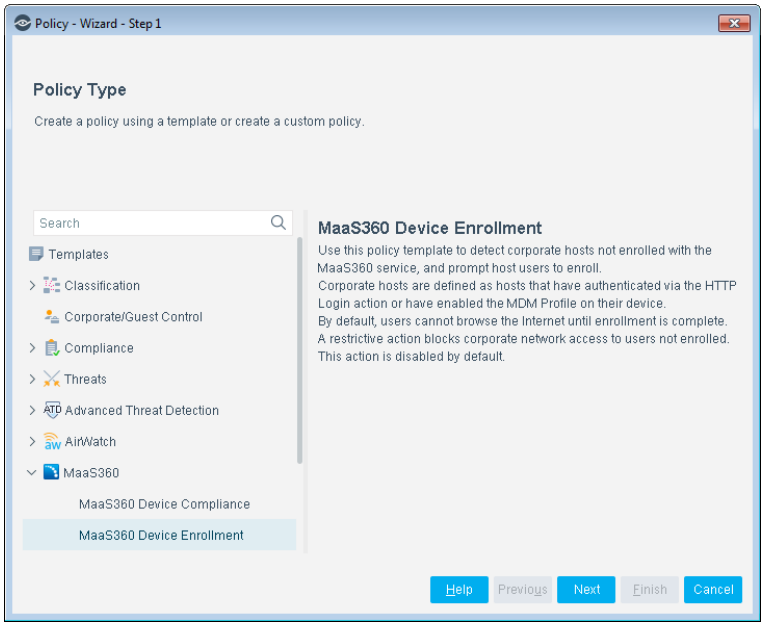
This section describes how to run the template.

To run the template:

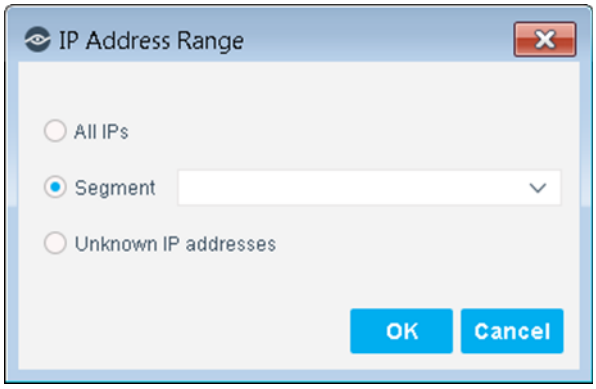
1. Select the Policy tab from the Console.



2. Select **Add**. The Policy Wizard opens.
3. Select **MaaS360** and then select **MaaS360 Device Enrollment.**



4. Select **Next**. The Name page opens. Define a unique name for the policy you are creating based on this template.
5. Select **Next.** The Scope page opens.
6. Use The IP Address Range dialog box to define which endpoints are inspected.



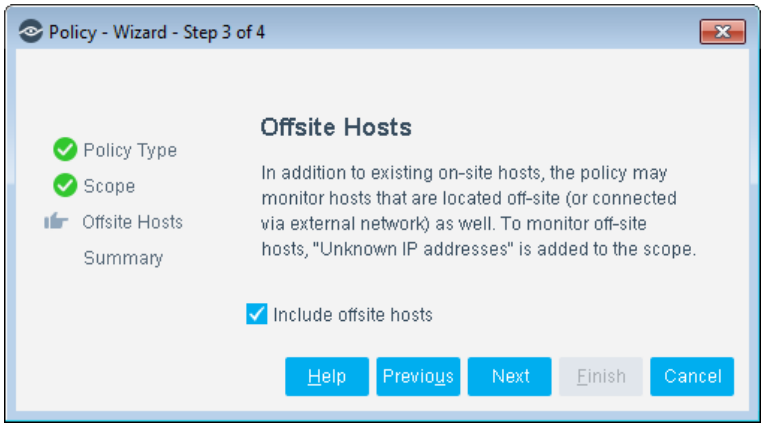
The following options are available:

- **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 page.
- **Unknown IP addresses**: Apply the policy to endpoints whose IP addresses are not known. Endpoint detection is based on the endpoint MAC address.

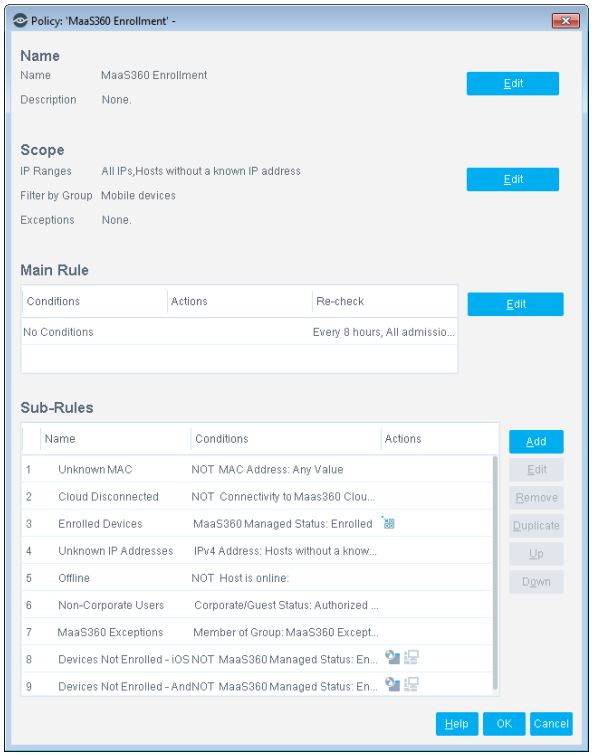
7. Select **OK**. The added range appears in the Scope page.

   In the Filter by Group area, the scope of the policy is limited to members of the *Mobile devices group*. You must run the Mobile Classification template to create and populate this group.

8. The Offsite Hosts page opens. If you selected the **Support off-site devices** option when you configured the module, select the **Include offsite hosts** option. Endpoints without a known IP address are added to the scope of the policy. This is equivalent to selecting the **Unknown IP addresses** option in the Scope page of the wizard.



9. Select **Next**. The Summary page opens and lists the policies generated by the template.
   - If the *MDM Classification* policy did not already exist, it is also created.
10. Select **Finish**. The policy is created.



Which Endpoints are Inspected - Policy Scope

By default, MaaS360 service enrollment is only invoked when devices are in the corporate network. Devices without an IP address are not in the corporate network. Do not include the **Unknown IP Address** option when you define the range for policies based on this template, because policy rules filter out these endpoints even if they are included in the scope.

How Devices are Detected and Handled

This section describes the rules and sub-rules of the policy created by the MaaS360 Enrollment Policy template.

Main Rule

The main rule of the policy does not filter hosts, but it specifies recheck behavior for the policy. By default, the policy is evaluated every eight hours, and is applied to newly discovered endpoints.

Sub-Rules

Sub-rules of the policy filter situations and endpoints for which MaaS360 enrollment is not applicable. The final sub-rules enroll qualified mobile devices in the MaaS360 service.

Detecting and Handling Devices Not Qualified for Enrollment

Initial sub-rules of the policy detect and bypass devices that are not candidates for enrollment, for example devices that are not part of the corporate domain, or devices listed in the MaaS360 Exceptions group. When a device matches one of

these rules, the policy evaluation of the device ends. No actions are applied, with the exception of already enrolled devices, which are place in the *MaaS360 Enrolled Devices* group.

1. **Unknown MAC** – CounterACT queries MaaS360 for host information based on the MAC Address of the device. If no MAC Address is known for an endpoint, the MaaS360 service cannot be used to manage the device.
2. **MaaS360 Server Disconnected** – this rule tests for CounterACT connectivity with the MaaS360 web service, which is necessary for enrollment. This rule suspends evaluation of the policy if there is no connectivity with the MaaS360 service platform.
3. **Unknown IP Address** – enrollment is only invoked when devices are in the corporate network. Devices without an IP address are not in the corporate network.
4. **Enrolled Device** – this rule detects devices already enrolled in the MaaS360 service.

    The **Add to Group** action adds devices that match this rule to the *MaaS360 Enrolled Devices* group.

   No further enrollment action is necessary for these endpoints, and their evaluation ends at this rule.
5. **MaaS360 Exceptions** - devices listed in the *MaaS360 Exceptions* group are excluded from enrollment.
6. **Offline** – Enrollment cannot be implemented if the device has gone offline.
7. **Non-Corporate Users** – by default, only corporate user devices are enrolled in the MaaS360 service.

Detecting and Handling Devices Qualified for Enrollment

The following two sub-rules detect devices that are qualified for enrollment in the MaaS360 service, and prompt device users to enroll in the service.

1. **Devices Not Enrolled – iOS** – if a device has been classified into the iOS group but is not a member of the *MaaS360 Enrolled Devices* group, it is a candidate for enrollment.
2. **Devices Not Enrolled – Android** – if a device has been classified into the Android group but is not a member of the *MaaS360 Enrolled Devices* group, it is a candidate for enrollment.

The following actions are applied when a device matches one of these rules:

 An **HTTP Notification** action redirects users to an enrollment interaction.

 An optional **Virtual Firewall** action prevents users from accessing the corporate network until they are compliant. This action is disabled by default. See Configuring Virtual Firewall Actions for information about enabling this action.

 *Newly enrolled endpoints are not immediately added to the* MaaS360 Enrolled Devices *group. If the enrollment interaction completed successfully, rule 4 assigns them to the group the next time this policy runs.*

MDM Classification Policy Template

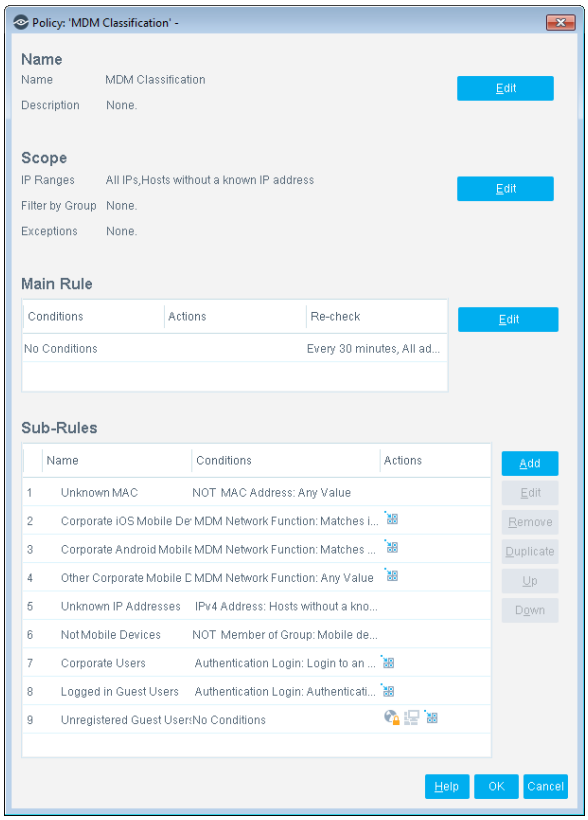
Use this template to create a policy that classifies all mobile devices into groups. Devices are sorted by operating system, and by their corporate/guest status.

All plugins in the MDM Integration Module use this policy. If another plugin of the module is already installed, this policy was probably already created, and the existing version of the policy is retained.

If this policy does not already exist, the MaaS360 Enrollment Policy template creates this policy in addition to the MaaS360 Enrollment policy.

Prerequisites

This policy sorts endpoints based on previous classification by the Asset Classification and Mobile Classification policies, and corporate/guest status as determined by Corporate/Guest Control policies. Run these policies before you run this policy.



Which Endpoints are Inspected - Policy Scope

To classify all mobile devices, including devices not currently in the corporate network, include the **Unknown IP Address** option when you define the range for policies based on this template. This option is active in the default template.

How Devices are Detected and Handled

This section describes the rules and sub-rules of the MDM Classification policy as it is created by MDM module templates.

Main Rule

The main rule of the policy does not filter hosts, but it specifies recheck behavior for the policy. By default, the policy is evaluated every 30 minutes, and is applied to newly discovered endpoints.

Sub-Rules

Sub-rules of the policy perform the following evaluations:

- Filter endpoints that cannot be evaluated
- Sort corporate user mobile devices into groups by their operating system
- Evaluate mobile devices that have not logged in as corporate users.

Conditions Preventing MDM Evaluation

This rule excludes endpoints based on the following filter conditions.

1. **Unknown MAC** – If no MAC Address is known for an endpoint, CounterACT cannot evaluate whether the device is managed by an MDM service. No actions are applied, and policy evaluation of the endpoint ends.

Corporate Devices Already Enrolled in an MDM Service

The following rules detect corporate mobile devices that are already enrolled in an MDM service based on the **MDM Network Function** host property. Because this property receives values from MDM services, a valid value indicates that the endpoint is managed by an MDM service.

1. **Corporate iOS Mobile Devices**
2. **Corporate Android Mobile Devices**
3. **Other Corporate Mobile Devices**

 The **Add to Group** action is used to assign all endpoints that match one of these rules to the following groups:

- *Mobile Devices* group
- *Corporate Hosts* group - devices with any CounterACT management components installed are assumed to be corporate user devices.

In addition, devices are assigned to the following groups based on their operating system:

- *iOS* group
- *Android* group

Conditions Preventing Further Evaluation

The final rules of the policy will sort corporate/guest users. The following rules of the policy exclude endpoints that cannot be classified as corporate/guest users. When an endpoint matches one of these rules, no actions are applied, and policy evaluation of the endpoint ends.

1. **Unknown IP Address** – Corporate/guest evaluation is irrelevant for the remaining endpoints without an IP address. (Corporate devices that are already enrolled in an MDM service were detected by the previous rules - even if they are currently outside the corporate network.)
2. **Not a Mobile Device** – this policy focuses on mobile endpoints. Endpoints that were not classified into the *Mobile Devices* group are excluded from further evaluation.

Corporate/Guest User Evaluation for Mobile Devices

The remaining rules sort unmanaged mobile devices into groups using standard corporate/guest authentication criteria.

1. **Corporate Users** - if at least one of the following criteria is met, a device is evaluated as a *Corporate Host*.
   - The device recently authenticated via the **HTTP Login** action
   - The device is enrolled in an MDM service

   The **Add to Group** action assigns endpoints that match the rule to the *Corporate Hosts* group.
2. **Signed-in Guest Users** - if the user authenticated as a guest via the *HTTP Login* action the endpoint is evaluated as a *Signed-In Guest.*

   The **Add to Group** action assigns endpoints that match the rule to the *Signed-In Guests* group.
3. **Unregistered Guest Users** – if the user was not authenticated as a corporate host or signed-in guest, the following actions are applied:

   The **Add to Group** action assigns the endpoint to the *Guest Hosts* group.

   The **HTTP Login** action redirects the endpoint to an interaction for authentication.

   An optional **Virtual Firewall** action prevents users from accessing the corporate network until they complete enrollment. See Configuring Virtual Firewall Actions for information about enabling this action.

MaaS360 Device Compliance Policy Template

Use this template to create a policy that verifies device compliance with CounterACT network requirements and MaaS360 service requirements. When a non-compliant device browses in the corporate network, an **HTTP Notification** action redirects the user to a notification that indicates:

- Why the device is not-compliant
- Network access limitations
- Steps for remediation

By default, non-compliant users cannot browse the Internet but can access the corporate network. An optional restrictive action blocks corporate network access to users not enrolled. This action is disabled by default.

Prerequisites

To detect unauthorized applications you must add unauthorized applications to the Unauthorized Mobile Application list. An empty list is automatically created when the module is installed. See Adding Applications to the Unauthorized Application List.

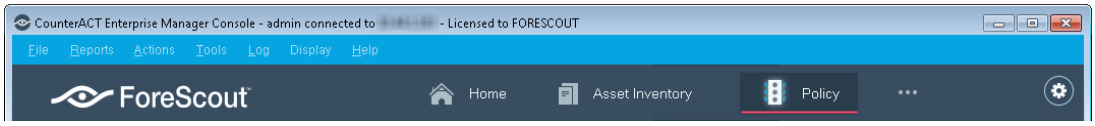
You must create and run a policy based on the MaaS360 Device Enrollment template ***before*** you use this template to create policies. This template uses groups and other information created by the MaaS360 Device Enrollment policy.

Running the Template

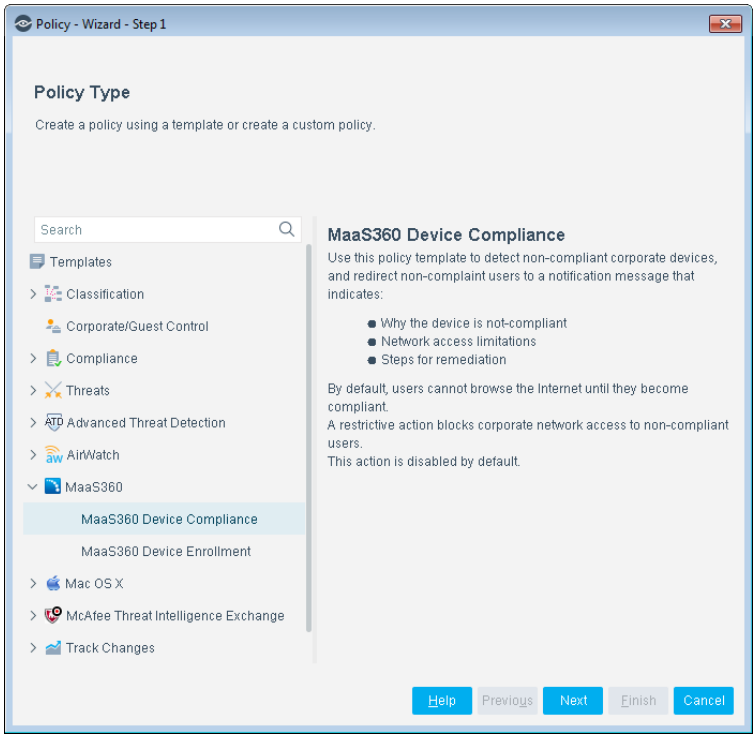
This section describes how to run the template.

To run the template:

1. Select the **Policy** tab from the Console.

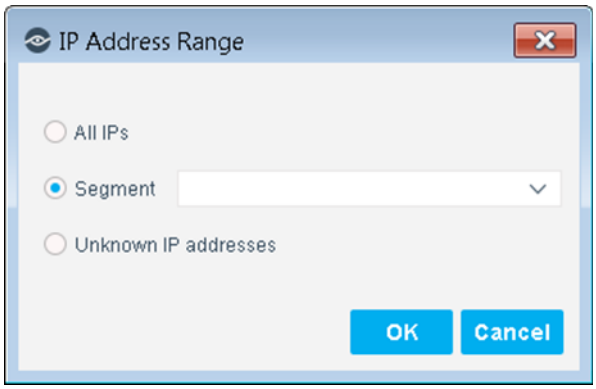


2. Select **Add**. The Policy Wizard opens.
3. Select **MaaS360** and then select **MaaS360 Device Compliance.**



4. Select **Next**. The Name page opens. Define a unique name for the policy you are creating based on this template.
5. Select **Next.** The Scope page opens.

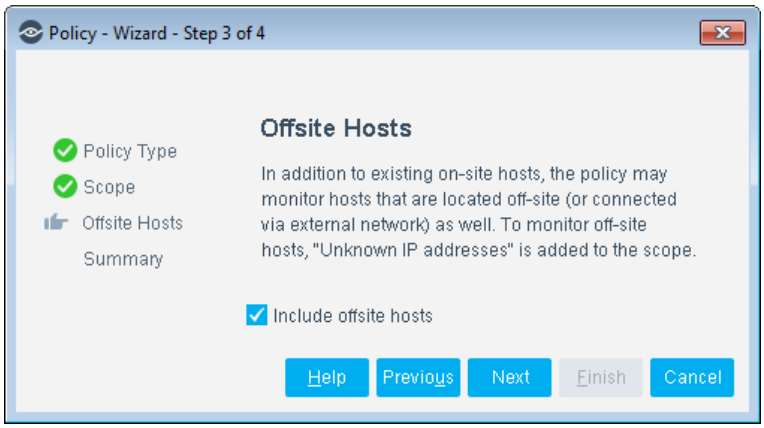
6. Use The IP Address Range dialog box to define which endpoints are inspected.



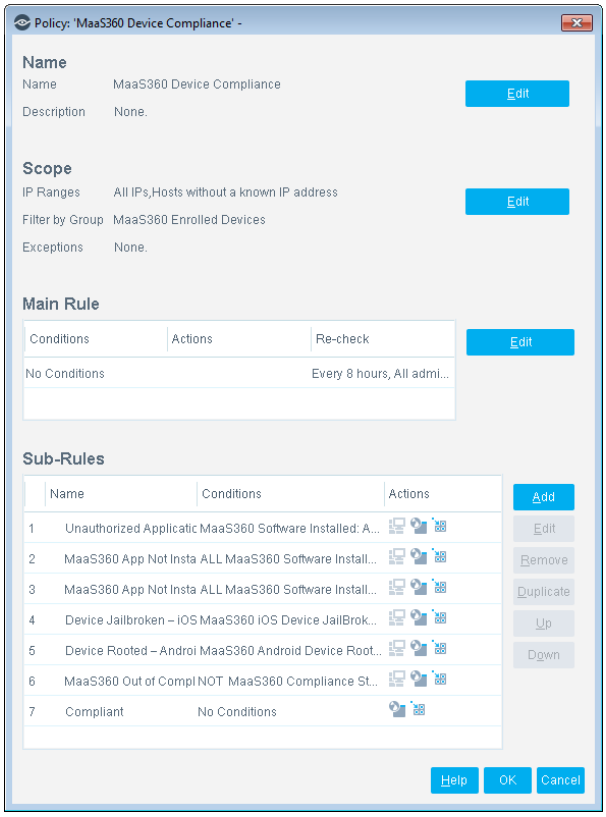
The following options are available:

- **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 page.
- **Unknown IP addresses**: Apply the policy to endpoints whose IP addresses are not known. Endpoint detection is based on the endpoint MAC address.

7. The Offsite Hosts page opens. If you selected the **Support off-site devices** option when you configured the module, select the **Include offsite hosts** option. Endpoints without a known IP address are added to the scope of the policy. This is equivalent to selecting the **Unknown IP addresses** option in the Scope page of the wizard.



8. Select **Next**. The Sub-Rules page lists the rules of the policy.
9. Select **Finish**. The policy is created.



Which Endpoints are Inspected - Policy Scope

Policies based on this template inspect only devices previously enrolled in the MaaS360 service. The *MaaS360 Enrolled Devices* group is used to filter the scope of this policy.

Because notification and enrollment use HTTP redirection actions, do not include the **Unknown IP Address** option when you define the range for policies based on this template.

How Devices are Detected and Handled

This section describes the rules and sub-rules of the MDM Classification policy as it is created by MDM module templates.

Main Rule

The main rule of the policy does not filter hosts, but it specifies recheck behavior for the policy. By default, the policy is evaluated every 8 hours, and is applied to newly discovered endpoints.

Sub-Rules

Sub-rules of the policy perform compliance evaluations, and apply various remediation actions.

Detect Endpoints with Unauthorized Applications

The following rule detects and remediates devices with unauthorized applications:

1. **Unauthorized Application Installed** – this rule checks the applications listed in the **MaaS360 Software Inventory** host property against the MaaS360 Unauthorized Mobile Applications list. See Adding Applications to the Unauthorized Application List for information about creating this list.

   A device matches this rule when an unauthorized application is found. In this case the following actions are applied to the endpoint:

   An **HTTP Notification** action informs the user that an unauthorized application is installed on the device.

   The **Add to Group** action assigned the device to the *MaaS360 Unauthorized Application Installed* group.

   An optional **Virtual Firewall** action prevents users from accessing the corporate network until they are compliant. This action is disabled by default. See Configuring Virtual Firewall Actions for information about enabling this action.

Detect Endpoints that Removed the MaaS360 Service App

The following rules examine applications listed in the **MaaS360 Software Inventory** host property to identify previously enrolled devices that do not have the MaaS360 service enrollment package installed.

1. **MaaS360 App Not Installed – iOS**
2. **MaaS360 App Not Installed – Android**

When a device matches one of these rules:

An **HTTP Notification** action redirects users to a service enrollment interaction.

The **Add to Group** action assigns the device to the *MaaS360 App Not Installed – iOS* or the *MaaS360 App Not installed – Android* group.

An optional **Virtual Firewall** action prevents users from accessing the corporate network until they are compliant. This action is disabled by default. See Configuring Virtual Firewall Actions for information about enabling this action.

Detect Jailbroken or Rooted Endpoints

1. **Device Jailbroken/Rooted** – this rule tests the **MaaS360 Jailbroken/Rooted** host property to detect jailbroken iOS devices or rooted Android devices. When a device matches this rule:

   An **HTTP Notification** action informs the user that the device is jailbroken/rooted, and its access to the corporate network is restricted.

   The **Add to Group** action assigns the device to the *MaaS360 Device Jailbroken/Rooted* group.

An optional Virtual Firewall action prevents users from accessing the corporate network until they are compliant. This action is disabled by default. See Configuring Virtual Firewall Actions for information about enabling this action.

Detect Devices Out of MaaS360 Service Compliance

1. **MaaS360 Out of Compliance** – this rule tests the **MaaS360 Compliance Status** host property to detect devices that do not meet compliance criteria of the MaaS360 service. When a device matches one of these rules:

   An **HTTP Notification** action informs the user that the device does not meet MaaS360 service compliance criteria, and its access to the corporate network is restricted.

   The **Add to Group** action assigned the device to the *MaaS360 Out of Compliance* group.

   An optional **Virtual Firewall** action prevents users from accessing the corporate network until they are compliant. This action is disabled by default. See Configuring Virtual Firewall Actions for information about enabling this action.

2. **MaaS360 Compliant** – Endpoints that did not match previous rules are considered to be compliant. When a device matches one of these rules:

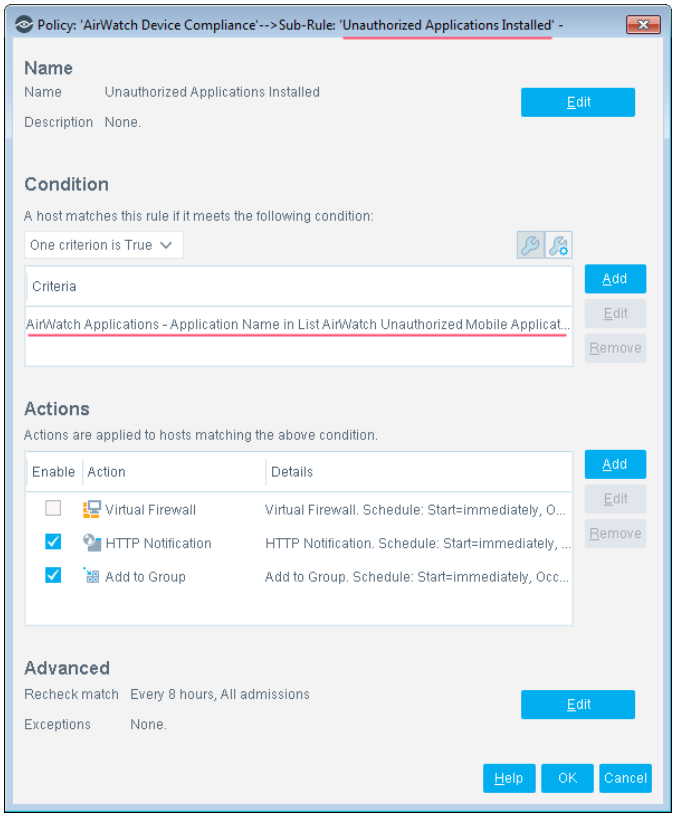
   An **HTTP Notification** action informs the user that the device is compliant, and prompts the user to continue browsing in the corporate network.

   The **Add to Group** action assigns the device to the *MaaS360 Compliant Devices* group.

Adding Applications to the Unauthorized Application List

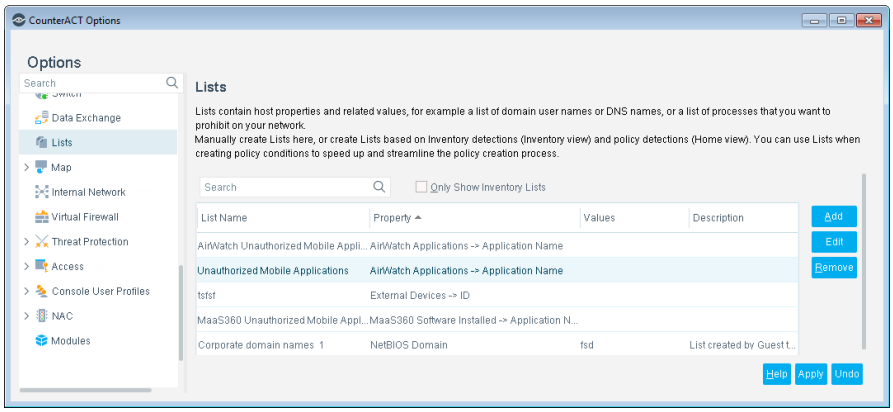
In order to work with the MaaS360 Compliance Policy template, you must compile a list of applications that you want to prohibit on your network.

The Unauthorized Mobile Application list is automatically created when the module is installed. You must add the applications that you want to prohibit to this list. The list is automatically incorporated into the *Unauthorized Applications Installed* sub-rule.

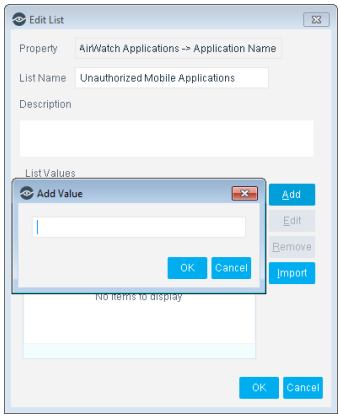


To add an application to the list:

1. Select **Options** from the **Tools** menu and then select **Lists**.



2. Select the **Unauthorized Mobile Application** entry for MaaS360.
3. Select **Edit**. The Edit List dialog box opens.
4. Select **Add**. The Add Value dialog box opens.



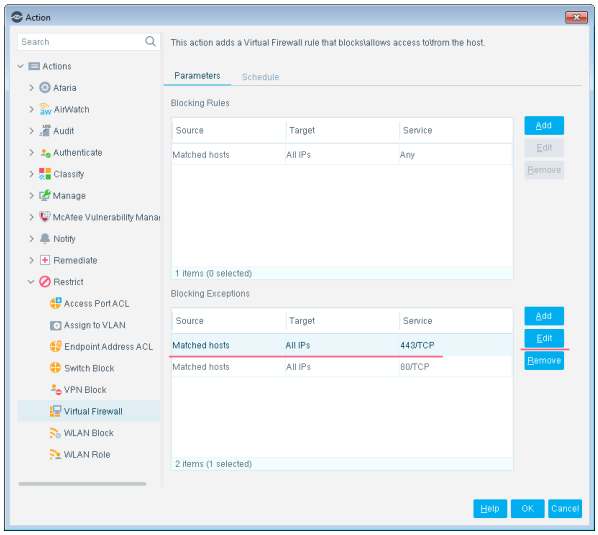
5. Enter the name of an application that you want to prohibit and then select **OK**.
6. Repeat steps 4 and 5 for other prohibited applications.
7. (Optional) Type a description of the list in the **Description** field of the Edit List dialog box.
8. Select **OK**. The unauthorized applications that you added appear in the Values column.

Configuring Virtual Firewall Actions

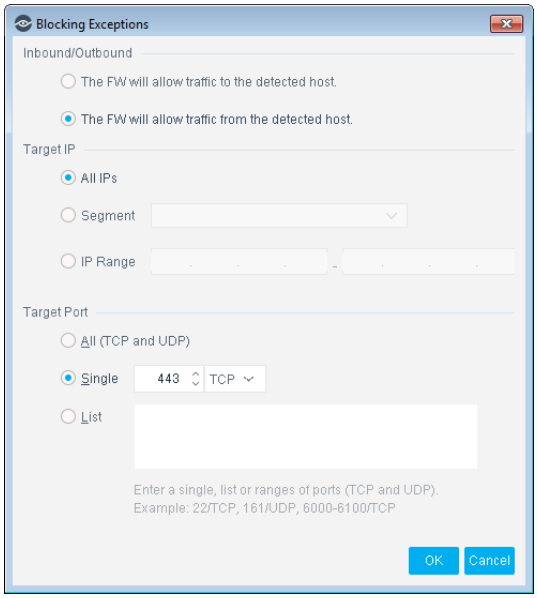
Policy templates include optional **Virtual Firewall** actions that block user access to the corporate network. These actions are disabled by default in policy templates. If you enable the **Virtual Firewall** action, edit action settings to permit MDM service communication with the device.

To configure virtual firewall actions:

1. Open a rule of the policy. Select the **Virtual Firewall** action, and select **Edit**. The Virtual Firewall action dialog box opens.



2. In the Blocking Exceptions table of the Parameters tab, select the exception that uses port 443/TCP. Select **Edit**:
3. In the Blocking Exceptions dialog, make the following selections:
   - Allow traffic from the host
   - All IPs
   - Select the port used to communicate with the MDM service.



4. Select **OK** to save changes to the exception. Select **OK** to finish editing the action.
5. Repeat this procedure for all the ports required by the module. See Networking Requirements.

Displaying Asset Inventory Data

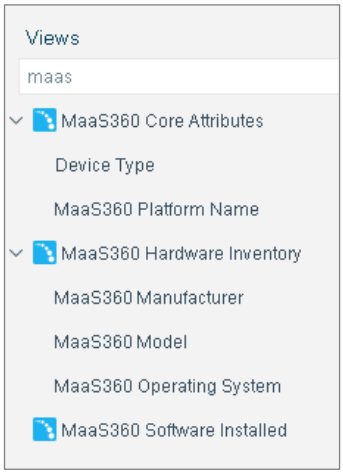
Use the CounterACT Asset Inventory to view a real-time display of MaaS360 device network activity at multiple levels, for example, software installed, core attributes or hardware information.

The Asset Inventory lets you:

- Broaden your view of the organizational network from device-specific to activity-specific
- View MaaS360 devices that have been detected with specific attributes
- Easily track MaaS360 device activity
- Incorporate inventory detections into policies

To access the Asset Inventory:

1. Select the **Asset Inventory** icon from the Console toolbar.
2. Navigate to the MaaS360 entries.



The following information is available:

- MaaS360 Core Attributes: Device Type, MaaS360 Platform Name
- MaaS360 Hardware Inventory: Manufacturer, Model, Operating System.
- MaaS360 Software Installed

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

Managing Offsite Devices

When devices are not in the corporate network, the module uses the MaaS360 service platform to retrieve updated host information and implement CounterACT policy actions.

To configure support for management of offsite devices:

- Select the Support Offsite Devices option when you configure the module. See Configure and Test the Module.
- Select the Include Offsite Hosts option when you create policies based on MaaS360 templates. See Run MaaS360 Policy Templates.

Consider the following when you create CounterACT policy conditions and actions that apply to offsite endpoints:

- CounterACT identifies offsite devices by their MAC address. To manage offsite devices, policies must include endpoints without a known IP address in their scope.
- All host properties can be evaluated for offsite devices.

- All MaaS360-specific actions provided by this module are supported on offsite devices. See Tag MaaS360 Devices - Policy Actions.
- Not all general CounterACT actions can be applied to offsite devices. The following CounterACT actions can be applied to offsite devices:
  - Manage: Add to Group / Classify / Delete host
  - Notify: Send email

Note that no Restriction or HTTP redirection actions can be applied to offsite devices.

Working with CounterACT Policies

This section describes how to use CounterACT policies to detect and control MaaS360 devices. Create or edit a policy and use policy conditions to detect these devices with specific properties.

To create a policy:

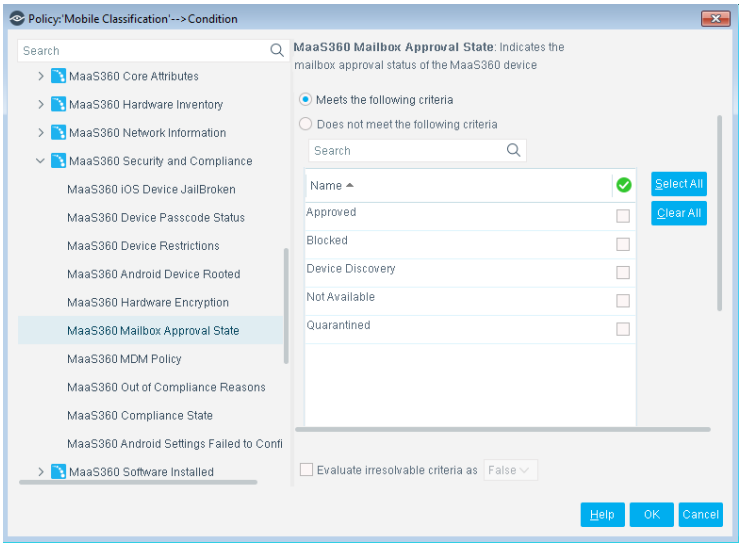
1. Log in to the CounterACT Console.
2. Select the **Policy** tab from the Console toolbar.
3. Create or edit a policy.

Detecting MaaS360 Devices - Policy Properties

CounterACT policy conditions and properties let you instruct CounterACT which MaaS360 devices to detect.

In the conditions screen, expand the MaaS360 folder in the Properties tree to use MaaS360 properties in a policy condition. An extensive range of properties can be detected. The categories include:

- Asset Classification
- Core Attributes
- Security and Compliance
- Hardware Inventory
- Network Information
- Additional Information



Asset Classification

MDM Network Function	Indicates the mobile operating system of an MDM managed endpoint. This property is common to all plugins of the MDM Integration Module, and appears in the Asset Classification folder of the Properties tree.

Core Attributes

Device Type	
MaaS360 Device ID	Indicates the MaaS360 device ID.
MaaS360 Device Name	Indicates the MaaS360 device name.
MaaS360 Device Online	Indicates if the MaaS360 device is online.
MaaS360 Device Status	Indicates the active status of the MaaS360 device.
MaaS360 Last Reported	Indicates the date/time of the last reported event on a host.
MaaS360 Managed Status	Indicates the managed status of the MaaS360 device: ▪ Enrolled ▪ Not Active ▪ Not Enrolled ▪ Pending Control Removal ▪ User Removed Control
MaaS360 Platform Name	Indicates the platform on which the MaaS360 device is running. ▪ Android ▪ iOS

MaaS360 User Name	Indicates the user name associated with the MaaS360 device.

Security and Compliance

MaaS360 Android Device Rooted	Indicates if an enrolled Android device is rooted.
MaaS360 Android Settings Failed to Configure	Indicates if certain settings were not configured on an Android host.
MaaS360 Compliance State	Indicates the MaaS360 compliance state of the host: ▪ Compliant ▪ Not Available ▪ Not Compliant
MaaS360 Device Passcode Status	Indicates the MaaS360 device passcode status: ▪ Compliant ▪ Not Available ▪ Not Compliant per Profiles ▪ Not Compliant ▪ Not Compliant per all Requirements ▪ Not Enabled ▪ Passcode Policy Configured ▪ Passcode Policy Not Configured ▪ Pending Compliance Confirmation
MaaS360 Device Restrictions	Indicates restrictions configured on the MaaS360 device: ▪ Allow Installing of Applications ▪ Allow Screen Capture ▪ Allow Use of Camera ▪ Allow Use of YouTube ▪ Allow Use of iTunes Music Store ▪ Allow Use of Safari
MaaS360 Hardware Encryption	Indicates if certain hardware encryption values were detected on the host.
MaaS360 MDM Policy	Indicates an MDM policy applied to the MaaS360 device.
MaaS360 Mailbox Approval State	Indicates the mailbox approval status of the MaaS360 device: ▪ Approved ▪ Blocked ▪ Device Discovery ▪ Not Available ▪ Quarantined
MaaS360 Out of	Indicates if certain out of compliance reasons were detected

Compliance Reasons	on the host.
MaaS360 iOS Device JailBroken	Indicates if the MaaS360 device is jailbroken.

Hardware Inventory

MaaS360 Custom Attributes	Indicates devices that were detected with specific MaaS360 device attributes or values.
MaaS360 Email Address	Indicates the Email Address of the MaaS360 device.
MaaS360 Manufacturer	Indicates the manufacturer of the MaaS360 device.
MaaS360 Model	MaaS360 Model
MaaS360 Operating System	Indicates the Operating System running on the MaaS360 device.
MaaS360 Ownership	Indicates the ownership of the MaaS360 device.

Network Information

MaaS360 ICCID	Indicates an ICCID value detected on the MaaS360 device.
MaaS360 Phone Number	Indicates the phone number associated with the MaaS360 device.

Additional Information

MaaS360 Software Installed	Indicates if specific software is installed on the MaaS360 device.
Connectivity to MaaS360 Cloud	Indicates if CounterACT is connected to the MaaS360 cloud.
MaaS360 Listed in Service	Indicates if the device is listed in MaaS360 service.

Tag MaaS360 Devices - Policy Actions

This section describes CounterACT actions you can use to tag MaaS360 devices.

- Custom Attribute Value Action
- Refresh Device Information Action

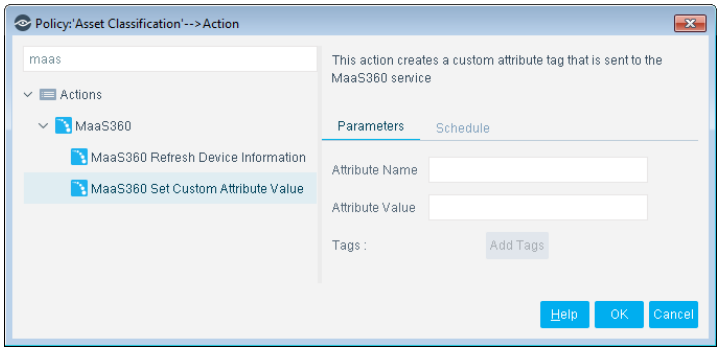
Custom Attribute Value Action

Detect devices using a CounterACT policy and tag the devices with a user-defined *Attribute Name* and *Attribute Value*. This information is sent to the MaaS360 Cloud Service. For example, use CounterACT to detect devices that were resolved as guests and tag them as:

Attribute Name: East Coast Office

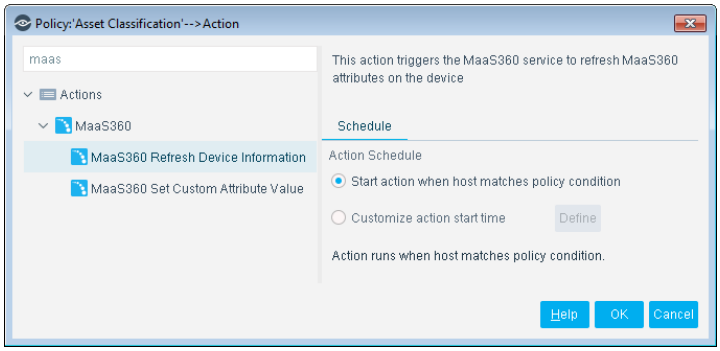
Attribute Value: Guest

Devices will appear as *East Coast Office Guests* at the MaaS360 Console.



Refresh Device Information Action

The *Refresh Device Information* action triggers the MaaS360 Cloud Service to refresh MaaS360 attributes on the device.



Additional CounterACT Documentation

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

- Documentation Downloads
- Documentation Portal
- CounterACT Help Tools

Documentation Downloads

Documentation downloads can be accessed from one of two ForeScout portals, depending on which licensing mode your deployment is using.

- ***Per-Appliance Licensing Mode*** - Product Updates Portal
- ***Centralized Licensing Mode*** - Customer Portal

Software downloads are also available from these portals.

To learn which licensing mode your deployment is using, see Identifying Your Licensing Mode in the Console.

Product Updates Portal

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

To access the Product Updates Portal:

1. Go to https://updates.forescout.com/support/index.php?url=counteract.
2. Select the CounterACT version you want to discover.

Customer Portal

The Downloads page on the ForeScout Customer Portal provides links to purchased CounterACT version releases, Base and Content Modules, and Extended Modules, 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. The Documentation page on the portal provides a variety of additional documentation.

To access documentation on the ForeScout Customer Portal:

1. Go to https://forescout.force.com/support/.
2. Select **Downloads** or **Documentation**.

Documentation Portal

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

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

To access the Documentation Portal:

1. Go to www.forescout.com/docportal.
2. Use your customer support credentials to log in.
3. Select the CounterACT version you want to discover.

CounterACT Help Tools

Access information directly from the CounterACT Console.

Console Help Buttons

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

CounterACT Administration Guide

Select **CounterACT Help** from the **Help** menu.

Plugin Help Files

1. After the plugin is installed, select **Options** from the **Tools** menu and then select **Modules**.
2. Select the plugin and then select **Help**.

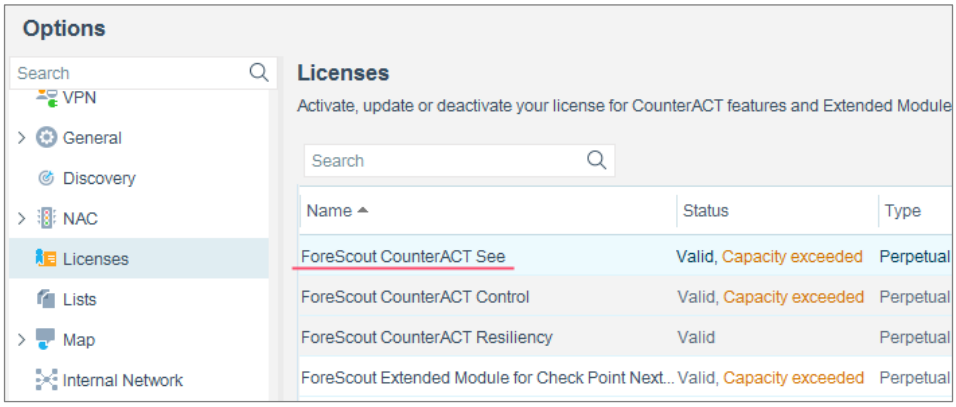
Documentation Portal

Select **Documentation Portal** from the **Help** menu.

Identifying Your Licensing Mode in the Console

If your Enterprise Manager has a *ForeScout CounterACT See* license listed in the Console, your deployment is operating in Centralized Licensing Mode. If not, your deployment is operating in Per-Appliance Licensing Mode.

Select **Options > Licenses** to see whether you have a *ForeScout CounterACT See* license listed in the table.



Contact your ForeScout representative if you have any questions about identifying your licensing mode.

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