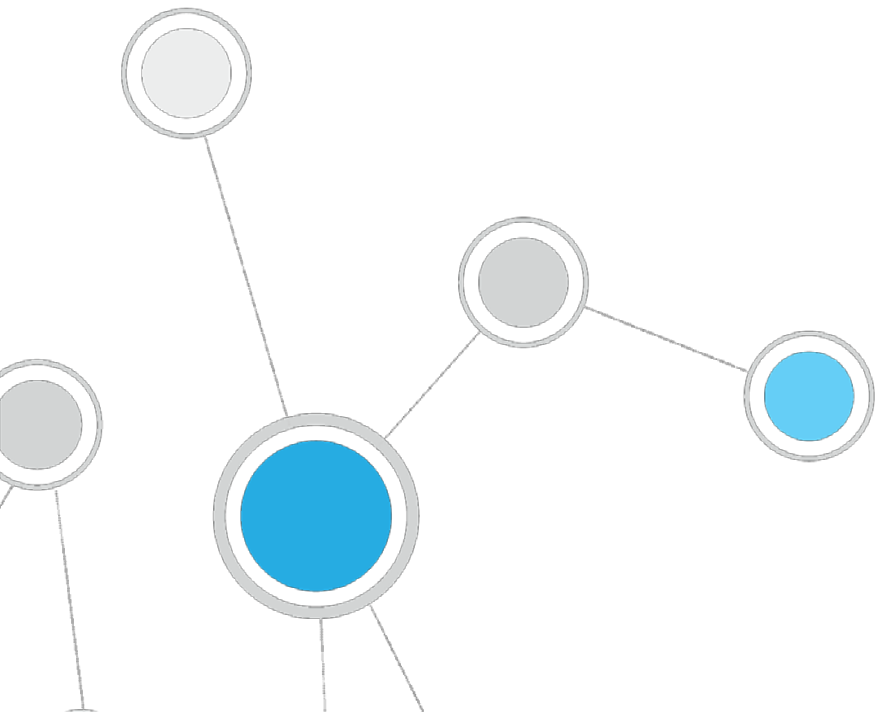
ForeScout CounterACT®

Endpoint Module: Hardware Inventory Plugin

Configuration Guide

Version 1.0



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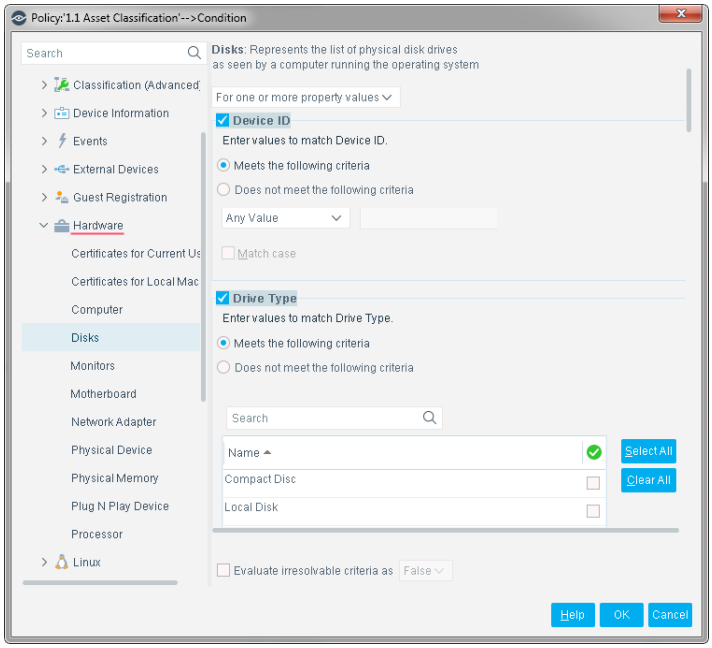
About the Hardware Inventory Plugin

The Hardware Inventory Plugin is a component of the ForeScout CounterACT® Endpoint Module. See Endpoint Module Information for details about the module.

The Hardware Inventory Plugin extends the host properties discovered by the HPS Inspection Engine to include physical hardware devices, endpoint configuration settings, and related information such as serial numbers.



Use these properties to create policies that identify and group endpoints based on system configuration or status, and to filter displays in the Home, Asset Inventory, and Asset Portal views.

For example, you can implement the following management activities using hardware-based policies:

- Discover plug-and-play or hot-swappable devices introduced by a host.
- Identify monitors and other equipment that do not comply with energy conservation guidelines.
- Administer security certificates for network adaptors and other components, or for software applications.
- Track and manage hardware inventory by serial number, vendor, configuration details, or other information.
- Find candidates for disk space and operating system upgrades.

Most CounterACT hardware inventory properties are based on the standard WMI object model defined by the Distributed Management Task Force (DMTF).

What to Do

You must perform the following to work with this plugin:

- Verify that requirements are met. See Requirements for details.

- Define and implement policies that discover hosts based on hardware inventory properties. See Use Hardware Inventory Information for details.

Requirements

The plugin requires the following CounterACT releases and other CounterACT components:

- CounterACT version 8.0.
- Endpoint Module version 1.0 with the HPS Inspection Engine running.

Verify That the Plugin Is Running

After installation, verify that the plugin 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.

Use Hardware Inventory Information

CounterACT can retrieve and work with a broad range of hardware inventory properties, supporting many security and managements actions.

Hardware inventory monitoring can significantly increase communication between CounterACT devices and hosts. In particular, the general discovery policies described here - which retrieve information for all monitored hosts – can generate a large volume of traffic. See Optimizing Hardware Inventory Performance.

Inventory Policies to Support Host Management

You can use policies that examine hardware inventory properties to implement a broad range of administration and management tasks.

Example: Compliance with Corporate Usage Guidelines

When corporate guidelines govern details of host computer usage, define CounterACT policies that identify non-compliant hosts. For example:

- Use the *Power Management Supported* field of the **Computer** property and related properties to verify compliance with energy-conservation rules.
- Use the *Current Time Zone* and *Status* fields of the **Computer** property to enforce time restrictions on computer access.

Example: Management of Machine Certificates

The **Certificates for Current User** and **Certificates for Local Machine** properties report detailed information about certificates on the endpoint.

- Use the *Not Before* and *Not After* fields of certificate related properties to identify pending or expired software licenses.
- Use the *Subject*, *Serial Number*, or *Issuer* fields to define exception lists of certificates used in spoofing attacks.

Example: Identifying Hot-Swappable Disks and other Hardware Security Risks

Use the *Drive Type* field of the **Disks** property to find disks and other devices that may present data security risks:

Example: Hardware Maintenance

Policies can examine a broad range of properties to find candidates for hardware maintenance and/or upgrade actions. For example:

- Define conditions based on the *Free Space, Drive Type*, and *Status* fields of the **Disks** property to discover disks and storage devices that operate at maximum capacity. Use time limits and recheck options to identify endpoints that regularly exceed threshold values.
- Use the *CPU Status, Load Percentage, Family*, and *Max Clock Speed* fields of the **Processor** property to identify processors that should be upgraded.
- Use the *Manufacturer* or *Serial Number* fields of the **Physical Device** property to identify equipment from specific vendors.

Optimizing Hardware Inventory Performance

The CIM specifications are very detailed. This plugin opens CounterACT to a large collection of information from Windows machines - and CounterACT must poll hosts for property values. This can increase communication between CounterACT devices and hosts.

Use the following strategies to minimize traffic resulting from hardware inventory reporting:

Deploy hardware inventory properties strategically – and selectively. CounterACT only retrieves hardware properties that are referenced by active policies. Carefully consider the hardware properties that you want to use, and create policies with only those properties.

Limit the scope of policies that use hardware properties. Combine conditions to target a focused set of relevant hosts or devices.

Tune run/recheck intervals to minimize polling. Many hardware properties do not change often – or at all. You can run/recheck policies that examine these properties less frequently than most policies. Longer recheck intervals let CounterACT distribute polling interactions to prevent traffic spikes. Use the following general guidelines to determine how frequently to run a policy that uses hardware properties:

- Stable values such as number of processors, model or serial numbers rarely change. Typically you examine these properties to identify unauthorized hosts, or to identify upgrade candidates. These policies can be run once a day, or on demand.
- Performance or configuration values such as certificates, power consumption, or free memory may change infrequently - but changes impact management policies. These properties can be examined every 15 minutes, or several times in a day.
- Changes that present security risks require rapid discovery. For example, a policy that detects insertion of removable storage media can be run more frequently. Use additional conditions to limit the scope of the policy.

Hardware Inventory Properties

When the Hardware Inventory plugin is installed as part of the Endpoint Module, you can use the hardware properties described in this section to create conditions in CounterACT policies.

Most CounterACT hardware inventory properties are based on the standard WMI object model defined by the Distributed Management Task Force (DMTF). The relevant class definition of the Win32 object namespace is referenced in the descriptions below.

Certificate Properties

The plugin provides two properties that let you detect endpoints based on digital certificates present on the endpoint:

Certificates for Current User reports certificates found in the following Windows registry locations:

The CURRENT_USER referenced in these paths is the account used by CounterACT to inspect the endpoint.

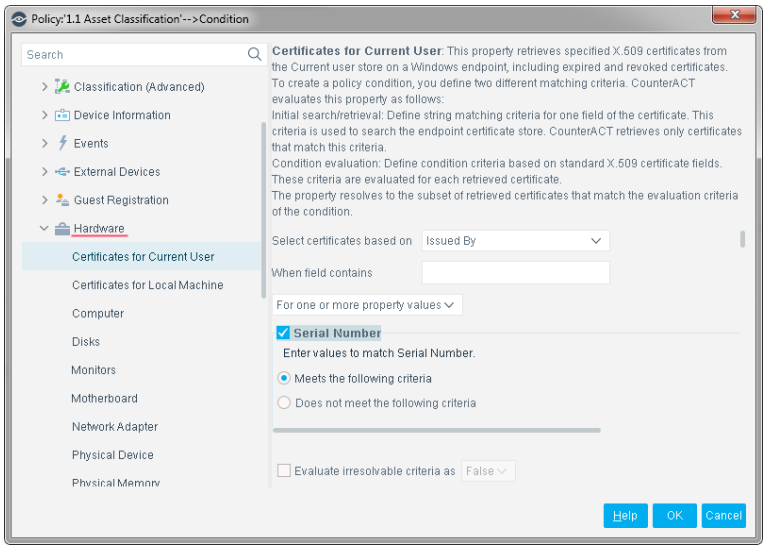
- HKEY_CURRENT_USER\Software\Microsoft\SystemCertificates
- HKEY_CURRENT_USER\Software\Policy\Microsoft\SystemCertificates

Certificates for Local Machine reports certificates found in the following Windows registry locations:

- HKEY_LOCAL_MACHINE\Software\Microsoft\SystemCertificates
- HKEY_LOCAL_MACHINE\Software\Policies\Microsoft\SystemCertificates
- HKEY_LOCAL_MACHINE\Software\Microsoft\EnterpriseCertificates
- HKEY_LOCAL_MACHINE\Software\Microsoft\Cryptography\Services\ServiceName\SystemCertificates

These properties are not based on the WMI object model. CounterACT uses script-based queries to retrieve certificate information.

These properties do not necessarily contain all *the certificates at these locations of the endpoint registry. When you use these properties, you define search criteria that are used to retrieve* a subset of certificates *on the endpoint. See* *Working with Certificate Properties*.



The following information is returned for each certificate:

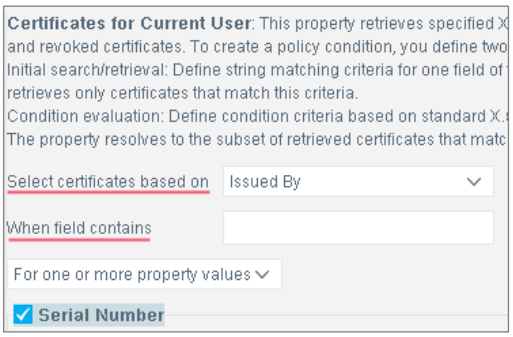
- Serial Number
- Status
- Name
- Subject
- Issuer
- Thumbprint
- Store
- Not Before
- Not After

Working with Certificate Properties

Certificate properties provided by this plugin do not contain all the certificates at these locations of the endpoint registry. When you use these properties, you define search criteria that are used to retrieve a subset of certificates on the endpoint.

To create a policy condition based on certificate information, follow this two-step procedure:

1. ***Define data retrieval criteria***. CounterACT only retrieves information for certificates that match these criteria. To define retrieval criteria:
   - Use the **Select certificates based on** drop-down to specify which certificate field is examined.
   - Use the **When field contains** field to specify a matching condition.



The plugin retrieves only the certificates on the endpoint for which the specified certificate field matches the criteria.

2. ***Define a policy condition***. As for other policy conditions, define a matching condition using one or more fields of the certificate property.

   For each endpoint, the condition is evaluated only for the certificates that were retrieved based on the data retrieval criteria.

Computer

Detect hosts based on the following properties of the Win32_ComputerSystem class.

- Name
- User Name
- Primary Owner Contact
- Primary Owner Name
- Support Contact Description
- Part of Domain
- Domain
- Domain Role
- Workgroup
- Roles
- Manufacturer
- Model
- OEM String Array
- Description
- Caption
- System Type
- PC System Time
- Current Time Zone
- Bootup State
- Number Of Processors
- Total Physical Memory (Megabytes)
- Keyboard Password Status
- Power Management Supported
- Power State
- Thermal State
- Status

Disks

Detect hosts based on the following properties of the Win32_LogicalDisk class.

- Device ID
- DriveType
- Volume Name
- Free Space (Megabytes)
- Size (Megabytes)
- Availability
- Name
- Description
- MediaType
- Status
- File System

Monitors

Detect hosts based on the following properties of the Win32_DesktopMonitor class.

- Name
- Monitor Manufacturer
- Monitor Type
- Device ID
- Status
- Availability
- Is Locked
- Power Management Supported
- Screen Height
- Screen Width
- Error Description

Motherboard

Detect hosts based on the following properties of the Win32_BaseBoard class.

- Name
- Caption
- Description
- Manufacturer
- Model
- Other Identifying Info
- Part Number
- Serial Number
- SKU
- Product
- Version
- Hosting Board
- Hot Swappable
- Removable
- Replaceable

Network Adapter

Detect hosts based on the following properties of the Win32_NetworkAdapter class.

- Index
- Description
- Service Name
- IP Address
- IP Subnet
- Default IP Gateway
- IP Enabled
- IP Connection Metric
- MACAddress
- DHCP Enabled
- DHCP Server
- DNS Domain
- DNS HostName
- DNS Server Search Order
- Domain DNS Registration Enabled
- IGMP Level

Physical Device

Detect hosts based on the following properties of the Win32_PhysicalMedia class.

- Name
- Caption
- Description
- Manufacturer
- Model
- Other Identifying Info
- Part Number
- Serial Number
- SKU
- Status
- Tag
- Version

Physical Memory

Detect hosts based on the following properties of the Win32_PhysicalMemory class.

- Name
- Caption
- Description
- Manufacturer
- Removable
- Replaceable
- SKU
- Other Identifying Info
- Status
- Capacity
- Memory Type
- Data Width
- Bank Label
- Device Locator

- Part Number
- Serial Number
- Speed

Plug and Play Device

Detect hosts based on the following properties of the Win32_PNPEntity class.

- Name
- Caption
- Description
- Manufacturer
- Class GUID
- Device ID
- PNP Device ID
- Service

Processor

Detect hosts based on the following properties of the Win32_Processor class.

- Name
- Family
- Device ID
- Processor ID
- Manufacturer
- Address Width
- Architecture
- Max Clock Speed
- Number Of Cores
- Load Percentage
- CPU Status

Inventory Views

When you use this plugin for the first time, CounterACT creates a Hardware folder in the Views tree of the Asset Inventory screen. These views group hosts by common characteristics, based on hardware inventory property values. To populate these views, you must define policies that classify hosts based on the hardware properties provided by this plugin.

Endpoint Module Information

The Hardware Inventory plugin is installed with the CounterACT Endpoint Module.

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

- 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 CounterACT release.

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

Executable Files Used by the Plugin on Windows Endpoints

This plugin deploys the following executable files on endpoints to resolve inventory related properties.

Name	Description	Last Updated
hwi_cert_store_new.exe	Resolves the **Certificates for Current User** and the **Certificates for Local Machine** properties.	1.1.0
hwi_disks_query.vbs	Resolves the **Disks** property.	1.1.0
hwi_monitors.vbs	Resolves the **Monitors** property.	1.0.2

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**.

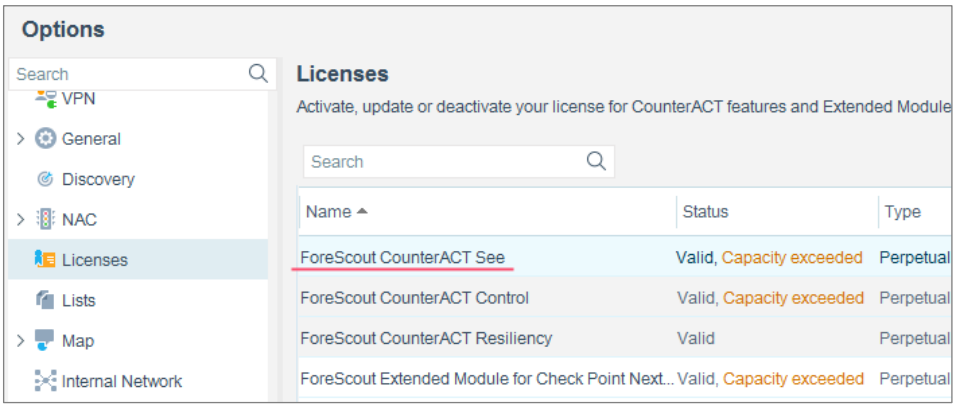
Documentation Portal

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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