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Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager

v01.10.0

User's Guide for Compute Systems

Hitachi Data Systems

Contents

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems

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Preface

This document describes how to use the Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager software management packs for compute systems.

This preface includes the following information:

> **Note**
> The use of *Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager* for Compute Systems and all other Hitachi Data Systems products is governed by the terms of your agreement(s) with Hitachi Data Systems Corporation.

Intended Audience

This document is intended for system administrators, Hitachi Ltd. representatives, and authorized service providers who are involved in installing, configuring, and operating the Compute System and Switch families.

Readers of this document should be familiar with the following:

- Microsoft System Center Operations Manager.

- Hitachi Compute Blade 500/2000/2500 and Compute Rack 200 servers.
- QuantaPlex T41S-2U server

Product Version

This document revision applies to Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager version v01.10.0 or later.

Release Notes

Release notes are on the documentation CD. Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document.

Related Documents

Hitachi documents:

- *Hitachi Infrastructure Adapter for Microsoft System Center Operations Manager Consolidated Installer User's Guide,* MK-92SCOM010
- *Hitachi Infrastructure Adapter for Microsoft System Center Operations Manager User's Guide (For Storage Systems),* MK-92SCOM008
- *Hitachi Compute Blade 2000 User's Guide*, MK-99BDS2K001
- *Hitachi Compute Blade 500 Series CLI Console User's Guide*, MK-91CB500034
- *Hitachi Compute Blade 500 Series Web Console User's Guide*, MK-91CB500015
- *Hitachi Compute Rack 210H/220H Remote Management User's Guide*, MK-90CRH006
- *Hitachi Compute Rack 220S Remote Management User's Guide*, MK-90CRS004
- *Hitachi Compute Blade 2500 Series Getting Started Guide*, MK-99CB2500003
- *Hitachi Compute Blade 2500 Series Management Module User Guide*, MK-99CB2500004
- *Compute Blade Built-in LAN Switch Module Software Manual Configuration Commands*, MK-99COM087, MK-99COM088
- *Compute Blade Built-in LAN Switch Module Software Manual Operation Commands*, MK-99COM094-01, MK-99COM095
- *Compute Blade Built-in LAN Switch Module Software Manual Message Log Reference*, MK-99COM092
- *Compute Blade Built-in LAN Switch Module Software Manual MIB Reference*, MK-99COM093
- *Compute Blade Built-in LAN Switch Module Software Manual Configuration Settings*, MK-99COM089, MK-99COM090, MK-99COM091

- *Networking OS 7.8 for 1/10Gb LAN Switch Module Application Guide*, MK-99CB2500039
- *Networking OS 7.8 for 1/10Gb LAN Switch Module Command Reference*, MK-99CB2500040

Hitachi Data Systems Portal, http://portal.hds.com

Brocade documents:

- *Brocade Web Tools Administrator's Guide*
- *Brocade Access Gateway Administrator's Guide*
- *Brocade Fabric OS Administrator's Guide*
- *Brocade Fabric OS Command Reference Manual*
- *Brocade Fabric OS MIB Reference*
- *Brocade Fabric OS Message Reference*
- *Brocade Fabric Watch Administrator's Guide*
- *Brocade Fabric Watch Administrator's Guide*

Microsoft documents:

- *Microsoft® technical documentation for System Center Operations Manager*

Quanta Cloud Technology documents:

- *QuantaPlex Series T41S-2U/T41SP-2U User's Guide*

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Document Conventions

This document uses the following typographic conventions:

Convention	Description
Bold	• Indicates text in a window, other than the window title, including menus, menu options, buttons, fields, and labels. Example: Click OK. • Indicates emphasized words in list items.
Italic	• Indicates a document title or emphasized words in text. • Indicates a variable, which is a placeholder for actual text you enter or text provided by the system. Example: `pairdisplay -g ` *`group`* (For exceptions to this convention, see angled brackets.)
`screen/code (monospace)`	Indicates text displayed on screen or text that you enter. Example: `# pairdisplay -g oradb`
<> angled brackets	• Indicates variables in the following scenarios: Variables are not clearly separated from the surrounding text or from other variables. Example: `Status-<`*`report-name`*`><`*`file-version`*`>.csv` • Variables in headings.
[ ] square brackets	Indicates optional values. Example: [a | b] indicates that you can select a, b, or nothing.
{ } braces	Indicates required or expected values. Example: { a | b } indicates that you must select either a or b.
| vertical bar	Indicates a choice between two or more options or arguments. Examples: [a | b] indicates that you can select a, b, or nothing. { a | b } indicates that you must select either a or b.
_ (underlined text)	Default value

This document uses the following iconographic conventions to draw attention to information:

	Label	Definition
	Note	Calls attention to important and/or additional information.
	Tip	Provides helpful information, guidelines, or suggestions for performing tasks more effectively.
	Caution	Warns the user of adverse conditions and/or consequences (for example, disruptive operations).
	WARNING	Warns the user of severe conditions and/or consequences (for example, destructive operations).

Convention for Storage Capacity Values

Physical storage capacity values (for example, disk drive capacity) are calculated based on the following values:

Physical Capacity Unit	Value
1 kilobyte (KB)	1,000 (10^3) bytes
1 megabyte (MB)	1,000 KB or $1,000^2$ bytes
1 gigabyte (GB)	1,000 MB or $1,000^3$ bytes
1 terabyte (TB)	1,000 GB or $1,000^4$ bytes
1 petabyte (PB)	1,000 TB or $1,000^5$ bytes
1 exabyte (EB)	1,000 PB or $1,000^6$ bytes

Logical storage capacity values (e.g., logical device capacity) are calculated based on the following values:

Logical Capacity Unit	Value
1 block	512 bytes
1 cylinder	Mainframe: 870 KB Open-systems: • OPEN-V: 960 KB • Others: 720 KB
1 KB	1,024 (2^{10}) bytes
1 MB	1,024 KB or $1,024^2$ bytes
1 GB	1,024 MB or $1,024^3$ bytes
1 TB	1,024 GB or $1,024^4$ bytes
1 PB	1,024 TB or $1,024^5$ bytes
1 EB	1,024 PB or $1,024^6$ bytes

Getting Help

The Hitachi Data Systems Support Center staff is available 24 hours a day, seven days a week. To reach us, please visit the support Web site for current telephone numbers and other contact information: http://www.hds.com/services/support/. If you purchased this product from an authorized HDS reseller, contact that reseller for support.

Before calling the Hitachi Data Systems Support Center, please provide as much information about the problem as possible, including:

- The circumstances surrounding the error or failure.
- The exact content of any error message(s) displayed on the host system(s).

Comments

Please send us your comments on this document: doc.comments@hds.com. Include the document title, number, and revision level (for example, -07), and refer to specific section(s) and paragraph(s) whenever possible. All comments become the property of Hitachi Data Systems Corporation.

Thank you!

Introduction

The System Center Operations Manager (SCOM) is a performance, health and state monitoring product for Microsoft Windows operating systems.

The Hitachi Compute Adapter for Microsoft® System Center Operations Manager software package provides management packs for Hitachi servers, and is contained in the Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager software. Hitachi Compute Adapter for Microsoft® System Center Operations Manager integrates with SCOM to discover and monitor Hitachi Compute System and Switch families.

The Hitachi Compute Adapter for Microsoft® System Center Operations Manager software package includes the following management packs:

Management Pack	Description
Hitachi Compute Base Management Pack	This Management Pack is a prerequisite to all other Hitachi server monitoring Management Packs.
Hitachi Compute Blade 2000 Management Pack	This Management Pack enables Compute Blade 2000 devices to be monitored by SCOM.
Hitachi Compute Blade 500 Management Pack	This Management Pack enables Compute Blade 500 devices to be monitored by SCOM.
Hitachi Compute Rack 200 Management Pack	This Management Pack enables Compute Rack 200 devices to be monitored by SCOM.
Hitachi Compute Switch Management Pack	This Management Pack enables SNMP traps from Hitachi Compute Blade Switch Modules to appear in SCOM as alerts.
Hitachi Compute Blade 2500 Management Pack	This Management Pack enables Compute Blade 2500 devices to be monitored by SCOM.
QuantaPlex T41S-2U Management Pack	This Management Pack enables QuantaPlex T41S-2U devices to be monitored by SCOM.

The management packs listed above provide the following object views in the Operations Manager console Monitoring pane.

- **Hitachi Compute Systems View**: displays the Hitachi Compute Blade and Rack servers monitored by SCOM.
- **Hitachi Compute Switch View**: displays the FC and LAN switch modules monitored by SCOM.

Also included in the Hitachi Compute Adapter for Microsoft® System Center Operations Manager software package:

Management Pack	Description
Hitachi Server Service Monitoring Management Pack	This Management Pack allows the Connector service to be monitored by SCOM.

This management pack monitors the operational status of Hitachi Compute Connector Service. For more details, refer to Hitachi Server Service Monitoring.

2

Navigating the SCOM GUI

The Hitachi Compute Adapter for Microsoft® System Center Operations Manager View appears in the Monitoring View of the SCOM console.
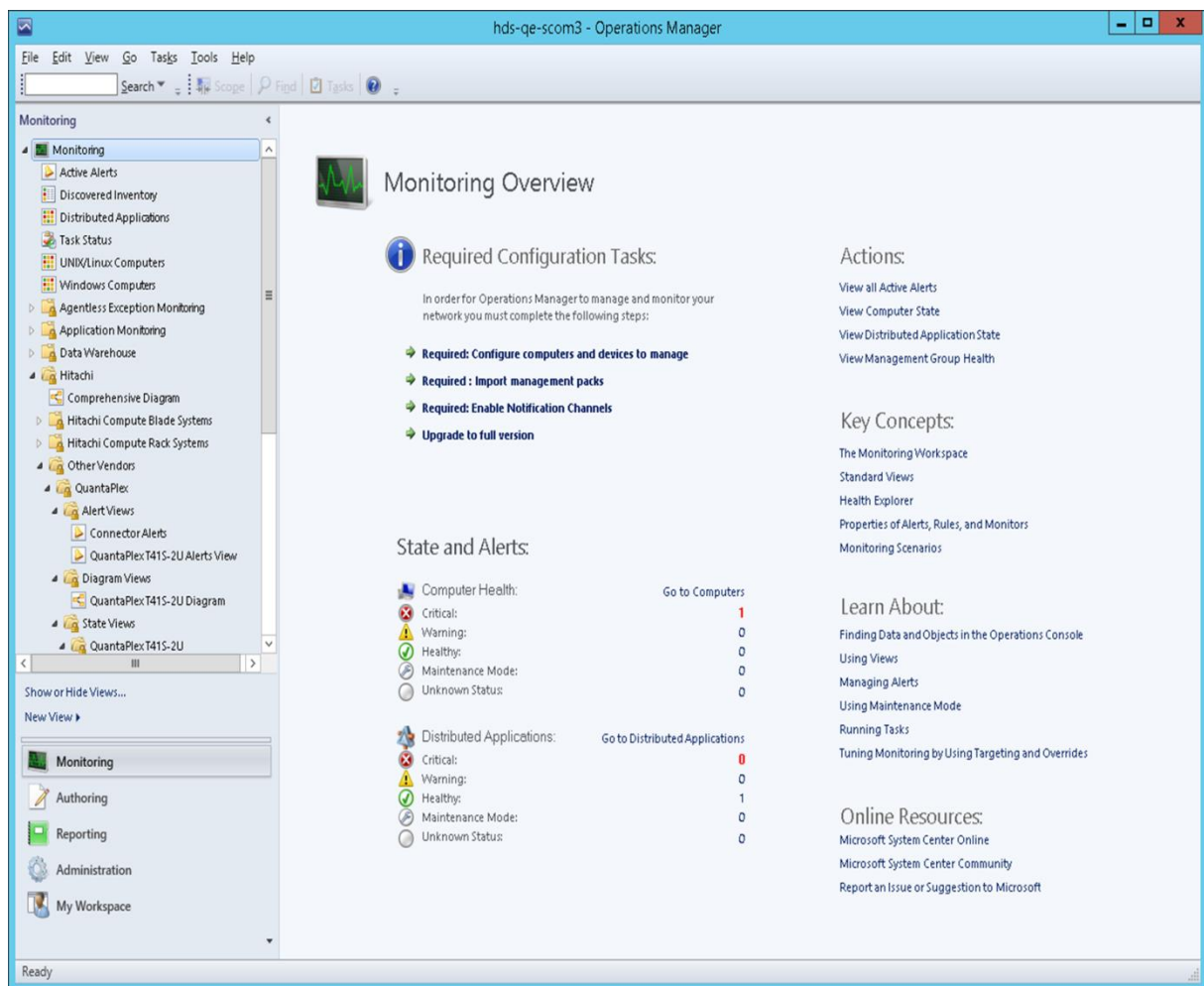
Monitoring View

Discovering a Compute Device

1. From the **Start > All Programs**, select **Hitachi > Hitachi Compute Management Pack for SCOM > Hitachi Compute Connector Configuration**. The MMC Snap-In will be displayed as follows:
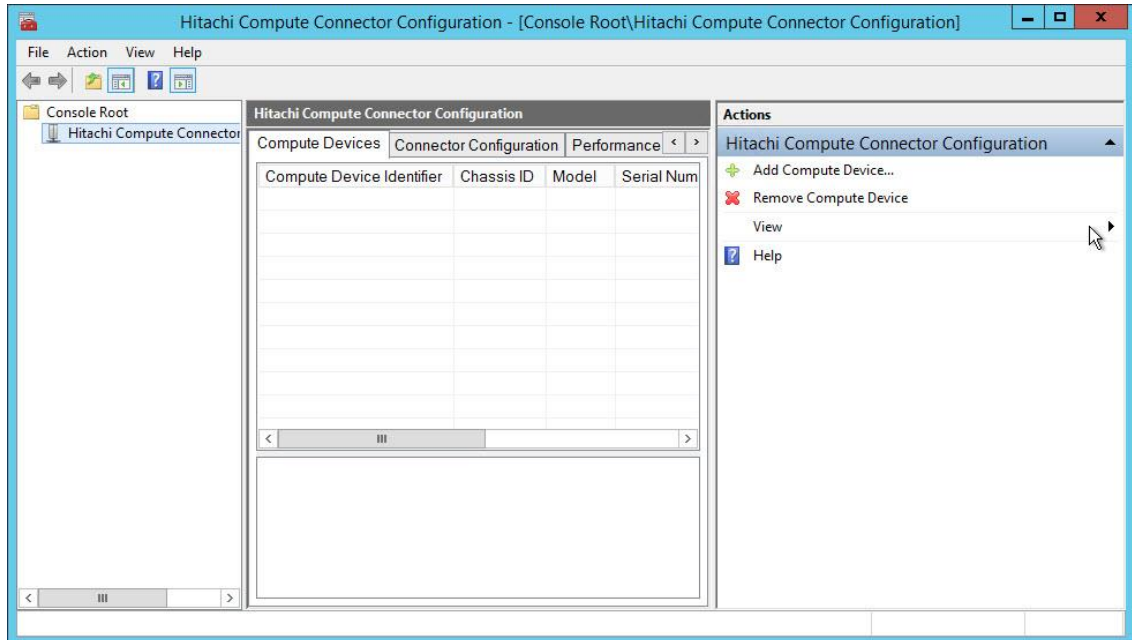
Hitachi Compute Connector Configuration

2. Select the **Compute Devices** tab under the Hitachi Compute Connector Configuration pane and then click **Add Compute Device** from the Actions pane.
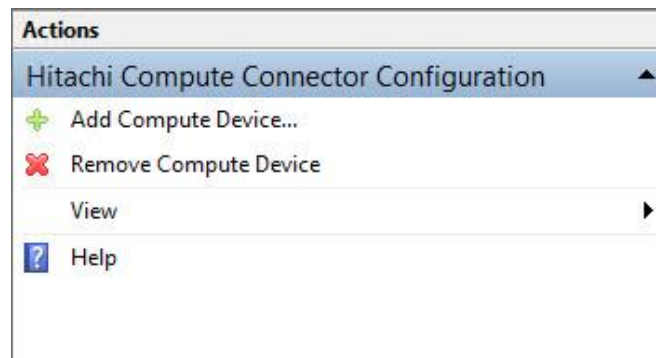
Add Compute Device

> **Note**
> If the SNMP settings for a compute device are changed after the compute device has been added, current compute device information may stop appearing in SCOM. To change the SNMP information used by the Hitachi SCOM Management Pack, remove and re-add the compute device configuration.

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3. When **Add Compute Device** is clicked in the Actions pane, an Add Compute Device dialog is displayed.

Add Compute Device dialog (showing model selection)

> **Note**
> If the selected model does not match the model detected during device addition, an error message is displayed and the selected model is not added.

4. Complete the Add Compute Device dialog for the selected model. Include all of the applicable inputs from the table below.

Item#	Action	Input
Compute Device	Select Model	Select the model corresponding to the device being added. This input is required.
Management Module	IP Address	For Compute Blades, use the management module IP. For Compute Rack servers, use the management controller IP. This input is required.
SNMP	Community Name	SNMP community name used for the server. To protect the privacy of the community name, the text is not displayed during entry. This input is required.
	Port Number	SNMP port number used for the server. This input is required.
	Version	SNMP protocol version used for the server. This value cannot be changed.
BMC	IP Address	Use the BMC IP. This input is required.
	User Name	Username for BMC connection. This input is required. Only user accounts with administrator privileges will be able to logon to the Quanta server.
	Password	Password for BMC connection. This input is required.
Server Blade Management LAN IP address	Server Blade 0| Server Blade 7	Management IP address for the blade BMC. This input is displayed only while adding CB500 and CB2000 devices.
SMASH	User Name	User Name for SMASH connection. This input is displayed only while adding CB500 and CB2500 devices. This input is required.
	Password	Password for SMASH connection. To protect the privacy of the password, the text is not displayed during entry. This input is displayed only while adding CB500 and CB2500 devices. This input is required.
	Port Number	SMASH (WS-Management) port number used for the server. This input is displayed only while adding CB500 and CB2500 devices. This input is required.
	Configure independent SMASH connection settings for each blade.	Select this item to configure independent SMASH connection settings for each blade. If OK is pressed with this item checked, a new dialog is displayed which allows independent per-blade settings to be configured. This input is displayed only while adding CB500 and CB2500 devices.

Add Compute Device dialog for CB2000 devices

	Note
	The Server Blade 0-7 IP addresses must be entered if the CB2000 management module firmware version is older than "A0360." If they are not entered, blade tasks initiated from within the SCOM Operations Console may not function.

Add Compute Device dialog for CB500 devices

Add Compute Device dialog for CR devices

Add Compute Device dialog for CB2500 devices

Add Compute Device dialog for QuantaPlex T41S-2U devices

5. Click **OK** to accept the entries. If the **Configure independent SMASH connection settings for each blade** option is selected, and either a CB500 or CB2500 device is being added, an independent SMASH setting dialog is displayed.

Inputs for this dialog are shown below.

Item			Description
Server Blade SMASH	Server Blade 0-7 (for CB500)	User Name	SMASH account name. This input is required.
	Server Blade 1-15 (for CB2500)	Password	SMASH password. The password is not displayed during entry. This input is required.
		Port Number	SMASH (WS-Management) port number used for the server. This input is required.

SMASH Settings dialog for CB500 devices

SMASH Settings dialog for CB2500 devices

> **Note**
>
> The independent SMASH settings dialog fields are automatically populated based on the entries from the main Add Compute Device dialog. It is only necessary to change the field values for the blades with SMASH settings that differ from the defaults.
>
> SMASH information must be entered while adding CB500 or CB2500 devices. If the SMASH information is left blank, an error is displayed and registration cannot be performed.

6.   Click **OK** to accept the entries and add the compute device.

Configuring the Hitachi Compute Connector

1. From **Start > All Programs**, select **Hitachi > Hitachi Compute Management Pack for SCOM > Hitachi Compute Connector Configuration**.

> **Note**
> The account used to start the MMC snap-in must belong to the Administrators group on the computer(s) running SCOM and Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager. See *Account permissions for installing and using the Hitachi Infrastructure Adapter for SCOM* in the *Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager Consolidated Installer User's Guide*.

2. The MMC Snap-In will appear as follows:

MMC Snap-In

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
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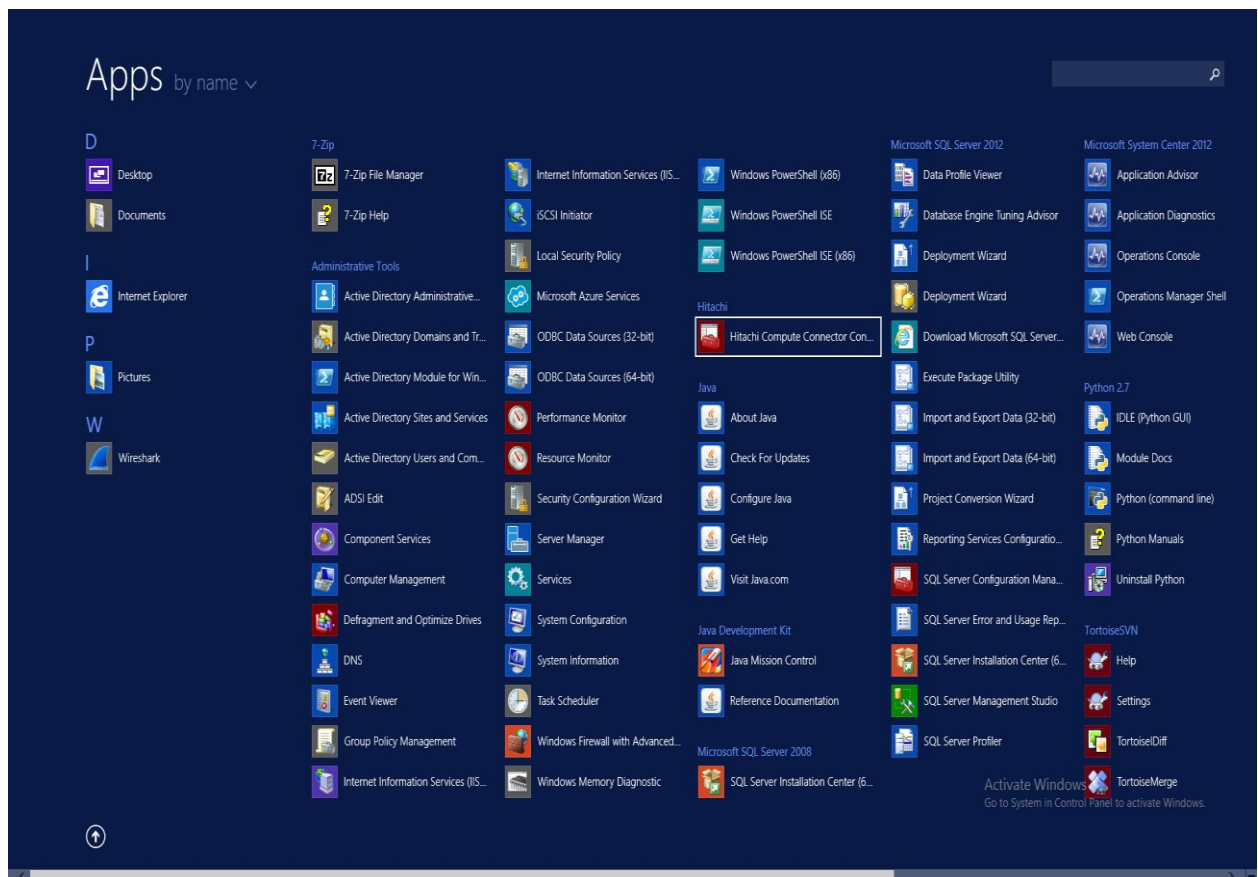
3.   Enter the appropriate SCOM management server address. If the server is remote, enter its IP address or hostname. If the SCOM server is local, enter LOCALHOST.

4.   Enter a configuration data collection interval and click Save Configuration. The default is 30 minutes.
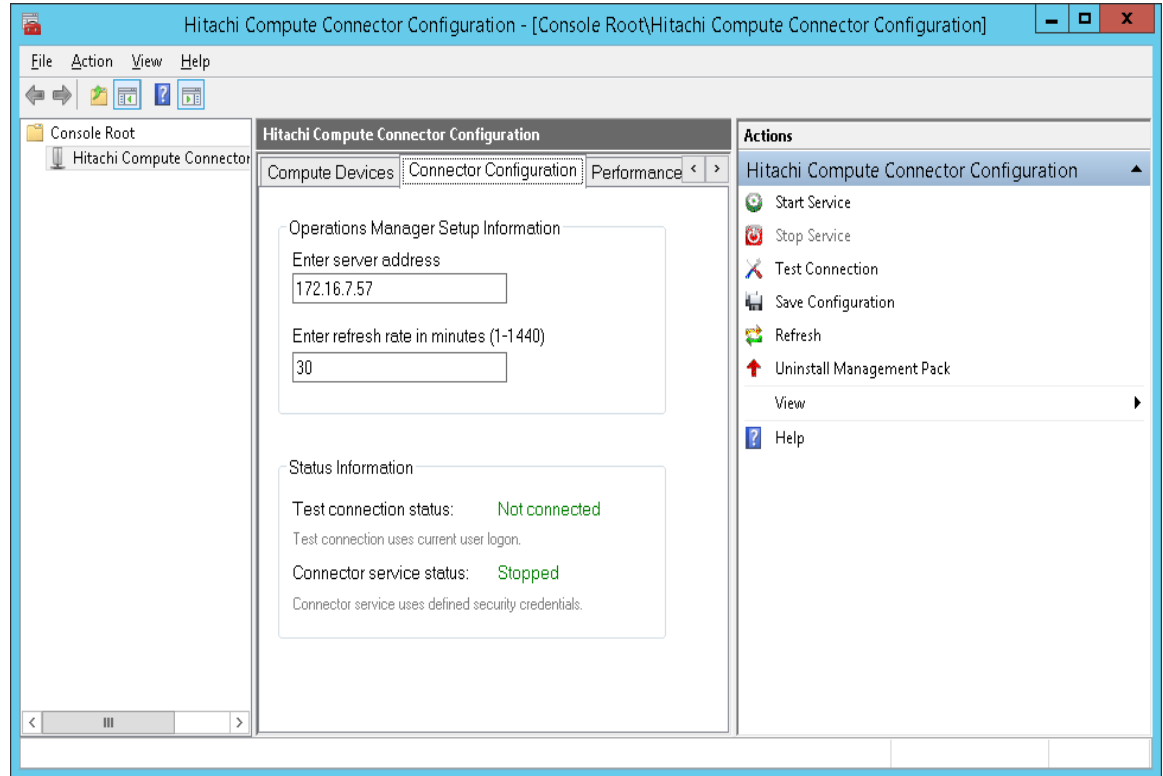
Connector Configuration tab

5.   Select the **Start Service** button from the Actions pane. The Connector service status should progress from "Stopped" to "Starting" to "Running." The Connector service status will automatically be updated.

> **Notes**
> 1. The first time it starts, the connector service installs the Hitachi Server Management Packs and connector settings on the SCOM server.
> 2. The connector service cannot be started when the System Center Data Access service for the SCOM server is not running.

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6. To test the connection between the Hitachi Compute Adapter for Microsoft® System Center Operations Manager and the SCOM server, select Test Connection.

7. Select **Save Configuration** to save the settings.

> **Note**
> The status of the Connector service refreshed every thirty seconds.

8. If changes are made to the SCOM server address or the refresh rate, it is necessary to restart the Connector service.

> **Note**
> This installer for this adapter does not remove the management packs and connector settings from SCOM. To remove these, select Uninstall Management Packs from the Actions pane.

9. To confirm that the management packs are installed on the SCOM server, open Operations Console and select Administration > Management Packs. The Hitachi management packs should appear as follows:

Administration > Management Packs
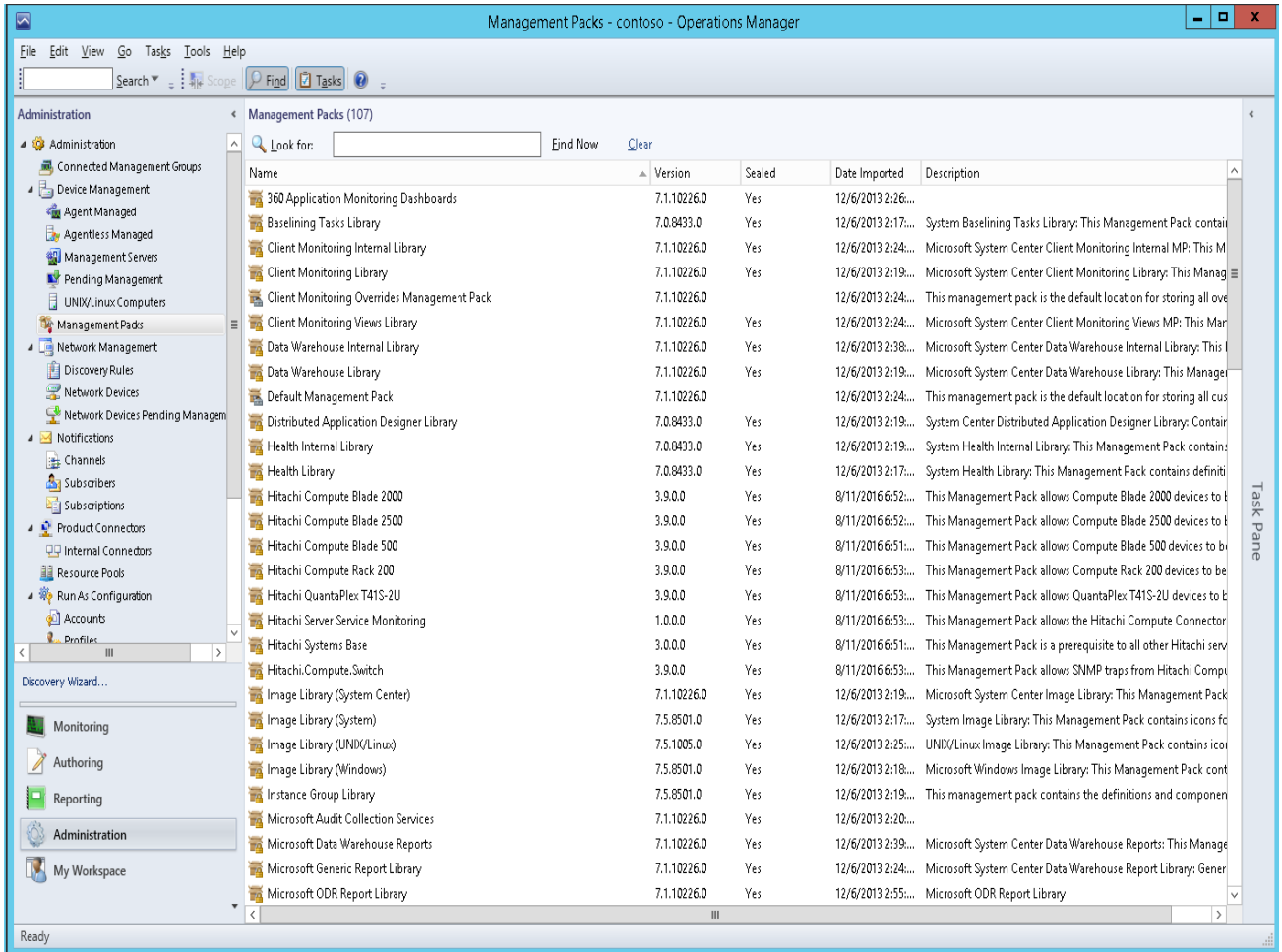
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Accessing Hitachi Compute Connector Service Properties

To access the Hitachi Compute Connector Service properties window, open the Windows Services control panel item.
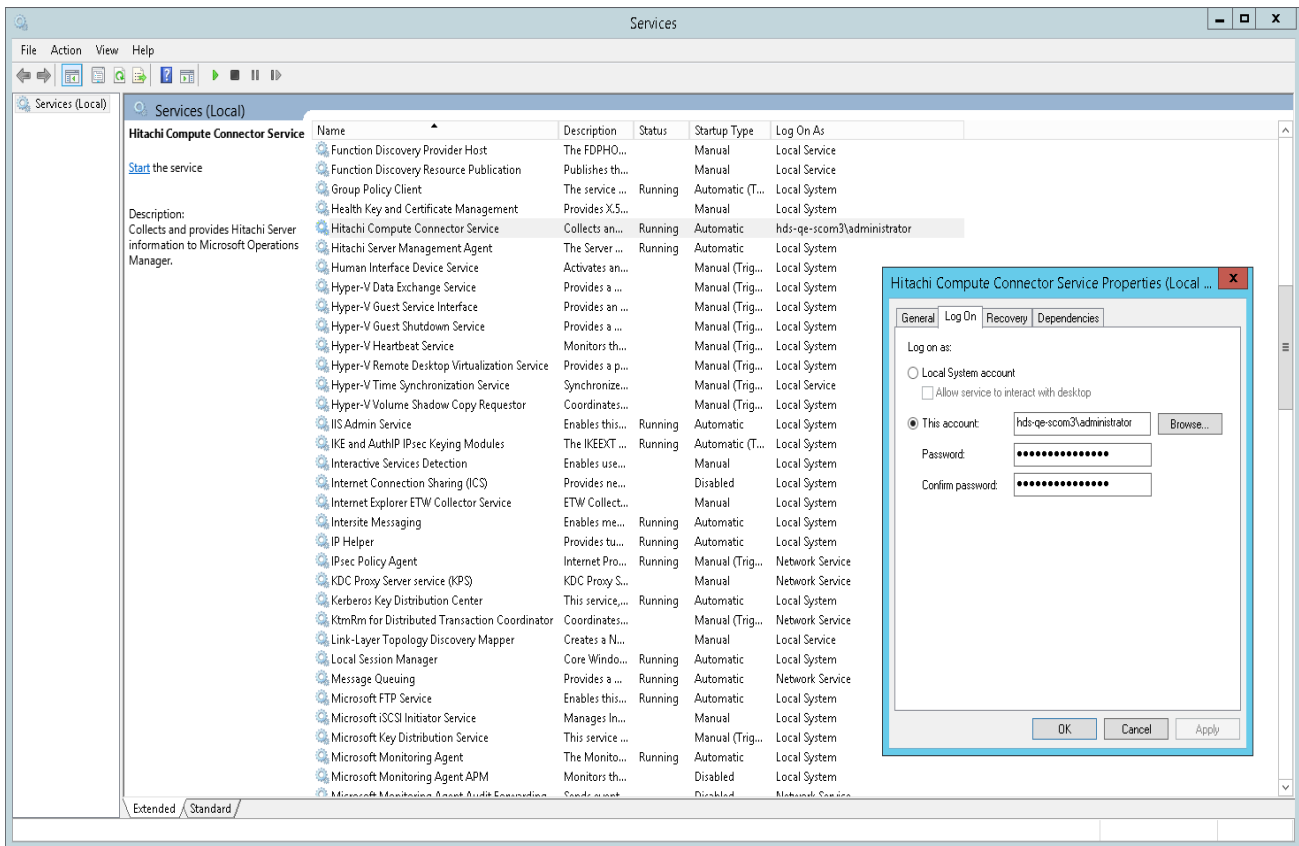
Hitachi Compute Connector Service Properties

Configuring Performance Monitoring

The Hitachi Compute Adapter for Microsoft® System Center Operations Manager is able to display compute device electrical consumption information in SCOM. To configure this, open Hitachi Compute Connector Configuration and follow these steps:

1. Click the **Connector Configuration** tab and click **Start Service** to start the Connector service.

2. Click the **Performance** tab, enter a performance data collection interval and click **Save Configuration**. The default is fifteen seconds.
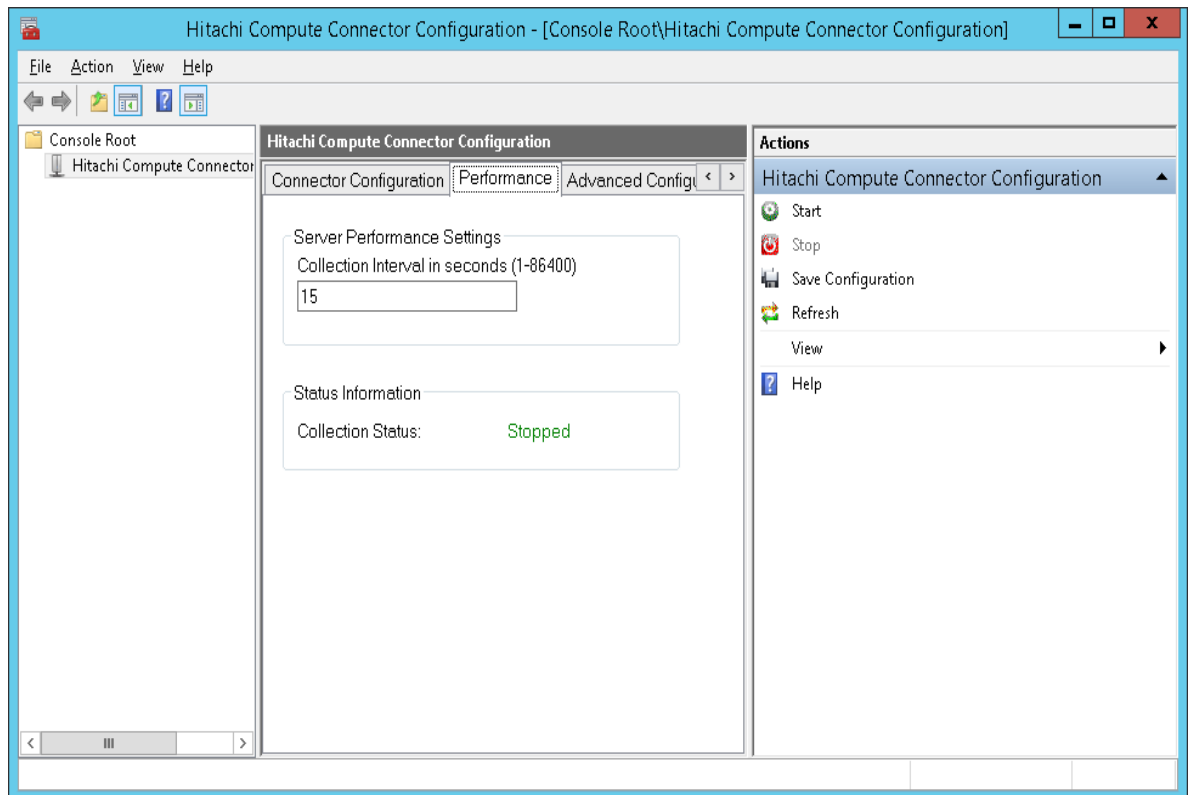
Performance tab

3. Click **Start** to start performance monitoring.

Supporting Maintenance Mode

When a monitored object is put in to maintenance mode, all of its constituent objects are put in to maintenance mode also.

When a monitored object is in maintenance mode, its behavior is as follows:

- If a Compute Blade chassis is placed in to maintenance mode, its constituent blades will also be put in maintenance mode.

- While in maintenance mode, monitored objects are changed to the Not Monitored state from their prior state. Their prior state can be Healthy, Warning or Critical.

When a monitoring object is in maintenance mode, the Connector Windows service does not send WMI events to update health states.

When monitored objects come out of maintenance mode, their health state is set to Healthy regardless of the state they were in before entering maintenance mode. Following that, the Connector service begins sending WMI events to update their health states.

When a monitoring object comes out of maintenance mode, the Connector Windows service starts sending the WMI event to update the health state.

Also, when monitored objects are in maintenance mode, no alerts are generated or resolved.

Monitoring Compute Systems and Switch Alerts

Hitachi servers and the switches found in Compute Blade chassis use SNMP to report hardware and environmental events. It is possible to configure Hitachi hardware and SCOM so that SNMP traps generated by the hardware appear in SCOM as alerts.

Note

Although it is possible to monitor Compute system and switch traps while the Connector process is running, the Connector is not strictly required for this feature to work. To monitor Compute system and switch traps without running the Connector, manually import the Hitachi Compute Systems Management Packs in to SCOM, then follow the configuration steps shown in this section.

To use this feature, the Hitachi hardware must be configured to send SNMP traps to the SCOM host, and SCOM must be configured to receive them; SCOM views the Hitachi hardware as "SNMP network devices."

Configuring Compute Systems and Switches to send SNMP traps to SCOM

To monitor Compute Systems and Switches from SCOM as SNMP network devices, it is necessary to configure SNMP in advance. For configuration instructions for each device, refer to its corresponding User's Guide.

Configuring a CB2000 to send SNMP traps to SCOM

The SNMP agent must be configured as follows:

- A valid port number must be assigned
- The SNMP version must be set to v1/v2c
- SNMP Traps must be enabled
- SNMP Trap messages must be set to HCSM

Also, the SCOM server must be registered as an SNMP manager on the device.

To configure SNMP with the CB2000, refer to the following User's Guide:

- *Hitachi Compute Blade 2000 User's Guid*e

Configuring a CB500 to send SNMP traps to SCOM

The SNMP agent must be configured as follows:

- A valid port number must be assigned
- The SNMP version must be set to v1/v2c
- SNMP Traps must be enabled

Also, the SCOM server must be registered as an SNMP manager on the device.

To configure SNMP with the CB500, refer to the following User's Guides:

- *Hitachi Compute Blade 500 Series CLI Console User's Guide*
- *Hitachi Compute Blade 500 Series Web Console User's Guide*

Configuring a Compute Rack to send SNMP traps to SCOM

The SNMP agent must be configured as follows:

- A valid port number must be assigned
- The SNMP version must be set to v1/v2c
- SNMP Traps must be enabled

Also, the SCOM server must be registered as an SNMP manager on the device.

To configure SNMP with the CR, refer to the following User's Guides.

- *Hitachi Compute Rack 220S Remote Management User's Guide*
- *Hitachi Compute Rack 210H/220H Remote Management User's Guide*

Configuring a CB2500 to send SNMP traps to SCOM

The SNMP agent must be configured as follows:

- A valid port number must be assigned
- The SNMP version must be set to v1/v2c
- SNMP Traps must be enabled

Also, the SCOM server must be registered as an SNMP manager on the device.

To configure SNMP with the CB2500, refer to the following User's Guides:

- *Hitachi Compute Blade 2500 Series Getting Started Guide*
- *Hitachi Compute Blade 2500 Series Management Module User's Guide*

Configuring a LAN Switch to send SNMP traps to SCOM

The SNMP agent must be configured as follows:

- A valid port number must be assigned
- The SNMP version must be set to v1/v2c
- SNMP Traps must be enabled

Also, the SCOM server must be registered as an SNMP manager on the device.

To configure SNMP with LAN Switches, refer to the following User's Guides:

- *Compute Blade Built-in LAN Switch Module Software Manual Configuration Commands*
- *Compute Blade Built-in LAN Switch Module Software Manual Operation Commands*
- *Compute Blade Built-in LAN Switch Module Software Manual MIB Reference*
- *Compute Blade Built-in LAN Switch Module Software Manual Message Log Reference*
- *Compute Blade Built-in LAN Switch Module Software Manual Configuration Settings*
- *Networking OS 7.8 for 1/10Gb LAN Switch Module Application Guide*
- *Networking OS 7.8 for 1/10Gb LAN Switch Module Command Reference*

Configuring an FC Switch to send SNMP traps to SCOM

The SNMP agent must be configured as follows:

- A valid port number must be assigned
- The SNMP version must be set to v1/v2c
- SNMP Traps must be enabled

Also, the SCOM server must be registered as an SNMP manager on the device.

To configure SNMP on FC Switches, refer to the following documents:

- *BROCADE Web Tools Administrator's Guide*
- *BROCADE Access Gateway Administrator's Guide*
- *BROCADE Fabric OS Administrator's Guide*
- *BROCADE Fabric OS Command Reference Manual*
- *BROCADE Fabric OS MIB Reference*
- *BROCADE Fabric OS Message Reference*

Configuring a QuantaPlex T41S-2U to send SNMP traps to SCOM

The SNMP agent must be configured as follows:

- SNMP must be enabled.
- SNMP traps must be enabled

The SCOM server must be registered as an SNMP manager on the device.

1) Open the SNMP Community Settings window.
   a) From the **Configuration** menu, select **SNMP Community**.

2) In the SNMP Community Settings window:

   a) Check the **Enable SNMPv1/v2** option.
   b) Enter public for the **Read-Only Community String**.
   c) Enter private for the **Read-Write Community String**.
   d) Check the **Enable Trap** option.
   e) Select a version.
   f) Enter public for the **Community String**.
   g) Enter SCOM server IP addresses for **Destination 1-5 IP**, as applicable.

3) Click **Save** to save the settings.

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Configuring SCOM to receive SNMP traps from Compute Systems and Switches

This section describes how to configure SCOM to receive SNMP traps from compute systems and switches.

1. Stop and disable the Windows SNMP service on the SCOM Server.

   From the SCOM Administration screen, select **Network Management, Network Devices**. Right-click on **Network Devices**, and select **Discovery Wizard**.

Select Discovery Wizard

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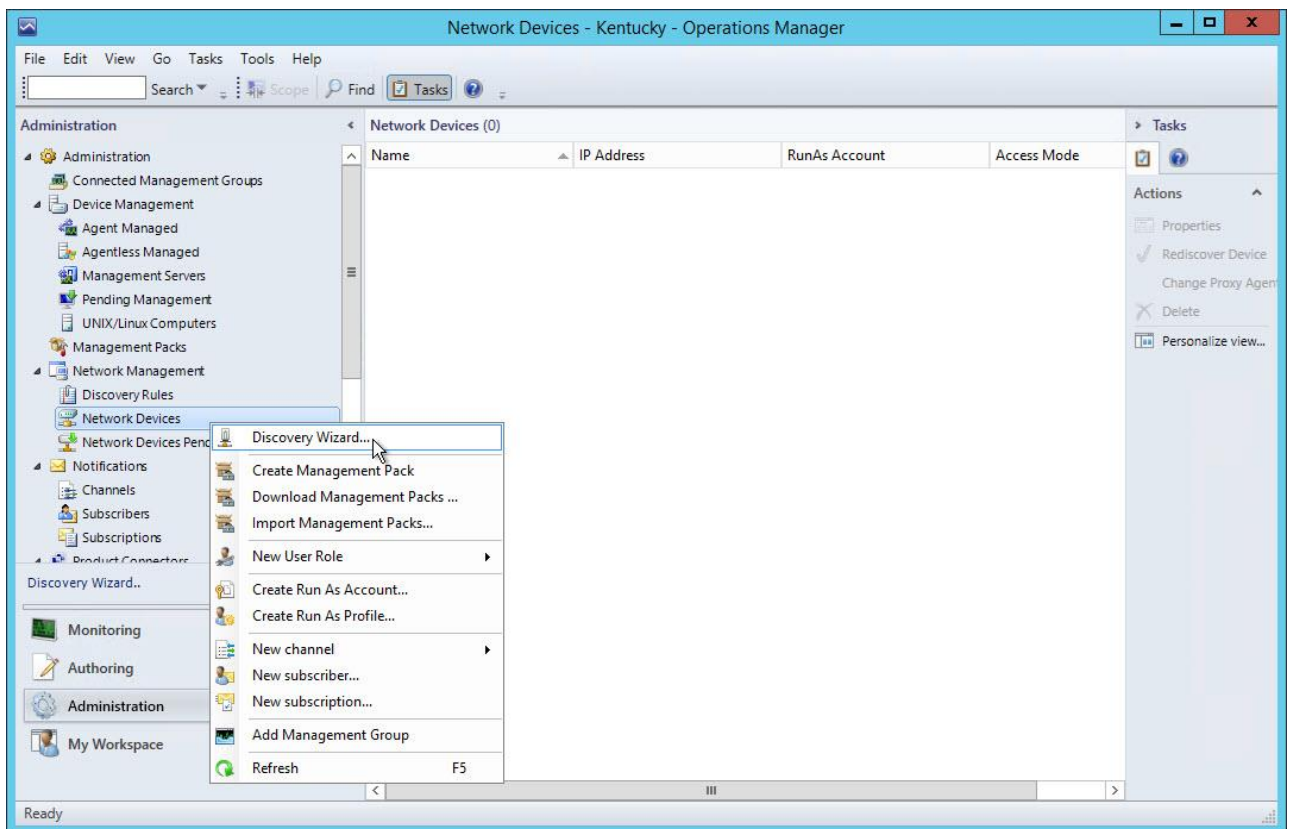
2. On the next screen, choose **Network devices**.

Choose Network devices
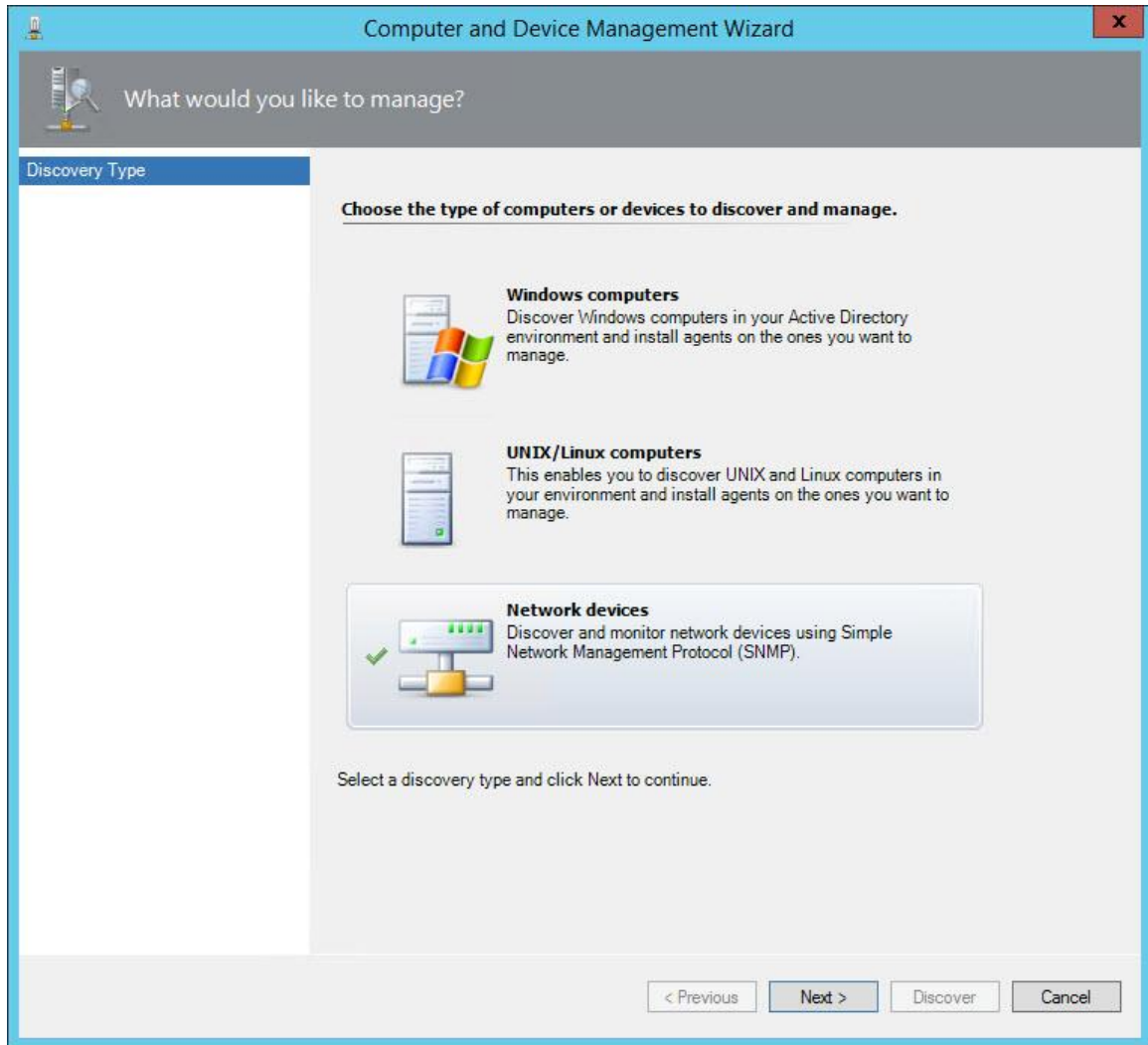
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3.   On the Discovery Method screen:

   a.   Enter an arbitrary name in the **Name** box.

   b.   Select the SCOM management server which can be used in **Available servers** box.

   c.   Select the resource pool which can be used in the **Available pools** box.

   d.   Click **Next**.

General Properties
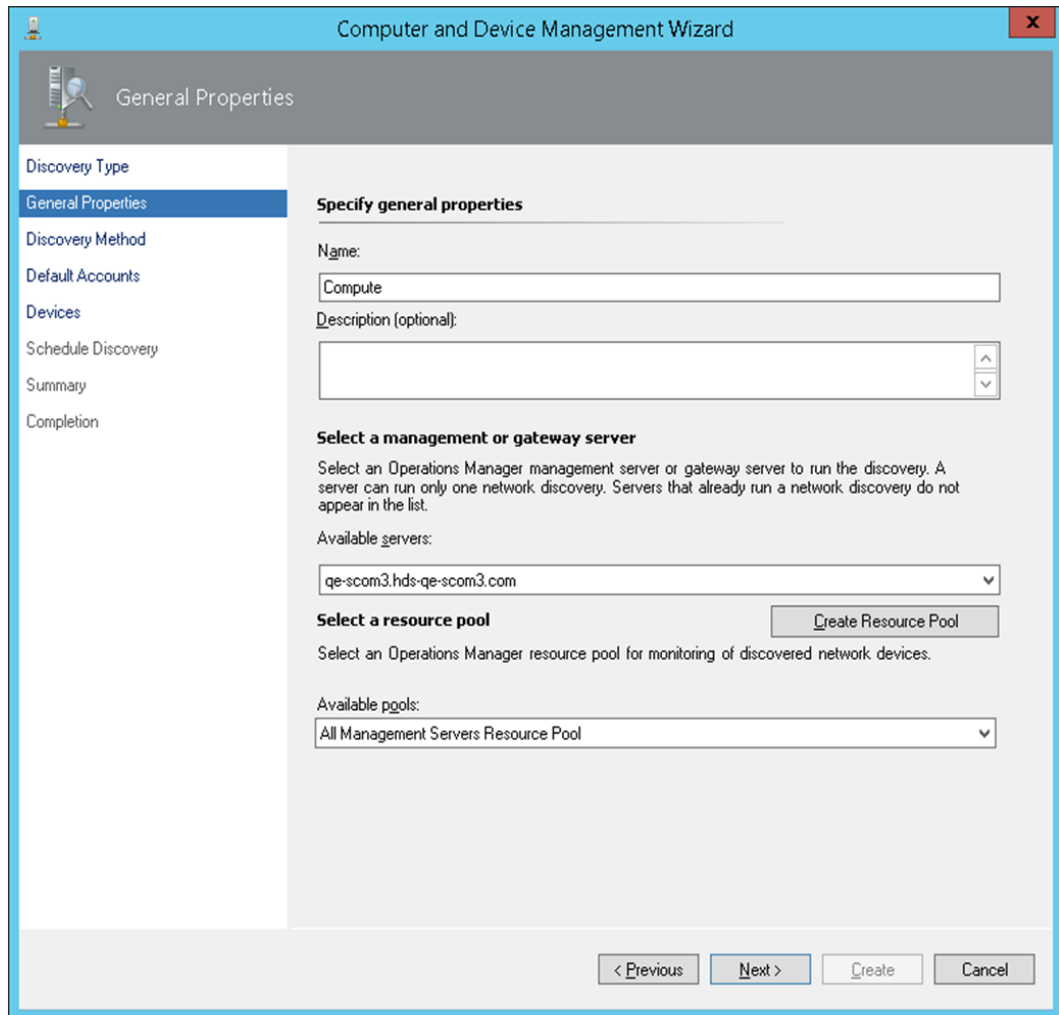
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4.   On the Discovery Method screen, choose **Explicit discovery** and click **Next**.

Discovery Method

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems
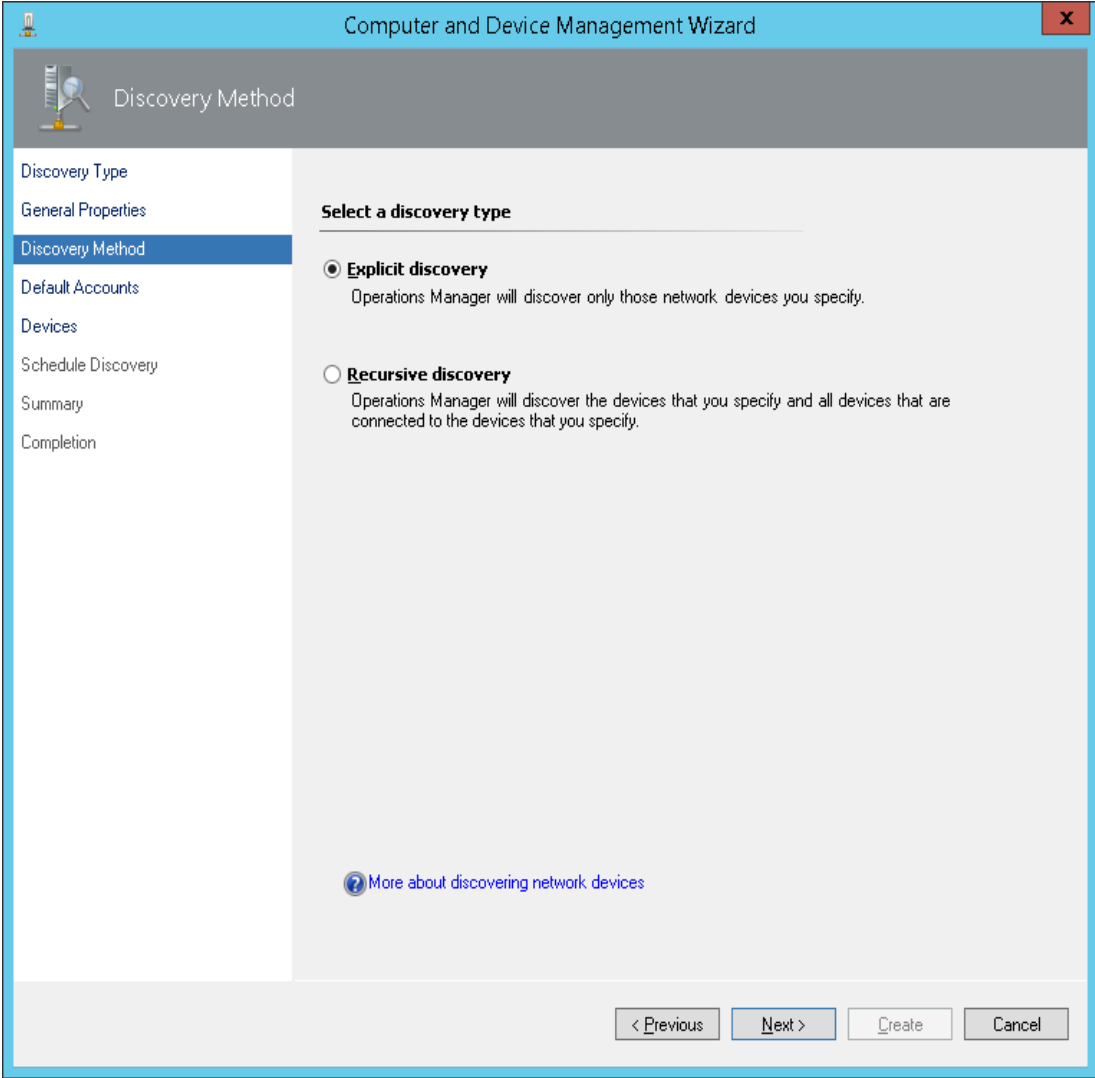
5.   On the Default Accounts screen, click **Create Account**.

Default Accounts (1)

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
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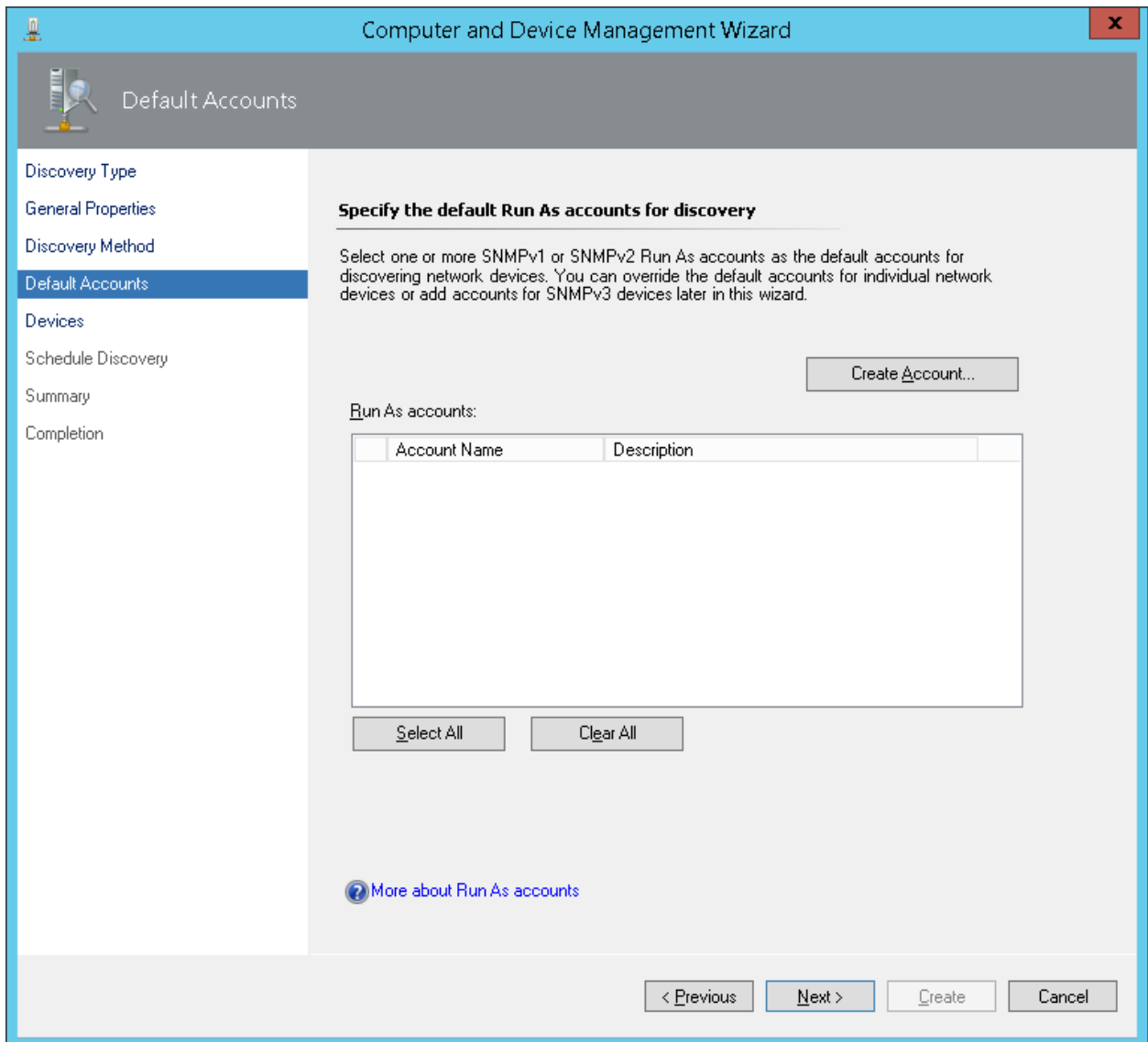
6. On the Introduction screen, click **Next**.

Introduction

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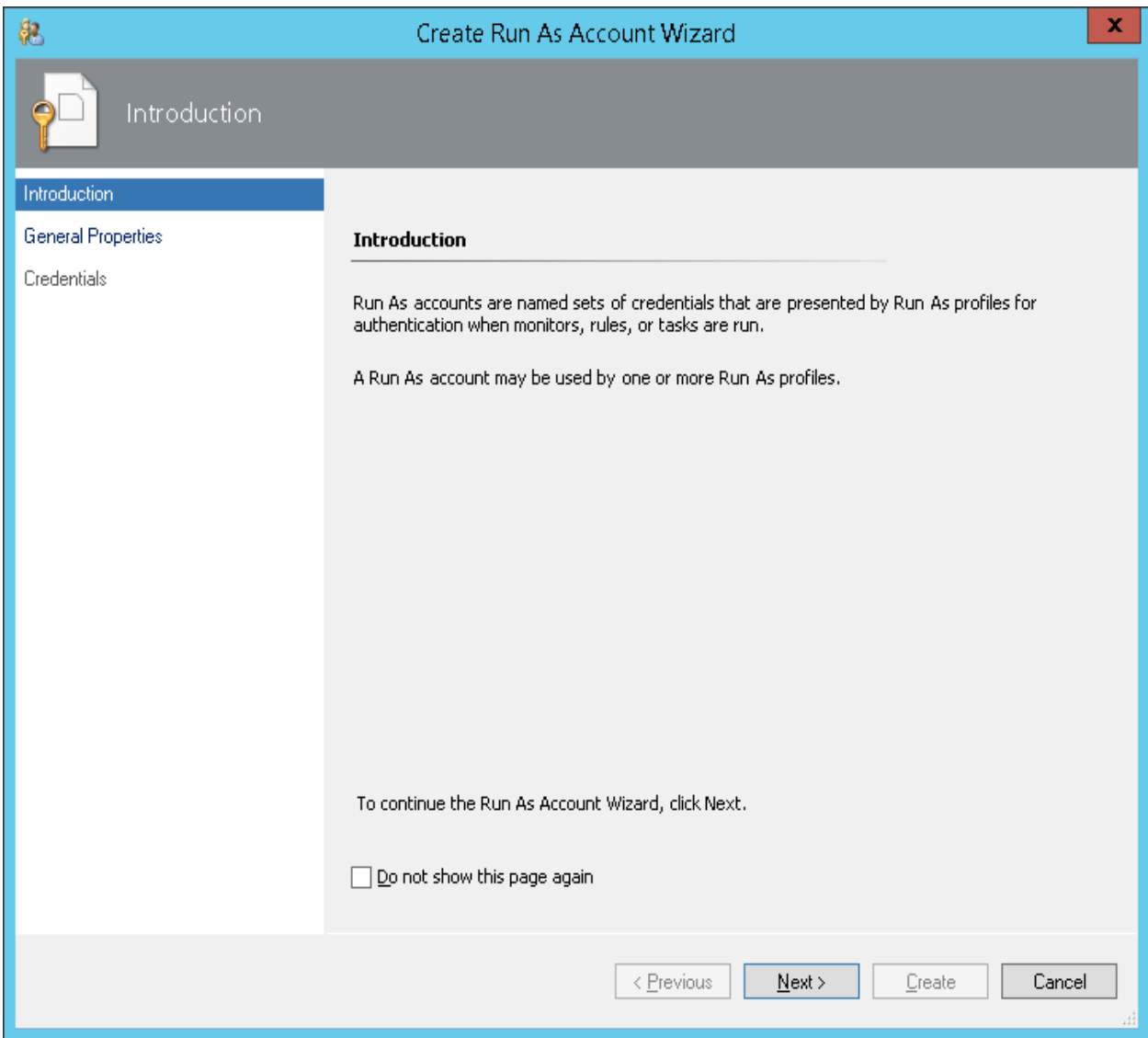
7. On the General Properties screen:

Enter an arbitrary name in the **Display Name** field, and click **Next**.
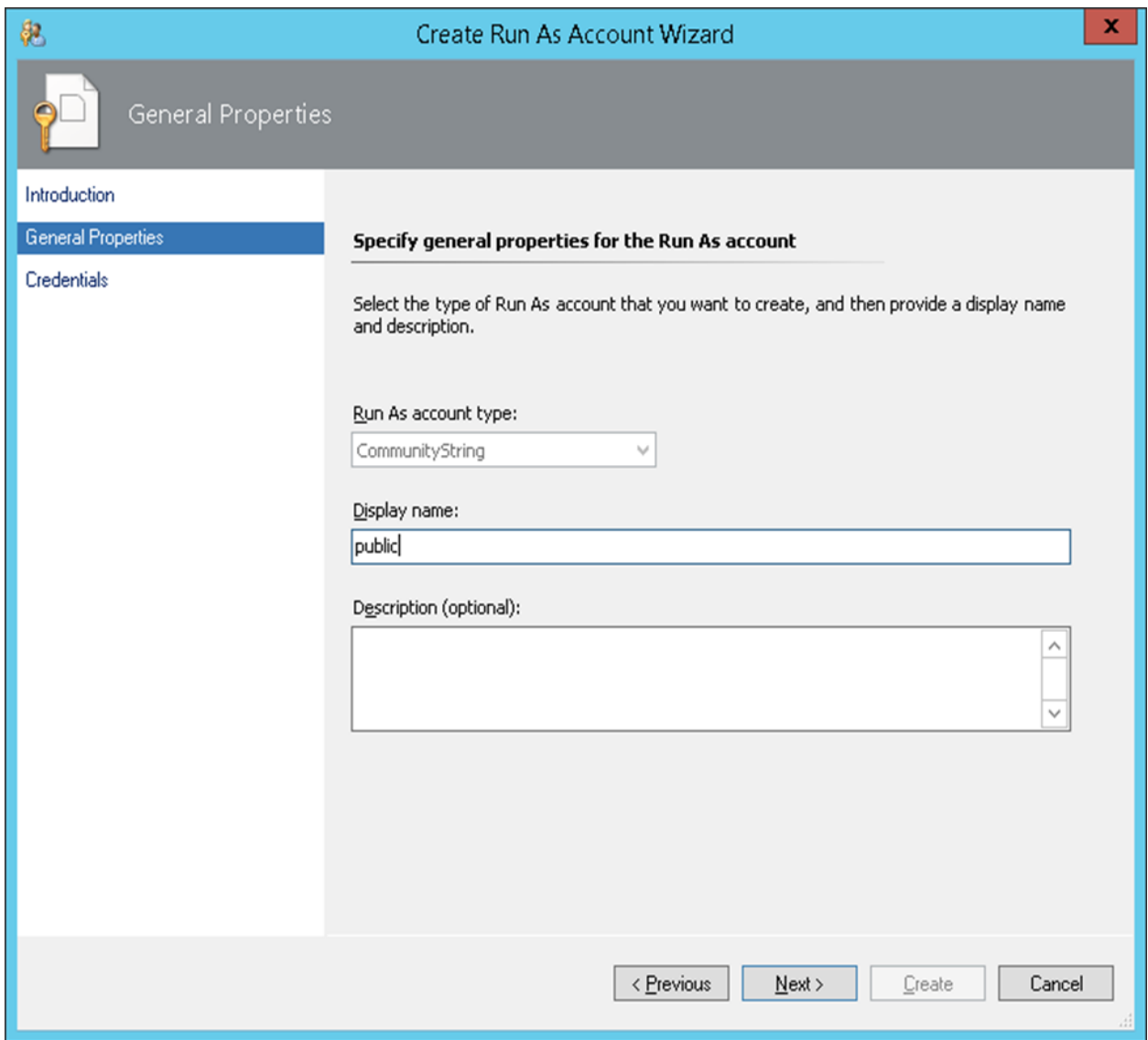
Create Run As Account Wizard - General Properties

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
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8. Enter the SNMP Community Name in **Community String** field, and click **Create**.

Create Run As Account Wizard

Credentials
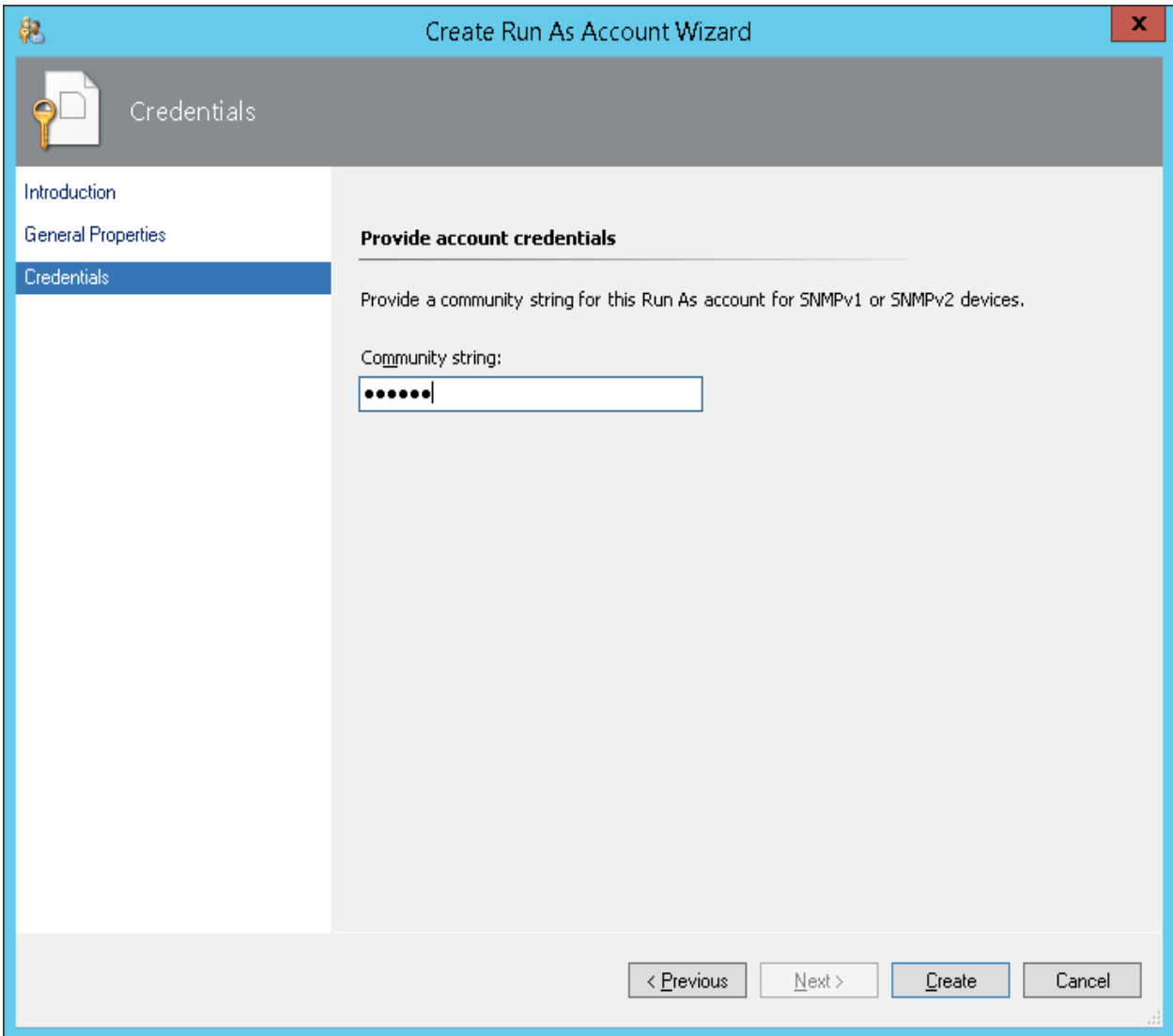
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9. On the Default Accounts screen, check the created account check-box, and click **Next**.

Default Accounts (2)

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
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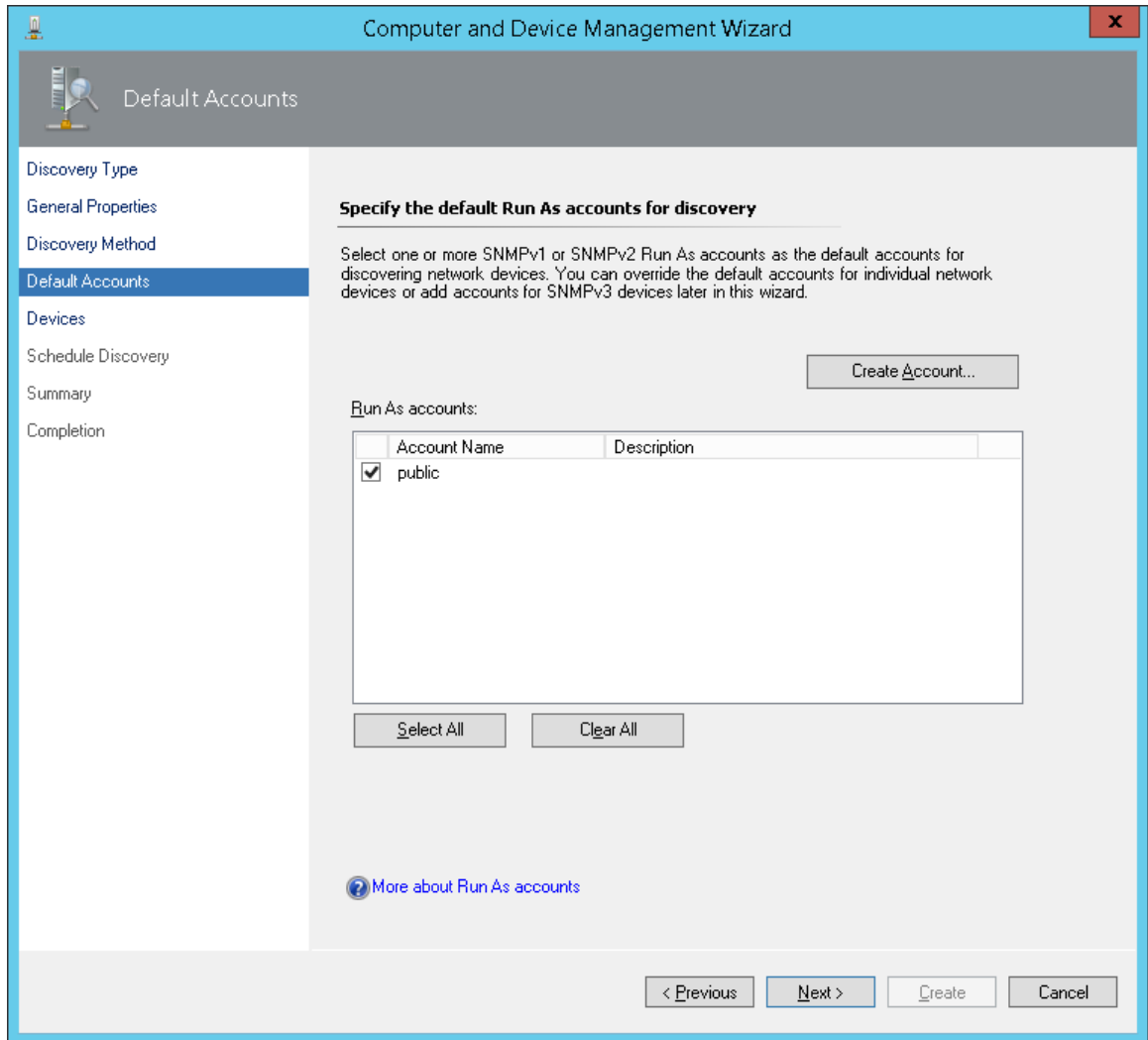
10. On the Devices screen, click **Add**.

Devices (1)

Navigating the SCOM GUI

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems
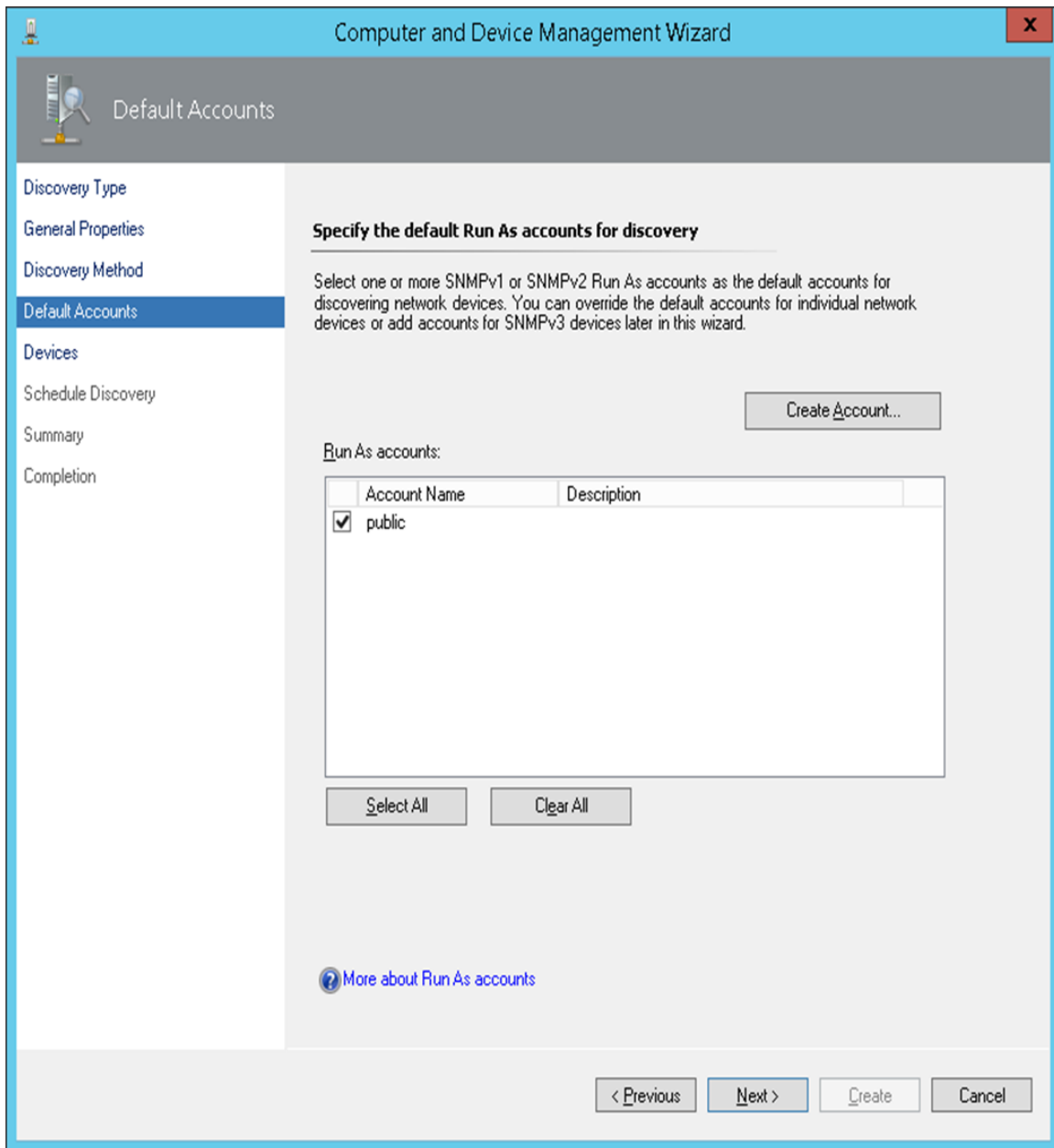
11. On the Add a Device screen
    a. Input the IP address of target in **Name or IP address** field.
    b. Select ICMP and SNMP in **Access mode** field.
    c. Select v1 or v2 in **SNMP version** field.
    d. Input the SNMP port number in **Port number** field.
    e. Select the account created in the above step 7 in **SNMP V1 or V2 Run As account** field.

Add a device

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems

12. On the Devices Screen, click **Next**.

Devices (2)

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems
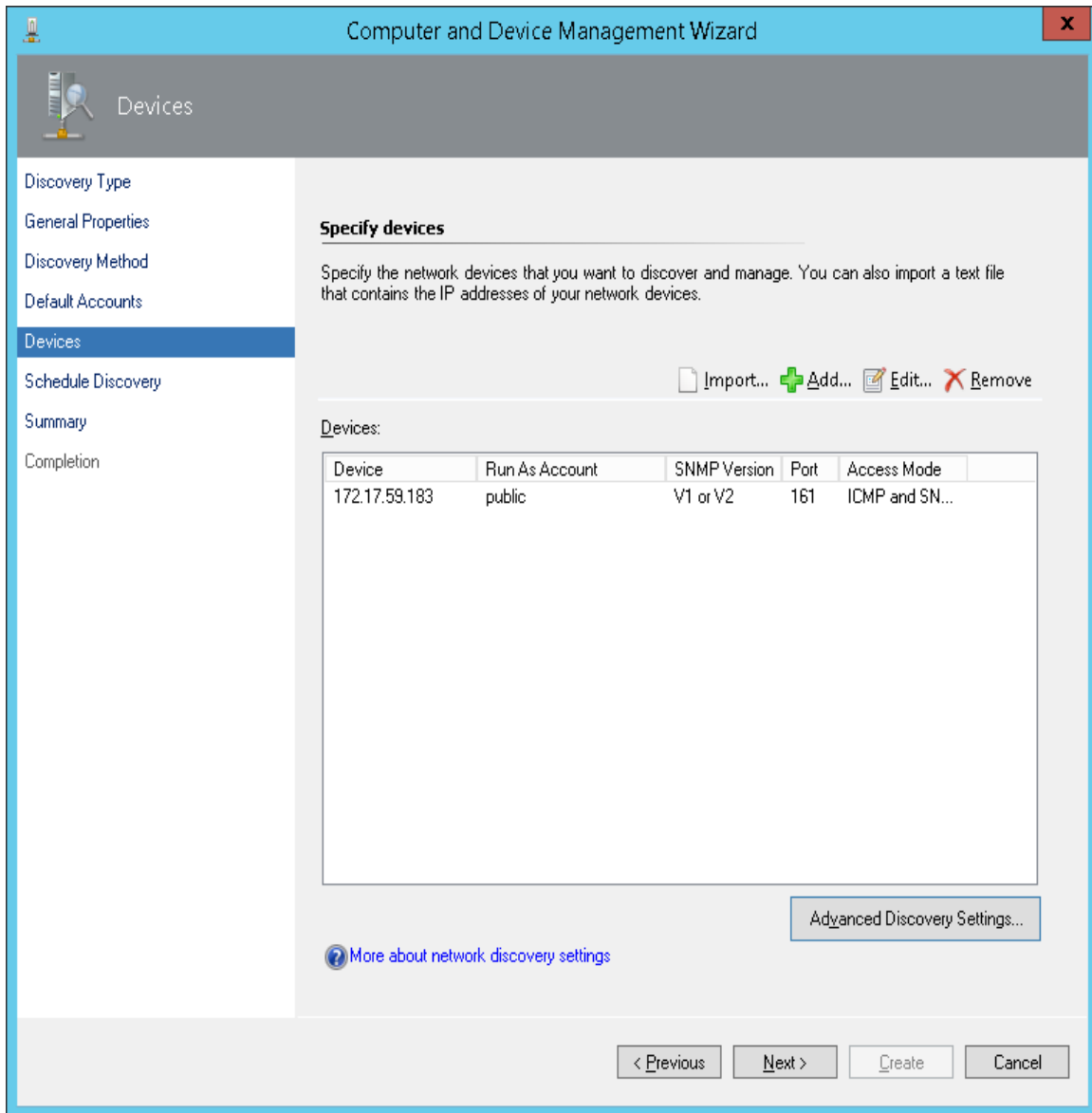
13. On the Schedule Discovery, select **Run the discovery rule manually**, and click **Next**.

Schedule Discovery

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems
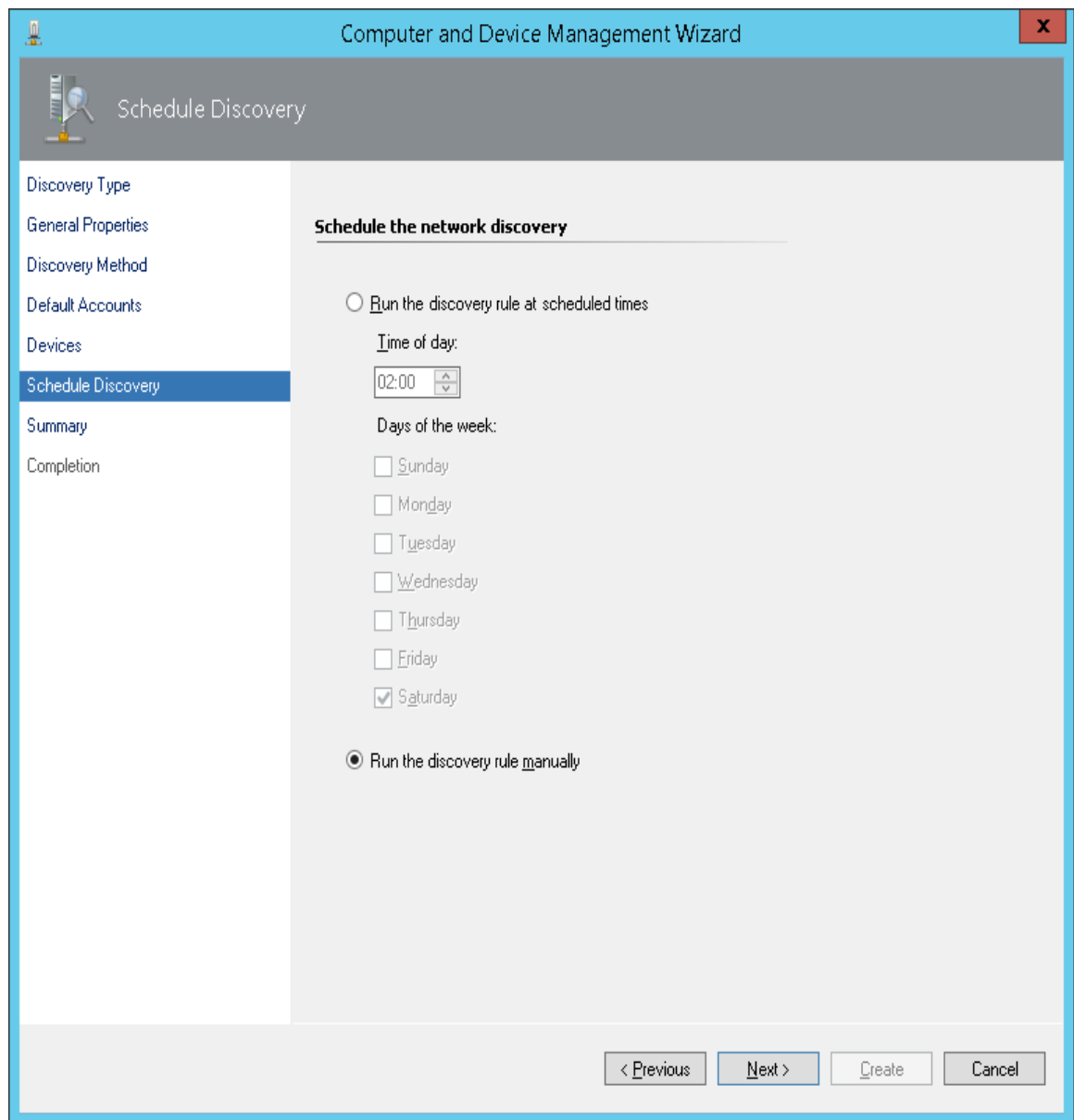
14. On the Summary, click **Create**.

Summary

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems
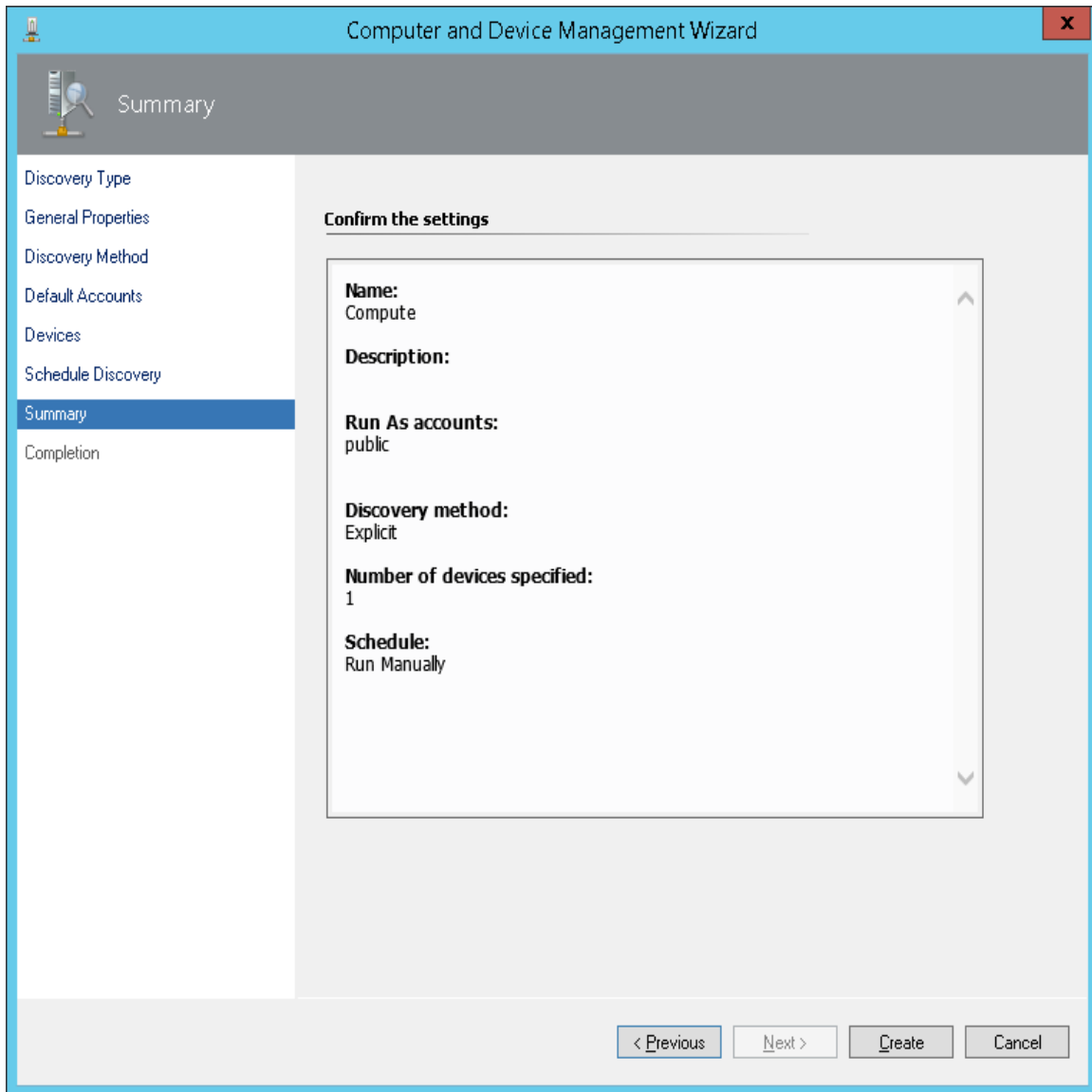
15. The following screen is displayed while a discovery rule is created. This process may take several minutes to complete.
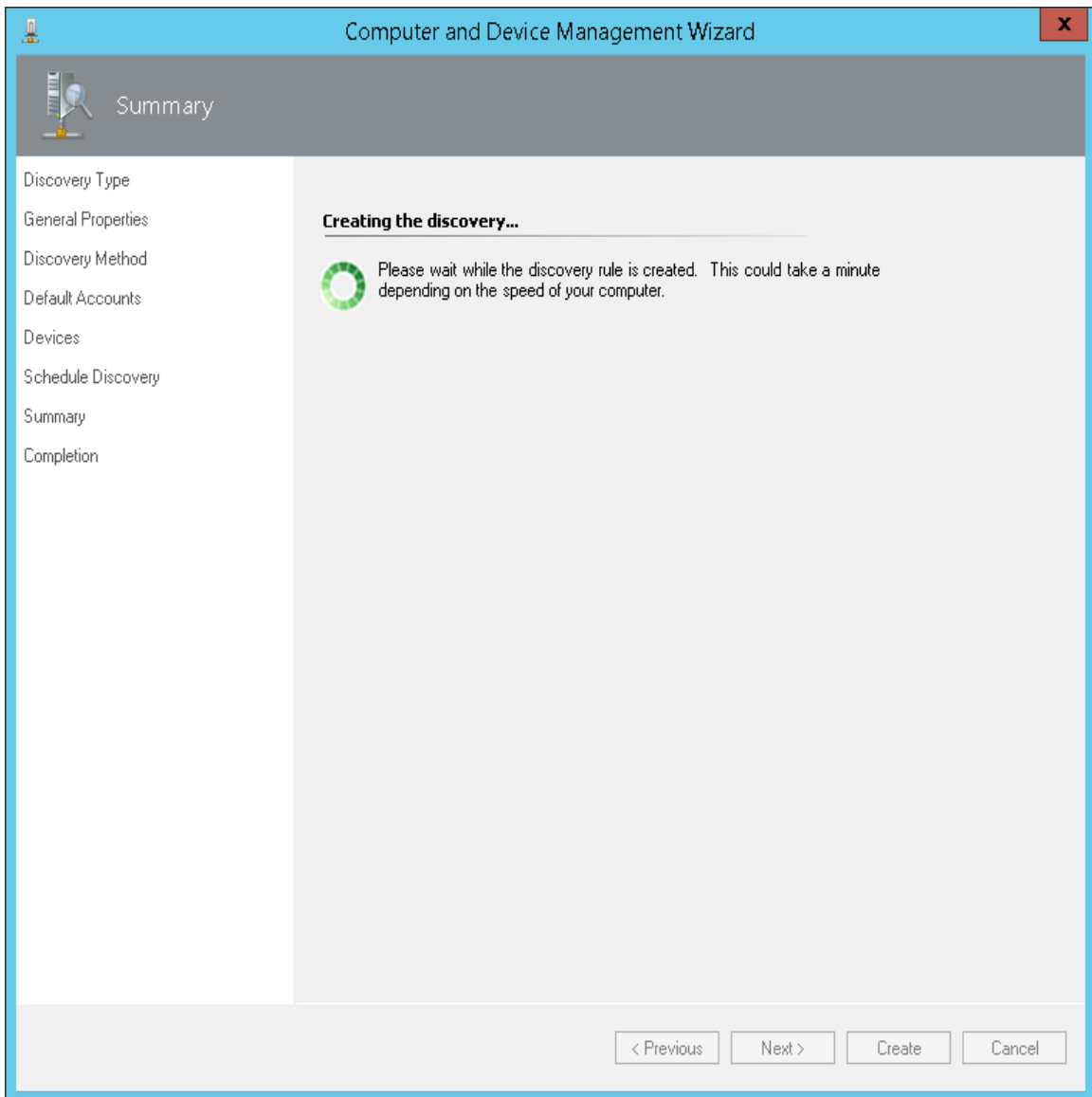
Summary - Creating the discovery

16. When the discovery rule creation results screen appears, click on the check-box next to **Run the network discovery rule after the wizard is closed** and click Close, and Finish to complete the configuration.

Completion

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems
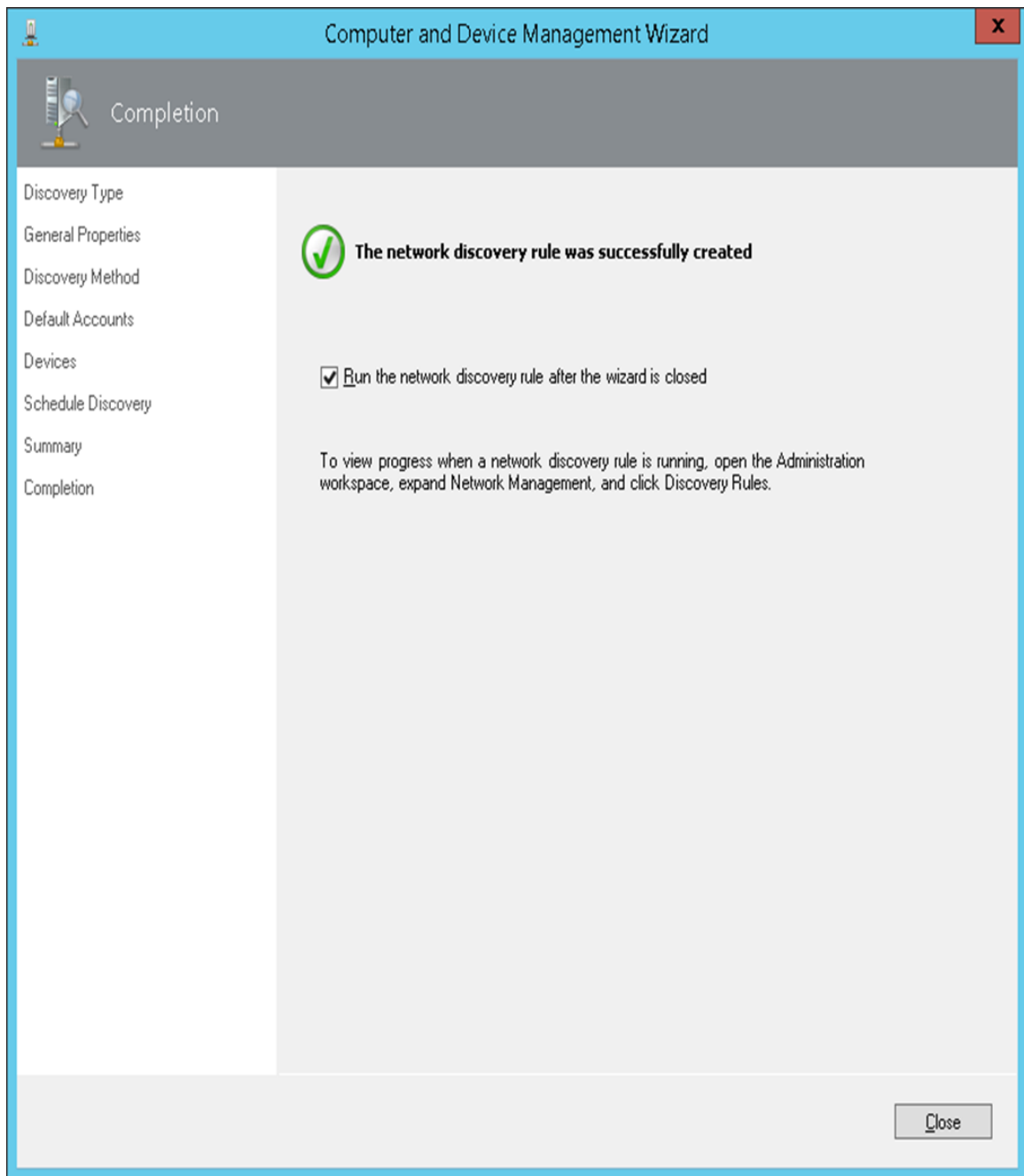
Monitoring SNMP trap alerts

A list of SNMP trap alerts is shown in Alert Views in the following folders:
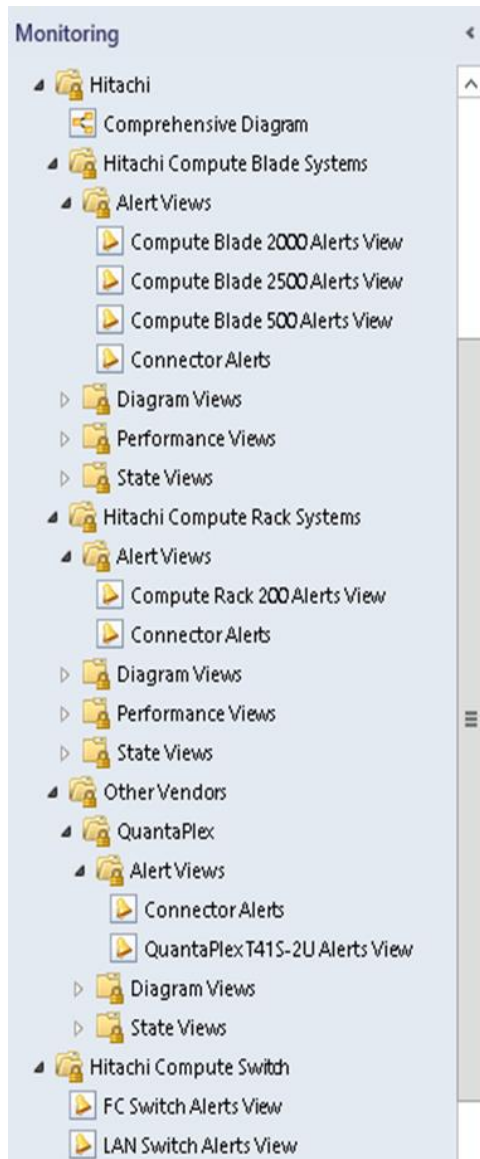
Alert Views

For the details of each Alert View, refer to later chapters in this user's guide.

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems

Hitachi Compute Systems View

This chapter provides instructions for performing Hitachi Compute Systems viewing operations with Hitachi Compute Systems Management Packs for Microsoft SCOM.

- Folder and Folder items
- Alert Views
- Diagram Views
- State Views
- Performance Views
- Groups
- Monitor
- Tasks
- Rules
- Reports
- Knowledge articles

Notational Conventions

This section describes how to interpret the tables in this chapter.

Target	Type	2	5	R	25	Q	Description
Chassis	Blade	X	X	-	X	-	Represents Compute Blade/Rack chassis.
	Rack	-	-	X	-	-	

In the above example, the description applies to blades in the "2" and "5" and "25" categories, and Compute Rack servers in the "R" category. The meanings of 2, 5, R, 25, and Q are listed in the next table.

Item	Configuration
2	This indicates the Hitachi Compute Blade 2000
5	This indicates the Hitachi Compute Blade 500
R	This indicates the Hitachi Compute Rack 210/220
25	This indicates the Hitachi Compute Blade 2500
Q	This indicates the QuantaPlex T41S-2U

Folders and Folder Items

Hitachi Compute Systems Management Packs add the following folders and items to the "Monitoring" view. Current information and health status can be checked in these views.
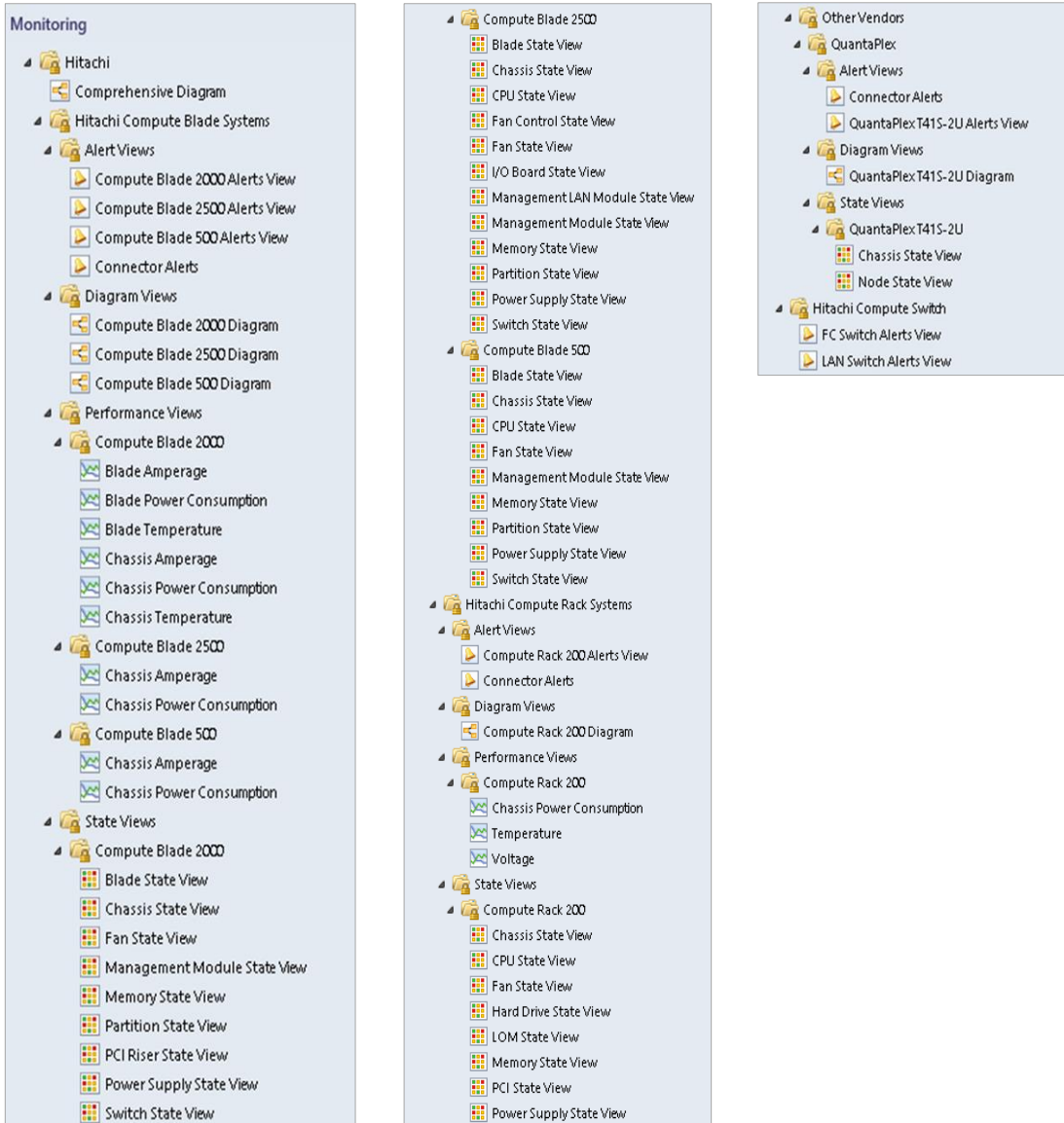
Alert View

Alert View displays alerts based on the rules defined by the Hitachi Compute Systems Management Packs. Alert View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > Alert Views**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > Alert Views**
- **Monitoring > Hitachi > Other vendors > QuantaPlex > Alert Views**
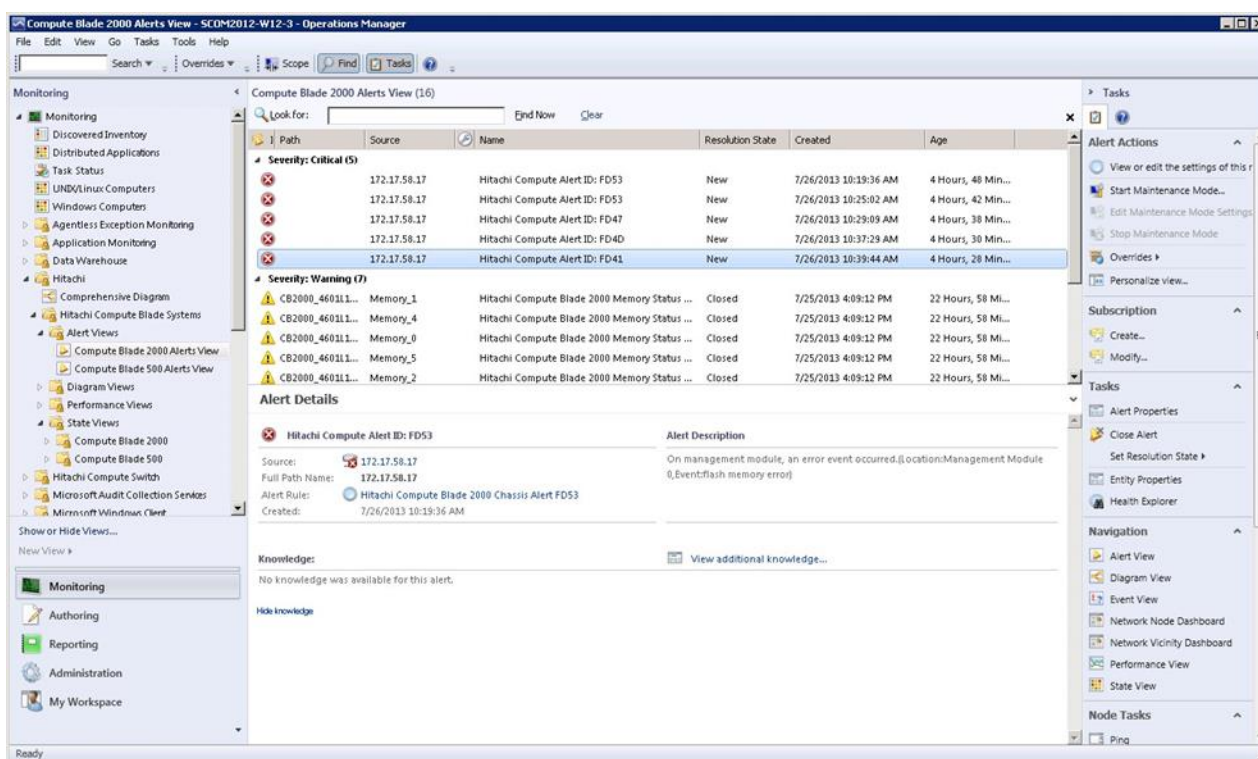
Alert Views properties

Alert Views and properties are listed in the tables below.

View Name	2	5	R	25	Q	Description
Compute Blade 2000 Alerts View	X	-	-	-	-	Compute Blade 2000 alerts
Compute Blade 500 Alerts View	-	X	-	-	-	Compute Blade 500 alerts
Compute Rack 200 Alerts View	-	-	X	-	-	Compute Rack (210/220) alerts
Compute Blade 2500 Alerts View	-	-	-	X	-	Compute Blade 2500 alerts
Connector Alerts	X	X	X	X	X	Hitachi Compute Connector Service alerts
QuantaPlex T41S-2U Alerts View	-	-	-	-	X	QuantaPlex T41S-2U alerts

Property	Description
Name	Name of alert
Source	Object information related to alert
Full Path Name	Path information of the object which is related to alert.
Alert Monitor	Name of the conditions for alert creation
Created	Creation date
Knowledge	Detailed information about the alert

Diagram View

Diagram View provides hierarchical views of related components. The Diagram View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Comprehensive Diagram**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > Diagram View**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > Diagram View**
- **Monitoring > Hitachi > Other vendors > QuantaPlex > Diagram View**
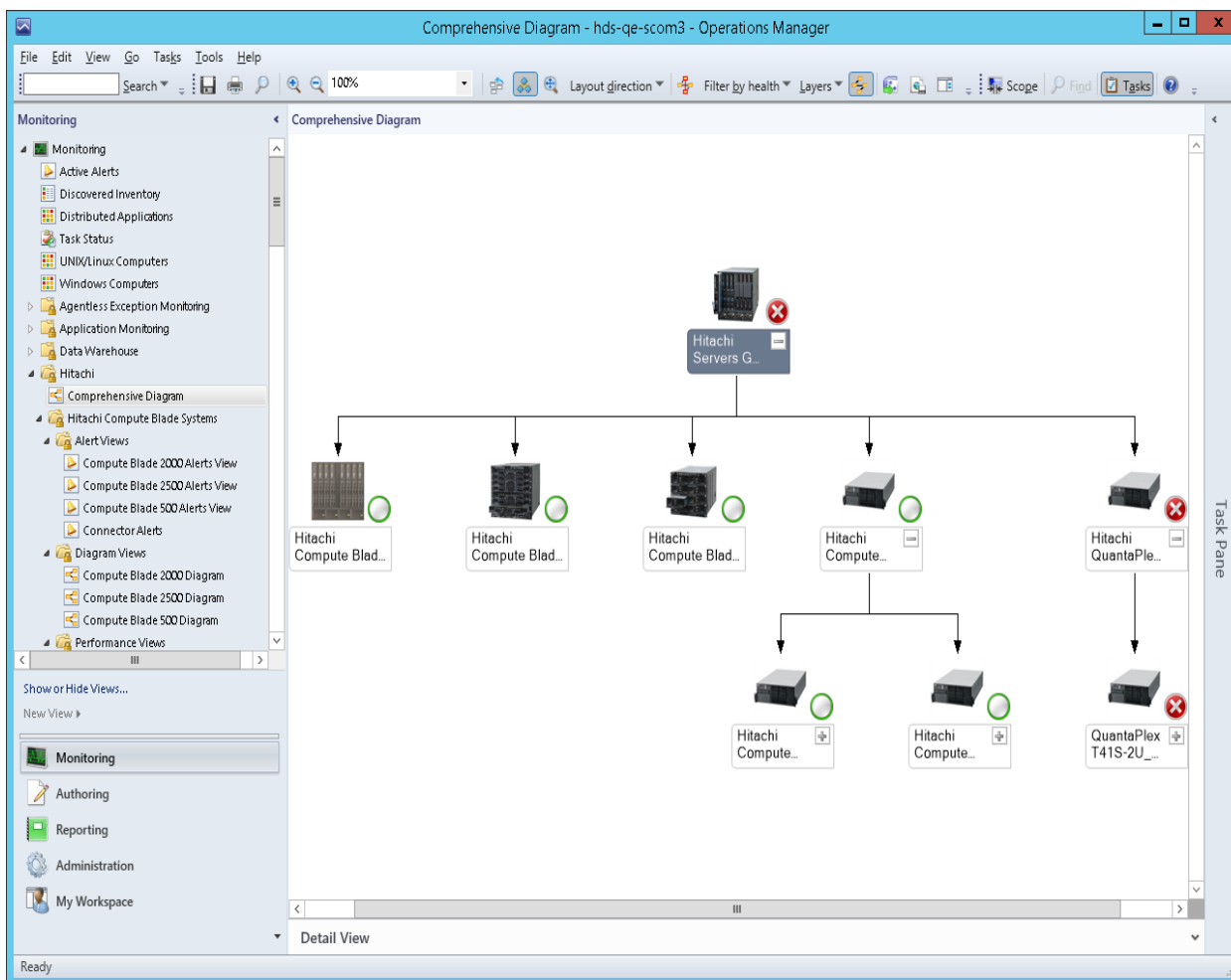
Comprehensive Diagram
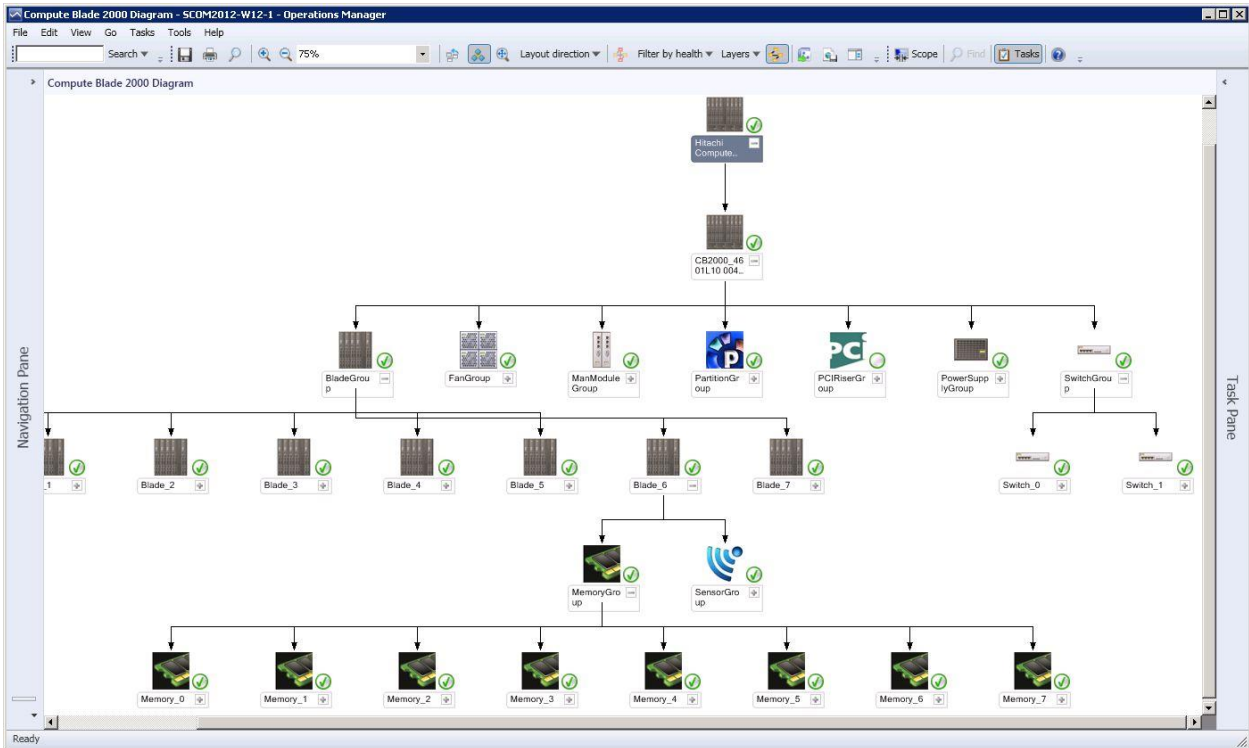
Compute Blade 2000 Diagram
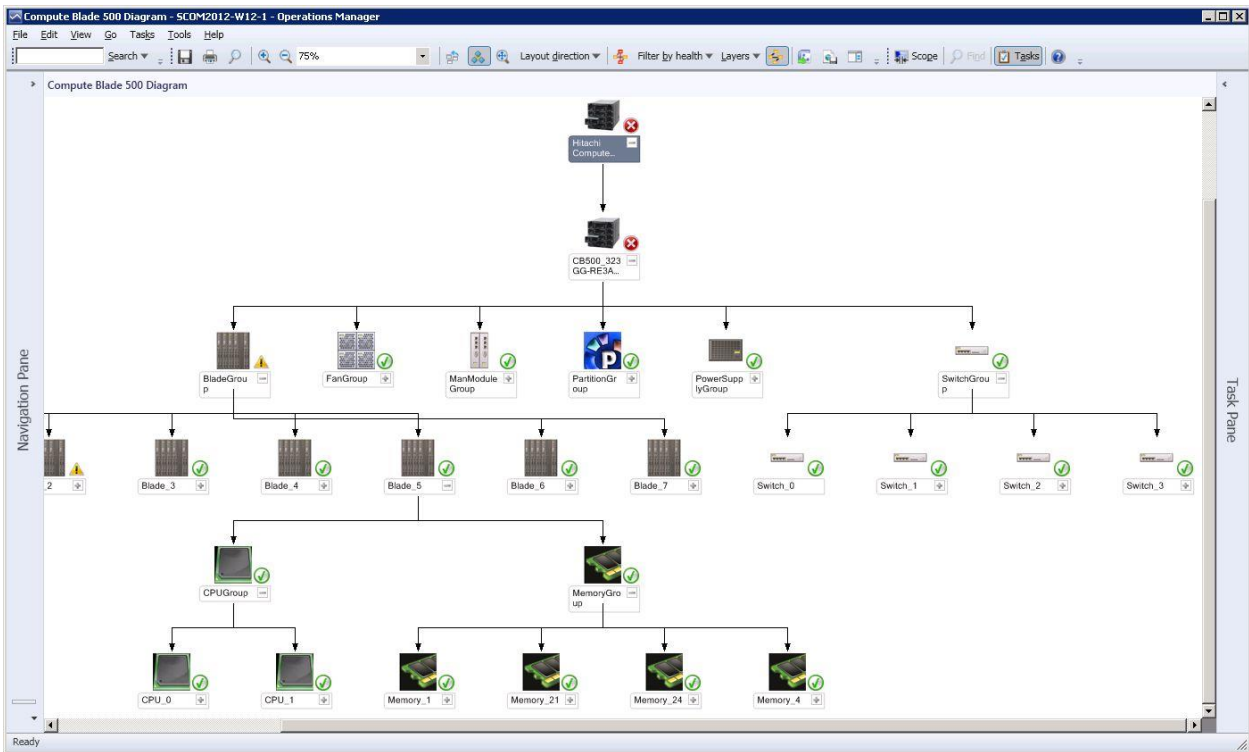
Compute Blade 500 Diagram
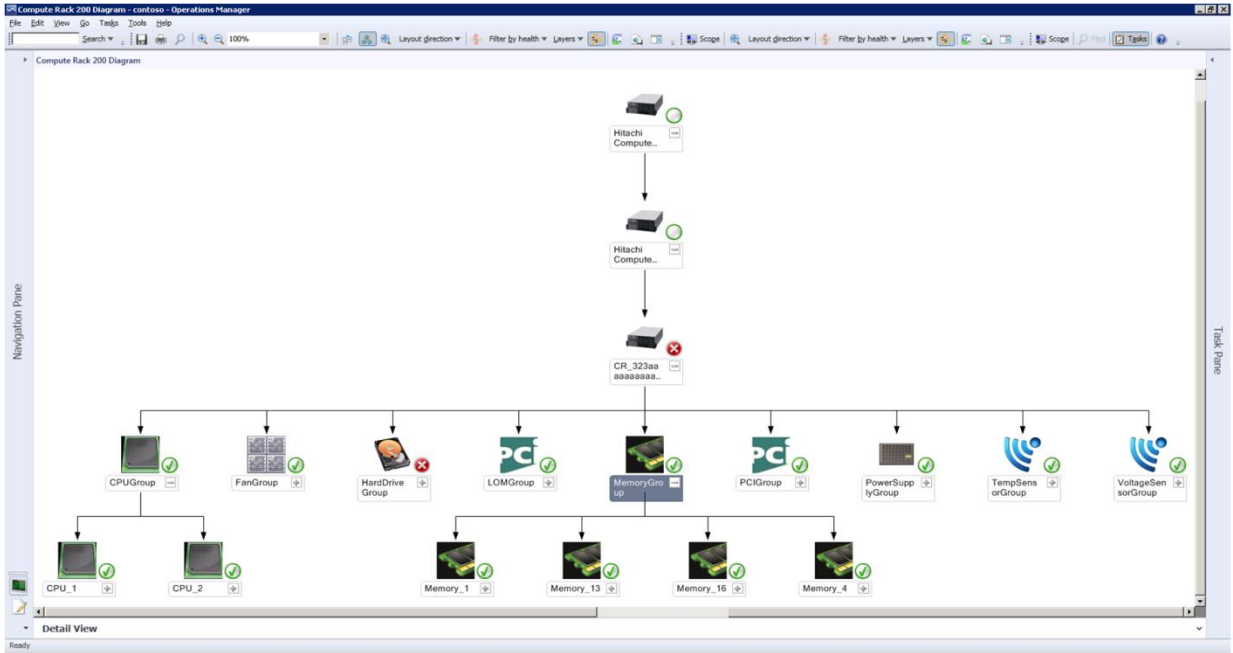
Compute Rack 200 Diagram

Compute Blade 2500 Diagram

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
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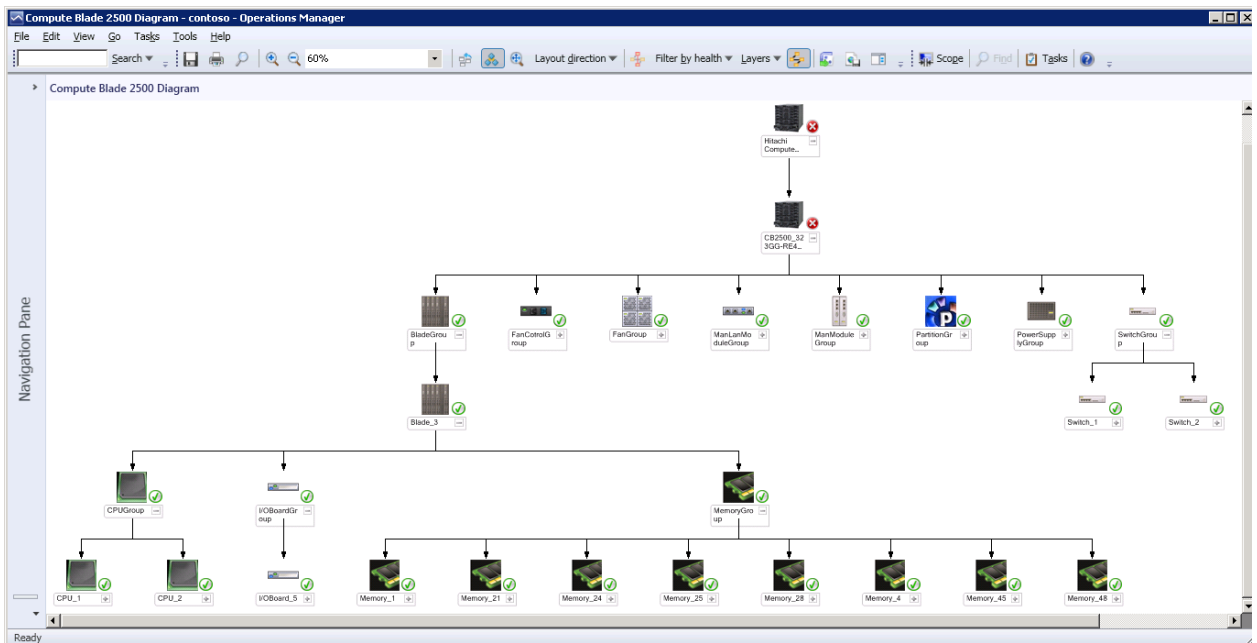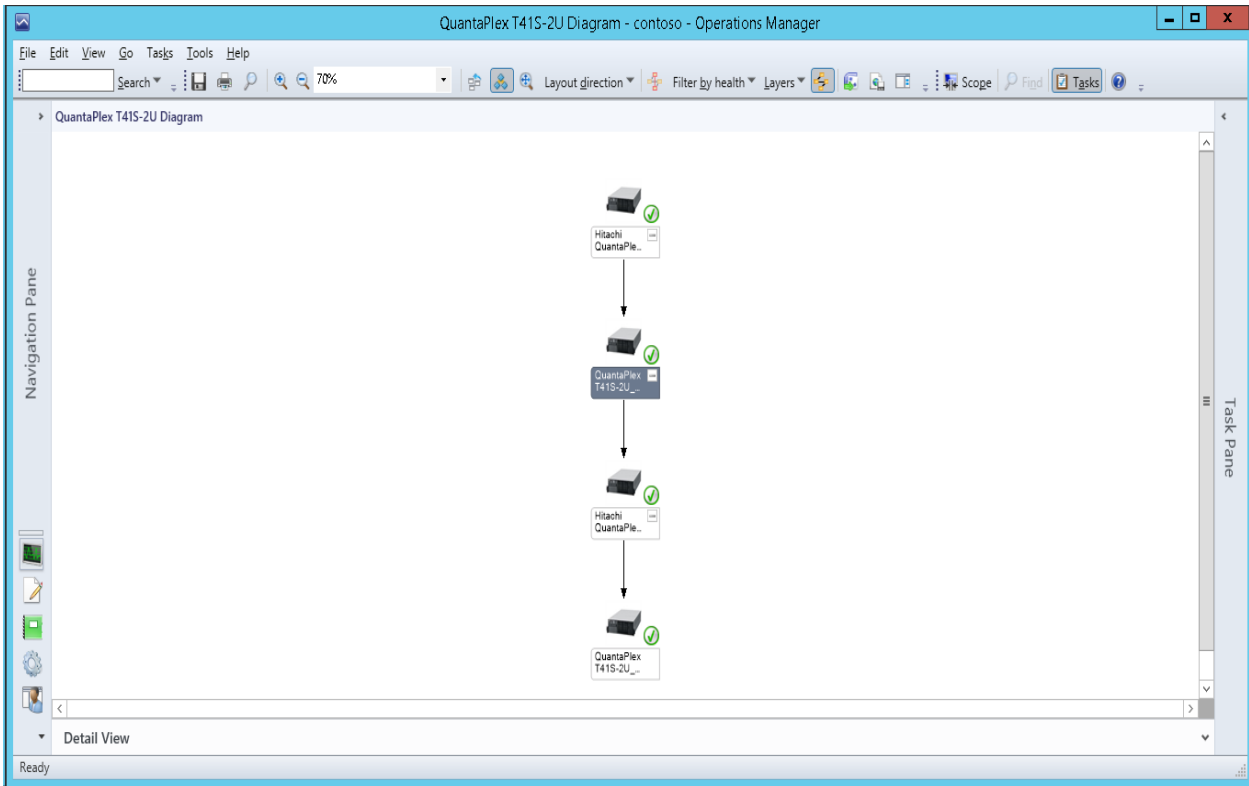
QuantaPlex T41S-2U Diagram

Diagram Views are listed in the table below.

View Name	2	5	R	25	Q	Description
Comprehensive Diagram	-	-	-	-	-	Compute Blade and Rack views
Compute Blade 2000 Diagram	X	-	-	-	-	Compute Blade 2000 views
Compute Blade 500 Diagram	-	X	-	-	-	Compute Blade 500 views
Compute Rack 200 Diagram	-	-	X	-	-	Compute Rack (210/220) views
Compute Blade 2500 Diagram	-	-	-	X	-	Compute Blade 2500 views
QuantaPlex T41S-2U Diagram	-	-	-	-	X	QuantaPlex T41S-2U views

State View

State View provides component status and property information. State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State View**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State View**
- **Monitoring > Hitachi > Other vendors > QuantaPlex > State View**
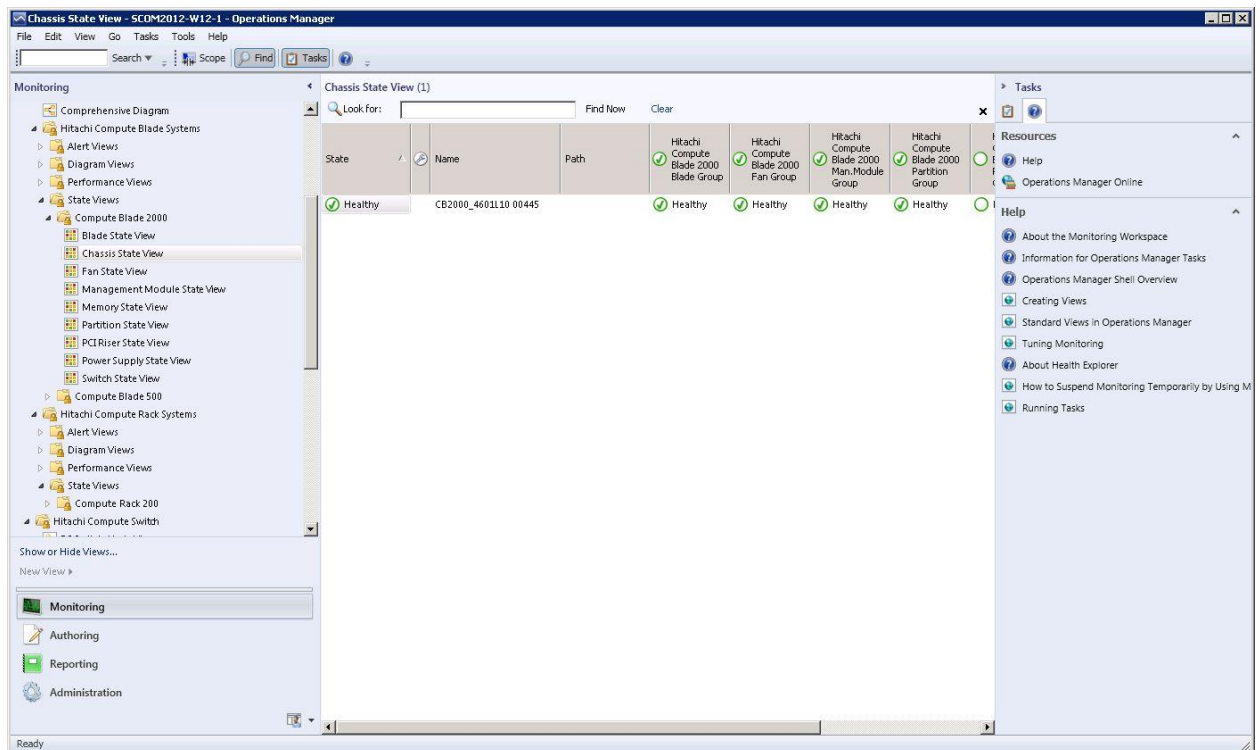
State Views

> **Note**
>
> QuantaPlex T41S-2U chassis state and node state have the following limitations:
>
> - The state of the chassis for QuantaPlex T41S-2U servers is not determined by directly monitoring the chassis. Instead, the chassis state is determined and displayed by monitoring the fan redundancy state and the power supply state.
> - The state of the node(s) for QuantaPlex T41S-2U servers is not determined by directly monitoring the node(s). Instead, the node state is determined and displayed by monitoring the state of the connection to the node(s).

The State View show the states and properties of a target. The following items are shown in the information pane by default:

- State (Health)
- Maintenance Mode
- Name (Display Name)
- Full Path Name
- State (Health) of child targets

In the Detail View pane, all properties defined for the target class type are displayed. State Views are listed in the table below.

View Name	2	5	R	25	Q	Target Component
Blade State View	X	X	-	X	-	Blades
Chassis State View	X	X	X	X	X	Chassis
CPU State View	-	X	X	X	-	CPUs
Fan State View	X	X	X	X	-	Fans
Hard Drive State View	-	-	X	-	-	Hard Drives
Management Module State View	X	X	-	X	-	Management modules
Memory State View	X	X	X	X	-	Memory
LOM State View	-	-	X	-	-	Lights out Management
Node State View	-	-	-	-	X	Main Boards
Partition State View	X	X	-	X	-	Partitions
PCI Riser State View	X	-	-	-	-	PCI Risers
PCI State View	-	-	X	-	-	PCI cards
Power Supply State View	X	X	X	X	-	Power Supplies
Switch State View	X	X	-	X	-	Switch modules
Fan Control State View	-	-	-	X	-	Fan control modules
I/O Board State View	-	-	-	X	-	I/O board modules
Management LAN Module State View	-	-	-	X	-	Management LAN modules

Blade State View

The Blade State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > Blade State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > Blade State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Blade State View**
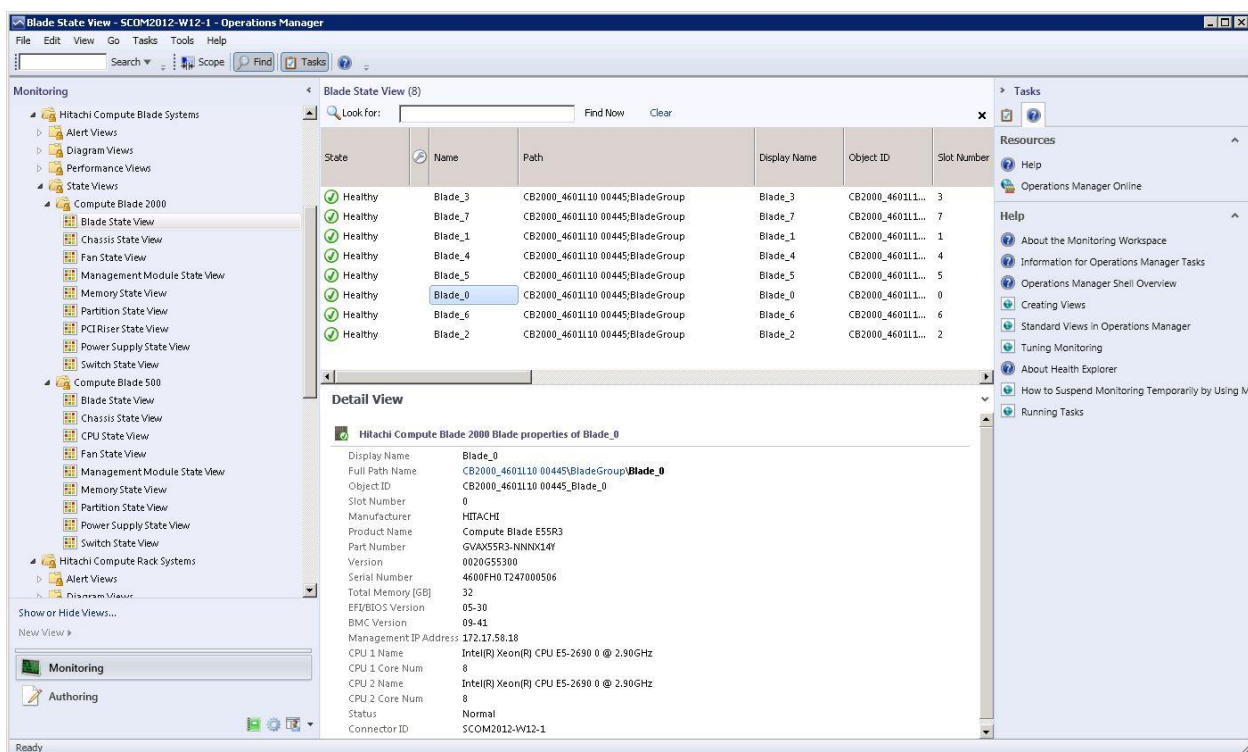
Blade State View Window

The Blade State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	X	X	-	X	-	Blade display name
Slot Number	X	X	-	X	-	Blade slot number
Manufacturer	X	X	-	X	-	Blade manufacturer
Product Name	X	X	-	X	-	Blade product name
Part Number	X	X	-	X	-	Blade part number
Version	X	X	-	X	-	Blade product version
Serial Number	X	X	-	X	-	Blade serial number
Total Memory [GB]	X	X	-	X	-	Blade total physical memory capacity
Firmware Version	-	X	-	X	-	Blade firmware version
EFI/BIOS Version	X	-	-	-	-	Blade EFI/BIOS version
BMC Version	X	-	-	-	-	Blade BMC firmware version
Management IP Address	X	X	-	X	-	Blade management LAN IP address
CPU 1 Name	X	-	-	-	-	CPU name in the blade
CPU 1 Core Num	X	-	-	-	-	CPU core number in the blade
CPU 2 Name	X	-	-	-	-	CPU name in the blade
CPU 2 Core Num	X	-	-	-	-	CPU core number in the blade

Chassis State View

The Chassis State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > Chassis State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > Chassis State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Chassis State View**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State Views > Compute Rack 200 > Chassis State View**
- **Monitoring > Hitachi > Other Vendors > QuantaPlex > State Views > QuantaPlex T41S-2U > Chassis State View**
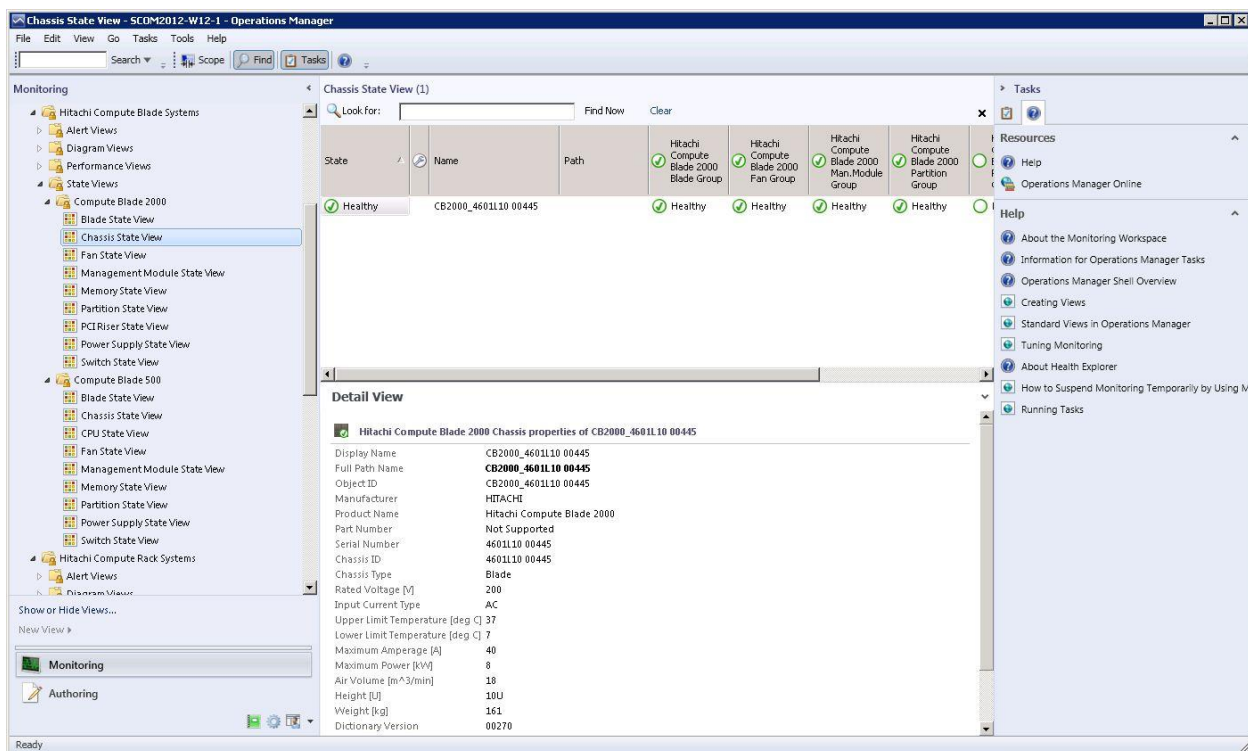
Chassis State View

The Chassis State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	X	X	X	X	X	Chassis Display Name
Manufacturer	X	X	X	X	-	Chassis manufacturer
Product Name	X	X	X	X	X	Chassis product name
Part Number	X	X	X	X	X	Chassis part number

Properties	2	5	R	25	Q	Description
Serial Number	X	X	X	X	X	Chassis serial number
Chassis ID	X	X	X	X	-	Chassis ID
Chassis Type	X	X	-	X	X	Chassis Type
Rated Voltage [V]	X	X	-	X	-	Chassis rated voltage
Input Current Type	X	X	-	X	-	Chassis electrical current type
Upper Limit Temperature [deg C]	X	X	-	X	-	Chassis upper temperature limit
Lower Limit Temperature [deg C]	X	X	-	X	-	Chassis lower temperature limit
Maximum Amperage [A]	X	X	-	X	-	Chassis current consumption in largest configuration
Maximum Power [kW]	X	X	-	X	-	Chassis power consumption in largest configuration
Air Volume [m^3/min]	X	X	-	X	-	Chassis maximum air volume
Height [U]	X	X	-	X	-	Chassis height
Weight [kg]	X	X	-	X	-	Chassis weight
Size	-	X	-	X	-	Chassis size
Dictionary Version	X	X	-	X	-	Chassis dictionary version
Equipment Parameter Version	X	X	-	X	-	Chassis equipment parameter version
BIOS Version	-	-	X	X	-	Chassis BIOS version
BMC Version	-	-	X	X	-	Chassis BMC Firmware version
Total Memory [GB]	-	-	X	X	-	Chassis total physical memory capacity
Management IP Address	X	X	X	X	-	Chassis Management LAN IP Address
Power Delivery Board Part Number	-	-	-	-	X	Chassis power delivery board part number
Power Delivery Board Serial Number	-	-	-	-	X	Chassis power delivery board serial number

CPU State View

The CPU State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > CPU State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > CPU State View**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State Views > Compute Rack 200 > CPU State View**
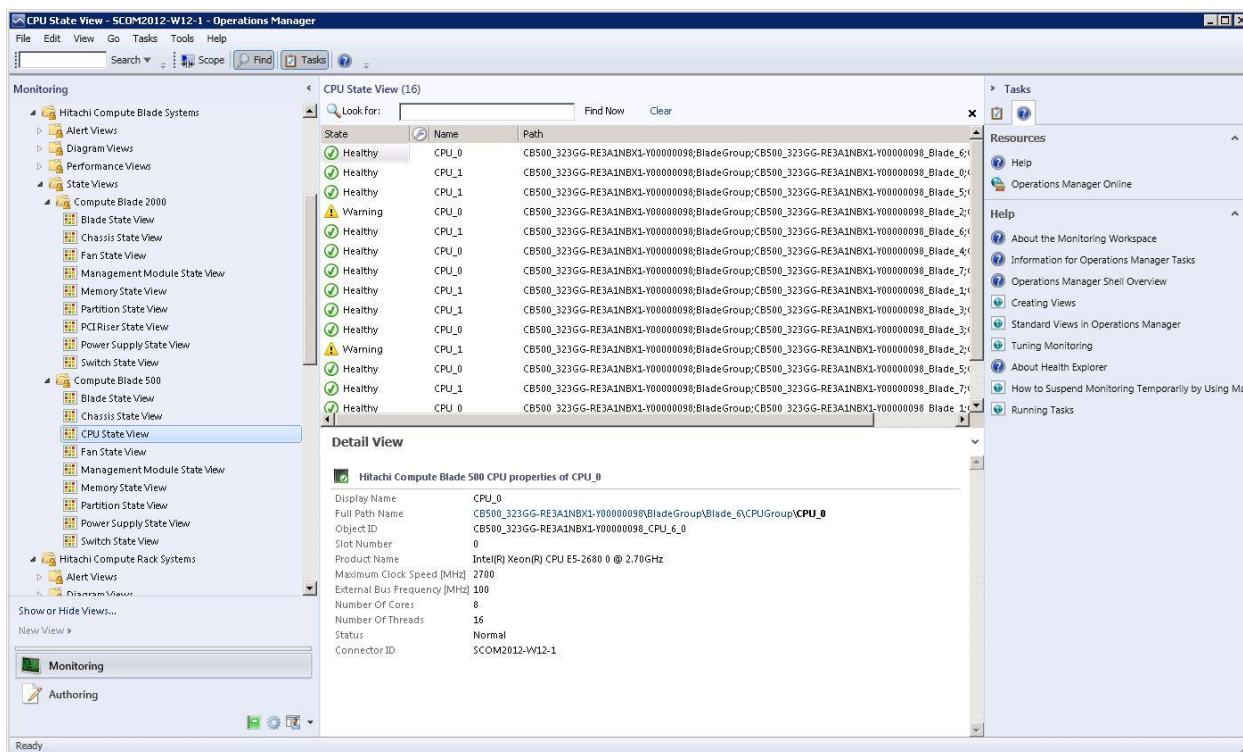
CPU State View

The CPU State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	-	X	X	X	-	CPU display name
Slot Number	-	X	X	X	-	CPU slot number on the chassis or blade
Product Name	-	X	X	X	-	CPU product name
Stepping	-	-	X	-	-	CPU stepping
Maximum Clock Speed [MHz]	-	X	X	X	-	CPU maximum clock frequency
External Bus Frequency [MHz]	-	X	-	X	-	CPU external bus frequency
Number Of Cores	-	X	X	X	-	Number of CPU cores
Number Of Threads	-	X	-	X	-	Number of threads per core

Fan Control State View

The Fan Control State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Fan Control State View**
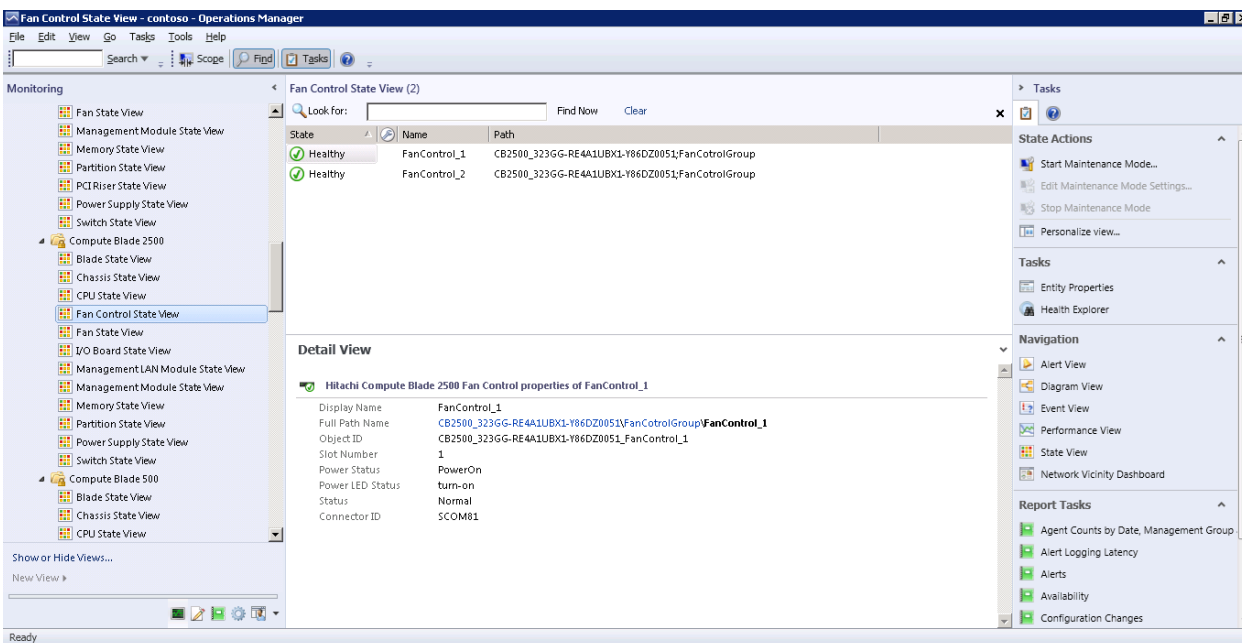
Fan Control State View

The Fan Control State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	-	-	-	X	-	Fan control module display name
Slot Number	-	-	-	X	-	Fan control module slot number in the chassis
Power Status	-	-	-	X	-	Fan control module power status
Power LED Status	-	-	-	X	-	Fan control module power LED status

Fan State View

The Fan State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > Fan State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > Fan State View**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State Views > Compute Rack 200 > Fan State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Fan State View**

Fan State View

The Fan State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	X	X	X	X	-	Fan display name
Slot Number	X	X	X	X	-	Fan slot number in the chassis
Maximum RPM	X	X	-	-	-	Maximum fan RPM
Fan Location	-	-	X	-	-	Fan location in chassis

Hard Drive State View

The Hard Drive State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State Views > Compute Rack 200 > Hard Drive State View**

Hard Drive State View

The Hard Drive State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	-	-	X	-	-	Hard Drive display name
Slot Number	-	-	X	-	-	Hard Drive slot number in the chassis

I/O Board State View

The I/O Board State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > I/O Board State View**
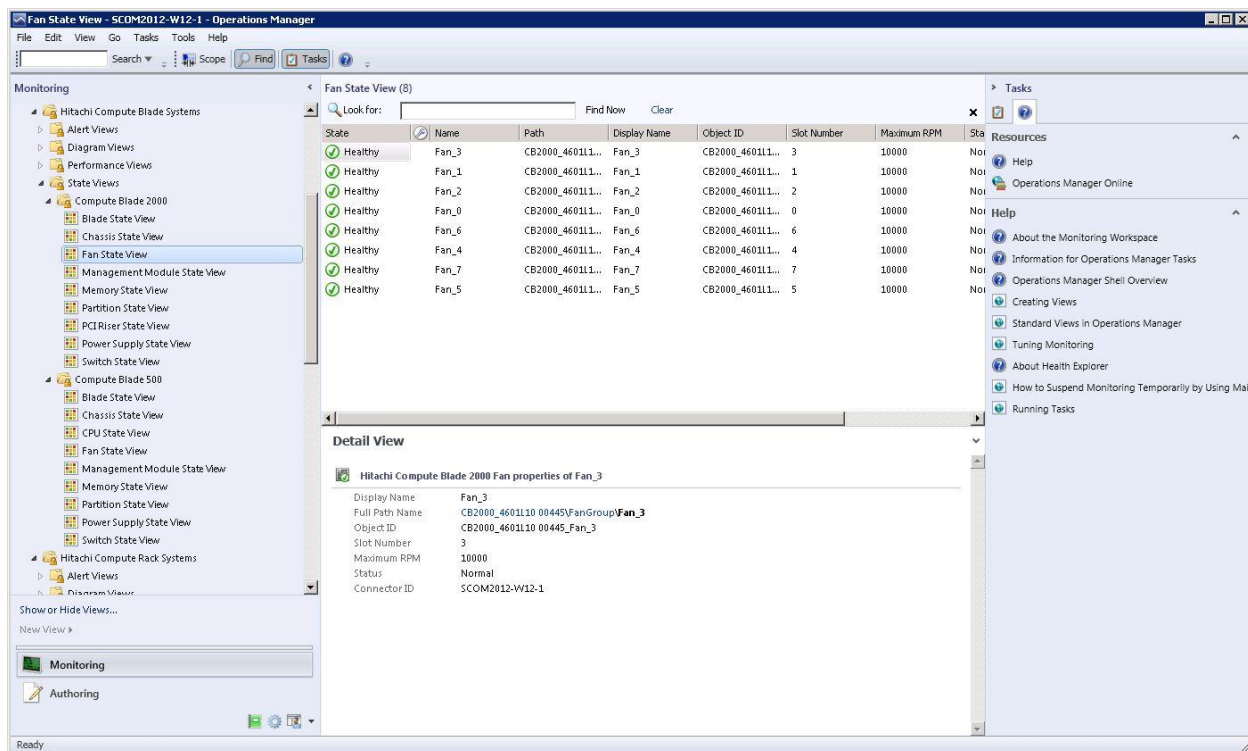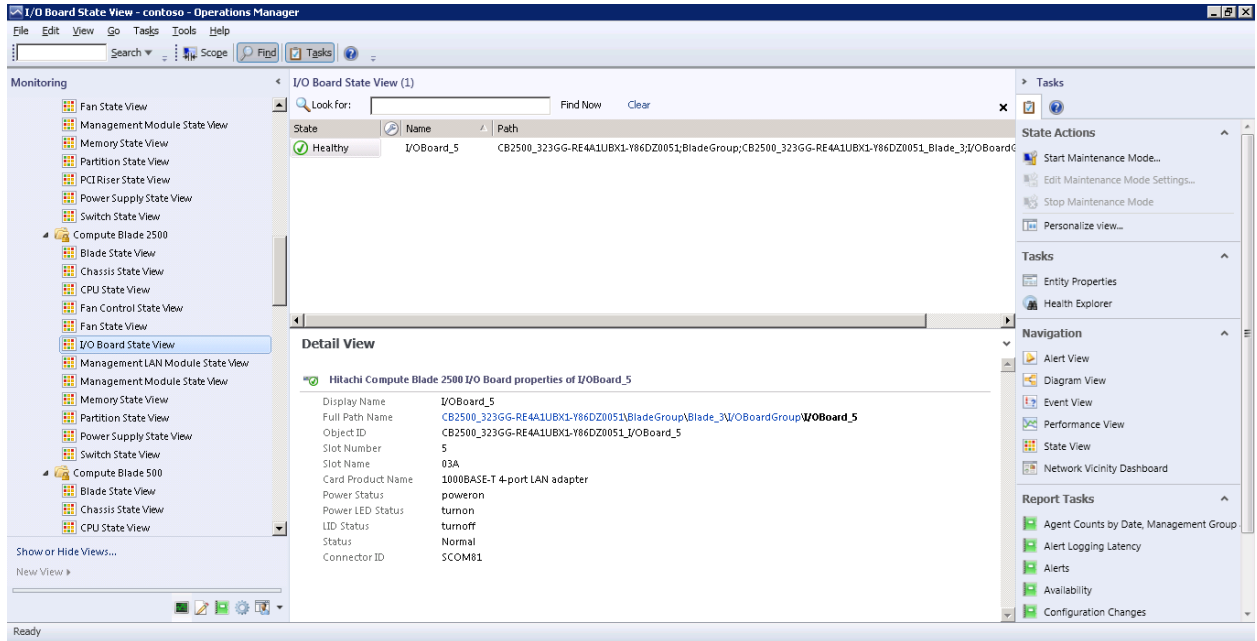

I/O Board State View

The I/O Board State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	-	-	-	X	-	I/O board module display name
Slot Number	-	-	-	X	-	I/O board module slot number in the chassis
Slot Name	-	-	-	X	-	I/O board module slot name in the chassis
Card Product Name	-	-	-	X	-	I/O board module card product name
Power Status	-	-	-	X	-	I/O board module power status
Power LED Status	-	-	-	X	-	I/O board module power LED status
LID Status	-	-	-	X	-	I/O board module LID status

LOM State View

The LOM State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State Views > Compute Rack 200 > LOM State View**

LOM State View

The LOM State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	-	-	X	-	-	LOM display name
Slot Number	-	-	X	-	-	Memory slot number in the chassis or blade
Type	-	-	X	-	-	Memory type
MAC Address	-	-	X	-	-	Memory MAC address

Management LAN Module State View

The Management LAN Module State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Management LAN Module State View**
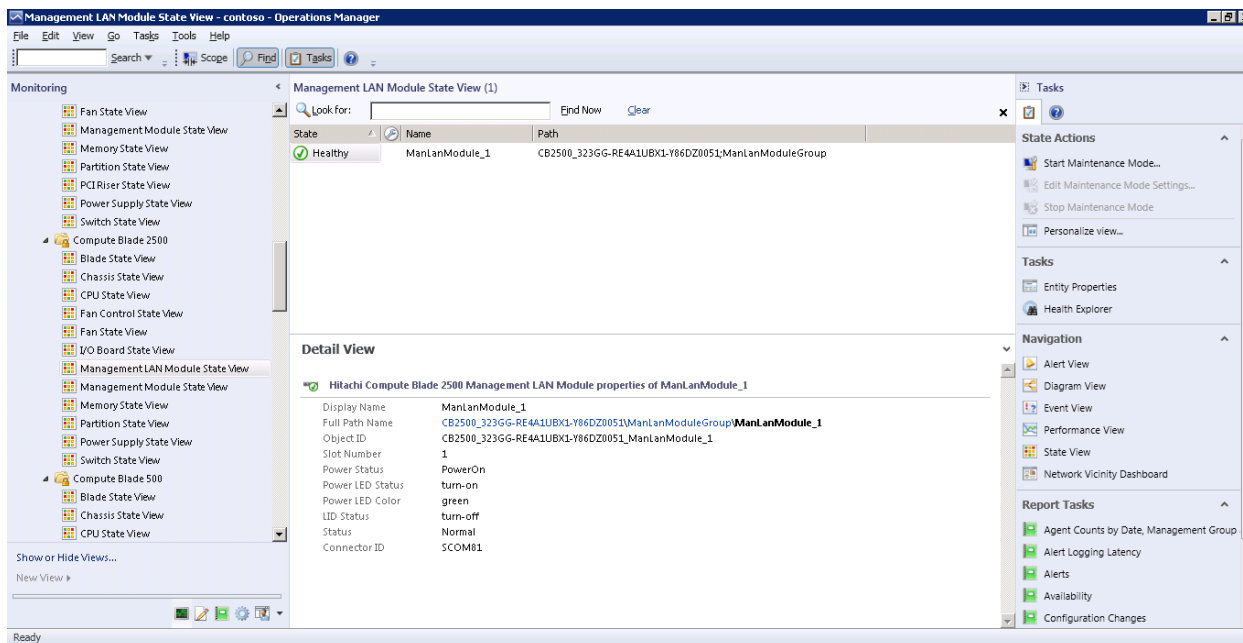
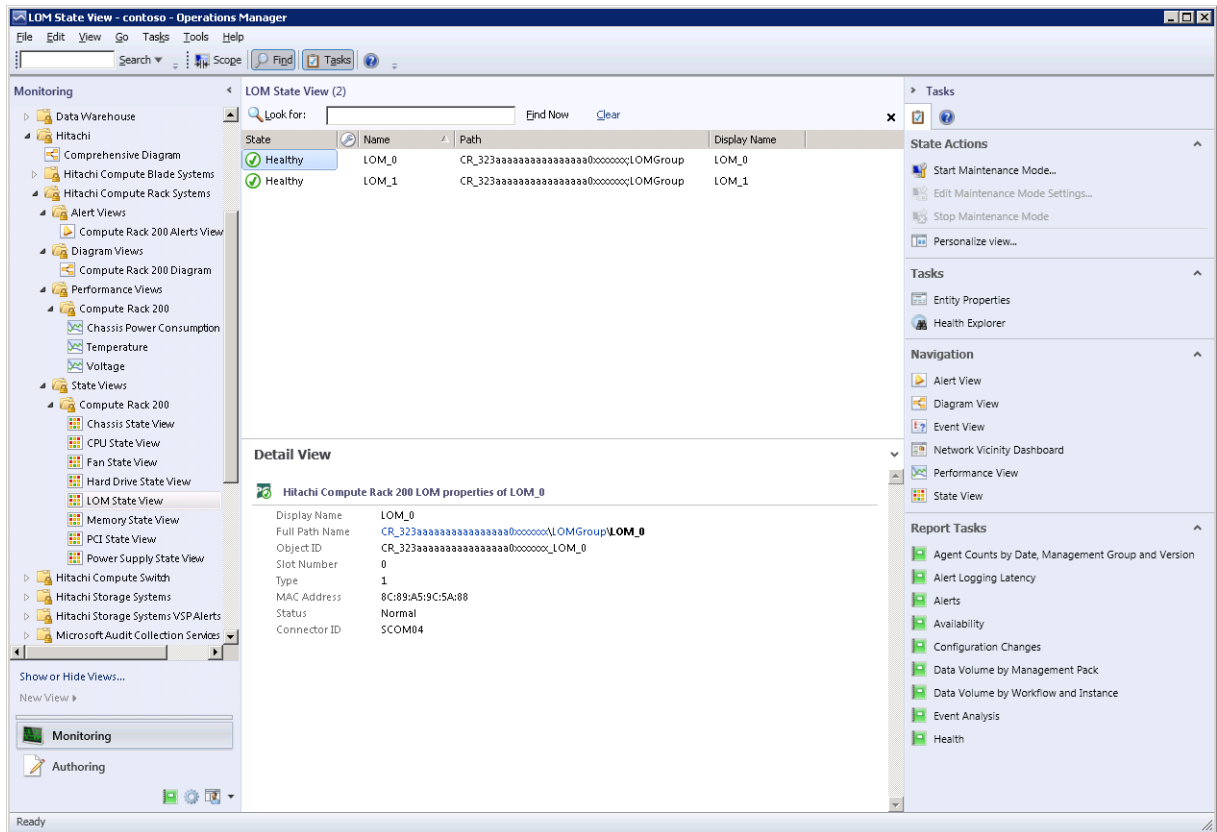**Management LAN Module State View**

The Management LAN Module State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	-	-	-	X	-	Management LAN module display name
Slot Number	-	-	-	X	-	Management LAN module slot number in the chassis
Power Status	-	-	-	X	-	Management LAN module power status
Power LED Status	-	-	-	X	-	Management LAN module power LED status
Power LED Color	-	-	-	X	-	Management LAN module power LED color

Properties	2	5	R	25	Q	Description
LID Status	-	-	-	X	-	Management LAN module LID status

Management Module State View

The Management Module State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > Management Module State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > Management Module State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Management Module State View**

Management Module State View

The Management Module View contains the columns listed in the table below.

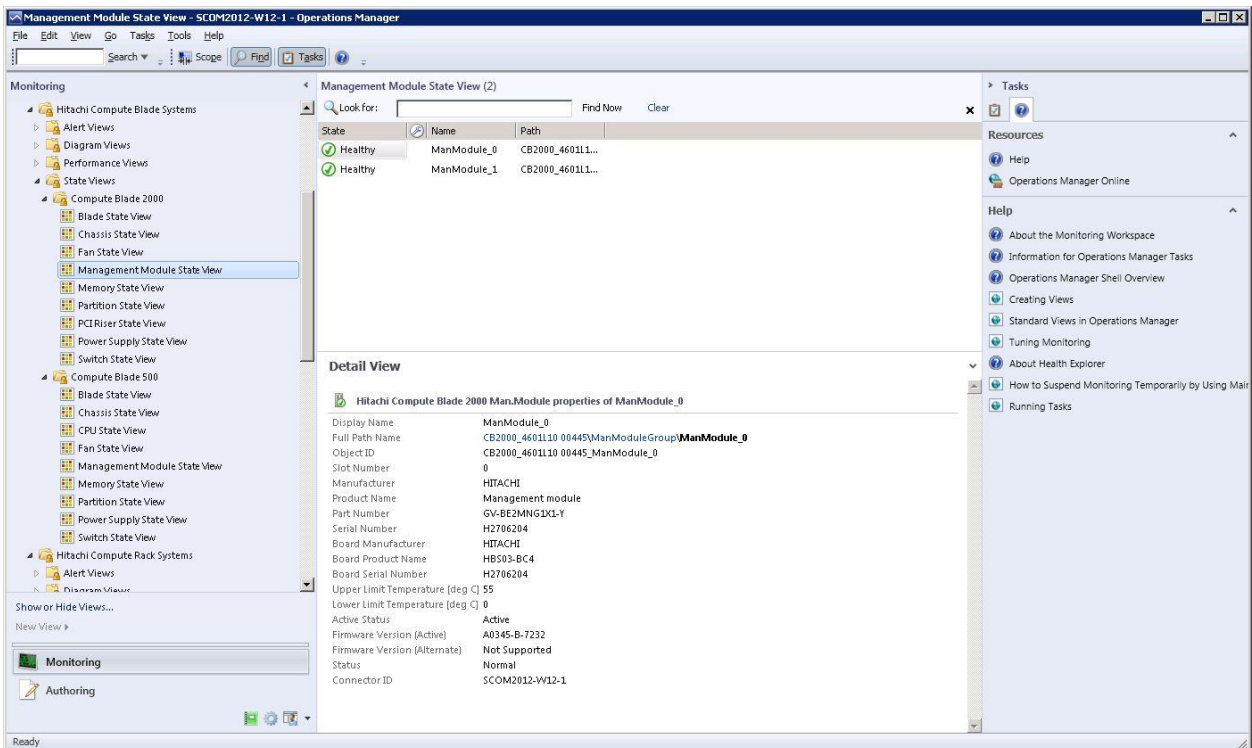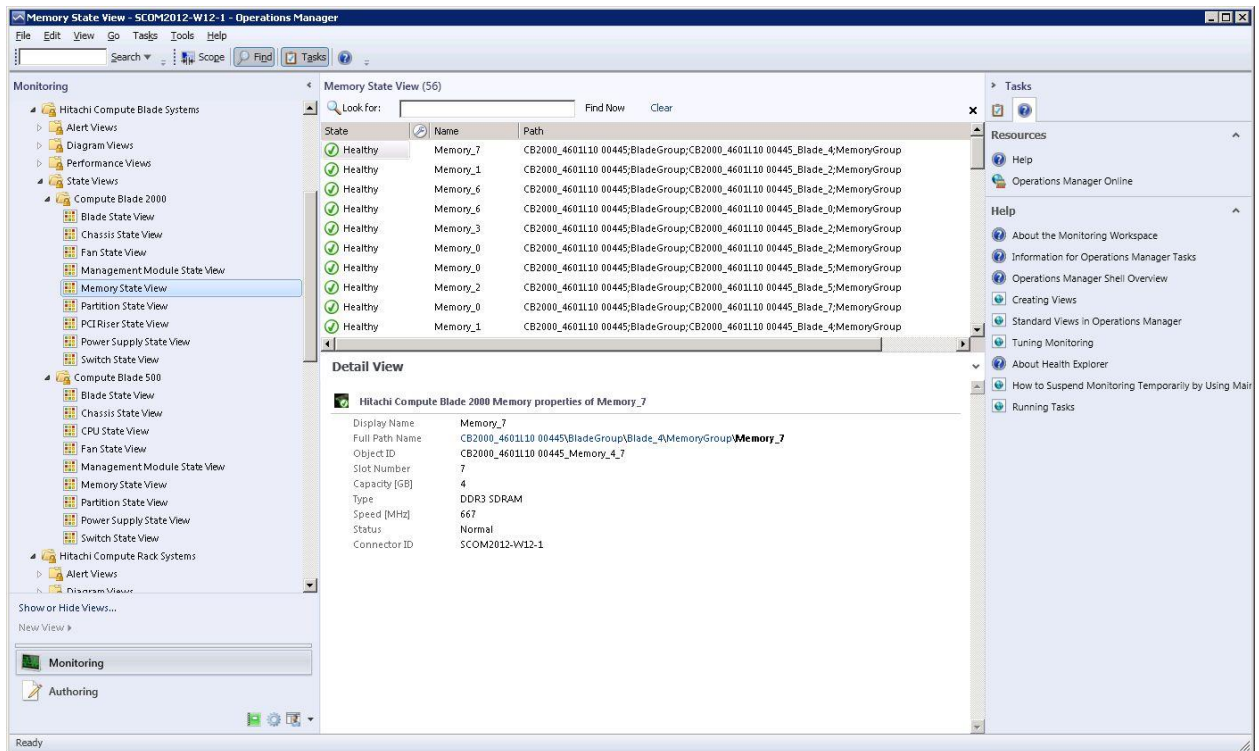| Properties	2	5	R	25	Q	Description
Display Name	X	X	-	X	-	Management module display name
Slot Number	X	X	-	X	-	Management module slot number in the chassis

Properties	2	5	R	25	Q	Description
Manufacturer	X	X	-	X	-	Management module Manufacturer
Product Name	X	X	-	X	-	Management module product name
Part Number	X	X	-	-	-	Management module part number
Serial Number	X	X	-	-	-	Management module serial number
Board Manufacturer	X	X	-	X	-	Management module board manufacturer
Board Product Name	X	X	-	X	-	Management module board product name
Board Serial Number	X	X	-	X	-	Management module board serial number
Upper Limit Temperature [deg C]	X	X	-	X	-	Management module upper temperature limit
Lower Limit Temperature [deg C]	X	X	-	X	-	Management module lower temperature limit
Active Status	X	X	-	X	-	Management module active status
Firmware Version (Active)	X	X	-	X	-	Management module active firmware version
Firmware Version (Alternate)	X	X	-	X	-	Management module alternative firmware version

Memory State View

The Memory State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > Memory State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > Memory State View**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State Views > Compute Rack 200 > Memory State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Memory State View**

Memory State View

The Memory State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	X	X	X	X	-	Memory display name
Slot Number	X	X	X	X	-	Memory slot number in the chassis
Capacity (GB)	X	X	X	X	-	Memory capacity
Type	X	X	X	X	-	Memory type
Speed (MHz)	X	X	X	X	-	Memory frequency

Node State View

The Node State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Other vendors > QuantaPlex > State Views > QuantaPlex T41S-2U > Node State View**
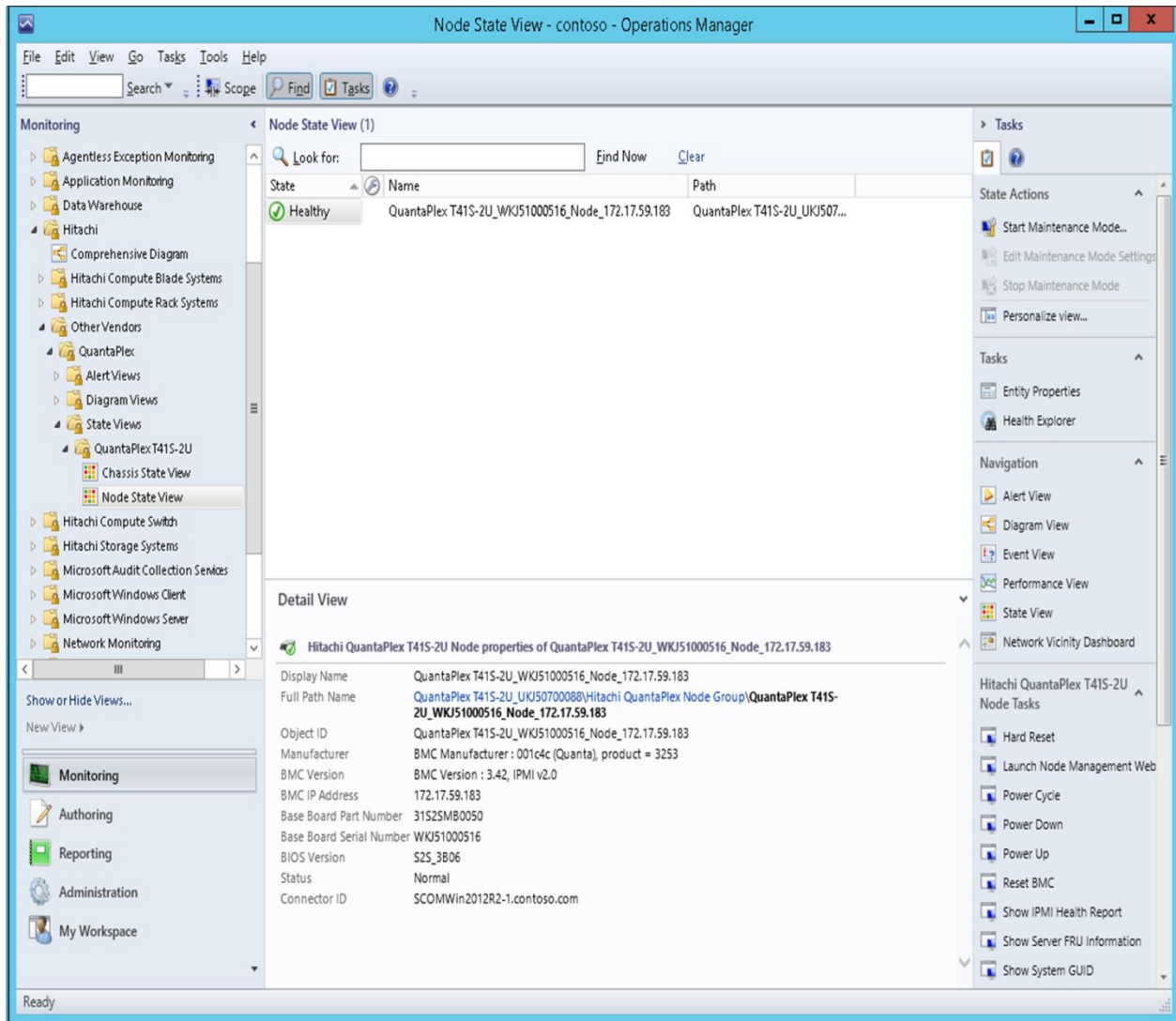
Node State View Window

The Node State View contains the columns listed in the table below.
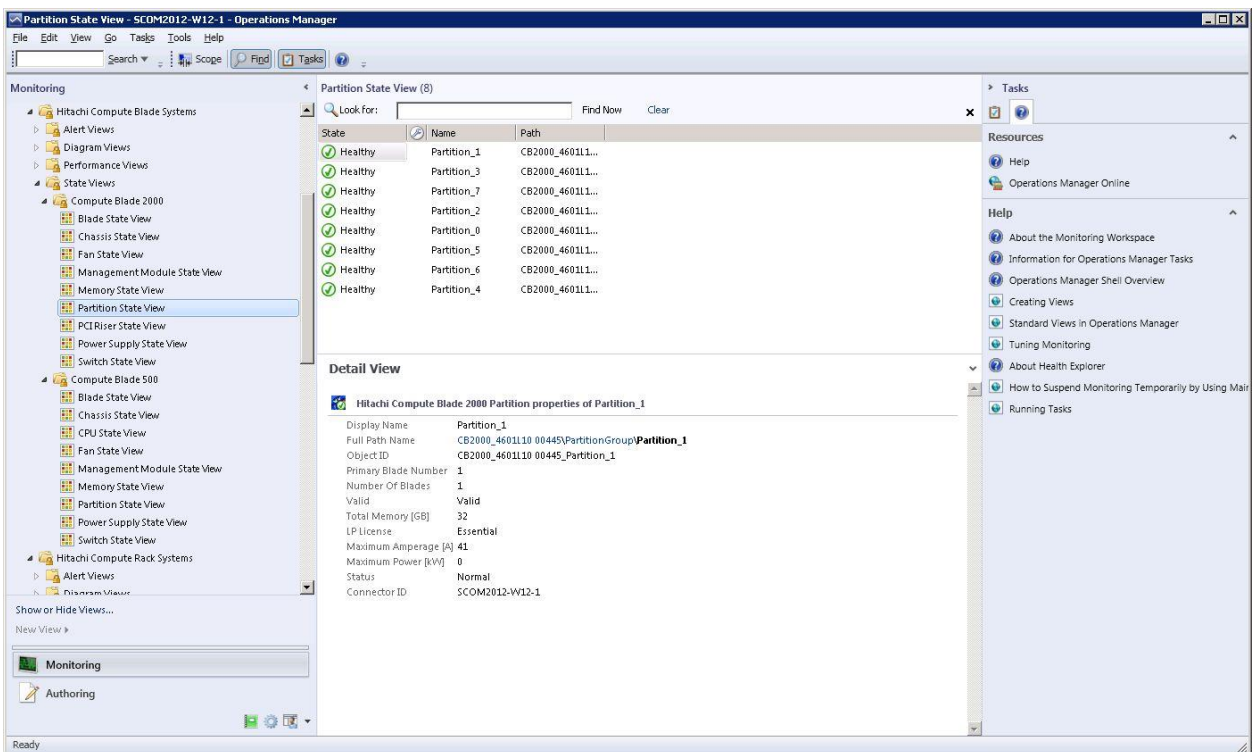
Properties	2	5	R	25	Q	Description
Display Name	-	-	-	-	X	Node display name
Manufacturer	-	-	-	-	X	BMC manufacturer
BMC Version	-	-	-	-	X	BMC version

Properties	2	5	R	25	Q	Description
BMC IP Address	-	-	-	-	X	BMC IP address
Base Board Part Number	-	-	-	-	X	Base board part number
Base Board Serial Number	-	-	-	-	X	Base board serial number
BIOS Version	-	-	-	-	X	BIOS version in the node

Partition State View

The Partition State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > Partition State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > Partition State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Partition State View**
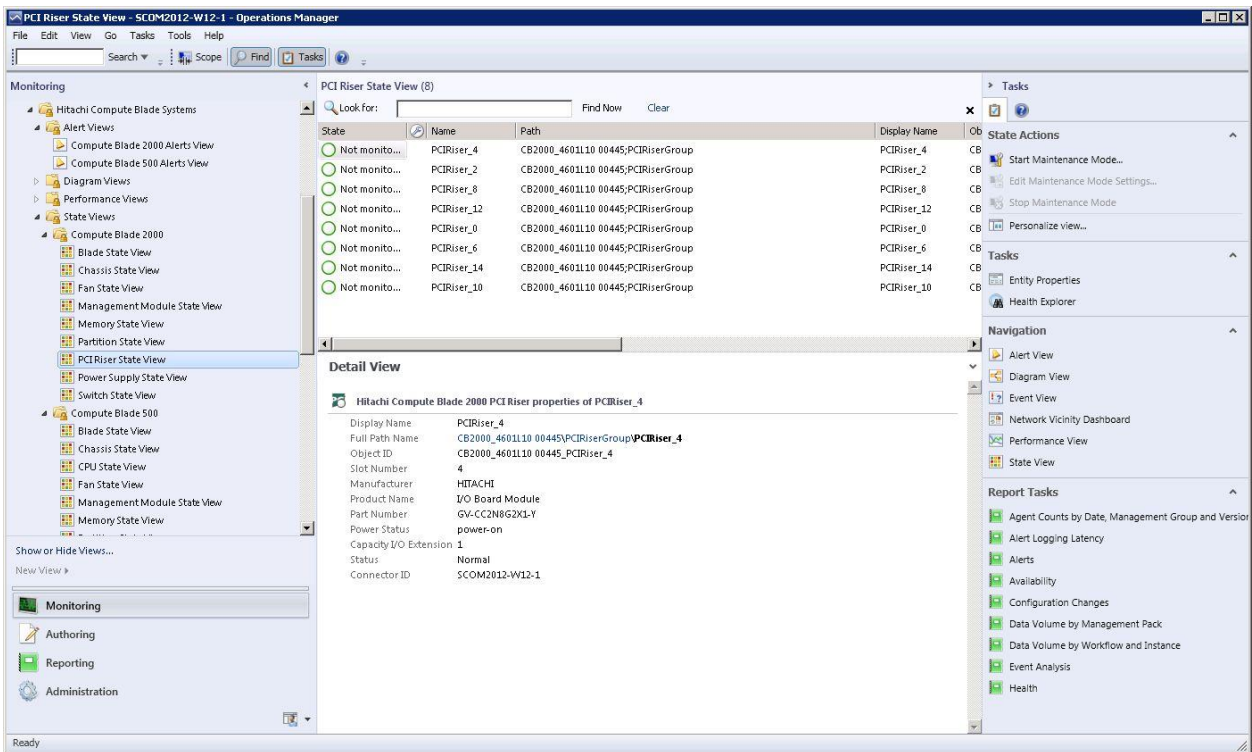

Partition State View

The Partition State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	X	X	-	X	-	Partition display name
Primary Blade Number	X	X	-	X	-	Primary Blade slot number of the partition
Number Of Blades	X	X	-	X	-	Number of Blades that belong to the partition
Valid	X	X	-	X	-	Partition validity information
Total Memory [GB]	X	X	-	X	-	Partition total physical memory capacity
LP License	X	X	-	X	-	LP manager model license information of the partition
LP License Version	-	X	-	X	-	LP manager available version license information of the partition
Maximum Amperage [A]	X	X	-	X	-	Maximum current consumption of the partition
Maximum Power [kW]	X	X		X	-	Maximum power consumption of the partition

PCI Riser State View

The PCI Riser State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > PCI Riser State View**
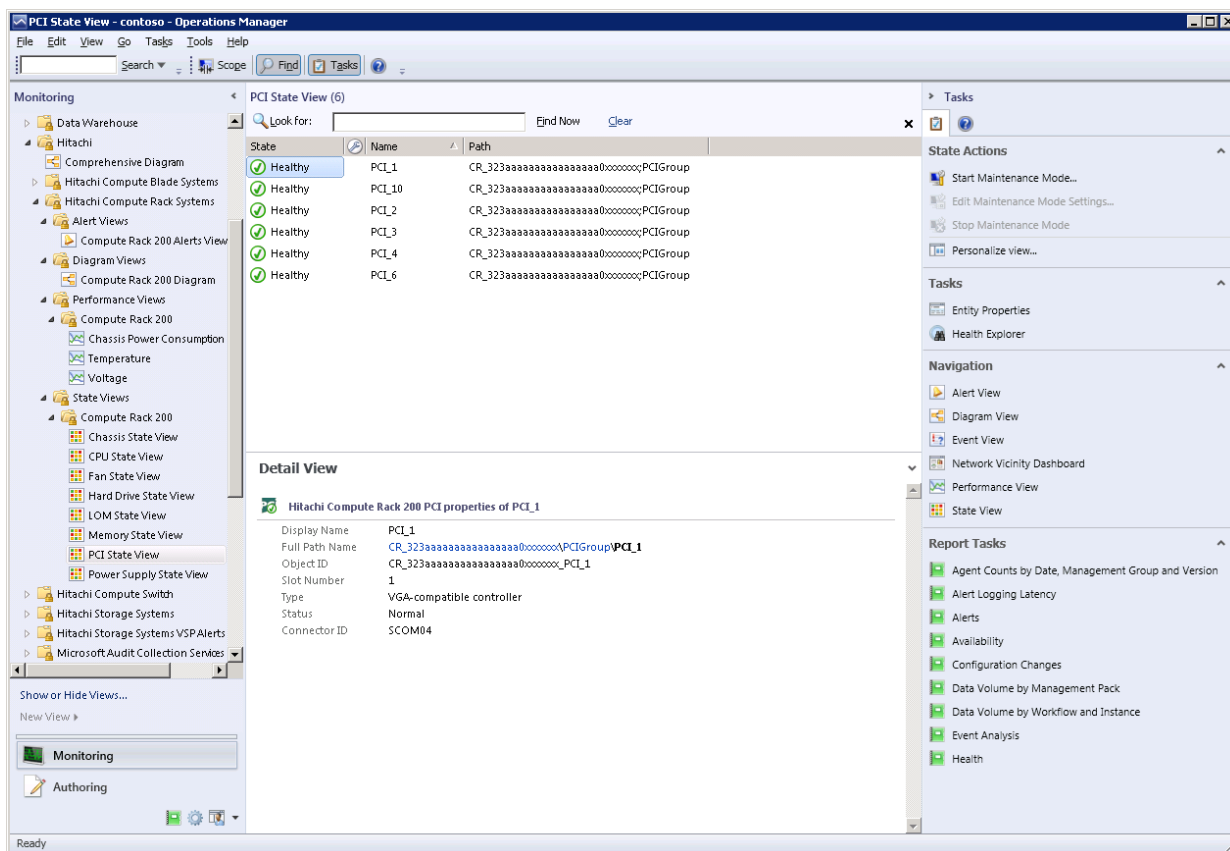

PCI Riser State View

The PCI Riser State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	X	-	-	-	-	PCI Riser display name
Slot Number	X	-	-	-	-	PCI Riser slot number in the chassis
Manufacturer	X	-	-	-	-	PCI Riser manufacturer
Product Name	X	-	-	-	-	PCI Riser product name
Part Number	X	-	-	-	-	PCI Riser part number
Power Status	X	-	-	-	-	PCI Riser power status
Capacity I/O Extension	X	-	-	-	-	Capacity of connectable I/O Expansion Unit of PCI Riser slot

PCI State View

The PCI State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State Views > Compute Rack 200 > PCI State View**
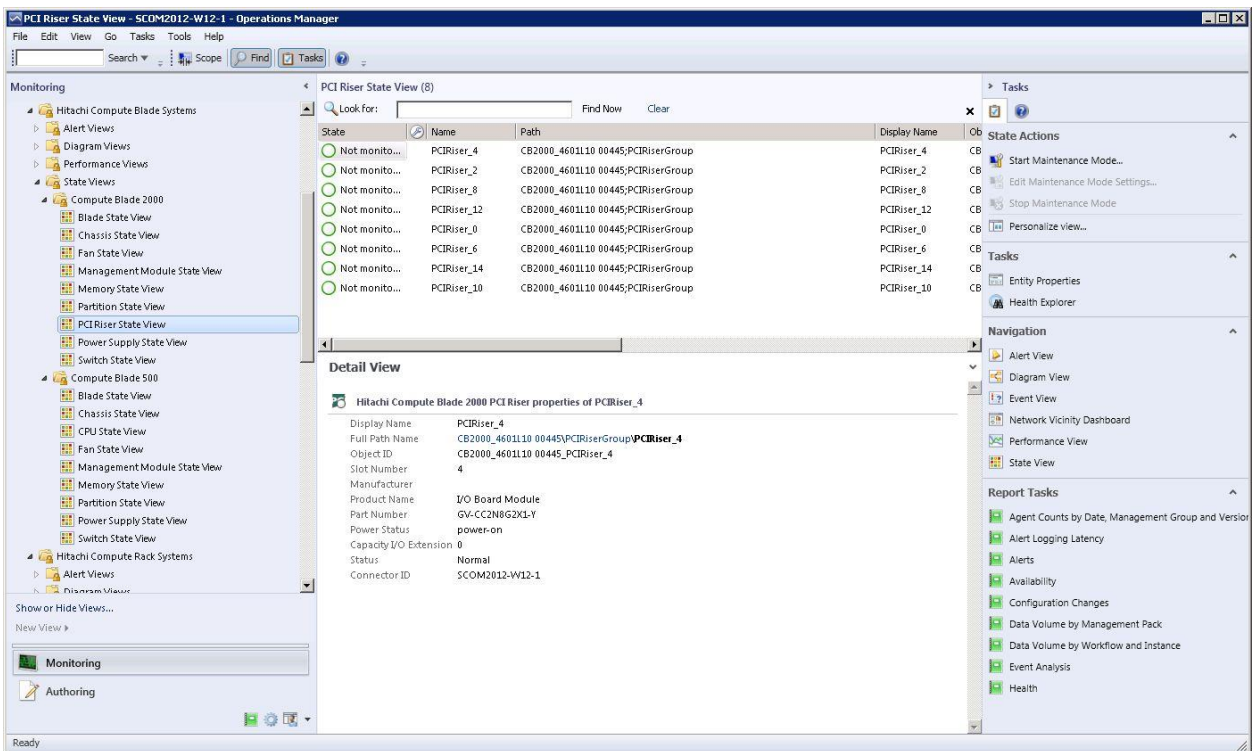

PCI State View

The PCI State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	-	-	X	-	-	PCI display name
Slot Number	-	-	X	-	-	PCI slot number in the chassis
Type	-	-	X	-	-	PCI type

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Power Supply State View

The Power Supply State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > Power Supply State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > Power Supply State View**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > State Views > Compute Rack 200 > Power Supply State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Power Supply State View**
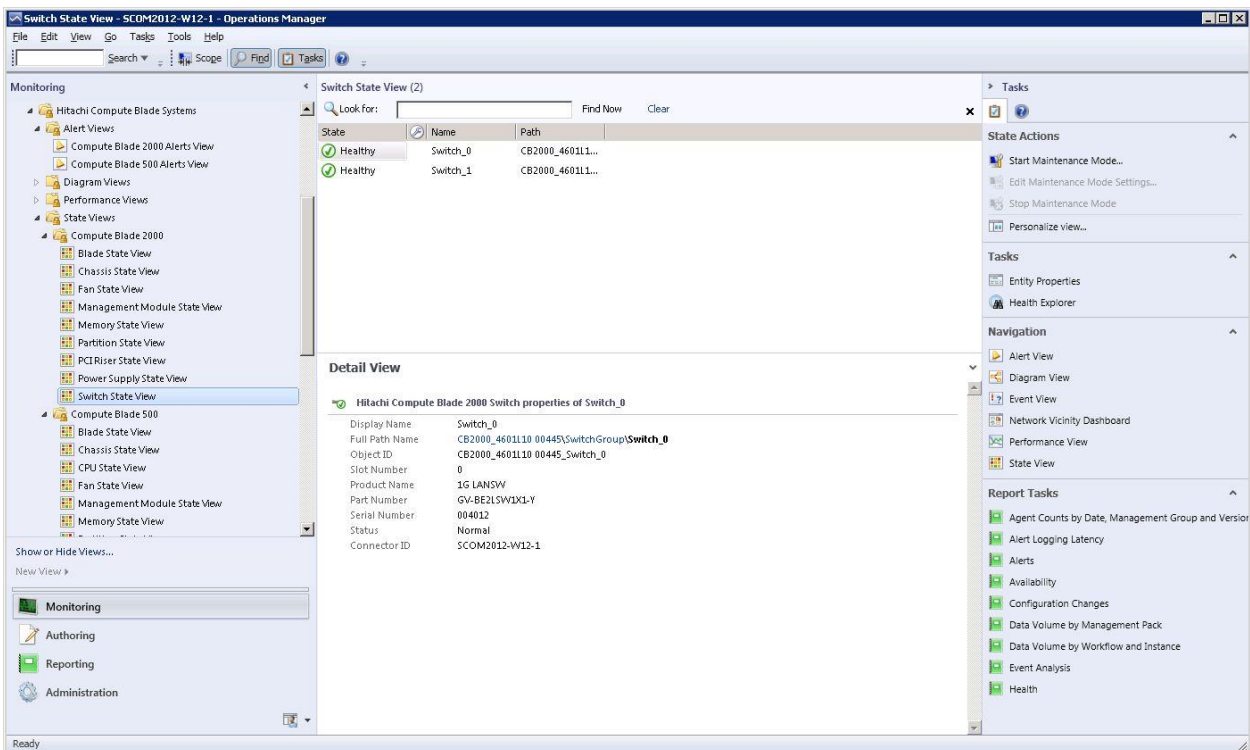

Power Supply State View

The Power Supply State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	X	X	X	X	-	Power supply display name
Slot Number	X	X	X	X	-	Power supply slot number in the chassis
Manufacturer	X	X	-	X	-	Power supply manufacturer
Product Name	X	X	-	X	-	Power supply product name
Part Number	X	X	X	X	-	Power supply part number
Version	X	X		X	-	Power supply product version
Serial Number	X	X	-	-	-	Power supply serial number
Upper Limit Temp (Ambient) [deg C]	X	-	-	-	-	Power supply upper ambient temperature limit
Lower Limit Temp (Ambient) [deg C]	X	-	-	-	-	Power supply lower ambient temperature limit
Upper Limit Temp (Hotspot) [deg C]	X	X	-	-	-	Power supply upper hot spot temperature limit
Lower Limit Temp (Hotspot) [deg C]	X	-	-	-	-	Power supply lower hot spot temperature limit
Upper Limit Temp (Exhaust) [deg C]	X	X	-	-	-	Power supply upper exhaust temperature limit
Lower Limit Temp (Exhaust) [deg C]	X	-	-	-	-	Power supply lower exhaust temperature limit

Switch State View

The Switch State View can be accessed from the SCOM console as follows:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2000 > Switch State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 500 > Switch State View**
- **Monitoring > Hitachi > Hitachi Compute Blade Systems > State Views > Compute Blade 2500 > Switch State View**

Switch State View

The Switch State View contains the columns listed in the table below.

Properties	2	5	R	25	Q	Description
Display Name	X	X	-	X	-	Switch display name
Slot Number	X	X	-	X	-	Switch slot number in the chassis
Manufacturer	X	X	-	X	-	Switch manufacturer
Product Name	X	X	-	X	-	Switch product name
Part Number	X	X	-	X	-	Switch part number
Version	X	X	-	X	-	Switch product version
Serial Number	X	X	-	-	-	Switch serial number
Upper Limit Temp (Ambient) [deg C]	X	-	-	-	-	Switch upper ambient temperature limit

Properties	2	5	R	25	Q	Description
Lower Limit Temp (Ambient) [deg C]	X	-	-	-	-	Switch lower ambient temperature limit
Upper Limit Temp (Hotspot) [deg C]	X	X	-	-	-	Switch upper hot spot temperature limit
Lower Limit Temp (Hotspot) [deg C]	X	-	-	-	-	Switch lower hot spot temperature limit
Upper Limit Temp (Exhaust) [deg C]	X	X	-	-	-	Switch upper exhaust temperature limit
Lower Limit Temp (Exhaust) [deg C]	X	-	-	-	-	Switch lower exhaust temperature limit

Performance View

Performance View provides graphical display of performance information, and can be accessed in the following folders:

- **Monitoring > Hitachi > Hitachi Compute Blade Systems > Performance View**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > Performance View**
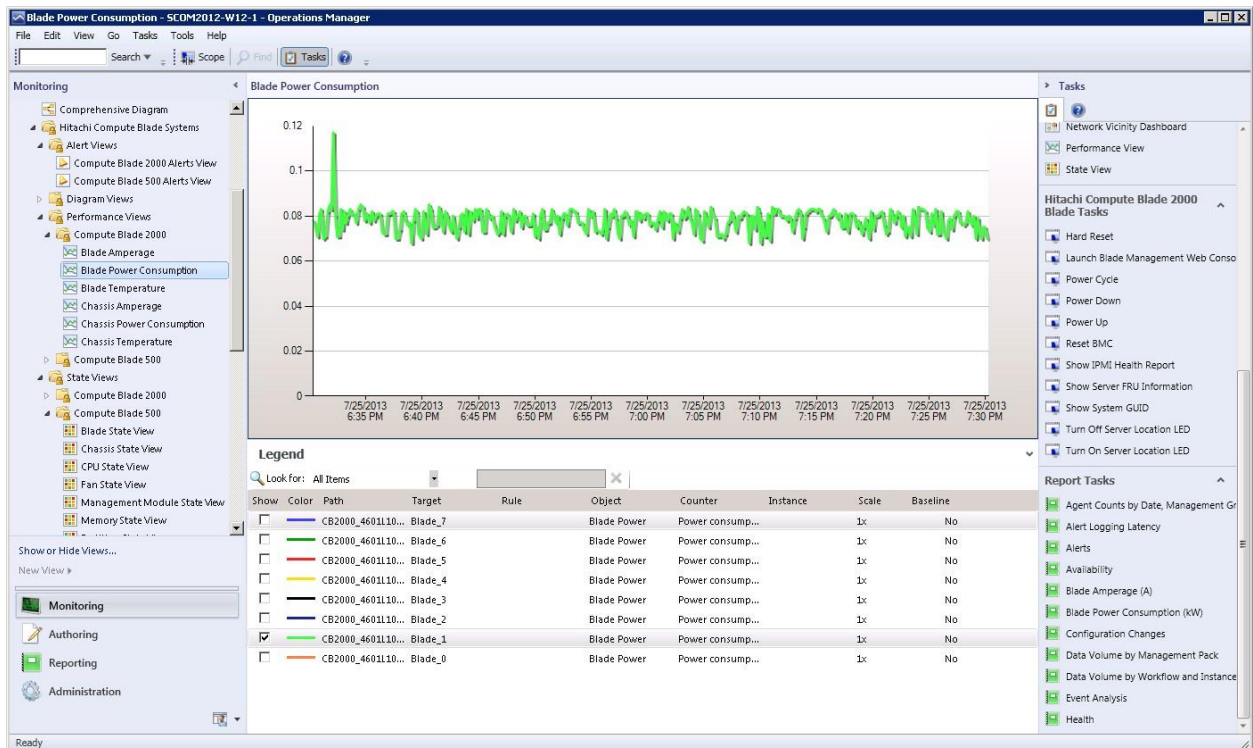
Performance View Example

The information provided by Performance View is listed in the table below.

View Name	2	5	R	25	Q	Counter Name
Blade Amperage	X	-	-	-	-	Amperage A

View Name	2	5	R	25	Q	Counter Name
Blade Power Consumption	X	-	-	-	-	Power consumption kW
Blade Temperature	X	-	-	-	-	Temperature deg C
Chassis Amperage	X	X	-	X	-	Amperage A
Chassis Power Consumption	X	X	X	X	-	Power consumption kW
Chassis Temperature	X	-	-	-	-	Temperature deg C
Temperature	-	-	X	-	-	Temperature deg C
Voltage	-	-	X	-	-	Voltage V

The Performance Views contains the columns listed in the table below.

Field Name	Description	Value
Counter	Name of counter	See above "Counter Name" definition
Path	Full path name of the object	See description
Target	Name of the object	Display Name property of the target
Object	Name of monitoring target	See description
Instance	This field is empty	This field is empty
Scale	Scale of measurement	"1x"

Groups

Groups displays instance objects of the monitored servers that can be checked for each model.

- **Authoring > Groups > Hitachi Servers Group**
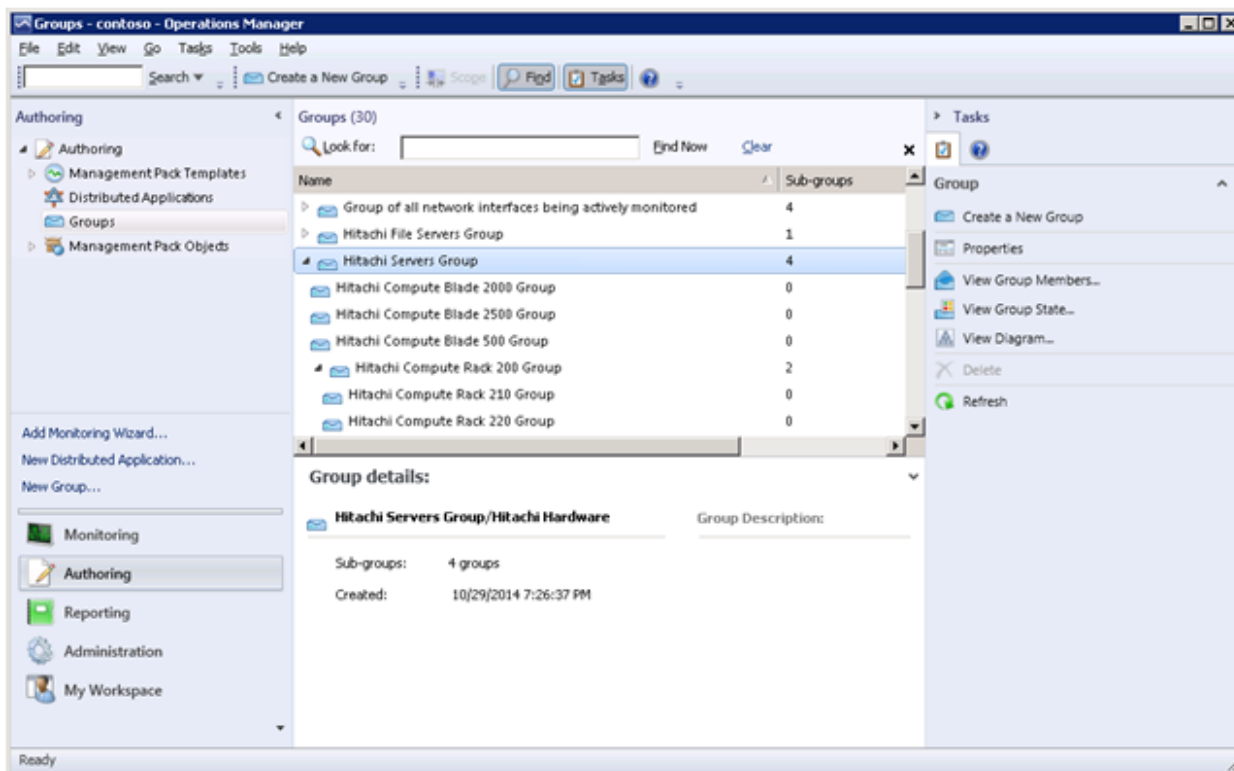
To see if an object belongs to a group, click **View Group Members**.
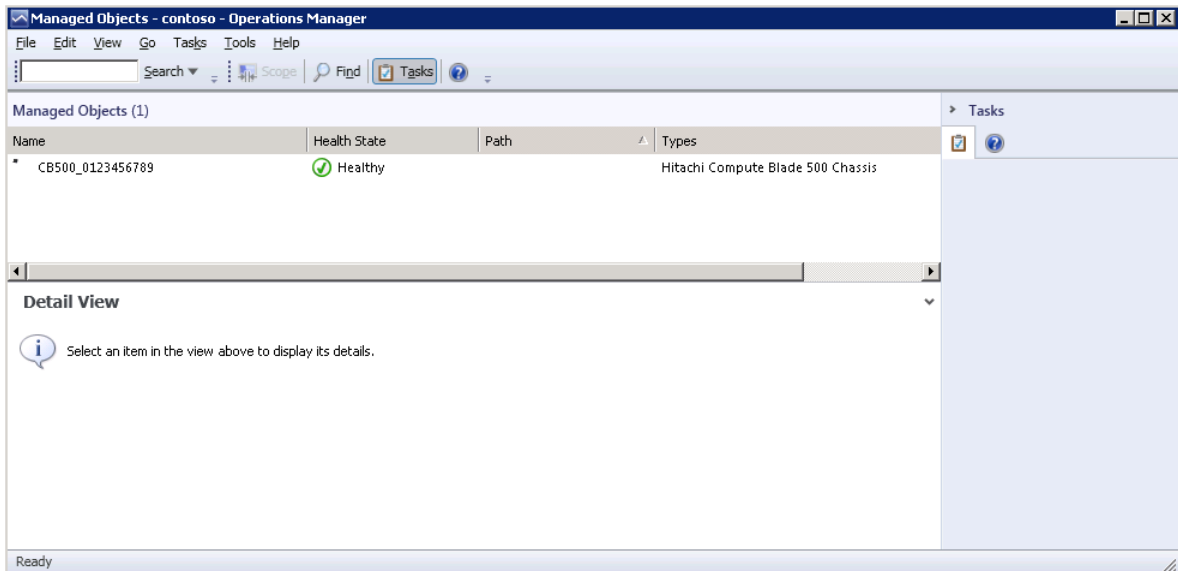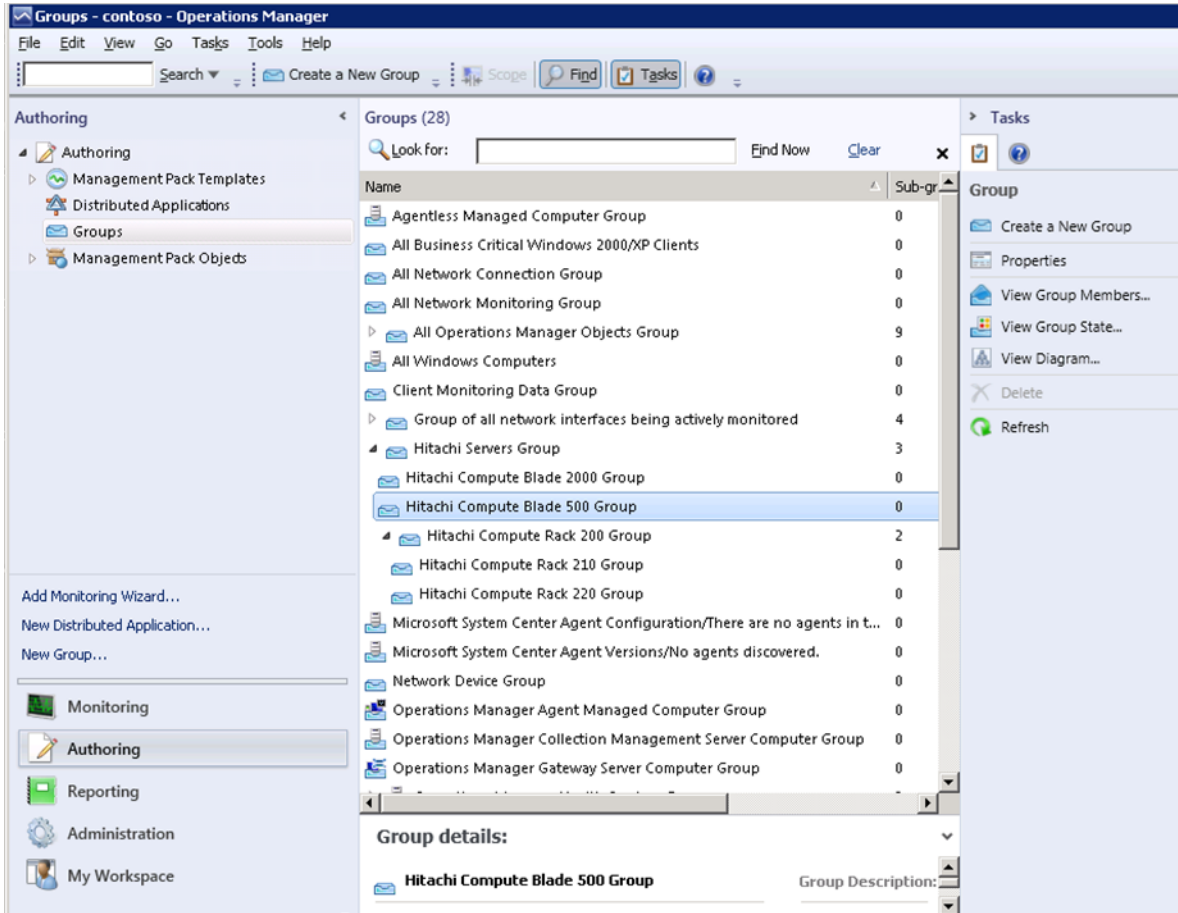
To see an object which belongs to a group, click **View Group State**.

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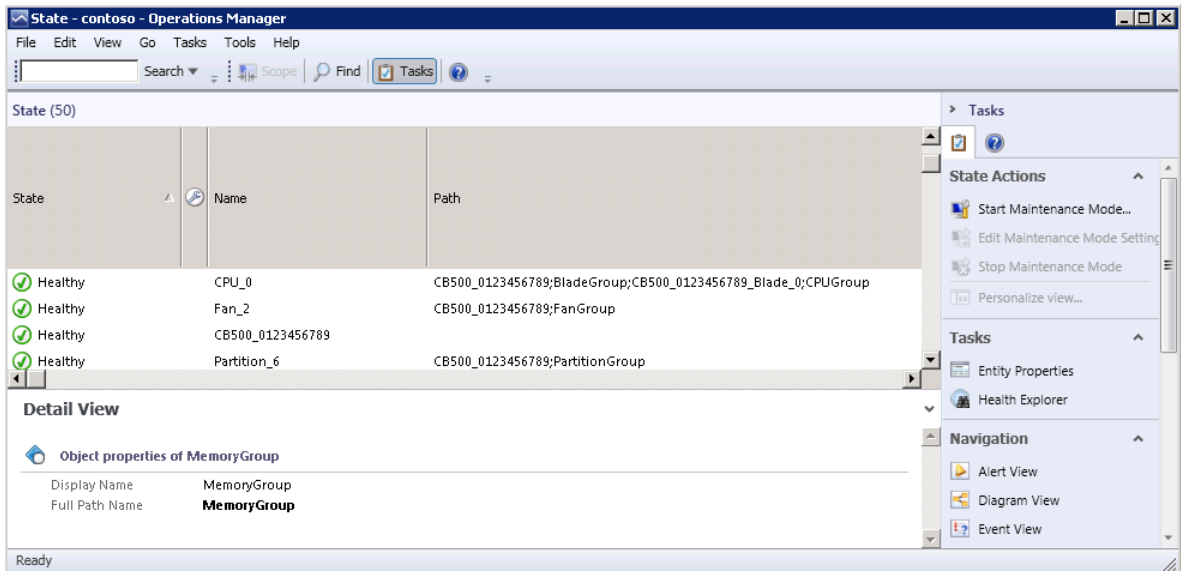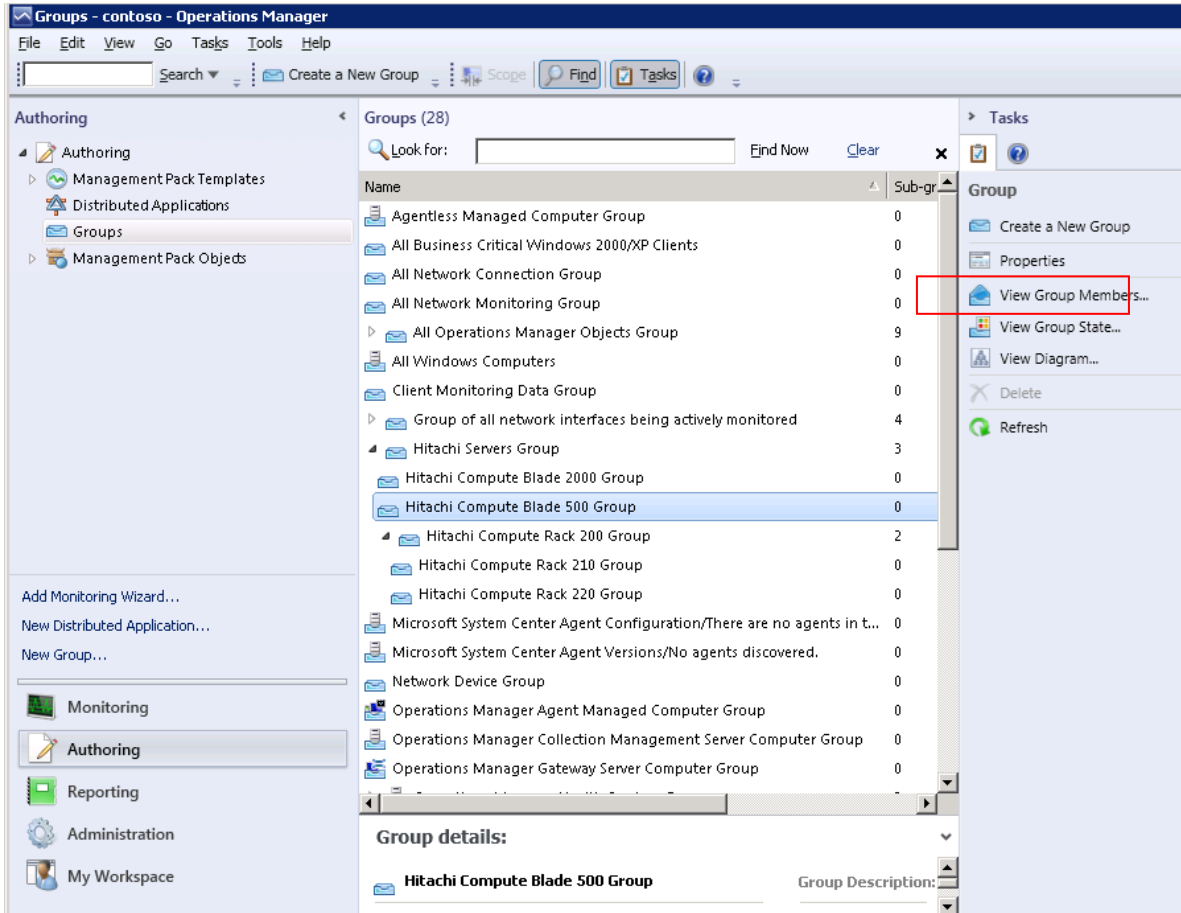
Monitors

Hitachi Compute Systems Management Packs provide failure status information for all monitored components. The failure status can be checked by observing the icons displayed in the State property column for each component.

Unit Monitor

Unit Monitor displays the conditions used to determine the failure status of each component. Unit Monitor monitors the status of all monitored object failures and chooses the failure status based on the conditions listed in the table below.

Target	Monitor Name	2	5	R	25	Q	State	Condition	Interval (s)
Chassis	Fan Redundancy Status						✅ Healthy	Fan is redundant.	
		X	X	X	X	X	⚠️ Warning	Fan redundancy state is unknown.	60
							❌ Critical	Fan is not redundant.	
	Power Supply Redundancy Status						✅ Healthy	Power supply is redundant.	
		X	X	X	X	X	⚠️ Warning	Power supply redundancy state is unknown.	60
							❌ Critical	Power supply is not redundant.	
	ManModule Redundancy Status						✅ Healthy	Management module is redundant.	
		X	X	-	X	-	⚠️ Warning	Management module redundancy state is unknown.	60
							❌ Critical	Management module is not redundant.	
Blade	Blade Status						✅ Healthy	Blade is healthy	
		X	X	-	X	-	⚠️ Warning	Blade status is unknown.	60
							❌ Critical	A blade failure has occurred.	

	Blade Intake Temp Status	X	-	-	-	-	✓ Healthy	Blade intake temp is in normal rage.	60
							⚠ Warning	Blade intake temp is in warning range.	
							✗ Critical	Blade intake temp is outside of the normal and warning ranges.	
	Blade SMASH Status	-	X	-	X	-	✓ Healthy	SMASH communication is successful.	60
							✗ Critical	A SMASH communication failure has occurred. However, if the Blade Status is other than healthy, the state should not be Critical.	
Node	Node Status	-	-	-	-	X	◯ Not monitored	Node is not monitored	-
CPU	CPU Status	-	X	-	X	-	✓ Healthy	CPU is healthy	60
							⚠ Warning	CPU state is unknown	
							✗ Critical	A CPU failure has occurred	
Memory	Memory Status	X	X	X	X	-	✓ Healthy	Memory is healthy.	60
							⚠ Warning	Memory state is unknown.	
							✗ Critical	A memory failure has occurred, and it is not available	
Fan	Fan Status	X	X	X	X	-	✓ Healthy	Fan is healthy	60
							⚠ Warning	Fan state is unknown	
							✗ Critical	A fan failure has occurred	
ManModule	ManModule Status	X	X	-	X	-	✓ Healthy	Management module is healthy	60
							⚠ Warning	Management module state is unknown	
							✗ Critical	A management module failure has occurred	

Partition	Partition Status	X	X	-	X	-	Healthy	Partition is healthy	60
							Warning	Partition state is unknown	
							Critical	A partition failure has occurred. At least one blade failure has occurred.	
PowerSupply	Power Supply Status	X	X	X	X	-	Healthy	Power supply is healthy	60
							Warning	Power supply state is unknown	
							Critical	A power supply failure has occurred	
Switch	Switch Status	X	X	-	X	-	Healthy	Switch module is healthy.	60
							Warning	Switch module state is unknown.	
							Critical	A switch module failure has occurred.	
HardDrive	Hard Drive Status	-	-	X	-	-	Healthy	Hard Drive is healthy.	60
							Warning	Hard Drive status is unknown.	
							Critical	A Hard Drive failure has occurred.	
FanControl	Fan Control Status	-	-	-	X	-	Healthy	Fan control module is healthy.	60
							Warning	Fan control module state is unknown.	
							Critical	A fan control module failure has occurred.	
I/OBoard	I/O Board Status	-	-	-	X	-	Healthy	I/O board module is healthy.	60
							Warning	I/O board module state is unknown.	
							Critical	An I/O board module failure has occurred.	
ManLanModule	Management LAN module Status	-	-	-	X	-	Healthy	Management LAN module is healthy.	60
							Warning	Management LAN module state is unknown.	
							Critical	A management LAN module failure has occurred.	

Dependency Monitor

Dependency monitors allow the health of one object be affected by the health of another object. This allows specific related components to have a combined health status.

Targets have their availability dependency monitors for each relationship of which source component is that target. The dependency monitor source is the root availability aggregate monitor of the source component.

All dependency monitors supported by Hitachi Compute Systems Management Packs are configured to use a "worst state" health policy.

Tasks

When a component is selected in a view, tasks that can be run that are related to that component are displayed in the Task pane in the SCOM console. Tasks for each component respectively are listed in the tables below.

Hitachi Compute Blade 2000

Task Name	Target	Description
Launch Chassis Management Web Console	Chassis	Launches the Web management console of the selected chassis
Launch Blade Management Web Console	Blade	Launches the Web management console of the selected blade
Turn On Server Location LED	Blade	Turns on the Location LED for the selected server
Turn Off Server Location LED	Blade	Turns off the Location LED for the selected server
Hard Reset	Blade	Hard resets the selected server
Power Down	Blade	Powers off the selected server
Power Up	Blade	Powers on the selected server
Power Cycle	Blade	Powers off the selected server, then powers it back on again.
Show System GUID	Blade	Shows the system GUID for the selected server
Show Server FRU Information	Blade	Shows server FRU information
Show IPMI Health Report	Blade	Shows IPMI health information

Hitachi Compute Blade 500

Task Name	Target	Description
Launch Chassis Management Web Console	Chassis	Launches the Web management console of the selected chassis
Launch Blade Management Web Console	Blade	Launches the Web management console of the selected blade
Turn On Server Location LED	Blade	Turns on the Location LED for the selected server
Turn Off Server Location LED	Blade	Turns off the Location LED for the selected server
Reset BMC	Blade	Resets the BMC

Task Name	Target	Description
Hard Reset	Blade	Hard resets the selected server
Power Down	Blade	Powers off the selected server
Power Up	Blade	Powers on the selected server
Power Cycle	Blade	Powers off the selected server, then powers it back on again.
Show System GUID[1]	Blade	Shows the system GUID for the selected server
Show Server FRU Information	Blade	Shows server FRU information
Show IPMI Health Report[1]	Blade	Shows IPMI health information

Note
- Not supported by CB 540A blade.

Hitachi Compute Rack 210/220

Task Name	Target	Description
Launch Chassis Management Web Console	Chassis	Launches the Web management console of the selected chassis
Turn On Server Location LED	Chassis	Turns on the Location LED for the selected server
Turn Off Server Location LED	Chassis	Turns off the Location LED for the selected server
Hard Reset	Chassis	Hard resets the selected server
Power Down	Chassis	Powers off the selected server
Power Up	Chassis	Powers on the selected server
Power Cycle	Chassis	Powers off the selected server, then powers it back on again.
Show System GUID	Chassis	Shows the system GUID for the selected server
Show Server FRU Information	Chassis	Shows server FRU information
Show IPMI Health Report	Chassis	Shows IPMI health information

Hitachi Compute Blade 2500

Task Name	Target	Description
Launch Chassis Management Web Console	Chassis	Launches the Web management console of the selected chassis
Launch Blade Management Web Console	Blade	Launches the Web management console of the selected blade
Turn On Server Location LED	Blade	Turns on the Location LED for the selected server
Turn Off Server Location LED	Blade	Turns off the Location LED for the selected server
Reset BMC	Blade	Resets the BMC
Hard Reset	Blade	Hard resets the selected server
Power Down	Blade	Powers off the selected server
Power Up	Blade	Powers on the selected server
Power Cycle	Blade	Powers off the selected server, then powers it back on again.
Show System GUID[1]	Blade	Shows the system GUID for the selected server
Show Server FRU Information	Blade	Shows server FRU information

Task Name	Target	Description
Show IPMI Health Report[1]	Blade	Shows IPMI health information

> **Notes**
> - Not supported by CB 540A blade.

QuantaPlex T41S-2U

Task Name	Target	Description
Launch Node Management Web Console	Node	Launches the Web management console of the selected node
Turn On Server Location LED	Node	Turns on the Location LED for the selected server
Turn Off Server Location LED	Node	Turns off the Location LED for the selected server
Reset BMC	Node	Resets the BMC
Hard Reset	Node	Hard resets the selected server
Power Down	Node	Powers off the selected server
Power Up	Node	Powers on the selected server
Power Cycle	Node	Powers off the selected server, then powers it back on again.
Show System GUID	Node	Shows the system GUID for the selected server
Show Server FRU Information	Node	Shows server FRU information
Show IPMI Health Report	Node	Shows IPMI health information

Error message appears or correct value is not displayed.

Some console tasks use IPMI over LAN to control the BMC. Such tasks prompt for IPMI credentials, as shown below:
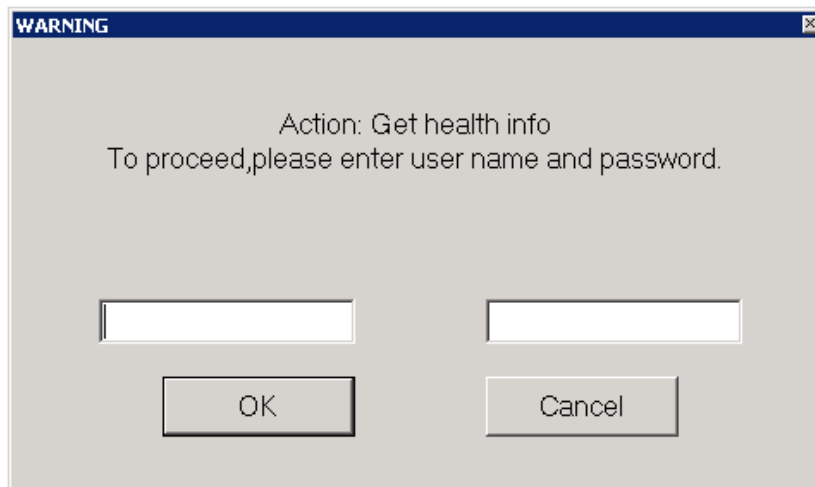
IPMI credential dialog

When an IP address is not available, an error message is displayed.

Rules

Creating Alerts by Detecting Failure Status of Monitored Devices

Hitachi Compute Systems Management Packs create alerts based on the component failure status defined in the Unit Monitor of Monitor. Alerts are created when the component status is either "Warning" or "Critical."

SNMP Trap to Alert Conversion

Hitachi Compute Systems Management Packs provide a set of SNMP Trap-to-SCOM Alert conversion rules.

Alert property	Generation rule
Name	Determined from the HCSM alert ID variable. See HCSM Alert Variable OIDs.
Severity	Determined based on the alert level defined by each HCSM alert ID
Priority	Same value as Severity
Alert Description	Obtained from the HCSM alert message variable. See HCSM Alert Variable OIDs.

HCSM Alert Variable OIDs are listed in the table below.

Object name	OID (CB2000)	OID (CB500/CR200/CB2500)
HCSM alert ID	.1.3.6.1.4.1.116.3.39.0.0.6.0	.1.3.6.1.4.1.116.5.52.10.0.4.0
HCSM alert message	.1.3.6.1.4.1.116.3.39.0.0.4.0	.1.3.6.1.4.1.116.5.52.10.0.5.0

QuantaPlex T41S-2U

Alert property	Generation rule
Name	Always display "QuantaPlex T41S-2U SNMP Trap Alert".
Severity	Always display critical.
Priority	Always high setting.
Alert Description	Obtained from the alert message variable. Alert Variable OID are ".1.3.6.1.4.1.7244.1.2.1.4.3".

Reports

Hitachi Compute Systems Management Packs provide reporting functionality. The report folders listed in the table below are created under the Report folder root.
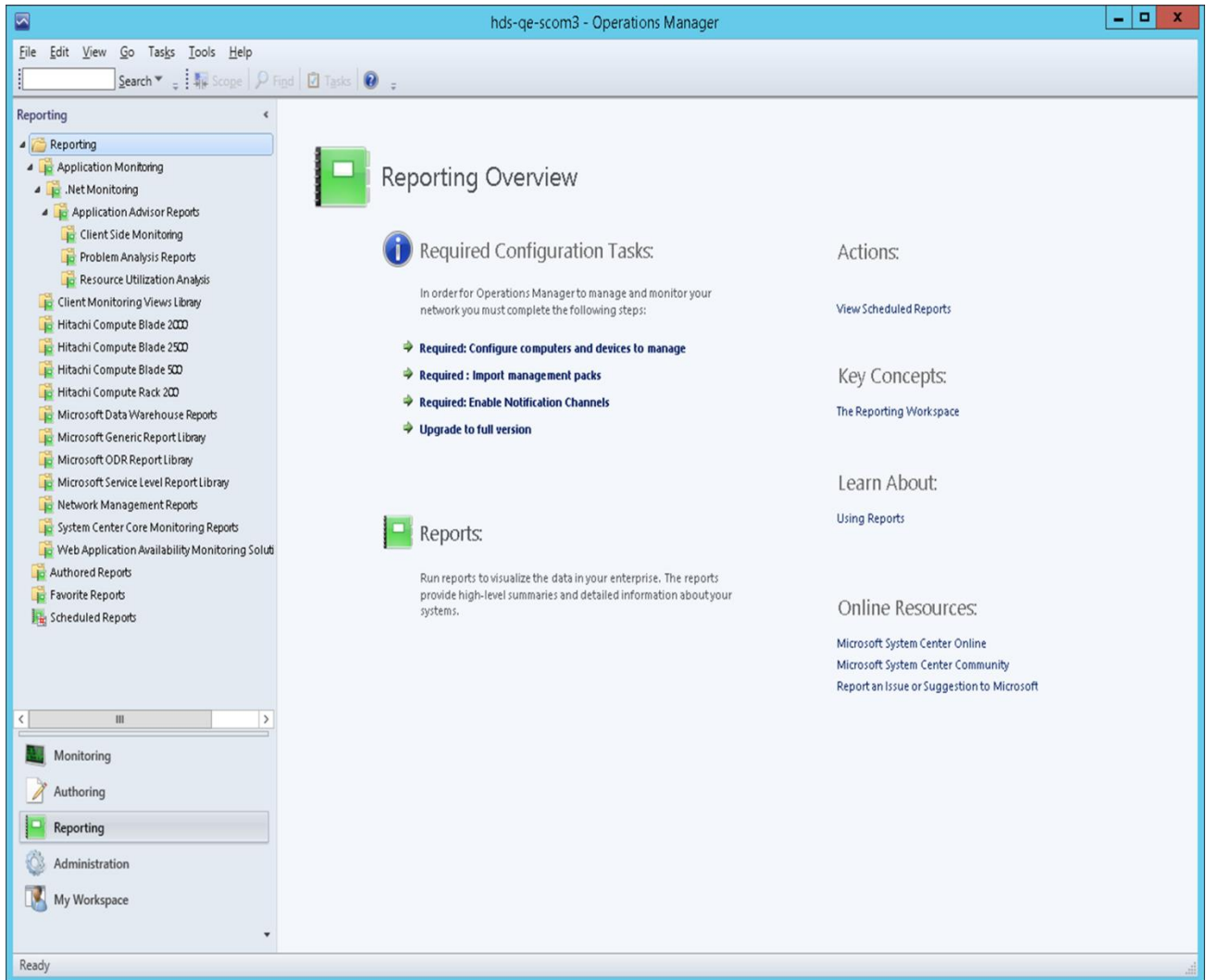
Folder Item Name	2	5	R	25	Q
Hitachi Compute Blade 2000	X	-	-	-	-
Hitachi Compute Blade 500	-	X	-	-	-
Hitachi Compute Rack 200	-	-	X	-	-
Hitachi Compute Blade 2500	-	-	-	X	-
QuantaPlex T41S-2U	-	-	-	-	-

The reports listed in the table below are supported. The report name is printed in the report.

Name	2	5	R	25	Q	Description
Blade Amperage (A)	X	-	-	-	-	This report displays the amperage utilization of server blades.
Blade Power Consumption (kW)	X	-	-	-	-	This report displays the power consumption of server blades.
Blade Temperature (deg C)	X	-	-	-	-	This report displays blade temperatures.
Chassis Amperage (A)	X	X	-	X	-	This report displays chassis amperage utilization.
Chassis Power Consumption (kW)	X	X	X	X	-	This report displays chassis power consumption.
Chassis Temperature (deg C)	X	-	-	-	-	This report displays the chassis temperature.
Temperature (deg C)	-	-	X	-	-	This report displays chassis temperature fluctuations.
Voltage (V)	-	-	X	-	-	This report shows chassis voltage fluctuations.

Knowledge articles

The following knowledge articles are provided by Hitachi Compute Systems management packs:

- "Summary" of status monitors
- "Resolution" of alerts generated by SNMP Trap conversions

Hitachi Compute Switch View

This chapter provides instructions for performing Hitachi Compute Switch view operations with Hitachi Compute Switch Management Packs for Microsoft SCOM.

- [LAN Switch Alerts View](#)
- [FC Switch Alerts View](#)

LAN Switch Alerts View

The LAN Switch Alerts View displays SNMP traps received from LAN switches. This view displays alerts based on their severity level.

The Hitachi Compute Switch View folder (located in the Hitachi folder) contains the LAN Switch Alerts View.

The LAN Switch Alerts View provides the alert, or trap, information as listed in the table below.

Properties	Description
Icon	An image reflecting the severity of the alert
Source	Object information related to alert
Name	Alert name
Resolution State	Resolution status
Created	Date of creation
Age	Time elapsed from the date of creation
Alert Rule	Resolution method of the problem

The detailed screen properties for the LAN Switch Alerts View are listed in the table below.

Properties	Description
Name	Alert name
Source	Object information related to alert
Full Path Name	Path information to the object related to the alert
Alert Rule	Name of the conditions for alert creation
Created	Date of creation
Knowledge	Detailed information of alert

The following screenshot shows an alert which indicates a LAN switch reboot:

LAN Switch Alerts View

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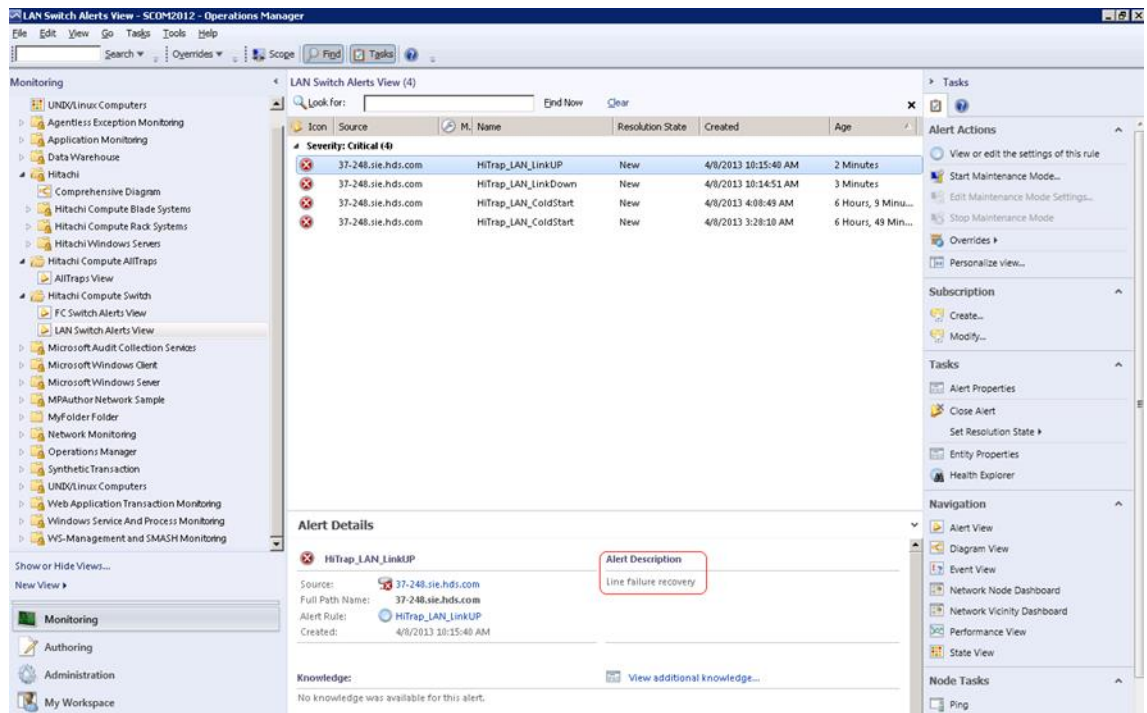
Alert properties contain more information, such as the OID. Click on "Edit" to view the condition filter.

Alert Property
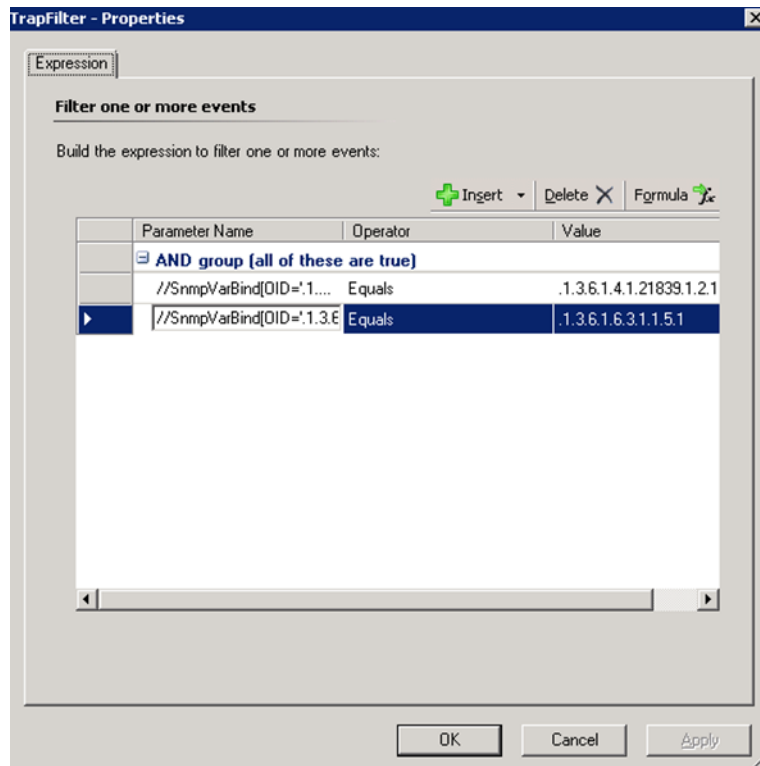
Trap Filter Properties

FC Switch Alerts View

The FC Switch Alerts View displays SNMP traps received from Fibre Channel switches. The alerts are displayed based on their severity levels.

The FC Switch Alerts View is located in the Hitachi Compute Switch View folder (which is inside of the Hitachi folder).

The FC Switch Alerts view provides the information listed in the table below regarding Alerts (or traps):

Properties	Description
Icon	An image indicating the severity of the alert
Source	Object information related to alert
Name	Alert name
Resolution State	Resolution status
Created	Date of creation
Age	Time elapsed from the date of creation
Alert Rule	Resolution method of the problem

The detail properties of the FC Switch Alerts View are listed in the table below.

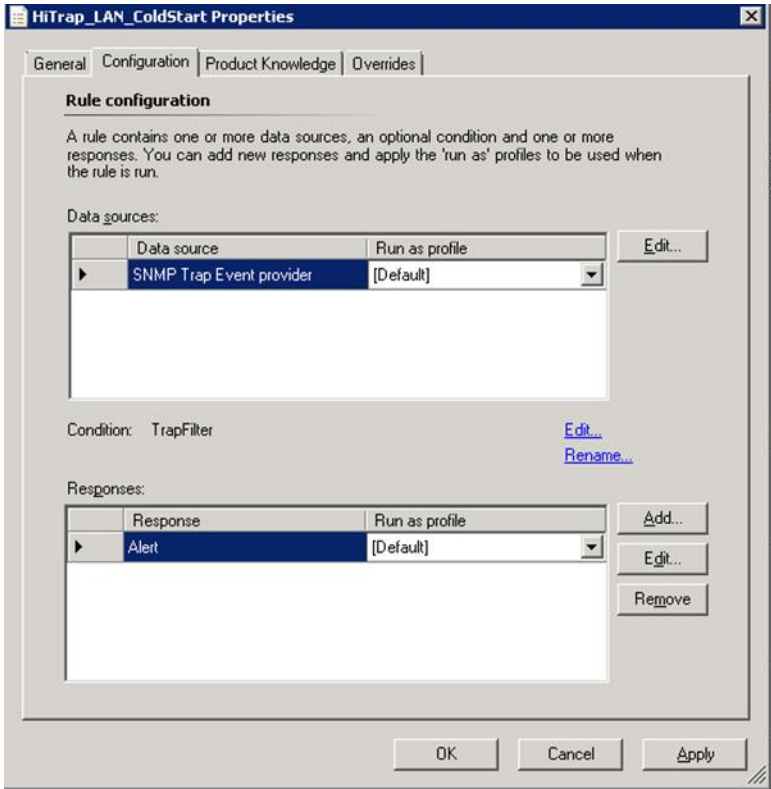| Properties	Description
Name	Alert name
Source	Object information related to alert
Full Path Name	Path information to the object related to the alert
Alert Rule	Name of the conditions for alert creation
Created	Date of creation
Knowledge	Detailed information of alert
Resolution	Resolution method of the problem

An FC Switch Alerts View screenshot is shown below:
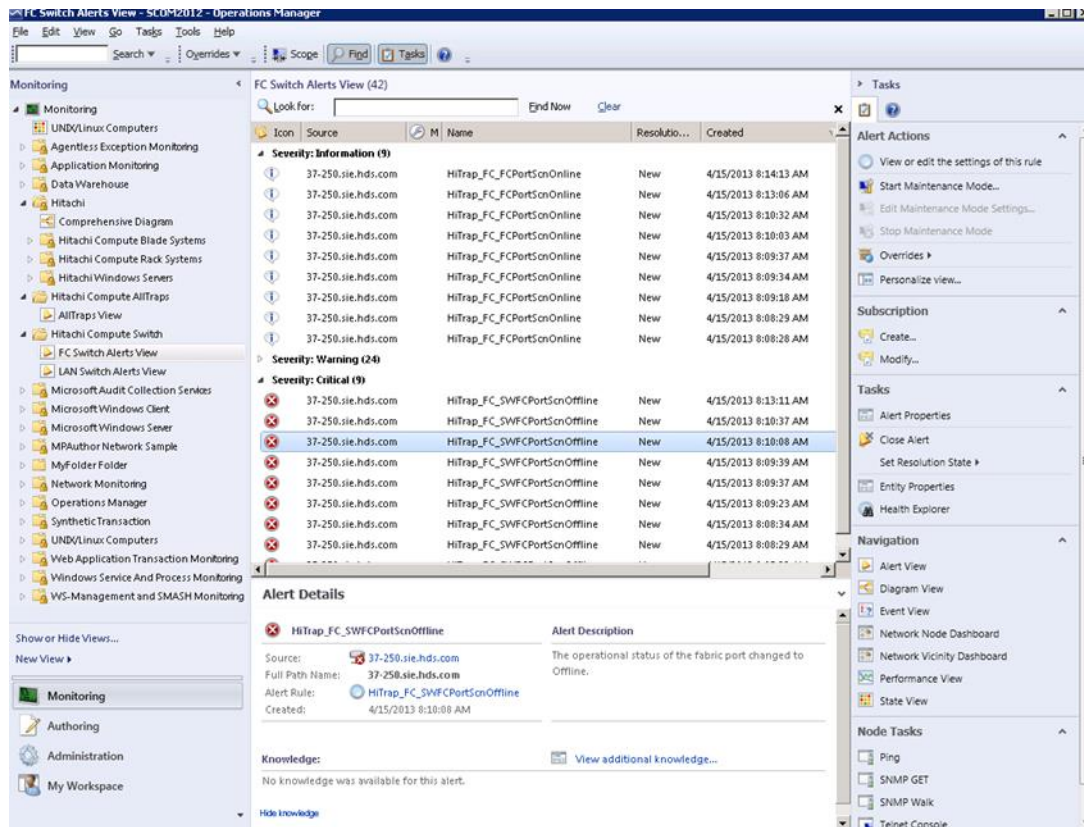
FC Switch Alerts View

Supported Alerts/Traps

The table below lists the FC and LAN switch traps supported by Hitachi Compute Switch management packs. By convention, the rule names contain the trap names.

Trap Name	OID	Switch Model	Severity	Priority
coldStart	1.3.6.1.6.3.1.1.5.1	AX3640S	2	1
warmStart	1.3.6.1.6.3.1.1.5.2	AX3640S	2	1
linkDown	1.3.6.1.6.3.1.1.5.3	AX3640S	2	1
Linkup	1.3.6.1.6.3.1.1.5.4	AX3640S	2	1
AuthenticationFailure	1.3.6.1.6.3.1.1.5.5	AX3640S	2	1
bgpEstablished	1.3.6.1.2.1.15.7.1	AX3640S	2	1
bgpBackwardTransition	1.3.6.1.2.1.15.7.2	AX3640S	2	1
risingAlarm	1.3.6.1.2.1.16.0.1	AX3640S	2	1
fallingAlarm	1.3.6.1.2.1.16.0.2	AX3640S	2	1
vrrpTrapNewMaster	1.3.6.1.2.1.68.0.1	AX3640S	2	1
vrrpTrapAuthFailure	1.3.6.1.2.1.68.0.2	AX3640S	2	1
vrrpTrapProtoError	1.3.6.1.2.1.68.0.3	AX3640S	2	1
ospfVirtIfState Change	1.3.6.1.2.1.14.16.2.1	AX3640S	2	1
ospfNbrStateChange	1.3.6.1.2.1.14.16.2.2	AX3640S	2	1
ospfVirtNbrStateChange	1.3.6.1.2.1.14.16.2.3	AX3640S	2	1
ospfIfConfigError	1.3.6.1.2.1.14.16.2.4	AX3640S	2	1
ospfVirtIfConfigError	1.3.6.1.2.1.14.16.2.5	AX3640S	2	1
ospfIfAuthFailure	1.3.6.1.2.1.14.16.2.6	AX3640S	2	1
ospfVirtIfAuthFailure	1.3.6.1.2.1.14.16.2.7	AX3640S	2	1
ospfIfStateChange	1.3.6.1.2.1.14.16.2.16	AX3640S	2	1
dot1agCfmFaultAlarm	1.3.111.2.802.1.1.8.0.1	AX3640S	2	1
ax3640sSystemMsgTrap	1.3.6.1.4.1.21839.1.2.11.0	AX3640S	0	1
ax3640sTemperatureTrap	1.3.6.1.4.1.21839.1.2.11.0.4	AX3640S	1	1
ax3640sAxrpStateTransitionTrap	1.3.6.1.4.1.21839.1.2.11.0.36	AX3640S	2	1
ax3640sAxrpMultiFaultDetection StartTrap	1.3.6.1.4.1.21839.1.2.11.0.41	AX3640S	2	1
ax3640sAxrpMultiFaultDetection StateTransitionTrap	1.3.6.1.4.1.21839.1.2.11.0.42	AX3640S	2	1
ax3640sGsrpStateTransitionTrap	1.3.6.1.4.1.21839.1.2.11.0.6	AX3640S	2	1
ax3640sL2ldLinkDown	1.3.6.1.4.1.21839.1.2.11.0.51	AX3640S	2	1
ax3640sL2ldLinkUp	1.3.6.1.4.1.21839.1.2.11.0.52	AX3640S	2	1
ax3640sL2ldLoopDetection	1.3.6.1.4.1.21839.1.2.11.0.53	AX3640S	2	1
axsOspfVirtIfStateChange	1.3.6.1.4.1.21839.2.2.1.14.16.2.0.1	AX3640S	2	1
axsOspfNbrStateChange	1.3.6.1.4.1.21839.2.2.1.14.16.2.0.2	AX3640S	2	1
axsOspfVirtNbrStateChange	1.3.6.1.4.1.21839.2.2.1.14.16.2.0.3	AX3640S	2	1
axsOspfIfConfigError	1.3.6.1.4.1.21839.2.2.1.14.16.2.0.4	AX3640S	2	1
axsOspfVirtIfConfigError	1.3.6.1.4.1.21839.2.2.1.14.16.2.0.5	AX3640S	2	1

Trap Name	OID	Switch Model	Severity	Priority
axsOspfIfAuthFailure	1.3.6.1.4.1.21839.2.2.1.14.16.2.0.6	AX3640S	2	1
axsOspfVirtIfAuthFailure	1.3.6.1.4.1.21839.2.2.1.14.16.2.0.7	AX3640S	2	1
axsOspfIfStateChange	1.3.6.1.4.1.21839.2.2.1.14.16.2.0.16	AX3640S	2	1
axsStaticGatewayStateChange	1.3.6.1.4.1.21839.2.2.1.38.2.0.1	AX3640S	2	1
axsStaticIpv6GatewayStateChange	1.3.6.1.4.1.21839.2.2.1.38.2.0.2	AX3640S	2	1
axsPolicyBaseRoutingRouteChange	1.3.6.1.4.1.21839.2.2.1.45.1.0.1	AX3640S	2	1
axsTrackObjectStateUp	1.3.6.1.4.1.21839.2.2.1.41.2.0.1	AX3640S	2	1
axsTrackObjectStateDown	1.3.6.1.4.1.21839.2.2.1.41.2.0.2	AX3640S	2	1
ax3640sAirFanStopTrap	1.3.6.1.4.1.21839.1.2.11.0.8	AX3640S	2	1
ax3640sPowerSupplyFailureTrap	1.3.6.1.4.1.21839.1.2.11.0.9	AX3640S	2	1
ax3640sLoginSuccessTrap	1.3.6.1.4.1.21839.1.2.11.0.10	AX3640S	0	1
ax3640sLoginFailureTrap	1.3.6.1.4.1.21839.1.2.11.0.11	AX3640S	2	1
ax3640sLogoutTrap	1.3.6.1.4.1.21839.1.2.11.0.12	AX3640S	0	1
ax3640sMemoryUsageTrap	1.3.6.1.4.1.21839.1.2.11.0.13	AX3640S	0	1
axsOadpNeighborCachelastChangeTrap	1.3.6.1.4.1.21839.2.2.1.7.2.0.1	AX3640S	2	1
ax3640sFrameErrorReceiveTrap	1.3.6.1.4.1.21839.1.2.11.0.18	AX3640S	2	1
ax3640sFrameErrorSendTrap	1.3.6.1.4.1.21839.1.2.11.0.19	AX3640S	2	1
ax3640sBroadcastStormDetectTrap	1.3.6.1.4.1.21839.1.2.11.0.20	AX3640S	2	1
ax3640sMulticastStormDetectTrap	1.3.6.1.4.1.21839.1.2.11.0.21	AX3640S	2	1
ax3640sUnicastStormDetectTrap	1.3.6.1.4.1.21839.1.2.11.0.22	AX3640S	0	1
ax3640sBroadcastStormPortInactivateTrap	1.3.6.1.4.1.21839.1.2.11.0.23	AX3640S	2	1
ax3640sMulticastStormPortInactivateTrap	1.3.6.1.4.1.21839.1.2.11.0.24	AX3640S	2	1
ax3640sUnicastStormPortInactivateTrap	1.3.6.1.4.1.21839.1.2.11.0.25	AX3640S	2	1
ax3640sBroadcastStormRecoverTrap	1.3.6.1.4.1.21839.1.2.11.0.26	AX3640S	2	1
ax3640sMulticastStormRecoverTrap	1.3.6.1.4.1.21839.1.2.11.0.27	AX3640S	2	1
ax3640sUnicastStormRecoverTrap	1.3.6.1.4.1.21839.1.2.11.0.28	AX3640S	2	1
ax3640sEfmoamUdldPortInactivateTrap	1.3.6.1.4.1.21839.1.2.11.0.29	AX3640S	2	1
ax3640sEfmoamLoopDetectPortInactivateTrap	1.3.6.1.4.1.21839.1.2.11.0.30	AX3640S	2	1
ax3640sUlrChangeSecondary	1.3.6.1.4.1.21839.1.2.11.0.87	AX3640S	0	1
ax3640sUlrChangePrimary	1.3.6.1.4.1.21839.1.2.11.0.88	AX3640S	0	1
ax3640sUlrActivePortDown	1.3.6.1.4.1.21839.1.2.11.0.89	AX3640S	2	1

Trap Name	OID	Switch Model	Severity	Priority
swFCPortScn	1.3.6.1.4.1.1588.2.1.1.1.0.3	Brocade FC	See swFCPorttScn section	
swEventTrap	1.3.6.1.4.1.1588.2.1.1.1.0.4	Brocade FC	See swEventTrap section	
swFabricWatch	1.3.6.1.4.1.1588.2.1.1.1.0.5	Brocade FC	1	1
swTrackChanges	1.3.6.1.4.1.1588.2.1.1.1.0.6	Brocade FC	0	1
ColdStart	1.3.6.1.6.3.1.1.5.1	Hitachi LAN	2	1
WarmStart	1.3.6.1.6.3.1.1.5.2	Hitachi LAN	2	1
LinkDown	1.3.6.1.6.3.1.1.5.3	Hitachi LAN	2	1
LinkUp	1.3.6.1.6.3.1.1.5.4	Hitachi LAN	2	1
AuthenticationFailure	1.3.6.1.6.3.1.1.5.5	Hitachi LAN	2	1
NewRoot	1.3.6.1.2.1.17.0.1	Hitachi LAN	2	1
TopologyChange	1.3.6.1.2.1.17.0.2	Hitachi LAN	2	1
altSwDefGwUp	1.3.6.1.4.1.20301.2.5.7.0.2	Hitachi LAN	2	1
altSwDefGwDown	1.3.6.1.4.1.20301.2.5.7.0.3	Hitachi LAN	2	1
altSwDefGwInService	1.3.6.1.4.1.20301.2.5.7.0.4	Hitachi LAN	2	1
altSwDefGwNotInService	1.3.6.1.4.1.20301.2.5.7.0.5	Hitachi LAN	2	1
altSwVrrpNewMaster	1.3.6.1.4.1.20301.2.5.7.0.16	Hitachi LAN	2	1
altSwVrrpNewBackup	1.3.6.1.4.1.20301.2.5.7.0.17	Hitachi LAN	2	1
altSwVrrpAuthFailure	1.3.6.1.4.1.20301.2.5.7.0.18	Hitachi LAN	2	1
altSwLoginFailure	1.3.6.1.4.1.20301.2.5.7.0.19	Hitachi LAN	2	1
altSwTempExceedThreshold	1.3.6.1.4.1.20301.2.5.7.0.22	Hitachi LAN	2	1
altSwValidLogin	1.3.6.1.4.1.20301.2.5.7.0.25	Hitachi LAN	0	1
altSwApplyComplete	1.3.6.1.4.1.20301.2.5.7.0.27	Hitachi LAN	0	1
altSwSaveComplete	1.3.6.1.4.1.20301.2.5.7.0.28	Hitachi LAN	0	1
altSwFwDownloadSucess	1.3.6.1.4.1.20301.2.5.7.0.29	Hitachi LAN	2	1
altSwFwDownloadFailure	1.3.6.1.4.1.20301.2.5.7.0.30	Hitachi LAN	2	1

Trap Name	OID	Switch Model	Severity	Priority
altSwStgNewRoot	1.3.6.1.4.1.20301.2.5.7.0.42	Hitachi LAN	2	1
altSwCistNewRoot	1.3.6.1.4.1.20301.2.5.7.0.43	Hitachi LAN	2	1
altSwStgTopologyChanged	1.3.6.1.4.1.20301.2.5.7.0.44	Hitachi LAN	2	1
altSwCistTopologyChanged	1.3.6.1.4.1.20301.2.5.7.0.45	Hitachi LAN	2	1
altSwHotlinksMasterUp	1.3.6.1.4.1.20301.2.5.7.0.46	Hitachi LAN	2	1
altSwHotlinksMasterDn	1.3.6.1.4.1.20301.2.5.7.0.47	Hitachi LAN	2	1
altSwHotlinksBackupUp	1.3.6.1.4.1.20301.2.5.7.0.48	Hitachi LAN	2	1
altSwHotlinksBackupDn	1.3.6.1.4.1.20301.2.5.7.0.49	Hitachi LAN	2	1
altSwHotlinksNone	1.3.6.1.4.1.20301.2.5.7.0.50	Hitachi LAN	2	1
altSwNtpNotServer	1.3.6.1.4.1.20301.2.5.7.0.61	Hitachi LAN	2	1
altSwNTPUpdateClock	1.3.6.1.4.1.20301.2.5.7.0.62	Hitachi LAN	2	1
altSwValidLogout	1.3.6.1.4.1.20301.2.5.7.0.63	Hitachi LAN	0	1
altSwStgBlockingState	1.3.6.1.4.1.20301.2.5.7.0.64	Hitachi LAN	2	1
altSwECMPGatewayUp	1.3.6.1.4.1.20301.2.5.7.0.65	Hitachi LAN	2	1
altSwECMPGatewayDown	1.3.6.1.4.1.20301.2.5.7.0.66	Hitachi LAN	2	1
altSwTeamingCtrlUp	1.3.6.1.4.1.20301.2.5.7.0.67	Hitachi LAN	2	1
altSwTeamingCtrlDown	1.3.6.1.4.1.20301.2.5.7.0.68	Hitachi LAN	2	1
altSwTeamingCtrlDownTearDownBlked	1.3.6.1.4.1.20301.2.5.7.0.69	Hitachi LAN	2	1
altSwTeamingCtrlError	1.3.6.1.4.1.20301.2.5.7.0.70	Hitachi LAN	2	1
altSwLACPPortBlocked	1.3.6.1.4.1.20301.2.5.7.0.71	Hitachi LAN	2	1
altSwLACPPortUnblocked	1.3.6.1.4.1.20301.2.5.7.0.72	Hitachi LAN	2	1
altVMGroupVMotion	1.3.6.1.4.1.20301.2.5.7.0.77	Hitachi LAN	2	1
altVMGroupVMOnline	1.3.6.1.4.1.20301.2.5.7.0.78	Hitachi LAN	2	1
altVMGroupVMVlanChange	1.3.6.1.4.1.20301.2.5.7.0.79	Hitachi LAN	2	1
altSwTempReturnThreshold	1.3.6.1.4.1.20301.2.5.7.0.95	Hitachi LAN	1	1

Trap Name	OID	Switch Model	Severity	Priority
altSwLFDPortErrdisabled	1.3.6.1.4.1.20301.2.5.7.0.103	Hitachi LAN	2	1
vmCheckSpoofedvm	1.3.6.1.4.1.20301.2.5.7.0.112	Hitachi LAN	2	1
altSwDefAdminDisable	1.3.6.1.4.1.20301.2.5.7.0.162	Hitachi LAN	2	1
altSwAcntStrngPswdNotMet	1.3.6.1.4.1.20301.2.5.7.0.163	Hitachi LAN	2	1
altSwAcntLocked	1.3.6.1.4.1.20301.2.5.7.0.164	Hitachi LAN	2	1
altSwAcntUnlocked	1.3.6.1.4.1.20301.2.5.7.0.165	Hitachi LAN	2	1

swFCPortScn

The **swFCPortScn** trap uses the conditions listed in the table below to categorize traps according to port states.

Variable	OID	Value	Port State	Severity	Priority
swFCPortOpStatus	1.3.6.1.4.1.1588.2.1.1.1.6.2.1.4.x (x : Port number(0-25) + 1)	0	Unknown	2	1
		1	Online	0	1
		2	Offline	2	1
		3	Testing	1	1
		4	Faulty	2	1

swEventTrap

The **swEventTrap** uses the following conditions listed in the table below to categorize traps according to event levels.

Variable	OID	Value	Port State	Severity	Priority
swEventLevel	1.3.6.1.4.1.1588.2.1.1.1.8.5.1.3	1	Critical	2	1
		2	Error	2	1
		3	Warning	1	1
		4	Info	0	1

Hitachi Server Service Monitoring

This chapter provides instructions for performing Hitachi Compute Connector Service Monitoring with the Hitachi Compute Adapter for Microsoft® System Center Operations Manager.

- □ Monitoring Setting Procedure
- □ Network Discovery

Monitoring Setting Procedure

By performing the following procedure in SCOM, the status of the Hitachi Compute Connector Service can be monitored. The status can be checked with any of these views:

- **Monitoring > Active Alerts**
- **Monitoring > Hitachi Compute Blade Systems > Alert Views > Connector Alerts**
- **Monitoring > Hitachi > Hitachi Compute Rack Systems > Alert Views > Connector Alerts**
- **Monitoring > Hitachi > Other Vendors > QuantaPlex > Alert Views > Connector Alerts**

When the Hitachi Compute Connector Service stops running, an alert will appear as shown below:

When the Resolution State is "New", the Hitachi Storage Connector Service stops running.

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems
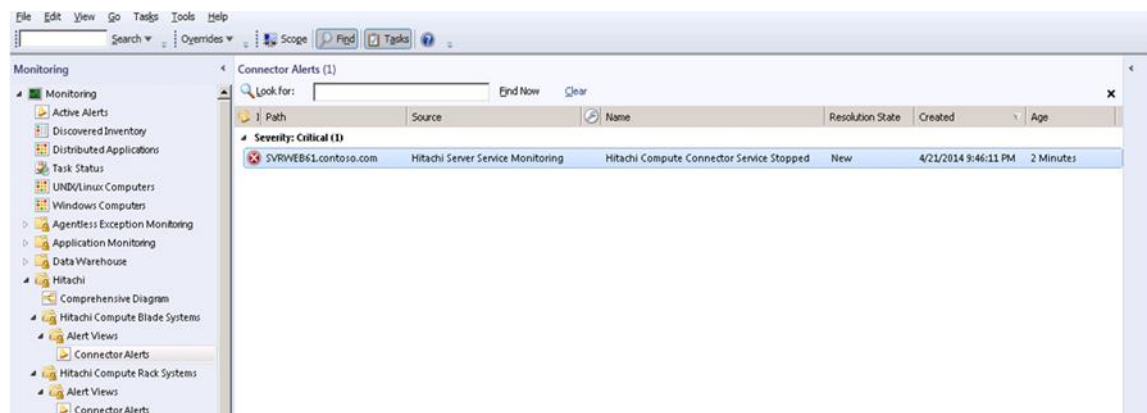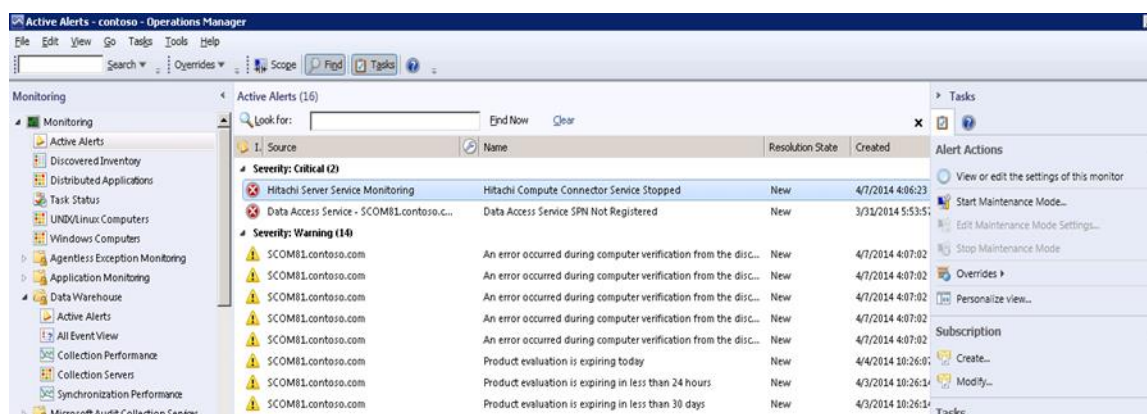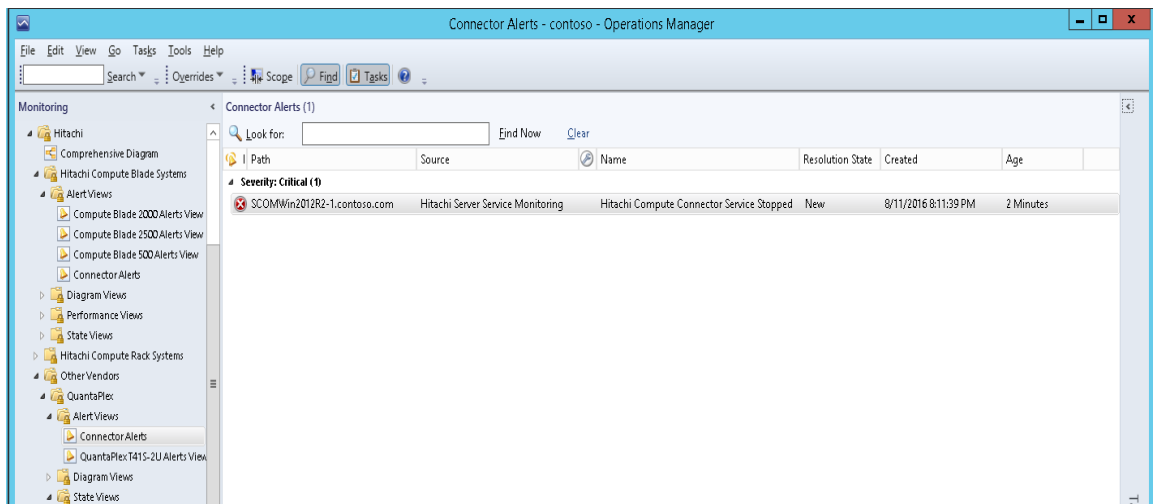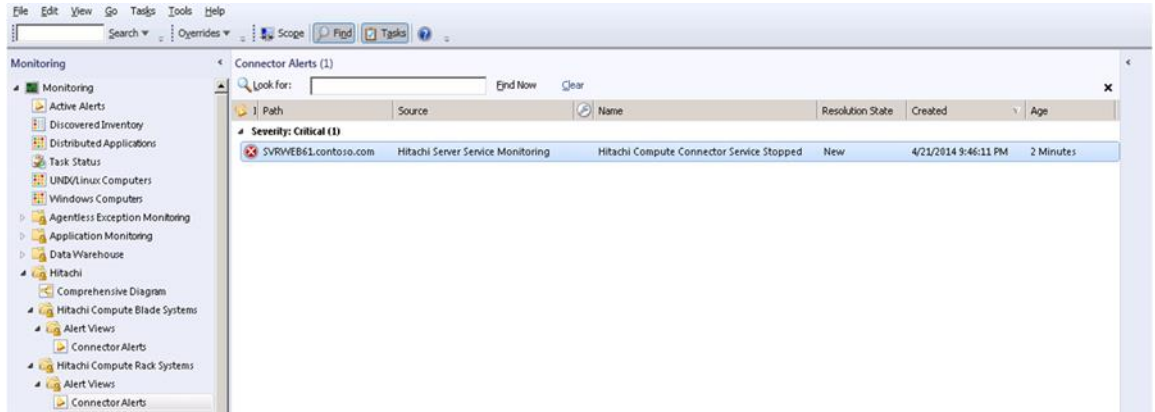
Network Discovery

If the Hitachi Compute Connector Service and SCOM are running on different servers, execute the following procedure:

1. From the SCOM Administration screen, select **Device Management > Agentless Managed**. Right-click on **Agentless Managed**, and select **Discovery Wizard**.

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User's Guide for Compute Systems
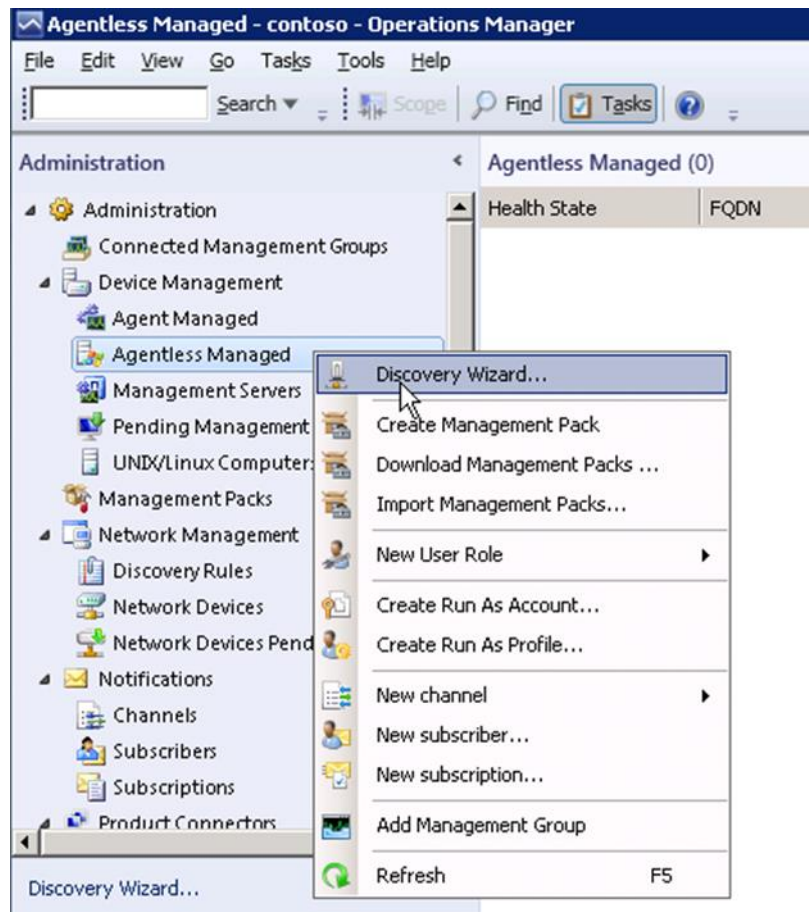
2. Select **Windows computers**.
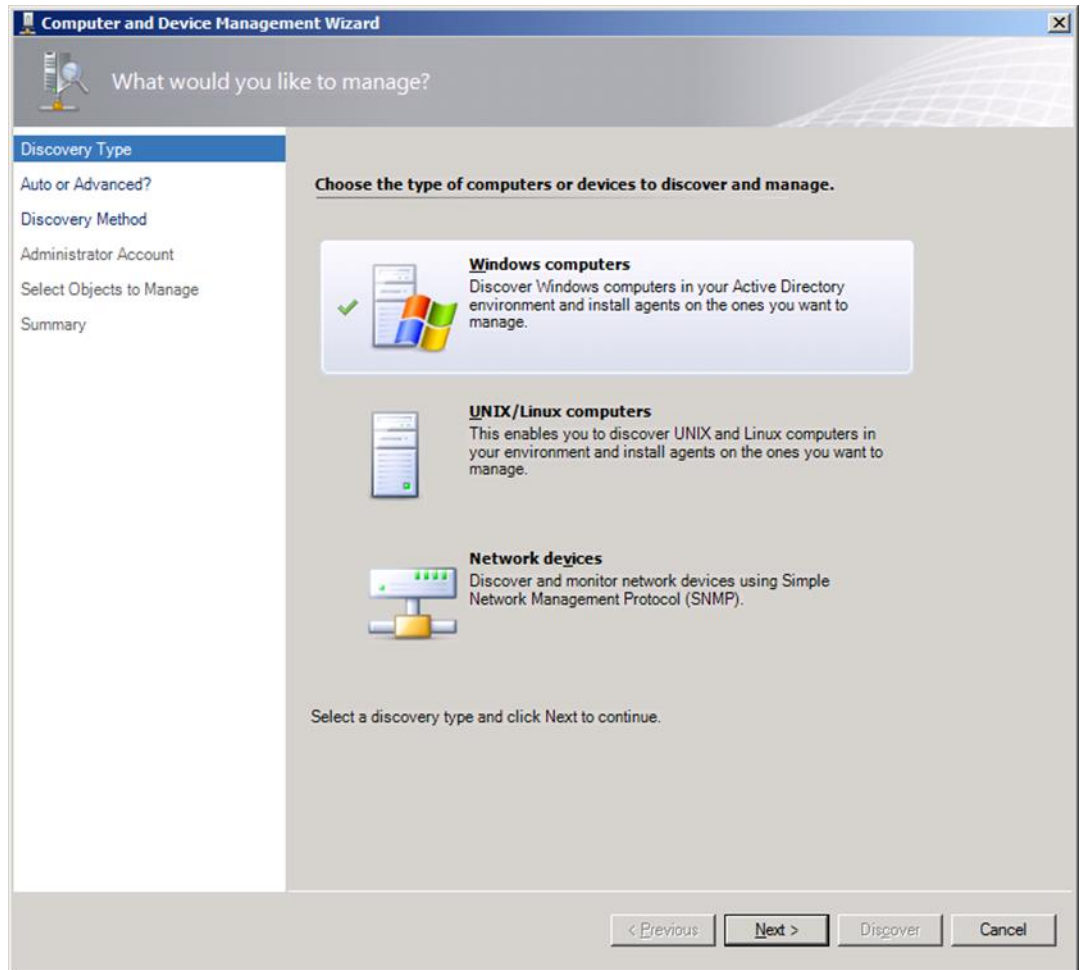
3. Select **Automatic computer discovery**.

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User's Guide for Compute Systems
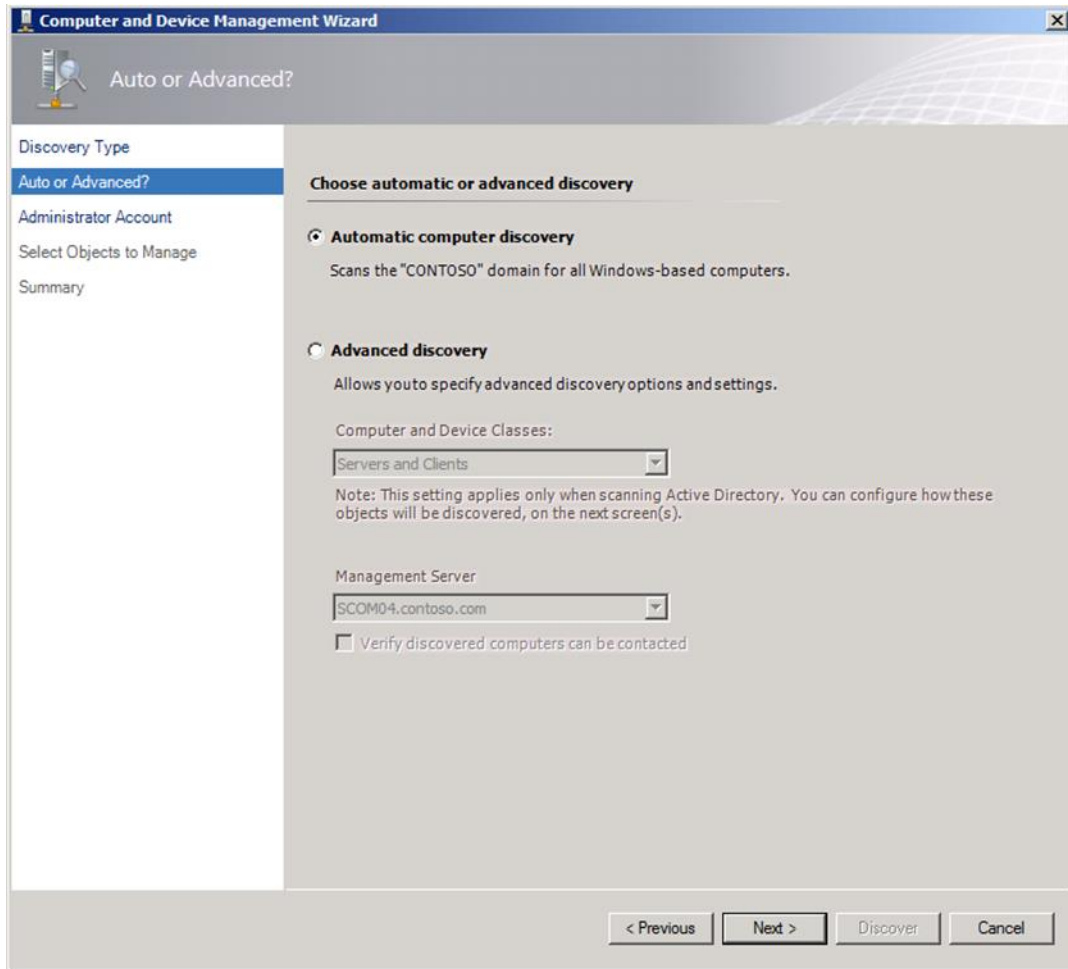
4. Select **Other user account**. Enter an account with domain Administrator rights on the monitored computers; click Discover.
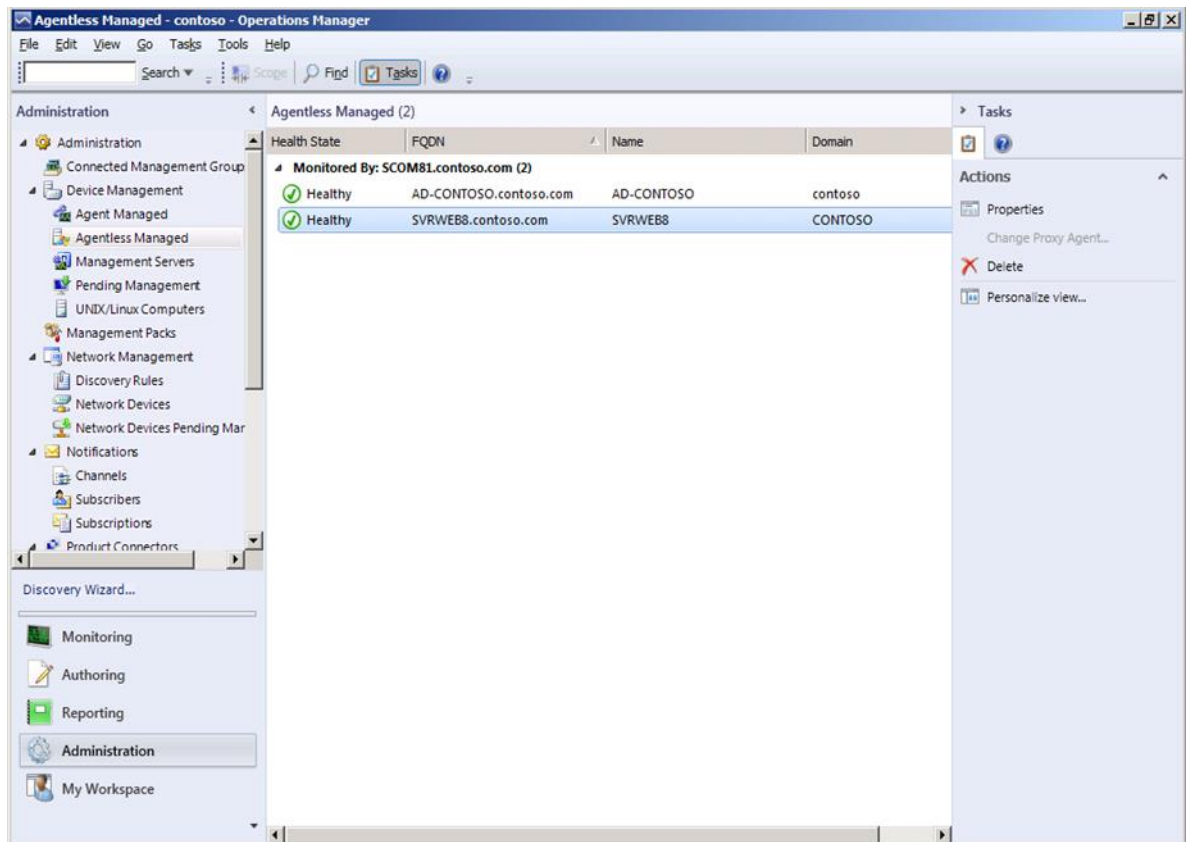
5. Select the devices you want to manage. Select **Agentless in Management Mode** and click **Next**.
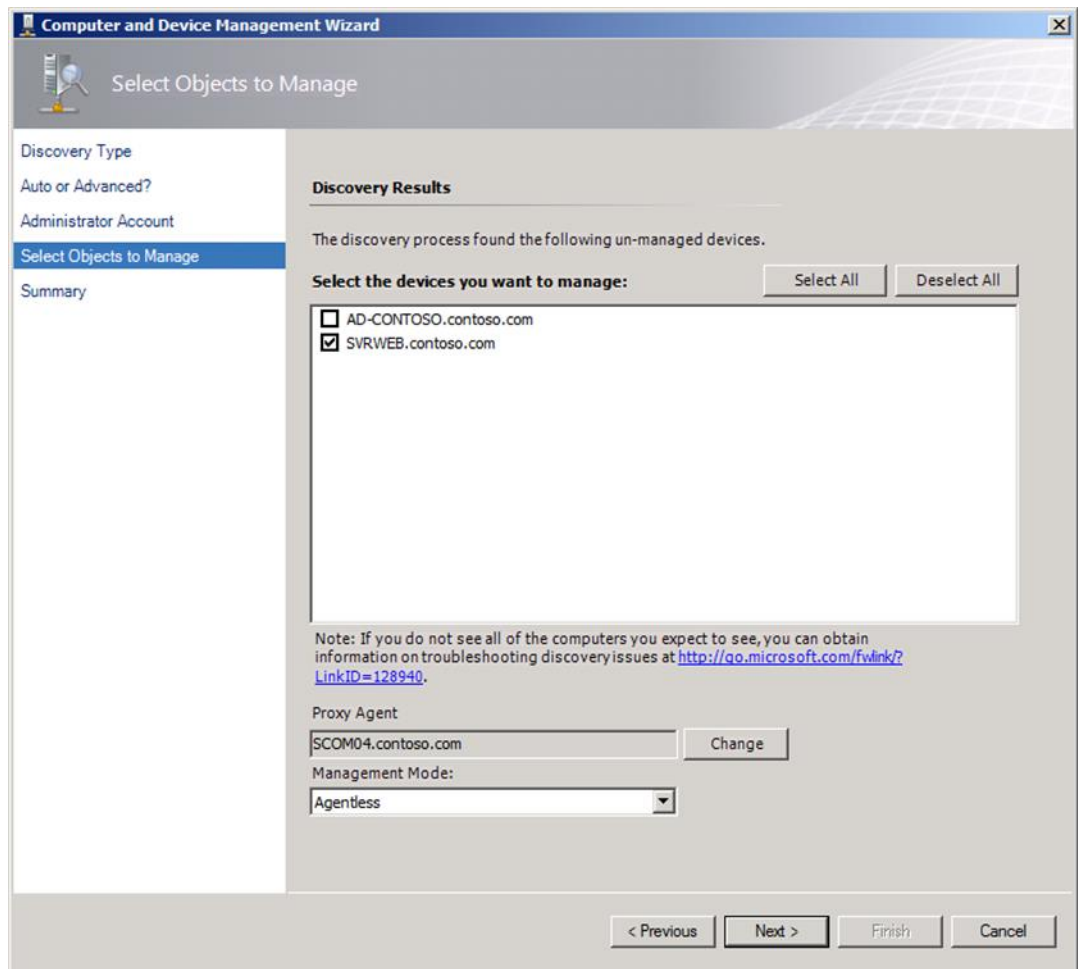
6. Select **Finish**.
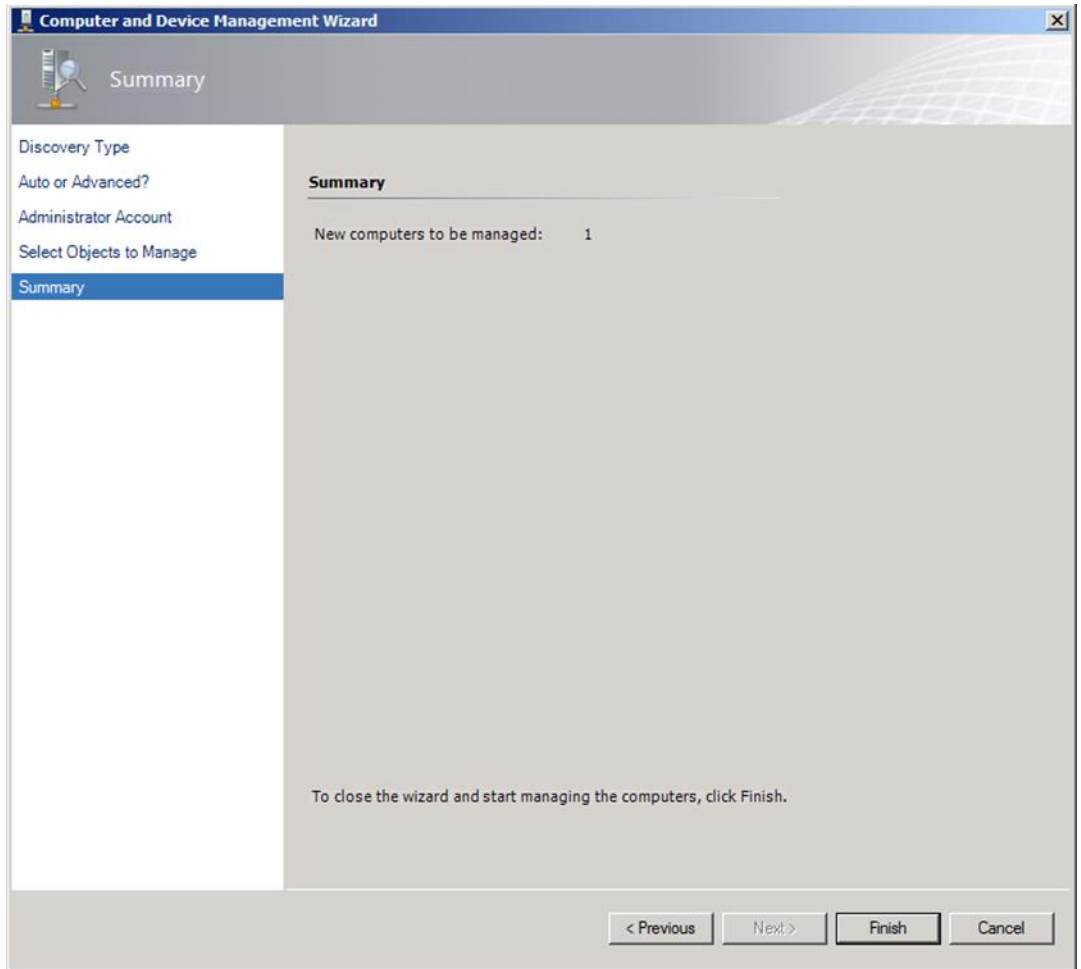
7. The status of the Connector can be checked by selecting
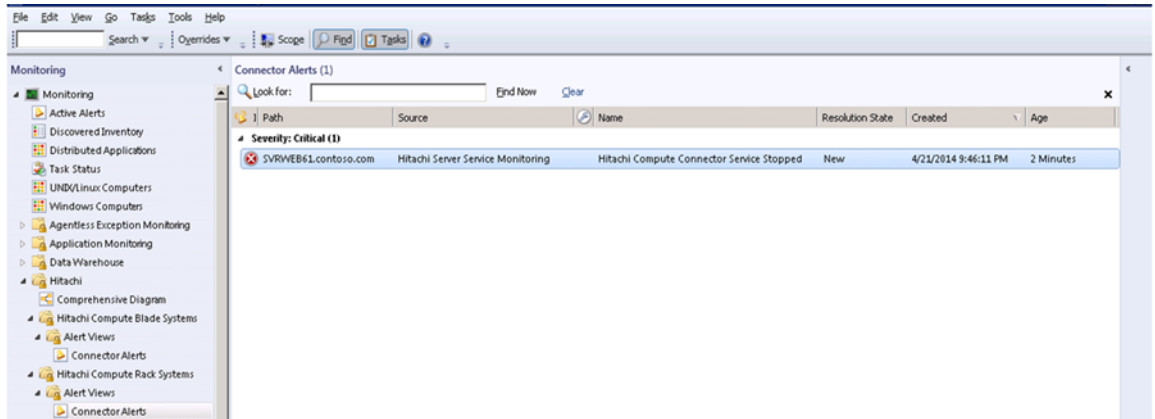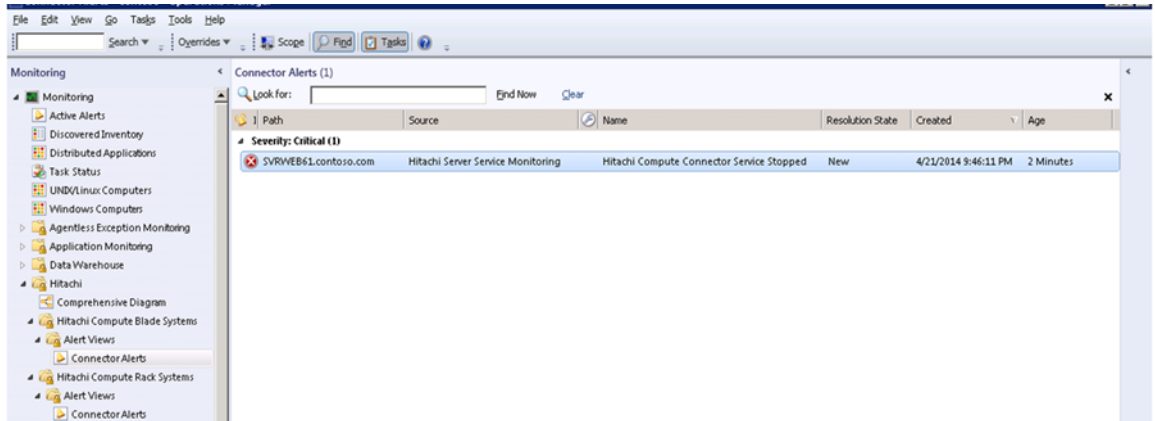   **Administration > Device Management > Agentless Managed**.
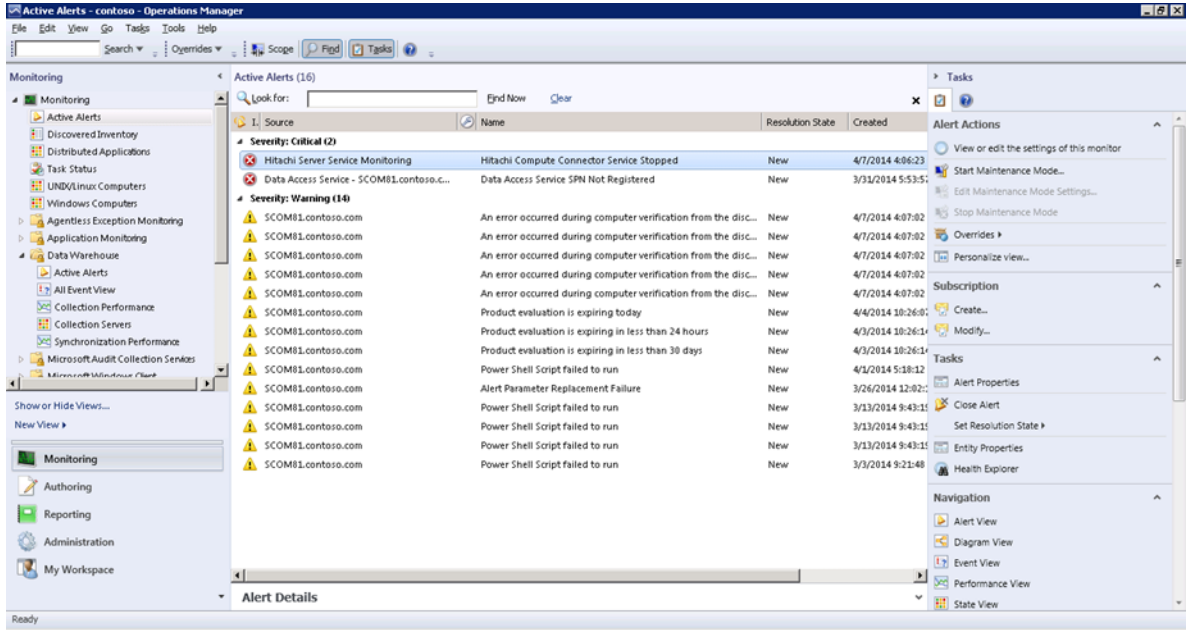

8. If the Connector service stops running, an alert will appear in these three views:

   Monitoring > Active Alerts

   Monitoring > Hitachi Compute Blade Systems > Alert Views > Connector Alerts

   Monitoring > Hitachi > Hitachi Compute Rack Systems > Alert Views > Connector Alerts

   Monitoring > Hitachi > Other Vendors > QuantaPlex > Alert Views > Connector Alerts

Hitachi Server Service Monitoring

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager
User's Guide for Compute Systems
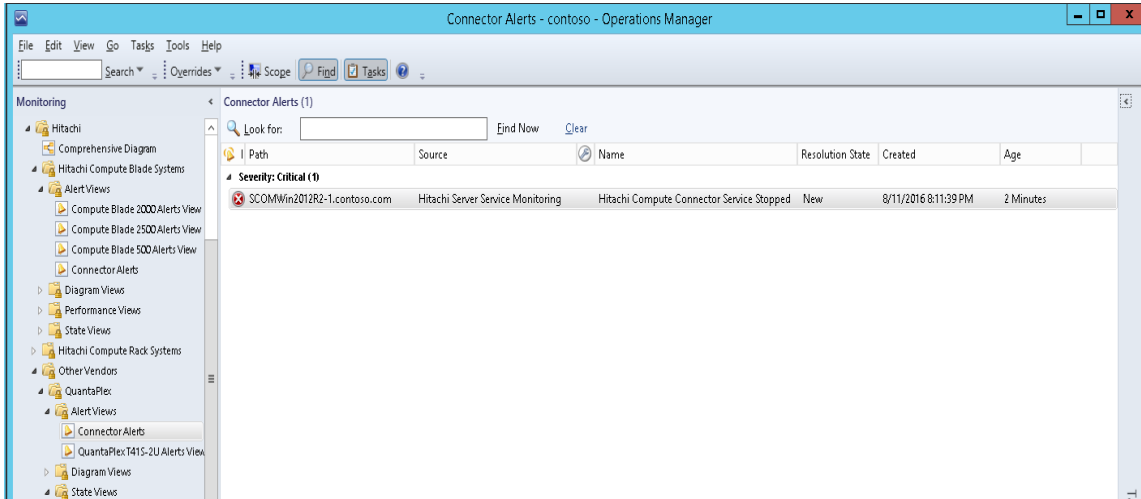
Glossary

This chapter defines the special terms, acronyms, and abbreviations used in this document. Click the desired letter below to display the glossary entries that start with that letter.

| # | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

A

AIX

Advanced Interactive eXecutive, a series of proprietary UNIX operating systems by IBM

B

BIOS

Basic Input Output System

BMC

Baseboard Management Controller

C

CB2000

A model belonging to the Hitachi Compute Blade family.

CB2500

A model belonging to the Hitachi Compute Blade family.

CB500

A model belonging to the Hitachi Compute Blade family.

CLI

Command Line Interface

Compute Rack 200

The Hitachi Compute Rack 200 family. When Compute Rack 200 is specified in this document, it includes both the Compute Rack 210 and the Compute Rack 220.

CPU

Central Processing Unit

CR

Compute Rack

D

DNS

Domain Name System

E

EFI

Extensible Firmware Interface

F

FC

Fibre Channel

FICON

Fibre Connection by IBM

FRU

Field Replaceable Unit

G

GUI

Graphical User Interface

GUID

Globally Unique Identifier

H

HCCC

An MMC snap-in which enables the Hitachi Compute Adapter for Microsoft® System Center Operations Manager to be managed.

HCCS

The Connector service associated with the Hitachi Compute Adapter for Microsoft® System Center Operations Manager.

HCSM

Hitachi Compute Systems Manager manages Hitachi Compute Blades and Hitachi Compute Rack 200s in an integrated manner.

HDS

Hitachi Data Systems Corporation

Hitachi Compute Management Packs

All SCOM Management Packs included in the Hitachi Compute Adapter for Microsoft® System Center Operations Manager, including Hitachi Compute Base Management Pack, Hitachi Compute Blade 2000 Management Pack, Hitachi Compute Blade 500 Management Pack, Hitachi Compute Blade 2500 Management Pack, Hitachi Compute Rack 200 Management Pack, Hitachi Compute Switch Management Pack, and Hitachi QuantaPlex T41S-2U Management Pack.

Hitachi Compute Systems

This refers to the Hitachi Compute Blade and Compute Rack 200 families.

Hitachi Compute Systems Management Packs

A collective term for the SCOM Management Packs related to Hitachi servers, including Hitachi Compute Base Management Pack, Hitachi Compute Blade 2000 Management Pack, Hitachi Compute Blade 2500 Management Pack, Hitachi Compute Blade 500 Management Pack and Hitachi Compute Rack 200 Management Pack.

Hitachi Compute Switch

This refers to the FC and LAN switch modules which can be installed in Hitachi Compute Blade chassis.

Hitachi Compute Switch Management Packs

This refers to SCOM Management Packs related to Hitachi Compute Switches, including Hitachi Compute Base Management Pack and Hitachi Compute Switch Management Pack.

I

ICMP

Internet Control Message Protocol

IP

Internet Protocol

IP Address

Internet Protocol Address

IPMI

Intelligent Platform Management Interface: A standard interface that monitors hardware.

I/O Expansion Unit

This is a device used to expand I/O in a server chassis. An I/O Expansion Unit can be connected to a Hitachi Compute Blade 2000.

L

LAN

Local Area Network

LED

Light Emitting Diode

LOM

Lights Out Management—a remote server management system

LP

Logical Partitioning

M

MAC Address

Media Access Control access

Management

Management includes discovery, initialization, configuration, provisioning, health and performance monitoring, alarms and alerts, and other system management functions.

Management IP address

IP address assigned to the management LAN for the external connection. Management IP address is used to manage the device.

Management Module

These are components which attach to a Compute Blade chassis to provide management and remote console functionality.

MIB

Management information base

MMC

Microsoft Management Console

MP

Management Pack

N

NAS

Network-Attached Storage

O

OID

Object Identifier

P

PCI Card

PCI Card mounted on Motherboard

PCI Riser

PCI module which expands I/O in a sever chassis. PCI Express Card is installed in a PCI module. PCI module can be installed in Hitachi Compute Blade 2000.

R

RPM

Rotations Per Minute

S

SCOM

System Center Operations Manager

SMASH

A standard server hardware management interface

SNMP

Simple Network Management Protocol

SQL

Structured Query Language

SSL

Secure Sockets Layer. A standard security technology for establishing an encrypted link between a server and a client.

W

WMI

Windows Management Instrumentation

WS-Management

A Web service for device management

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