



# Installing and Configuring Hitachi Compute Blade 2000, Hitachi Adaptable Modular Storage 2500, and Exchange 2010 Management Packs to work with Microsoft Operations Manager 2007 R2

Implementation Guide

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*December 2011*



## Feedback

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# Installing and Configuring Hitachi Compute Blade 2000, Hitachi Adaptable Modular Storage 2500 and Exchange 2010 Management Packs to work with Microsoft Operations Manager 2007 R2

## Implementation Guide

Deploying Microsoft Exchange 2010 on different hardware types gives you challenges to monitor your servers, storage, hypervisors, network devices, and applications. You can discover and monitor the following hardware and software applications from a single centralized console using Microsoft System Center Operations Manager 2007 R2 (SCOM):

- Hitachi Compute Blade 2000
- Hitachi Adaptable Modular Storage 2500
- Microsoft Windows Server 2008
- Microsoft Exchange 2010

This implementation guide is written so you can use Operations Manager 2007 R2 to monitor the Hitachi Compute Blade 2000, Hitachi Adaptable Modular Storage 2500, Microsoft Windows, and Microsoft Exchange environment.

It assumes familiarity with Microsoft Windows Server 2008 R2, Microsoft Exchange 2010, and Microsoft Systems Center Operations Manager 2007 R2.

## Solution Components

This solution requires the use of the hardware components found in Table 1.

**Table 1. Hardware Components**

<i>Hardware Component</i>
Hitachi Compute Blade 2000
Hitachi Adaptable Modular Storage 2500

This solution requires the use of the software components found in Table 2.

**Table 2. Software Components**

<i>Software Component</i>	<i>Version</i>
Microsoft Windows Server	2008
Microsoft Exchange	2010
Microsoft System Center Operations Manager	2007 R2
Microsoft SQL Server	2008 Do not use 2008 R2. This solution does not support this version.

## Solution Implementation

Install and update the software components in this order:

1. Microsoft SQL Server 2008
2. Microsoft System Center Operations Manager 2007 R2
3. Hitachi Compute Blade 2000 management packs
4. Hitachi storage management pack

### Install and Update Microsoft SQL Server 2008

This solution requires installing and updating Microsoft SQL Server 2008 prior to installing Microsoft System Center Operations Manager 2007 R2.

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**Note**— Do not use SQL Server 2008 R2. It is not supported by System Center Operations Manager. Only use SQL Server 2008.

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Follow these steps to install and update SQL.

1. Insert the **SQL Server Enterprise 2008** installation media. From the root folder, click **setup.exe**.
2. Click **Installation** from the area on the left. This opens the installation options.
3. Click **New SQL Server stand-alone installation or add features to an existing installation**, as shown in Figure 1.



**Figure 1**

4. Follow the installation wizard to complete the installation.
5. Upgrade the SQL Server 2008 installation to **SP2**.
  - Download **SQLServer2008SP2-KB2285068-x64-ENU.exe** from [Microsoft SQL Server 2008 Service Pack 2 \(SP2\) is now available for download](#). Follow the instructions on this page to install the update.
6. **Reboot** the host.

## Install Microsoft System Center Operations Manager 2007 R2

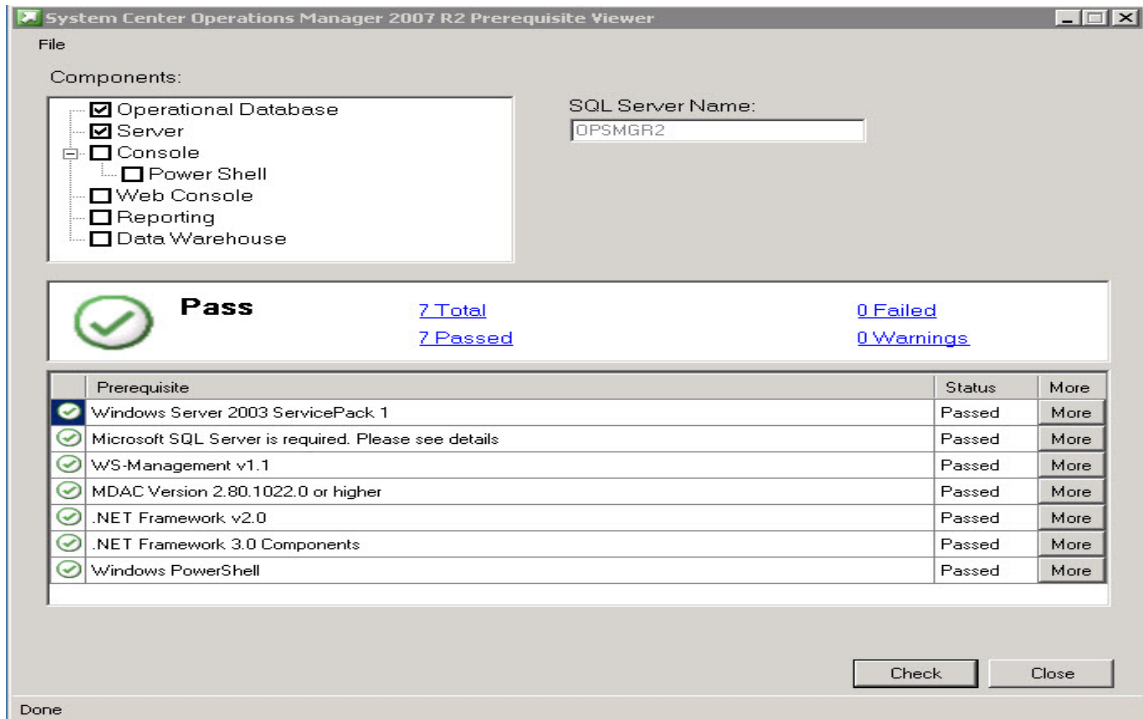
This solution requires installing and updating Microsoft System Center Operations Manager prior to installing management packs.

You have two installation options. Choose one of these options:

- **Option 1** — Install SQL Server and **System Center Operations Manager** on the same server. This makes it easier to configure and manage.
- **Option 2**—Install SQL Server on server 1 and install System Center Operations Manager on server 2. This improves performance for the SQL backend.

Follow the steps listed below to install and update Operations Manager.

1. Insert the **Operations Manager 2007 R2** installation media. From the root folder, click **setup.exe**.
2. Click **Check Prerequisites**. This launches the **System Center Operations Manager 2007 R2 Prerequisite Viewer** dialog box.
3. Select the **Operational Database** and **Server** check boxes and click **Check**. Verify that the prerequisites have passed, as shown in Figure 2.
  - If the prerequisites do not pass, click **More** to find out what to do.
  - When finished, click **Close**.



**Figure 2**

4. On the start screen, click Install Operations Manager 2007 R2.
5. Follow the installation wizard to complete the install.
6. Upgrade System Center Operations Manager to Cumulative Update 4 (CU4).
7. Reboot the host.

### *Add Exchange Servers as Agent-managed Computers*

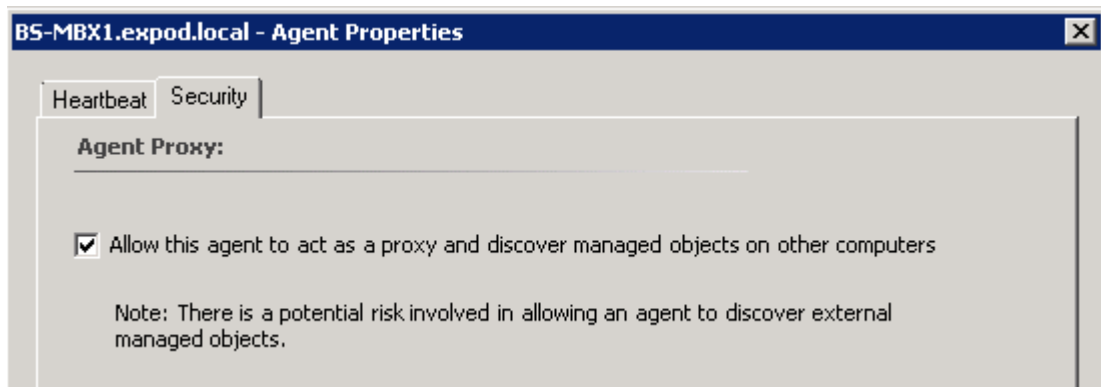
Do the following to add Microsoft Exchange Servers as agent-managed computers to Microsoft System Center Operations Manager:

1. Click **Operations Console** from the Start menu.
2. Click the **Administration** pane.
3. Find Exchange servers to add to System Center Operations Manager.
  - (1) Click the Discovery Wizard.
  - (2) Select **Windows computers** and then click **Next**.
  - (3) Select **Advanced discovery server only** and then click **Next**.
  - (4) Select **Browse for** and then click **Browse**.

- (5) On the **Select Computer** dialog box, type the first few characters of the server name.
- (6) Click **Check Names**.
- (7) Select the Exchange servers and then click **OK**.

For the solution, six mailbox servers, six client access, and hub transport servers were selected.

4. Click **Use selected Management Server Action Account**.
5. Click Discover to begin the discovery process. Depending on your network, this can take anywhere from 2 minutes to 4 minutes.
6. On the **Administration** pane, under **Device Management**, click **Agent Managed**.
7. Update each mailbox server.
  - (1) Right-click the server and then click **Properties**.
  - (2) Click the **Security** tab on the **Agent Properties** dialog box, and then select **Allow this agent to act as a proxy and discovery managed objects on other computers**, as shown in Figure 3.
  - (3) Accept the changes and close the dialog box.



**Figure 3**

### *Update the Generic Library Management Pack*

The generic library management pack is available after the Cumulative Update 4 (CU4) is upgraded. This is required before you can import the Windows and Exchange management packs successfully.

To update the generic library management pack, do the following:

1. On the **Administration** pane, right click on **Management Packs**, and then click **Import Management Pack**.

2. Click **Add from Disk** and browse to the following directory:

**C:\Program Files (x86)\System Center 2007 R2 Hotfix Utility\KB2449679\Management Packs and select Microsoft.SystemCenter.DataWarehouse.Report.Library.mp.**

3. To install the management pack, click **Install**.

4. Verify the successful completion of the installation by going to the management pack windows under the **Administration** pane.
  - Each management pack window shows the current installed version number. The management pack name has the current date and updated version number if it installed successfully.

### *Install Windows Server Management Packs*

Download and extract the Windows Server 2000, 2003 and 2008 management packs prior to importing it. Management packs for all three operating systems are required the monitoring to work correctly.

To install the management packs, do the following:

1. On the Administration pane, right-click **Management Packs**, and then click **Import Management Pack**.
2. Click **Add from Disk** and open the following:  
**C:\Program Files (x86)\System Center Management Packs\Windows Server Base OS System Center Operations Manager 2007 MP**
3. Select the following management packs:
  - Microsoft.Windows.Server.2000.mp
  - Microsoft.Windows.Server.2003.mp
  - Microsoft.Windows.Server.2008.Discovery.mp
  - Microsoft.Windows.Server.2008.Monitoring.mp
  - Microsoft.Windows.Server.Library.mp
4. To install the management packs, click **Install**.
5. Verify the successful completion of the installation by going to the management pack windows under the **Administration** pane.
  - Each management pack window shows the current installed version number. The management pack name has the current date and updated version number if it installed successfully.

### *Install the Exchange 2010 Management Pack*

Download and extract the Exchange 2010 management pack from the [Microsoft System Center Marketplace](#) before importing it.

Do the following to install the Exchange 2010 management pack:

1. On the **Administration** pane, right-click the **Management Packs**, and then click **Import Management Pack**.
2. Click **Add from Disk** and open the following:  
**C:\Program Files\System Center Management Packs**
3. Click and open **Microsoft.Exchange.2010.mp**.
4. To install the management pack, click **Install**.

5. Verify the completion of the installation by going to the management pack windows under the **Administration** pane.
  - Each management pack window shows the current installed version number. The management pack name has the current date and updated version number if it installed successfully.

## Hitachi Compute Blade 2000 Management Packs

The Hitachi Compute Blade 2000 management pack installs and integrates with Microsoft System Center Operations Manager 2007 R2 to discover and monitor the Hitachi Compute Blade 2000 chassis, blades, and components.

### *Configure SNMP Service*

This solution requires configuring SNMP service and the blade chassis prior to installing the management packs.

Follow the steps listed below to install and configure SNMP service.

1. On the Operations Manager server, install **Windows SNMP Service** using these Power Shell commands in **C:\Windows\system32**, as in Figure 4:
  - (1) `Import-Module servermanager`
  - (2) `Add-WindowsFeature SNMP-Service`



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2009 Microsoft Corporation. All rights reserved.

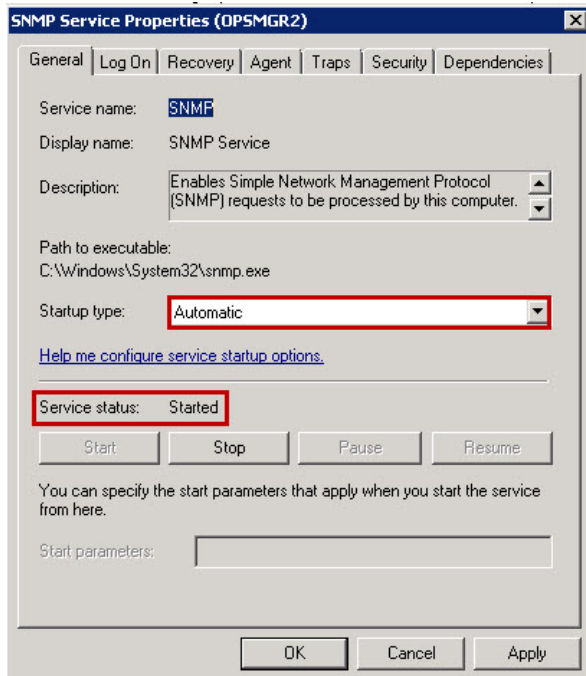
PS C:\Windows\system32> Import-Module servermanager
PS C:\Windows\system32> Add-WindowsFeature SNMP-Service

Success Restart Needed Exit Code Feature Result
-----
True      No                Success    <SNMP Service>

PS C:\Windows\system32> _
```

Figure 4

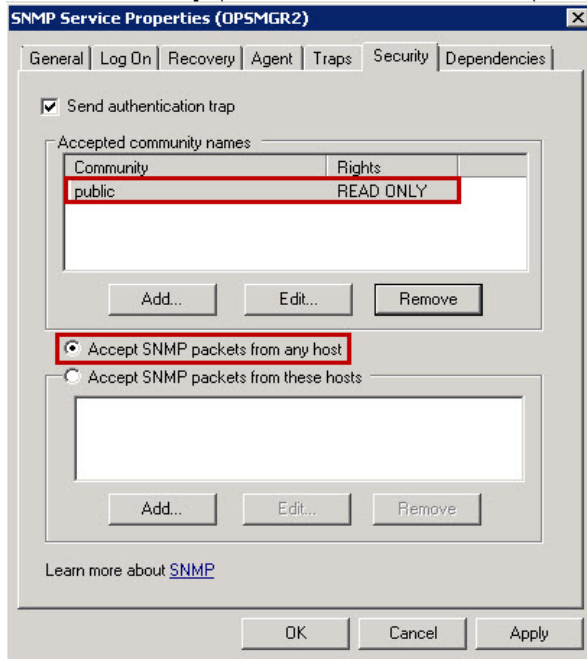
2. Verify by going to **Services** in **Server Manager** and see if **SNMP service** is there.
3. From **Services** in **Server Manager**, double-click **SNMP service** to open it.
4. On the **General** tab, in the **Startup type** list, click **Automatic**. Click **Start**. See Figure 5.



**Figure 5**

5. On the **Security** tab, do the following:
  - (1) In the **Accepted community names** area, to add the public community string, click **Add**.
  - (2) Click the **Accept SNMP packets from any host** option.
  - (3) Click **Apply** and then click **OK**.

See Figure 6. Clicking OK closes the **SNMP Service Properties** dialog box.



**Figure 6**

6. Log on to **SVP** on the chassis using a web browser.

The SVP is known also as the management module on the chassis. Connect to **SVP 0**, the default.

7. Change the SNMP settings.

- (1) Under **Coordinated setting**, click **SNMP** settings.

- (2) Click **Edit**.

- (3) On the **SNMP trap function** list, enable the service by clicking **Enable**.

- (4) In the **IP address/hostname** box, type the IP address of the Operations Manager server.

- (5) In the **Community Name** box, type **public**.

- (6) Click **Confirm** and then click **Apply**.

See Figure 7.

Coordinated setting > SNMP settings

### SNMP settings

You can configure SNMP in this window.

#### The settings of SNMP Agent

List

The SNMP agent settings are as follows.

Detail description

SNMP trap function	Enable
System Contact Name	hds
System Location	sse
Port number	161
Trap level	All
SNMP version	v1/v2c
Engine ID string	-----
Engine ID	-----

Top of the page

#### The settings of SNMP Manager

List

This window displays the SNMP manager settings.

Detail description

Manager 0

SNMP version	v1/v2c
IP address / hostname	172.17.167.232
Port number	162
Community Name	public

Figure 7

### Import the Management Packs

To import the management packs, use the Operations Manager Management Pack Import Wizard. Download the management pack and the import wizard from [Hitachi Data System Technical Information Service Center Portal](#). Save these items to **C:\Program Files\System Center Management Packs** before starting.

To import the management packs, do the following:

1. On the Administration pane, right-click on **Management Packs**, and then click **Import Management Pack**.
2. In the **Import Management Packs** window, click **Add from disk**.
3. When a dialog box asks to search the online catalog for management pack dependencies, click **No**.
4. Import each management pack in the following order by selecting each file individually and clicking **Open**.
  - (1) Hitachi Compute Blade base management pack
  - (2) Hitachi Compute Blade SNMP library management pack
  - (3) Hitachi Compute Blade standard management pack
  - (4) Hitachi Compute Blade Windows Server standard management pack

5. Once all the management packs are displayed in the import list, click **Install**.
6. After importing all of the management packs, click **Close**.

After configuring the SNMP and management packs, the following components start to populate on the **Monitoring** pane of the SCOM Operations Console, as shown in Figure 8. Depending on the number of devices to be managed and the network configuration, discovery can take anywhere from 5 minutes to 10 minutes.

- Blade
- Chassis
- Fan
- Management Module
- Memory
- PCI Riser
- Power Supply
- Sensor
- Switch
- Windows Server

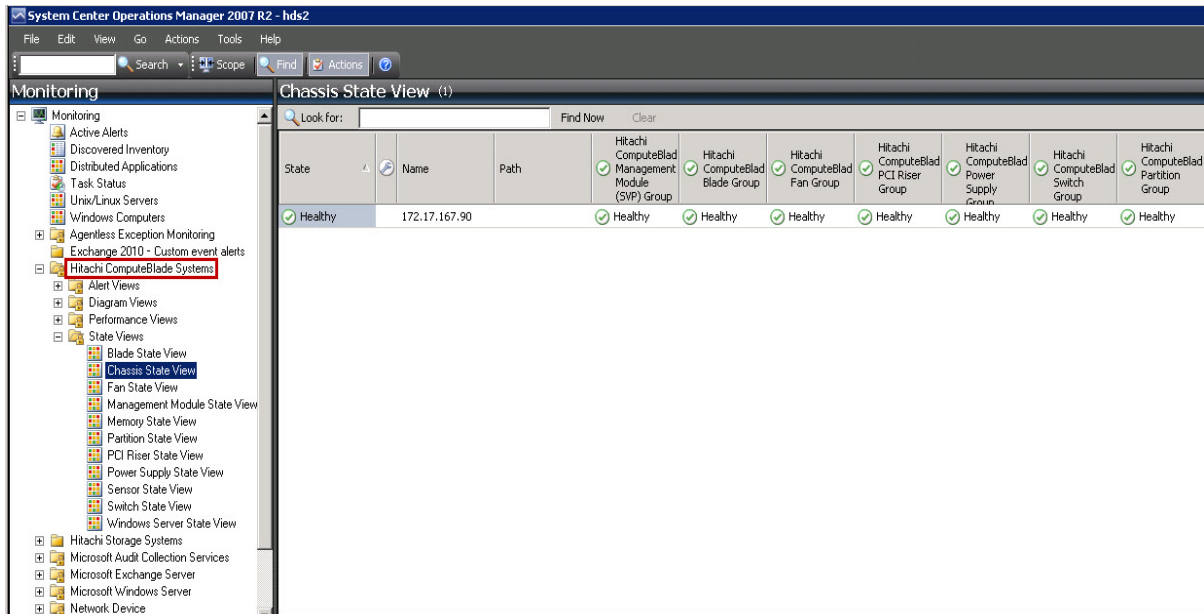


Figure 8

## Hitachi Storage Management Pack

Hitachi storage management pack is installed using Microsoft Windows Installer. Hitachi storage management pack connects and integrates with Microsoft System Center Operations Manager 2007 R2 to discover and monitor Hitachi Adaptable Modular Storage 2000.

### *Install the Management Pack*

The Hitachi Storage Management Pack for SCOM is available for download from the [Hitachi Data Systems Support Portal](#).

Follow the steps listed below to install and configure the Hitachi Storage Management Pack.

1. Load Hitachi Storage Management Pack for SCOM on the operations manager server to this location:

**C:\Program Files\System Center Management Packs**

2. Start the management pack installation by clicking the following file:

**Hi tachi - scommp- setup(01. 1. 10) - (x64) . msi**

3. Click **Next**.
4. Select the target installation folder. By default, install the binaries in the following default location:

**C:\Program Files\Hitachi\Hitachi Storage Management Pack for SCOM**

5. Start installation by clicking **Next**.
6. When the **Set Service Login** dialog box opens, type the user credentials.
7. When completing the installation, click **Close**.

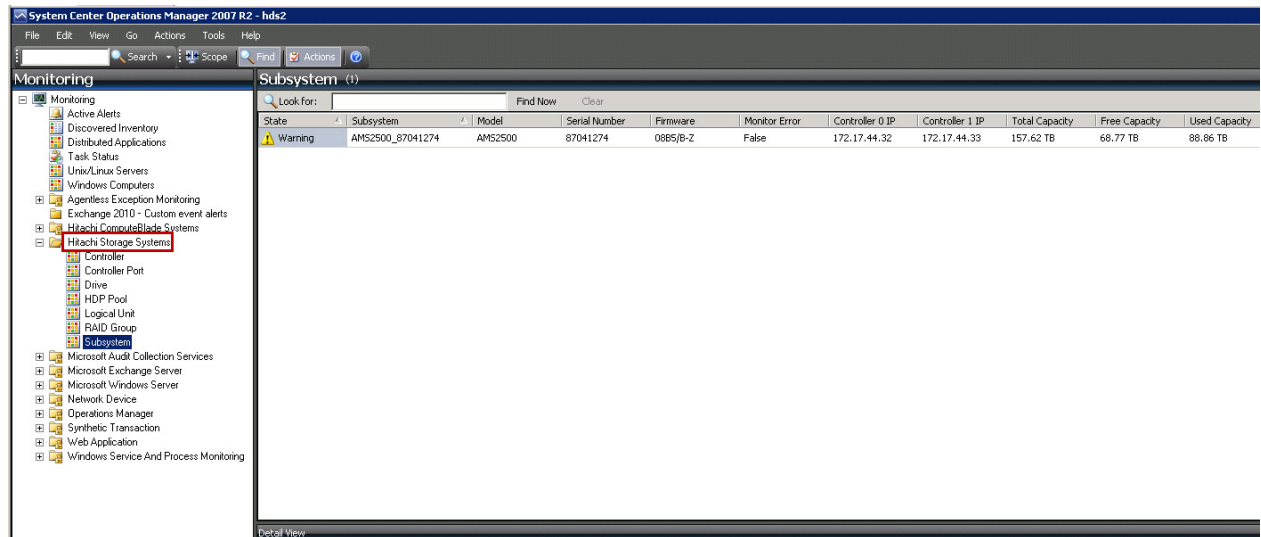
### *Configure Hitachi Storage Connector*

Do the following to configure Hitachi Storage Connector.

1. Click **Start**, and then click **All Programs**. From the program list, click **Hitachi**, click **Hitachi Storage Management Pack for SCOM**, and then click **Hitachi Storage Connector Configuration**.
2. Click **Subsystems** in the **Hitachi Storage Connector Configuration** area, and then click **Add Subsystem** from the **Actions** area.
3. For your Hitachi Adaptable Modular Storage 2500, type the IP address for Controller 0 and Controller 1. No authentication is needed.
4. To accept the entries, click **OK**.
5. On the **Connector Configuration** tab, type the following for the server address: **LOCALHOST**
6. Click **Start Service** from the Actions area. The **Connector service status** changes from *Not Running* to *Starting*, and then to *Running*. The **Connector service status** automatically updates.
7. To update the settings to the configuration file, click **Save Configuration**.

After configuring Hitachi Storage Connector, the following components start to populate on the Monitoring pane of the SCOM Operations Console, as shown in Figure 9. Depending on the number of devices to be managed and the network configuration, discovery can take anywhere from 5 minutes to 10 minutes.

- Controller
- Controller Port
- Drive
- HDP Pool
- Logical Unit
- RAID Group
- Subsystem



**Figure 9**

After installing and configuring all four sets of management packs, the alerts and events for the Hitachi Compute Blade 2000, Hitachi Adaptable Modular Storage 2500, Microsoft Windows, and Microsoft Exchange servers begin to populate within minutes.

By default, these management packs are designed to provide adequate hardware and software monitoring. They are pre-configured by Hitachi Data Systems and Microsoft. If you need to adjust the management pack objects to meet your environment service level agreement, create a new custom management pack to save the new configurations.

 **Hitachi Data Systems Corporation**

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