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# Contents

## Preface
- What Is In This Guide ......................................................... v
- Text Conventions ................................................................. vi
- Documentation Feedback ...................................................... vi
- Online Documentation ......................................................... vii

## Chapter 1: Introduction
- Supported Functionality ....................................................... 1
- MOM/SCOM Connector Differences ........................................ 2

## Chapter 2: Install and Run MOM Connector
- Overview of the MOM Connector ........................................... 3
- MOM Connector Software Requirements ................................... 3
- What the MOM Connector Does ............................................ 4
- MOM Terms ........................................................................... 5
- Add the .NET Framework Path .............................................. 5
- Install the MOM Connector .................................................... 6
  - Add the MOM Host Server to the Host Security on SpectroSERVER. 7
- Run the MOM Connector ....................................................... 7
- Verify that the MOM Connector is Running Properly .................. 7
- Create Models for MOM Agents ............................................ 8
- View SPECTRUM/MOM Alarms ............................................ 9
- MOM Connector and Fault Tolerant Environments ....................... 9
- Uninstall the MOM Connector ............................................. 9
- Troubleshoot MOM Connector ........................................... 10
  - MOM Connector Remains in the Windows Services Dialog After It Has Been Uninstalled 10

## Chapter 3: Configure MOM Event and Alert Rules
- Configure MOM Event Rules for Alert Forwarding ..................... 11
- Configure Alert Rules to Modify Alerts Generated by MOM Event Rules 12

## Chapter 4: Install and Run SCOM Connector
- Overview of the SCOM Connector ......................................... 15
- SCOM Connector Software Requirements ................................ 16
- What the SCOM Connector Does ......................................... 16
- SCOM Terms ........................................................................ 16
- Before Installing the SCOM Connector .................................. 17
  - User Access ..................................................................... 17
  - Host Access ..................................................................... 17
  - Communication Ports ...................................................... 17
  - Acknowledged Resolution State ....................................... 17
Chapter 5: Configure SCOM Connector
Set Up SCOM Connector Subscriptions ......................................................... 25
Create an Acknowledged Resolution State .................................................... 26

Chapter 6: Launch the Web Console
Launch the Web Console from the OneClick Console ..................................... 27
Configure the SCOM Connector to Provide HTTPS URLs ............................. 28
Change OneClick Web Context URL .............................................................. 28

Chapter 7: Supported SPECTRUM Events
SPECTRUM Events ......................................................................................... 29
Supported MOM Connector SPECTRUM Events .......................................... 29
Supported SCOM Connector SPECTRUM Events .......................................... 30

Index
Preface

This guide is intended for system administrators who want to integrate either their Microsoft Operations Manager (MOM) software or System Center Operations Manager (SCOM) software from Microsoft with SPECTRUM.

What Is In This Guide

This guide contains the following chapters:

- **Chapter 1: Introduction** introduces basic SPECTRUM/MOM and SPECTRUM/SCOM integration concepts.
- **Chapter 2: Install and Run MOM Connector** describes the SPECTRUM/Microsoft Operations Manager (MOM) integration and explains how to model MOM components in your network with SPECTRUM.
- **Chapter 3: Configure MOM Event and Alert Rules** explains how to configure alert forwarding for the SPECTRUM/MOM integration.
- **Chapter 4: Install and Run SCOM Connector** describes the SPECTRUM/System Center Operations Manager (SCOM) integration and explains how to model SCOM components in your network with SPECTRUM.
- **Chapter 5: Configure SCOM Connector** explains how to configure alert forwarding for the SPECTRUM/SCOM integration.
- **Chapter 6: Launch the Web Console** describes how to launch the MOM or SCOM Web Console from the OneClick Console.
- **Chapter 7: Supported SPECTRUM Events** lists the SPECTRUM events that are generated based on alerts received from MOM- or SCOM-managed hosts.
## Text Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Element</th>
<th>Convention Used</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td><em>Code</em> format and <em>Italic</em> in angle brackets (<em>&lt;&gt;</em>)</td>
<td>Type the following: DISPLAY=&lt;workstation name&gt;:0.0 export display</td>
</tr>
<tr>
<td>(You supply a value for the variable.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The directory where you installed SPECTRUM</td>
<td>&lt;$SPECROOT&gt;</td>
<td>Navigate to: &lt;$SPECROOT&gt;/app-defaults</td>
</tr>
<tr>
<td>(You supply a value for the variable.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linux, Solaris, and Windows directory paths</td>
<td>Unless otherwise noted, directory paths are common to all operating systems, with the exception that slashes (/) should be used in Linux and Solaris paths, and backslashes () should be used in Windows paths.</td>
<td>&lt;$SPECROOT&gt;/app-defaults on Linux and Solaris is equivalent to &lt;$SPECROOT&gt;\app-defaults on Windows.</td>
</tr>
<tr>
<td>On-screen text</td>
<td><em>Code</em> format</td>
<td>The following line displays: path=&quot;/audit&quot;</td>
</tr>
<tr>
<td>User-typed text</td>
<td><em>Code</em> format</td>
<td>Type the following path name: C:\ABC\lib\db</td>
</tr>
</tbody>
</table>

## Documentation Feedback

To send feedback regarding SPECTRUM documentation, access the following web address:

http://supportconnectw.ca.com/public/ca_common_docs/docserver_email.asp

Thank you for helping us improve our documentation.
Online Documentation

SPECTRUM documentation is available online at the following address:

http://ca.com/support

Check this site for the latest updates and additions.
Chapter 1: Introduction

This guide describes how to integrate both the Microsoft Operations Manager 2005 (MOM) and the System Center Operations Manager 2007 (SCOM) with SPECTRUM.

- **MOM Connector**: This is a SPECTRUM executable that enables alert forwarding from MOM 2005 to SPECTRUM.
- **SCOM Connector**: This is a SPECTRUM executable that enables alert forwarding from SCOM 2007 to SPECTRUM.

**Supported Functionality**

The following functionality is supported by both the MOM Connector and the SCOM Connector:

- Extracting alerts from MOM or SCOM and creating alarms on the appropriate system models in SPECTRUM
- SPECTRUM alarms can be configured to display a URL that can launch to the appropriate alert in the MOM or SCOM web console
- Bidirectional alert/alarm clearing
- Bidirectional alert/alarm acknowledgment
The MOM Connector and the SCOM Connector are different in the following ways:

- The MOM Connector and the SCOM Connector handle alert/alarm acknowledgment differently. SCOM 2007 does not come with a resolution state for acknowledging an alert so you must create one manually. Once you have done so, you can configure the SCOM Connector to use that resolution state to synchronize the acknowledgment of alerts and alarms. By default, however, the SCOM Connector does not provide acknowledgment synchronization.

  **Note:** For more information about creating an Acknowledged resolution state, see [Create an Acknowledged Resolution State on page 26](#).

- The SCOM Connector can be deployed to almost any Windows host in your environment while the MOM Connector is restricted to running on the MOM server.

- The MOM configuration file is named ".momrc"; the SCOM configuration file is named ".scomrc." For details about working with the .momrc file, see [Install the MOM Connector on page 6](#). For details about working with the .scomrc file, see [Install the SCOM Connector on page 18](#).
Chapter 2: Install and Run MOM Connector

This chapter explains how to install, run, and model Microsoft Operations Manager (MOM) components in your network with SPECTRUM. It includes the following topics:

- Overview of the MOM Connector on page 3
- Add the .NET Framework Path on page 5
- Install the MOM Connector on page 6
- Verify that the MOM Connector is Running Properly on page 7
- Create Models for MOM Agents on page 8
- View SPECTRUM/MOM Alarms on page 9
- Uninstall the MOM Connector on page 9
- Troubleshoot MOM Connector on page 10

This chapter assumes the following:

- You have an installed and configured Microsoft Operations Manager 2005 Management Server.
- You are integrating your MOM environment with SPECTRUM network management software.

Overview of the MOM Connector

The MOM Connector is an application that synchronizes alarm data between SPECTRUM and Microsoft Operation Manager. The MOM Connector uses the SPECTRUM SSORB CORBA API to interface with SPECTRUM and the MOM Connector Framework (MCF) to interface with MOM.

MOM Connector Software Requirements

- SPECTRUM v8.1 or later.
- The MOM Connector only works with MOM 2005.
What the MOM Connector Does

In SPECTRUM you can monitor and respond to MOM-generated alert conditions by generating SPECTRUM events and alarms. You can also monitor the status of the MOM agents managed by the MOM application using SPECTRUM.

The MOM Connector provides the following:

- Creates new SPECTRUM alarms as a result of alerts being generated in MOM
- Clears SPECTRUM alarms when the resolution state of the corresponding MOM alert is set to "Resolved" (and vice versa)
- Acknowledges a SPECTRUM alarm when the resolution state of the corresponding MOM alert is set to "Acknowledged"

The following diagram illustrates the SPECTRUM/MOM architecture.
MOM Terms

The following terms are key to understanding SPECTRUM/MOM.

**Microsoft Operations Manager (MOM)**

Provides real-time events and alerts on the performance of Microsoft Windows servers and applications in your network.

**MOM Connector**

An application that synchronizes alarm data between SPECTRUM and Microsoft Operations Manager. The MOM Connector uses SPECTRUM’s SSORB CORBA API to interface with SPECTRUM. It uses MOM Connector Framework to interface with Microsoft Operations Manager.

**MOM Host Server**

Responsible for management tasks, such as event-based alert generation.

**MOM Agent**

Installed agent software that resides on a system managed by MOM. A MOM Agent collects system events and statistics.

**SPECTRUM Event**

An event that is generated based on alerts received from MOM-managed hosts.

Add the .NET Framework Path

You must add the path to the Microsoft .NET Framework to the PATH environment variable on the server running MOM. Verify that you have met the following prerequisites before adding the .NET path:

- Microsoft .NET Framework, Version 1.1 is installed on the MOM Server Host. See the documentation provided with MOM 2005 software or its support Web site for the most accurate requirements.
- You must know the path to the .NET Framework software.
To add the Microsoft .NET Framework path to the MOM server PATH environment variable

1. Open the Windows Control Panel.
2. Double-click the System icon.
   The System Properties dialog appears.
3. Click the Advanced tab.
4. Click Environment Variables.
5. Select the Path variable in the System variables table and then click Edit.
6. Add the .NET Framework path to the end of the value and then click OK to save your changes.

Install the MOM Connector

Use the following procedure to install the MOM Connector software:

To install the MOM Connector

1. Copy the <$SPECROOT>/MOMConnector directory to the MOM Server Host.
   
   Note: Once you install the SPECTRUM MOM Connector on the MOM Server Host, you cannot move the directory; select a destination directory that does not need to be moved. For example: C:\Program Files\MOMConnector.

2. On the MOM Server Host, rename the file momrc.example to .momrc.
3. Open the .momrc file with a text editor.
4. Change the ssHost entry to the name of the SpectroSERVER Host. For example, ssHost=MOM01.
5. Execute the following command from the MOMConnector directory on the MOM Server Host:
   
   SpectrumMomConnector.exe --install
   This command sets up the required registry entries used by the MOM Connector and installs the MOM Connector as a Windows Service.

   The Services dialog appears.
7. Double-click the Spectrum MOM Connector service.
8. Click the Logon tab and then click This Account.
9. Choose a valid SPECTRUM user account, for example, Administrator.
10. Type and confirm the password for the account.
11. Click OK to accept your changes.
Add the MOM Host Server to the Host Security on SpectroSERVER

You must add the MOM Host Server name to the Server List on your SpectroSERVER to allow the servers to communicate. Use the following procedure to add the MOM host to the SpectroSERVER’s host security list.

**To add the MOM Host Server to the host security on SpectroSERVER**

1. Open the SPECTRUM Control Panel.
2. Select Host Security in the Configure menu.
   The Host Security dialog appears.
3. Enter the MOM Host Server name in the text box under Server List.
4. Click Add to add the MOM Host Server name to the Server List.
5. Click OK to accept your changes and exit the Host Security dialog.

Run the MOM Connector

Use the following procedure to run the MOM Connector.

**To run the MOM Connector**

1. Open Control Panel and select Administrative Tools, Services.
   The Windows Services dialog appears.
2. Select the Spectrum MOM Connector service.
3. Select Start from the Action menu to start the service.

Verify that the MOM Connector is Running Properly

Use the following procedure to verify the MOM Connector is running properly.

**To verify that MOM Connector is running properly**

1. Open the MOM Administrator Console
2. From the tree in the left pane, click Console Root > Microsoft Operations Manager (hostname) > Administration > Product Connectors.
3. Verify that ‘SPECTRUM_Connector’ appears in the pane to the right.
Create Models for MOM Agents

Create Models for MOM Agents

This section explains how to model each of the MOM agent hosts on your network. To model a MOM agent, use the Create Model by IP option. SPECTRUM selects the host device model type that most accurately represents each MOM agent.

To create models for MOM Agents on the OneClick Console

1. Click the Topology tab.
2. Click the Create a new model by IP icon in the toolbar.
   The Create Model by IP Address dialog appears.
3. Enter the Network Address, Community Name, and Agent Port for SPECTRUM to use to communicate with MOM agents.
4. Click OK.
   SPECTRUM creates a model that represents the host device with the specified IP address.
5. Exit out of edit mode by clicking Save changes made to this view ( ) after OneClick creates the model.
   Note: If the model is not created successfully, verify that the information you entered in Step 3 is correct.
6. Select the new model in the Contents panel Topology view.
   The new model information is displayed in the Component Detail panel Information view.
7. Click set next to the label displaying the IP address to the right of the model icon in the Information view and type the host name of the MOM agent host.
   This value is case-insensitive.
8. Press Enter to set the name.
   The MOM Connector uses one of the MOM alert properties to identify which model should receive the SPECTRUM event that is generated.
9. Repeat Step 1 through Step 8 for each MOM agent host in your network.
View SPECTRUM/MOM Alarms

When the MOM Connector receives alerts, it generates events based on the content of the alert. SPECTRUM then determines whether or not to generate an alarm.

After an alarm is generated, right-click the device model and select Alarm Details. You can view the cause of the alarm and the events that generated the alarm in the Alarm Details tab.

See Configure MOM Event Rules for Alert Forwarding on page 11 for information about sending MOM alerts to the MOM Connector.

MOM Connector and Fault Tolerant Environments

If you are deploying a fault tolerant environment with the MOM Connector running, you must restart the MOM Connector after fault tolerance has been set up. This is because the MOM Connector only checks the landscape map once to find a backup SpectroSERVER, typically during initialization or startup. After the MOM Connector has finished initializing it will not check again to find a backup SpectroSERVER unless it is restarted.

Uninstall the MOM Connector

The following procedure describes how to uninstall the MOM Connector.

To uninstall the MOM Connector

2. Right-click the Spectrum MOM Connector service and select Stop.
3. Execute the following command from the MOMConnector directory on the host machine:
   
   SpectrumMOMConnector.exe --remove

   The MOM Connector no longer appears in the Windows Services dialog and is removed from the list of Product Connectors in the MOM Administrator Console.
Troubleshoot MOM Connector

This section contains troubleshooting information for the MOM Connector.

MOM Connector Remains in the Windows Services Dialog After It Has Been Uninstalled

**Symptom:**

After being uninstalled, the MOM Connector remains in the Windows services dialog. The MOM Connector service is listed as being in the “Disabled” state. Refreshing the Windows services dialog does not remove the MOM Connector from the list. When the MOM Connector is in this state, you will not be able to reinstall it.

**Solution:**

Restart Windows. After restarting Windows, the Services dialog will release the handle and the service will be removed. You will now be able to reinstall the MOM Connector if desired.
Chapter 3: Configure MOM Event and Alert Rules

This chapter explains how to configure new MOM Event rules to create alerts that are forwarded to the MOM Connector. It also describes how to create an Alert rule to modify alerts created by MOM Event Rules so that they are forwarded to the MOM Connector. It contains the following topics:

- Configure MOM Event Rules for Alert Forwarding on page 11
- Configure Alert Rules to Modify Alerts Generated by MOM Event Rules on page 12

Configure MOM Event Rules for Alert Forwarding

An Event Rule specifies how a condition must be met for MOM to generate alerts to the SPECTRUM/MOM Connector. If the condition is met an alert is generated. For an alert to be sent to the SPECTRUM/MOM Connector, its resolution state must be set to SPECTRUM_Connector.

**Note:** See MOM documentation at [http://www.microsoft.com/](http://www.microsoft.com/) for additional information about creating event processing rules that generate alerts. Use the following procedure to create a new event rule that sends alerts generated by the rule to the SPECTRUM_Connector.

**To create a new Event Rule**

1. In MOM, select Console Root, Microsoft Operations Manager (hostname), Management Packs, Rule Groups, Microsoft Operations Manager, Operations Manager 2005, Agent, Event Rules.
   The Select Event Rule Type dialog appears.
3. Select "Alert on or Respond to Event (Event)" as the rule type and click Next.
   The Event Rules Properties - Event Provider dialog appears.
4. Select "System" from the list box as the data provider and click Next.
   The Event Rules Properties - Criteria dialog appears.
5. Click Next to proceed.
Configure Alert Rules to Modify Alerts Generated by MOM Event Rules

The Event Rules Properties - Schedule dialog appears.
6. Click Next to proceed.
   The Event Rules Properties - Event Provider dialog appears.
7. Click Next to proceed.
   The Event Rules Properties - Alert dialog appears.
8. Select Generate alert.
9. Select SPECTRUM_Connector from the Resolution state list box.
10. Click Next.
    The Event Rule Properties - Alert Suppression dialog appears.
11. Deselect Suppress duplicate alerts and click Next.
    The Responses dialog appears.
12. Click Next to proceed.
    The Event Rule Properties - Knowledge Base dialog appears.
13. Click Next to proceed.
    The Event Rule Properties - General dialog appears.
14. Enter a name for the event rule in the Rule Name field and click Finish.

**Note:** You might not see alerts being forwarded to SPECTRUM immediately while the MOM server updates.

### Configure Alert Rules to Modify Alerts Generated by MOM Event Rules

By default, alerts created by MOM event rules are not forwarded to the MOM Connector because their resolution state is set to something other than SPECTRUM_Connector. Instead of changing your MOM event rules, you can create an alert rule to forward alerts to SPECTRUM. Use the following procedure to create an alert rule that modifies alerts created by event rules so that they are forwarded to SPECTRUM.

**To create a MOM 2005 Alert Rule to modify MOM alerts**

1. In the MOM administrator console, create an Alert Rule with your specified criteria. Be sure that the Rule Group containing your Alert Rule is associated with the correct Computer Groups.
2. In the new alert rule’s properties, in the Responses tab, click Add, then select Launch a script.
   The Launch Script dialog appears.

---

12  Microsoft MOM and SCOM Integration Guide
3. In the Launch a Script dialog, create a new script. The language should be set to VBScript. Use the following format for SPECTRUM 8.1 connectors:

```
Option Explicit
Sub Main()
    Dim myAlert
    'change resolution state
    Set myAlert = ScriptContext.Alert
    myAlert.ResolutionState = 211
End Sub
```

**Note:** SPECTRUM 8.1 does not require the use of the CustomField1 in the MOM alert rule. However, pre-8.1 SPECTRUM connectors do require using the CustomField1. Use the following format for pre-8.1 versions of the SPECTRUM connector:

```
Option Explicit
Sub Main()
    Dim myAlert
    'change resolution state
    Set myAlert = ScriptContext.Alert
    myAlert.ResolutionState = 211
    Call myAlert.SetCustomField(1, myAlert.Computer)
End Sub
```

**Note:** The scripts set myAlert.ResolutionState to 211, which is the default value for the connectorID parameter. If you have modified the connectorID value in the .momrc file, you will need to change the value used to define myAlert.ResolutionState in the scripts to the connectorID value specified in the .momrc file.

4. Once you have entered the script source, click Next and then click Finish.
   The script does not require any parameters.

5. In the Alert Rule Properties dialog, click OK.

6. Right-click Console Root and select Microsoft Operations Manager (<host_name>), Management Packs node.

7. Select Commit Configuration Change from the menu.
   It may take several minutes for the MOM system to update. When the update is complete, you will start to see alerts forwarded to SPECTRUM.
Configure Alert Rules to Modify Alerts Generated by MOM Event Rules
This chapter explains how to install, run, and model System Center Operations Manager 2007 (SCOM) components in your network with SPECTRUM. It includes the following topics:

- Overview of the SCOM Connector on page 15
- Before Installing the SCOM Connector on page 17
- Install the SCOM Connector on page 18
- Run the SCOM Connector on page 19
- Verify that the SCOM Connector is Running Properly on page 20
- Create Models for SCOM Agents on page 20
- View SPECTRUM/SCOM Alarms on page 21
- Uninstall the SCOM Connector on page 21
- Troubleshoot SCOM Connector on page 23

This chapter assumes the following:

- You have an installed and configured Microsoft System Center Operations Manager 2007 Management Server.
- You are integrating your SCOM environment with SPECTRUM network management software.

### Overview of the SCOM Connector

The SCOM Connector is a Windows service that synchronizes alarm data between SPECTRUM and Microsoft System Center Operations Manager (SCOM). The SCOM Connector uses the SPECTRUM SSORB (CORBA) API to communicate with SPECTRUM and it uses the Operations Manager Connector Framework (OMCF) API to communicate with SCOM. The SCOM Connector synchronizes SCOM alerts with SPECTRUM events and alarms. It provides bidirectional alert/alarm clearing as well as bidirectional alert/alarm acknowledgment. Thus, if you clear or acknowledge a SCOM-related alarm in SPECTRUM, the corresponding alert is cleared or acknowledged in SCOM and vice versa.
Overview of the SCOM Connector

SCOM Connector Software Requirements

- SPECTRUM v8.1 or later.
  
  **Note:** The SCOM Connector only works with SCOM 2007.

- Microsoft .NET Framework 3.0 installed on the SCOM Connector Host.

What the SCOM Connector Does

In SPECTRUM you can monitor and respond to SCOM-generated alert conditions by generating SPECTRUM events and alarms. You can also monitor the status of the SCOM agents managed by the SCOM application using SPECTRUM.

The SCOM Connector does the following:

- Creates new SPECTRUM alarms as a result of alerts being generated in SCOM.
- Clears SPECTRUM alarms when the resolution state of the corresponding SCOM alert is set to “Closed” (and vice versa).
- Acknowledges a SPECTRUM alarm when the resolution state of the corresponding SCOM alert is set to “Acknowledged.”

  **Note:** By default, the SCOM Connector does not include a resolution state for acknowledging an alert; you must create it. For more information about creating this resolution state, see Create an Acknowledged Resolution State on page 26.

SCOM Terms

The following terms are key to understanding SPECTRUM/SCOM.

**System Center Operations Manager (SCOM)**

Provides real-time events and alerts on the health of servers and applications in your IT environment.

**SCOM Connector**

An application that synchronizes alarm data between SPECTRUM and System Center Operations Manager. The SCOM Connector uses the SPECTRUM SSORB CORBA API to interface with SPECTRUM. It uses the Operations Manager Connector Framework to interface with SCOM.

**SCOM Host Server**

Responsible for management tasks, such as event-based alert generation.

**SCOM Agent**

Installed agent software that resides on a system managed by SCOM. A SCOM agent collects system events and statistics.

**SPECTRUM Event**

An event that is generated based on alerts received from SCOM-managed hosts.
Before Installing the SCOM Connector

Consider the following items before you install the SCOM Connector:

### User Access

The user account that the SCOM Connector will be running under must have access to both SPECTRUM and SCOM.

- In SPECTRUM, use the User Editor (Users tab in OneClick) to create a SPECTRUM user model for the SCOM Connector user.
- In SCOM, make sure that the connector user is a member of the Administrator User Role. By default, the Administrator User Role in SCOM contains the local Administrator user group as a User Role Member. Therefore, to give the user access to SCOM, you can add the user to the local Administrator user group using the Windows Computer Management dialog.

### Host Access

If the SCOM Connector is running on a host other than the SpectroSERVER host, you must add the SCOM Connector host to the SpectroSERVER host security (using SCP or by editing the `<$SPECROOT>/hostrc` file). See Add the SCOM Host Server to the Host Security on SpectroSERVER on page 19 for more information.

### Communication Ports

Firewalls must be configured to allow traffic to pass on certain ports:

- On the remote SpectroSERVER host, the connector will try to connect to the NamingService on port 14006 (unless configured otherwise).
  
  **Note:** See the Distributed SpectroSERVER Administration Guide (2770) for more information about SSORB communication ports.

- On the remote SCOM host, the connector will try to connect to the Connector Framework on port 5724.

### Acknowledged Resolution State

To enable bidirectional alert/alarm acknowledgment, you must create a custom resolution state within SCOM. The new resolution state is used to represent an alert that has been “Acknowledged.” For details, see Create an Acknowledged Resolution State on page 26.
Install the SCOM Connector

The following procedure describes how to install the SCOM Connector software.

To install the SCOM Connector

1. Copy the <$SPECROOT>/SCOMConnector directory to the machine that will be hosting the SCOM Connector.
   
   Once you install the SCOM Connector on the server host, you cannot move the directory. Be sure to select a destination directory that does not need to be moved. For example: C:\Program Files\SCOMConnector.

2. On the host machine, rename the file scomrc.example to .scomrc.

3. Open the .scomrc file with a text editor and modify the parameters as needed.
   
   Note: The .scomrc file contains descriptions for each of the parameters available.

   a. Specify the ssHost and scomHost parameters if the connector is remote to one or both of the management systems. For example, if the SCOM Connector is located on the SCOM host and the SpectroSERVER is located on a different host, then the ssHost parameter must be specified for the connector to be able to connect to SPECTRUM.

   b. Specify the scomAckResolutionState parameter if you want to enable bidirectional alarm/alert acknowledgment. The value of this parameter is the numeric identifier of the “Acknowledged” resolution state in SCOM.
      
      Note: If you want to enable bidirectional alarm/alert acknowledgment, you must also create an “Acknowledged” resolution state. For instructions, see Create an Acknowledged Resolution State on page 26.

4. Execute the following command from the SCOMConnector directory on the host machine:

   SpectrumSCOMConnector.exe --install

   This command sets up the required registry entries used by the SCOM Connector and installs the SCOM Connector as a Windows Service.

5. In the Windows Control Panel select Administrative Tools, Services.

   The Services dialog appears.

6. Double-click the Spectrum SCOM Connector service.

7. Click the Log On tab and select the ‘This account’ option.

8. Choose a user account that you want the connector to run under, for example, Administrator. The user you select must be a valid SPECTRUM user.

9. Enter and confirm the password for the account.

10. Click OK to accept your changes.

    Note: For information about starting the SCOM Connector, see Run the SCOM Connector on page 19.
Add the SCOM Host Server to the Host Security on SpectroSERVER

You must add the SCOM Connector host name to the Server List on your SpectroSERVER to allow the servers to communicate. Use the following procedure to add the SCOM host to the SpectroSERVER host security list.

To add the SCOM Connector host to the host security on SpectroSERVER
1. Open the SPECTRUM Control Panel.
2. Select Host Security in the Configure menu.
   The Host Security dialog appears.
3. Enter the SCOM Connector host name in the text box under Server List.
4. Click Add to add the SCOM Connector host name to the Server List.
5. Click OK to accept your changes and exit the Host Security dialog.

Note: You can also add the SCOM Connector host to the host security on SpectroSERVER by editing the <$SPECROOT>/hostrc file.

Run the SCOM Connector

The following procedure describes how to run the SPECTRUM/SCOM Connector.

To run the SCOM Connector
1. Open Control Panel and select Administrative Tools, Services.
   The Windows Services dialog appears.
2. Select the Spectrum SCOM Connector service.
3. Start the service by selecting Start from the Action menu.
Verify that the SCOM Connector is Running Properly

Use the following procedure to verify the connector is running properly.

To verify that the SCOM Connector is running properly
1. Open the SCOM Operations Console.
2. Change to the Administration context in the console.
3. From the tree in the left pane, expand Administration and then select Product Connectors.
4. Verify that ’SPECTRUM Connector’ appears in the pane to the right.

Create Models for SCOM Agents

This section describes how to model each of the SCOM agent hosts on your network. To model a SCOM agent, use the Create Model by IP option. SPECTRUM selects the host device model type that most accurately represents each SCOM agent.

To create models for SCOM Agents in the OneClick Console
1. Click the Topology tab.
2. Click the Create a new model by IP icon in the toolbar.
   The Create Model by IP Address dialog appears.
3. Enter the Network Address, Community Name, and Agent Port for SPECTRUM to use to communicate with SCOM agents.
4. Click OK.
   SPECTRUM creates a model that represents the host device with the specified IP address.
5. Exit out of edit mode by clicking ‘Save changes made to this view’ ( ) after OneClick creates the model. If the model is not created successfully, verify that the information you entered in Step 3 is correct.
6. Select the new model in the Contents panel Topology view.
   The new model information is displayed in the Component Detail panel Information view.
7. Click ‘set’ next to the label displaying the IP address to the right of the model icon in the Information view and enter the host name of the SCOM agent host.
   This value is case-insensitive.
8. Press the Enter key to set the name.
   The SCOM Connector uses one of the SCOM alert properties to identify which
   model should receive the SPECTRUM event that is generated.

9. Repeat Step 1 through Step 8 for each SCOM agent host on your network.

   **Note:** For more information about modeling devices on your network, see
   *Modeling Your IT Infrastructure Administrator Guide (5167)*.

---

**View SPECTRUM/SCOM Alarms**

When the SCOM Connector receives alerts, it generates events based on the
content of the alert. SPECTRUM then determines whether or not to generate an
alarm.

After an alarm is generated, right-click the device model and select Alarm
Details. You can view the cause of the alarm and the events that generated the
alarm in the Alarm Details tab.

See [Configure SCOM Connector on page 25](#) for information about sending SCOM
alerts to the SCOM Connector.

---

**SCOM Connector and Fault Tolerant Environments**

If you are deploying a fault tolerant environment with the SCOM Connector
running, you must restart the SCOM Connector after fault tolerance has been set
up. This is because the SCOM Connector only checks the landscape map once to
find a backup SpectroSERVER, typically during initialization or startup. After the
SCOM Connector has finished initializing it will not check again to find a backup
SpectroSERVER unless it is restarted.

---

**Uninstall the SCOM Connector**

The following procedure describes how to uninstall the SCOM Connector.

**To uninstall the SCOM Connector**

   The Services window appears.

2. Right-click the Spectrum SCOM Connector service and select Stop.

3. Execute the following command from the SCOMConnector directory on the
   host machine:
   ```
   SpectrumSCOMConnector.exe --remove
   ```
Uninstall the SCOM Connector

The SCOM Connector no longer appears in the Windows Services dialog and is removed from the list of Product Connectors in the SCOM Operations Console.
Troubleshoot SCOM Connector

This section contains troubleshooting information for the SCOM Connector.

SCOM Connector Loses Ownership of its Alerts After It Has Been Uninstalled and Reinstalled

**Symptom:**
If you uninstall and then reinstall the SCOM Connector, the Connector may lose ownership of its alerts.

**Solution:**
Manually reforward those alerts to the newly installed SCOM Connector.

SCOM Connector Remains in the Windows Services Dialog After It Has Been Uninstalled

**Symptom:**
After being uninstalled, the SCOM Connector remains in the Windows services dialog. The SCOM Connector service is listed as being in the “Disabled” state. Refreshing the Windows services dialog does not remove the SCOM Connector from the list. When the SCOM Connector is in this state, you will not be able to reinstall it.

**Solution:**
Restart Windows. After restarting Windows, the Services dialog will release the handle and the service will be removed. You will now be able to reinstall the SCOM Connector if desired.
Chapter 5: Configure SCOM Connector

This chapter explains how to configure SCOM Connector alert subscriptions to allow SCOM to forward pertinent alerts to the SCOM Connector. It also describes how to create a resolution state for acknowledging alerts. It includes the following topics:

- Set Up SCOM Connector Subscriptions on page 25
- Create an Acknowledged Resolution State on page 26

Set Up SCOM Connector Subscriptions

You must set up a connector subscription in SCOM to allow alerts to be forwarded through the SCOM Connector to SPECTRUM.

To set up a SCOM Connector subscription

1. After you have started the SCOM Connector for the first time, you will see SPECTRUM Connector listed as a Product Connector in the SCOM Operations Console. Right-click SPECTRUM Connector in the Operations Console and click Properties.
   The Product Connector Properties dialog appears.
2. Click Add in the Subscription section to create a new connector subscription.
   The Product Connector Subscription Wizard appears.
3. Enter a subscription name and a description in the General page and then click Next.
4. Select the groups whose alerts you want forwarded to SPECTRUM in the Groups page and then click Next.
5. Select the targets whose alerts you want forwarded to SPECTRUM in the Targets page and then click Next.
6. Select the appropriate criteria for the alerts that will be forwarded to SPECTRUM in the Criteria page.
7. Click Create to create the subscription.
Create an Acknowledged Resolution State

By default, the SCOM Connector does not include a resolution state for acknowledging an alert. Instead, you must create one. Once you have created the resolution state in SCOM, the Connector can be configured to use that resolution state to synchronize the acknowledgment of alerts and alarms. By default, however, the SCOM Connector does not provide acknowledgment synchronization.

To create an Acknowledged resolution state

1. On the SCOM host, open the SCOM Operations Console.
2. In the Operations Console, select Administration, Settings.
3. Right-click Alerts in the center table.
4. In the Alert Resolution States tab, click New.
5. Type a name for the new resolution state and then select a Unique ID.
   
   **Note:** This Unique ID will be used to configure the scomAckResolutionState parameter in the .scomrc file. For more information about the scomAckResolutionState parameter see Acknowledged Resolution State on page 17.
Chapter 6: Launch the Web Console

This chapter explains how to launch the MOM Web Console and the SCOM Web Console from OneClick. It includes the following topics:

- Launch the Web Console from the OneClick Console on page 27
- Configure the SCOM Connector to Provide HTTPS URLs on page 28
- Change OneClick Web Context URL on page 28

Launch the Web Console from the OneClick Console

The SPECTRUM integration with MOM and SCOM lets you launch the applicable Web Console from the OneClick Console.

To launch the MOM Web console from OneClick

1. Select any SPECTRUM model that has a MOM-based alarm associated with it.
2. Click the Alarms tab in the Contents panel and then click the Alarm Details tab in the Component Detail panel.
3. Click the omAlertURL at the bottom of the window to display alarm details.
   Note: A hyperlink is not shown for alarms which do not have an associated URL.

To launch the SCOM Web console from OneClick

1. Select any SPECTRUM model that has a MOM- or SCOM-based alarm associated with it.
2. Click the Alarms tab in the Contents panel and then click the Alarm Details tab in the Component Detail panel.
3. The Web Context URL provides a link that states, “Click here to launch.”
Configure the SCOM Connector to Provide HTTPS URLs

SCOM supports HTTPS for the web console. You can configure the SCOM Connector to provide HTTPS URLs as described in the following procedure.

To configure the SCOM Connector to provide HTTPS URLs

1. Open the .scomrc file with a text editor.
2. Specify the scomWebPrefix parameter with a value of https, as follows:
   ```
   scomWebPrefix = https
   ```
3. Save the .scomrc file.
4. Restart the SCOM Connector to apply your changes.

Change OneClick Web Context URL

This procedure requires that you have a working knowledge of XML and HTML. Although this procedure applies to both MOM and SCOM, it uses MOM for illustration purposes.

Note: For information about preserving the customized XML created in this procedure from being overwritten during a SPECTRUM or OneClick upgrade or reinstallation, see the OneClick Customization User Guide (5160).

To change the OneClick Web Context URL

1. In the OneClick installation directory (<$SPECROOT>), go to the following location:
   ```
   <$SPECROOT>/tomcat/webapps/spectrum/WEB-INF/alarm/config
   ```
2. Open the column-alarmwebcontexturl-config.xml file for editing.
3. Modify the text between the <html> and </html> tags to display an alternate hyperlink in OneClick. For example, replace the existing text to display a hyperlink in OneClick that reads Launch MOM Web Console.

Replace this text:
```
"<html>Click <a href=" + (String)value() + ">
   here</a> to launch</html>"
```
With the following text:
```
"<html><a href=" + (String)value() + ">
   Launch MOM Web Console</a></html>"
```
Chapter 7: Supported SPECTRUM Events

This chapter shows the SPECTRUM events that are generated based on alerts received from MOM- or SCOM-managed hosts.

SPECTRUM Events

The following tables show the SPECTRUM events that are generated based on MOM or SCOM alerts received from MOM- or SCOM-managed entities. The columns display the following information:

- **SPECTRUM Event**: The SPECTRUM event created based on a MOM or SCOM alert.
- **Event Code**: The SPECTRUM event code for the event.
- **Event Action**: The processing that is performed on the event based on the instructions in the event disposition file. For example, raise an alarm, clear an alarm, or check for a frequent problem.
- **Alarm Code**: The alarm code generated or cleared by the event.
- **Alarm Severity**: The severity of the alarm generated.

Supported MOM Connector SPECTRUM Events

The following table lists the SPECTRUM events supported by the MOM Connector.

<table>
<thead>
<tr>
<th>SPECTRUM Event</th>
<th>Event Code</th>
<th>Event Action</th>
<th>Alarm Code</th>
<th>Alarm Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>0x3e0000a</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Information</td>
<td>0x3e0000b</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Warning</td>
<td>0x3e0000c</td>
<td>Alarm Generated</td>
<td>0x3e0000c</td>
<td>Minor</td>
</tr>
<tr>
<td>Error</td>
<td>0x3e0000d</td>
<td>Alarm Generated</td>
<td>0x3e0000d</td>
<td>Major</td>
</tr>
</tbody>
</table>
The following table lists the SPECTRUM events supported by the SCOM Connector.

<table>
<thead>
<tr>
<th>SPECTRUM Event</th>
<th>Event Code</th>
<th>Event Action</th>
<th>Alarm Code</th>
<th>Alarm Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Error</td>
<td>0x3e0000e</td>
<td>Alarm Generated</td>
<td>0x3e0000e</td>
<td>Critical</td>
</tr>
<tr>
<td>Security Breach</td>
<td>0x3e0000f</td>
<td>Alarm Generated</td>
<td>0x3e0000f</td>
<td>Critical</td>
</tr>
<tr>
<td>Service Not Available</td>
<td>0x3e00010</td>
<td>Alarm Generated</td>
<td>0x3e00010</td>
<td>Critical</td>
</tr>
</tbody>
</table>

The following table lists the SPECTRUM events supported by the SCOM Connector.

<table>
<thead>
<tr>
<th>SPECTRUM Event</th>
<th>Event Code</th>
<th>Event Action</th>
<th>Alarm Code</th>
<th>Alarm Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>0x3e00012</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Warning</td>
<td>0x3e00013</td>
<td>Alarm Generated</td>
<td>0x3e00011</td>
<td>Minor</td>
</tr>
<tr>
<td>Error</td>
<td>0x3e00014</td>
<td>Alarm Generated</td>
<td>0x3e00012</td>
<td>Critical</td>
</tr>
</tbody>
</table>
Symbols

.momrc file • 2, 6, 13
.scomrc file • 2, 18, 26, 28

A
adding the Framework path • 5
Alarm Code • 29
alarm details • 9, 21
Alarm Severity • 29
alert forwarding • 11

C
changing the Web Context URL in OneClick • 28
configuring alert forwarding • 11
connectorID • 13
creating an event rule • 11
creating models for MOM agents • 8
creating models for SCOM agents • 20
CustomField1 • 13

E
Event Action • 29
Event Code • 29
event rule • 11
events • 29

F
Framework path • 5

H
host security • 7, 19

I
installation
MOM Connector • 6
SCOM Connector • 18

K
key terms
SPECTRUM/MOM • 5, 16

M
MOM Alert Rule • 12
MOM Connector • 1
functionality described • 4
overview • 3

O
OneClick Console • 27

P
pre-8.1 SPECTRUM connectors • 13

R
running SPECTRUM/MOM Connector • 7

S
SCOM Connector • 1
installaton • 18
overview • 15
running • 19
verifying • 20
SpectroSERVER • 7, 19
SPECTRUM Event • 29

V
VBScript • 13
verifying SCOM Connector • 20
verifying SPECTRUM/MOM Connector • 7
viewing alarms • 9, 21

W

Web Context URL • 28