

Storage Management Pack for Microsoft SCOM



Tables of Contents

IBM Storage Management Pack for Microsoft SCOM	1
What's new	1
Release notes	1
What's new in 2.8.0	1
Compatibility and requirements	2
Supported operating systems	2
Supported storage systems	2
Required software on the host	3
Change log	3
2.8.0 (February 2022)	4
2.7.0 (December 2017)	4
2.6.0 (August 2016)	5
2.5.0 (June 2016)	5
2.4.0 (June 2015)	5
2.3.0 (December 2014)	6
2.2.1 (June 2014)	6
2.2.0 (December 2013)	7
2.1.0 (July 2013)	7
Known issues	7
Introduction	8
Bundled tools and management packs	9
Monitoring modules	9
Concept diagram	9
Compatibility and requirements	10
Before you proceed	10
Installation	11
Downloading the IBM Storage Management Pack	11
Installation package contents	12
First-time installation vs. upgrade	12
Running the installation wizard	13
Installing the Microsoft Operations Manager SDK on an agent server	16
Uninstalling the IBM Storage Management Pack	17
Removing a specific management pack	17
Uninstalling all management packs	17
Configuration	18
Using the command-line utility	18
Configuring the SCOM management server	21
Checking the existing management server configuration	21
Setting the management server domain and credentials	22
Deleting the management server information	23
Adding IBM storage systems	23
Adding a DS8000 system	24
Adding a Spectrum Virtualize Family system	25
Adding an XIV or Spectrum Accelerate system	26
Adding a FlashSystem A9000 or FlashSystem A9000R system	26
Displaying the monitored storage systems	27

Modifying storage system connection parameters	28
Removing a storage system from the monitoring list	29
Changing event severity levels	29
Importing management packs to Microsoft SCOM	30
Setting the storage system discovery and event collection intervals	34
Setting the storage system discovery intervals	34
Setting the event collection intervals	35
Monitoring	36
Monitoring alerts	37
Monitoring events	39
Monitoring systems	41
Monitoring physical and logical components	43
Viewing diagrams	46
Diagnostics and troubleshooting	48
Testing the connection to the SCOM management server	48
Testing the connectivity to storage systems	48
Setting the logging level	49
Collecting diagnostic information	49
Checking the running environment	49
Troubleshooting	50
Notices	53
Terms and conditions for product documentation	54
Publications and related information	55

IBM Storage Management Pack for Microsoft SCOM

IBM FlashSystem® Storage Management Pack for Microsoft SCOM is a set of software modules, called management packs, that help you access and monitor IBM storage systems from the host-based Microsoft SCOM interface.

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What's new

This topic lists the dates and nature of updates to the published information of IBM® Storage Management Pack for Microsoft System Center Operations Manager (SCOM) 2.8.0.

Date	Nature of updates to the published information
16 February 2022	This version information was first published. For more information about the version contents, refer to the release notes .

Release notes

The following release information is available for IBM® Storage Management Pack for Microsoft System Center Operations Manager (SCOM) 2.8.0.

- [What's new in 2.8.0](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.8.0 introduces the following new features.
- [Compatibility and requirements](#)
This section specifies the compatibility and requirements of IBM Storage Management Pack for Microsoft SCOM 2.8.0.
- [Change log](#)
This section summarizes the changes made in different version releases of the IBM Storage Management Pack for Microsoft SCOM.
- [Known issues](#)
This section details the known issues in IBM Storage Management Pack for Microsoft System Center Operations Manager 2.8.0, along with possible workarounds (if workarounds are available).

What's new in 2.8.0

IBM® Storage Management Pack for Microsoft System Center Operations Manager 2.8.0 introduces the following new features.

Additional storage system support

IBM Storage Management Pack for Microsoft SCOM 2.8.0 adds additional storage system support for the new FlashSystem 7300 and 9500 models.

Microsoft Windows 2022 support

IBM Storage Management Pack for Microsoft SCOM 2.8.0 adds Microsoft Windows Server 2022 support.

Compatibility and requirements

This section specifies the compatibility and requirements of IBM® Storage Management Pack for Microsoft SCOM 2.8.0.

- **[Supported operating systems](#)**
The IBM Storage Management Pack for Microsoft SCOM can be installed on any Microsoft Windows or Windows Server operating system that is supported by the Microsoft SCOM version that you are using.
- **[Supported storage systems](#)**
IBM Storage Management Pack for Microsoft SCOM 2.8.0 supports different IBM storage systems, as listed in the following table.
- **[Required software on the host](#)**
Prior to installing the IBM Storage Management Pack for Microsoft SCOM, one of the following Microsoft SCOM versions must be installed on the host system.

Supported operating systems

The IBM® Storage Management Pack for Microsoft SCOM can be installed on any Microsoft Windows or Windows Server operating system that is supported by the Microsoft SCOM version that you are using.

Note: This version of the IBM Storage Management Pack for Microsoft SCOM can be installed on all site servers that run SCOM agents, in addition to the regular installation on the SCOM management server.

- For a complete list of operating systems supported by Microsoft System Center Operations Manager 2012 (including SP1 and R2), see the [Microsoft System Center Operations Manager 2012 technical information website](#).

Supported storage systems

IBM® Storage Management Pack for Microsoft SCOM 2.8.0 supports different IBM storage systems, as listed in the following table.

Important: The IBM Storage Management Pack for Microsoft SCOM can detect the following IBM storage systems over IPv4 connections only.

Storage system	Microcode version	Compatibility note
IBM FlashSystem® A9000	12.3.2.b or later	N/A
IBM FlashSystem A9000R	12.3.2.b or later	N/A
IBM XIV® Storage System	11.6.2.x	N/A

Storage system	Microcode version	Compatibility note
IBM Spectrum Accelerate	11.5.3.c, 11.5.4	N/A
IBM DS8880	8.3, 8.4	N/A
IBM SAN Volume Controller	7.8, 8.2.x, 8.3.x, 8.4.x, 8.5.0.0	N/A
IBM Storwize® V3500	7.8.1	N/A
IBM Storwize V3700	7.8.1	N/A
IBM Storwize V5000	7.8, 8.1, 8.2.1, 8.3.1	N/A
IBM Storwize V5000E	8.3.1, 8.4.x	N/A
IBM Storwize V5100	8.4.x	N/A
IBM Storwize V7000	7.8, 8.1, 8.2.x, 8.3.1, 8.4.x	N/A
IBM FlashSystem V9000	7.8, 8.1, 8.2.1	N/A
IBM FlashSystem 5000	8.3.1, 8.4.x	
IBM FlashSystem 5100	8.2.1, 8.3.x, 8.4.x	N/A
IBM FlashSystem 5200	8.4.0.1 or later, 8.5.0.0	N/A
IBM FlashSystem 7200	8.3.1, 8.4.x	N/A
IBM FlashSystem 7300	8.5.0.0	N/A
IBM FlashSystem 9100	8.2.x, 8.3.1, 8.4.x	N/A
IBM FlashSystem 9200	8.3.1, 8.4.x	N/A
IBM FlashSystem 9500	8.5.0.0	N/A

Note: Newer microcode versions may also be compatible. When a newer microcode version becomes available, refer to the [Lifecycle and support matrix page](#) to check whether the new microcode version is also supported.

Attention: Although the proxy DS8000® CIM agent supports IBM DS8000, IBM DS6000™, and IBM Enterprise Storage Server® (ESS) systems, the DS6000 and ESS systems are not supported by the IBM Storage Management Pack for Microsoft SCOM.

Required software on the host

Prior to installing the IBM® Storage Management Pack for Microsoft SCOM, one of the following Microsoft SCOM versions must be installed on the host system.

- Microsoft System Center Operations Manager 2012
- Microsoft System Center Operations Manager 2012 SP1
- Microsoft System Center Operations Manager 2012 R2
- Microsoft System Center Operations Manager 2016
- Microsoft System Center Operations Manager 2019

Note: Newer supported versions may also be compatible. Refer to the [Lifecycle and support matrix](#) to see the latest supported versions.

Change log

This section summarizes the changes made in different version releases of the IBM® Storage Management Pack for Microsoft SCOM.

- [**2.8.0 \(February 2022\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.8.0 adds support for the following:
- [**2.7.0 \(December 2017\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.7.0 added support for Microsoft System Center Operations Manager 2016 and the following storage system releases:
- [**2.6.0 \(August 2016\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.6.0 added support for IBM FlashSystem® V9000 7.7 and included the following enhancement.
- [**2.5.0 \(June 2016\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.5.0 added support for the following storage system releases:
- [**2.4.0 \(June 2015\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.4.0 added support for the following storage system releases:
- [**2.3.0 \(December 2014\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.3.0 added support for the XIV® multi-tenancy feature, which applies only to XIV microcode version 11.5 or later (non-domain users have access only when the access policy is set to "Open").
- [**2.2.1 \(June 2014\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.2.1 resolved the following critical issue.
- [**2.2.0 \(December 2013\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.2.0 added support for the following storage systems:
- [**2.1.0 \(July 2013\)**](#)
IBM Storage Management Pack for Microsoft System Center Operations Manager 2.1.0 added support for the IBM Storwize® V3700 and IBM Storwize V3500 storage systems and for newer microcode versions of the already supported storage systems.

2.8.0 (February 2022)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.8.0 adds support for the following:

- Microsoft Windows Server 2022
- IBM FlashSystem® 7300 and IBM FlashSystem 9500 storage systems

2.7.0 (December 2017)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.7.0 added support for Microsoft System Center Operations Manager 2016 and the following storage system releases:

- IBM FlashSystem® A9000 12.0.x, 12.1.x, and 12.2.x
- IBM FlashSystem A9000R 12.0.x, 12.1.x, and 12.2.x
- IBM® Storwize® V3500 7.8 and 8.1.x
- IBM Storwize V3700 7.8 and 8.1.x
- IBM Storwize V5000 7.8 and 8.1.x

- IBM Storwize V7000 7.8 and 8.1.x
- IBM SAN Volume Controller 7.8 and 8.1.x
- IBM FlashSystem V9000 7.8 and 8.1.x
- IBM DS8880 8.2 and 8.3

This version also included the following enhancement:

Ticket ID	Description
SCOM-261272	Enhancement: The following properties have been added to the IBM Storage Management Pack for Microsoft System Center Operations Manager user interface for the IBM Spectrum Virtualize Family management pack to make it easier to distinguish between different IBM Spectrum Virtualize Family storage systems being managed: <ul style="list-style-type: none"> • code_level: The software release version on the storage system being managed. • product_name: The IBM product name of the storage system being managed.

2.6.0 (August 2016)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.6.0 added support for IBM FlashSystem® V9000 7.7 and included the following enhancement.

Ticket ID	Description
SCOM-261263	Enhancement: The former IBM® SAN Volume Controller and Storwize® series management packs have been combined into one IBM Spectrum Virtualize Family management pack, which also includes support for IBM FlashSystem V9000.

2.5.0 (June 2016)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.5.0 added support for the following storage system releases:

- IBM FlashSystem A9000 12.0.1
- IBM FlashSystem A9000R 12.0.1
- IBM® Storwize® V3500 7.7
- IBM Storwize V3700 7.7
- IBM Storwize V5000 7.7
- IBM Storwize V7000 7.7
- IBM SAN Volume Controller 7.7

Additional fix in this version:

Ticket ID	Description
SCOM-261255	Fixed: SCOM could not connect to XIV or Spectrum Accelerate using LDAP.

2.4.0 (June 2015)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.4.0 added support for the following storage system releases:

- IBM® Storwize® V3500 7.5
- IBM Storwize V3700 7.5
- IBM Storwize V5000 7.5
- IBM Storwize V7000 7.5
- IBM SAN Volume Controller 7.5
- IBM XIV® Storage System 11.6.x
- IBM Spectrum Accelerate 11.5.0.b

Additional enhancements and fix in this version:

Ticket ID	Description
SCOM-261245	Enhancement: Minimal VVOL support added for IBM Storwize V3500 7.5, IBM Storwize V3700 7.5, IBM Storwize V5000 7.5, IBM Storwize V7000 7.5, and IBM SAN Volume Controller 7.5.
SCOM-261244	Enhancement: Minimal VVOL support and compression visibility support added for IBM XIV Storage System 11.6.x.
SCOM-261242	Fixed: The status of the SAN Volume Controller iSCSI port or Storwize iSCSI port is incorrect if the port is configured and the state of the link is not active.

2.3.0 (December 2014)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.3.0 added support for the XIV® multi-tenancy feature, which applies only to XIV microcode version 11.5 or later (non-domain users have access only when the access policy is set to "Open").

Additional fixes in this version:

Ticket ID	Description
SCOM-261162	Fixed: For SAN Volume Controller and Storwize® systems, cluster monitoring is dependent on FlashCopy® consistency group unit monitoring, while single system monitoring is dependent on array unit monitoring. If either of the required unit monitoring is not used, the cluster or system monitoring returns to the uninitialized state.
SCOM-261241	Fixed: Updated the IBM Storage Solutions External Runtime Components (previously named "XPyV") to version 1.4.4 to resolve man-in-the-middle (MITM) security attacks.

2.2.1 (June 2014)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.2.1 resolved the following critical issue.

Ticket ID	Description
SCOM-261210	Fixed: OpenSSL security vulnerability (also known as the Heartbleed bug) could have an impact on the connection to storage systems. Version 2.2.1 uses OpenSSL 1.0.1h, which resolves this security issue.

2.2.0 (December 2013)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.2.0 added support for the following storage systems:

- IBM® Storwize® V5000
- IBM Storwize V7000 Unified

IBM Storage Management Pack for Microsoft SCOM 2.2.0 also added support for newer microcode versions of the previously supported storage systems (see [Supported storage systems](#)), and for:

- Microsoft Windows Server 2012 R2
- Microsoft System Center Operations Manager 2012 R2

Additional fix in this version:

Ticket ID	Description
SCOM-261154	Fixed: For XIV® storage systems, only one volume is displayed as a logical component in SCOM if there are two or more volumes that share the same name with different uppercase and lowercase letters.

2.1.0 (July 2013)

IBM Storage Management Pack for Microsoft System Center Operations Manager 2.1.0 added support for the IBM® Storwize® V3700 and IBM Storwize V3500 storage systems and for newer microcode versions of the already supported storage systems.

Additional enhancements and fixes in this version:

Ticket ID	Description
SCOM-249670	Enhancement: Only active alerts are provided in the alerts view. Closed alerts are filtered out.
SCOM-255587	Enhancement: Support for device type renaming.
SCOM-255882	Enhancement: IBM Hyper-Scale Mobility (online volume migration) operations can now be monitored for XIV® systems of microcode 11.3 or later.
SCOM-238291	Fixed: When the IBM Storage Management Pack is installed on a SCOM agent and the connected storage system has a large amount of volumes (about 300 volumes per storage system), the discovery data package may exceed the SCOM size limit (4MB).
SCOM-242651	Fixed: XIV remote mirroring information cannot be viewed from SCOM if the user account is not defined on the XIV storage system as a storage administrator.
Note: If you are upgrading to version 2.1.0 by installing it over version 1.1.1, run the upgrade_config.cmd CLI utility after version 2.1.0 is installed. For more information, refer to the user guide.	

Known issues

This section details the known issues in IBM Storage Management Pack for Microsoft System Center Operations Manager 2.8.0, along with possible workarounds (if workarounds are available).

<p>Note:</p> <ul style="list-style-type: none"> For comprehensive information about known issues in Microsoft System Center Operations Manager 2012, see the Microsoft System Center Operations Manager 2012 online release notes. 	
Ticket ID	Description
SCOM-238811	The detection of DS8000® storage systems stops if volumes on these systems have names with non-ASCII characters. Currently there is no workaround or solution for this limitation (SCOM-238811).
SCOM-260923	In some cases, the monitoring host can not be discovered after a certain IBM® management pack is manually deleted and then and imported again. To resolve this issue, delete the same management pack again and then import it again. Alternatively, you can shorten the management pack object discovery interval to 30 seconds or less (for more information, refer to the relevant Microsoft SCOM documentation).
SCOM-261133	After upgrading to the latest version by installing it over version 1.1.0, the configuration that was made with version 1.1.0 is no longer valid. To resolve this issue, run the upgrade_config.cmd CLI utility after to the latest version is installed. For more information, refer to the user guide.
SCOM-261147	For SAN Volume Controller and Storwize® systems, the same event might be displayed several times under Events, each time with a different timestamp. This occurs if the event is reported by the storage system each time with an updated timestamp. This is a design behaviour that might be changed in a future management pack version. Currently there is no workaround or solution for this limitation (SCOM-261147).
SCOM-261151	Physical drives with an empty enclosure ID are not displayed for Storwize V3500 or Storwize V3700 systems. Currently there is no workaround or solution for this limitation (SCOM-261151).
SCOM-261196	XIV® volume information is not updated after the volume is migrated to another storage pool. To resolve this issue, remove the XIV storage system and then add it again by using the scomu.cmd utility.
SCOM-261197	Information regarding the relationship between FlashCopy® consistency group and FlashCopy mapping is not updated for Storwize systems. Currently there is no workaround or solution for this limitation (SCOM-261197).
SCOM-261198	For IBM Flex System® systems, only the target volume is displayed in the FlashCopy mapping relationship list. Currently there is no workaround or solution for this limitation (SCOM-261198).
SCOM-261200	The IBM Storage Management Pack only works when the SCOM Root Management Server (RMS) and SCOM agents reside in the same domain. Currently there is no other workaround or solution for this limitation (SCOM-261200).
SCOM-261238	The digital signature cannot be verified in Windows 2008.
SCOM-261243	The ID and System Name of the system are showing as the same value in the web console.

Introduction

The IBM® Storage Management Pack for Microsoft SCOM is a set of software modules, called management packs, that help you access and monitor IBM storage systems from the host-based Microsoft SCOM interface.

You can install a specific management pack, add specific storage systems to the list of SCOM monitored IBM storage systems, or remove IBM storage systems from the SCOM monitoring list.

- [Bundled tools and management packs](#)

The IBM Storage Management Pack for Microsoft SCOM includes the following components:

- [Monitoring modules](#)

The IBM Storage Management Pack for Microsoft SCOM includes the following monitoring modules:

- [Concept diagram](#)

The IBM Storage Management Pack comprises four separate management packs, each matching one or more IBM storage systems.

- [Compatibility and requirements](#)

For complete and up-to-date information about compatibility and requirements of the IBM Storage Management Pack for Microsoft SCOM, refer to the latest release notes.

- [Before you proceed](#)

Before you proceed to the installation and usage of the IBM Storage Management Pack, you need to obtain the required user privileges for accessing the specific IBM storage systems that you intend to monitor from Microsoft SCOM.

Bundled tools and management packs

The IBM® Storage Management Pack for Microsoft SCOM includes the following components:

- IBM Storage SCOM-control utility (**scomu.cmd**), a stand-alone command-line interface (CLI) utility (command prompt utility) for configuration and diagnostics.
- The management pack available support each of the relevant supported storage systems listed in the latest Release Notes and [Lifecycle and support matrix page](#). The following management packs are available:
 - Storwize® Family management pack
 - DS8000® Family management pack
 - XIV® and Spectrum Accelerate management pack
 - FlashSystem A9000/R management pack

Monitoring modules

The IBM® Storage Management Pack for Microsoft SCOM includes the following monitoring modules:

- Alerts – Lists all alert notifications.
- Events – Lists the captured events for every component of the monitored storage systems.
- Systems – Displays the health state of entire storage systems and their objects (overall view).
- Physical components – Displays the health state of any specific physical component.
- Logical components – Displays the health state of any defined logical component.
- Diagrams – Shows a visual representation of the hierarchy and relationship of selected components within a storage system, as well as more detailed information about it.

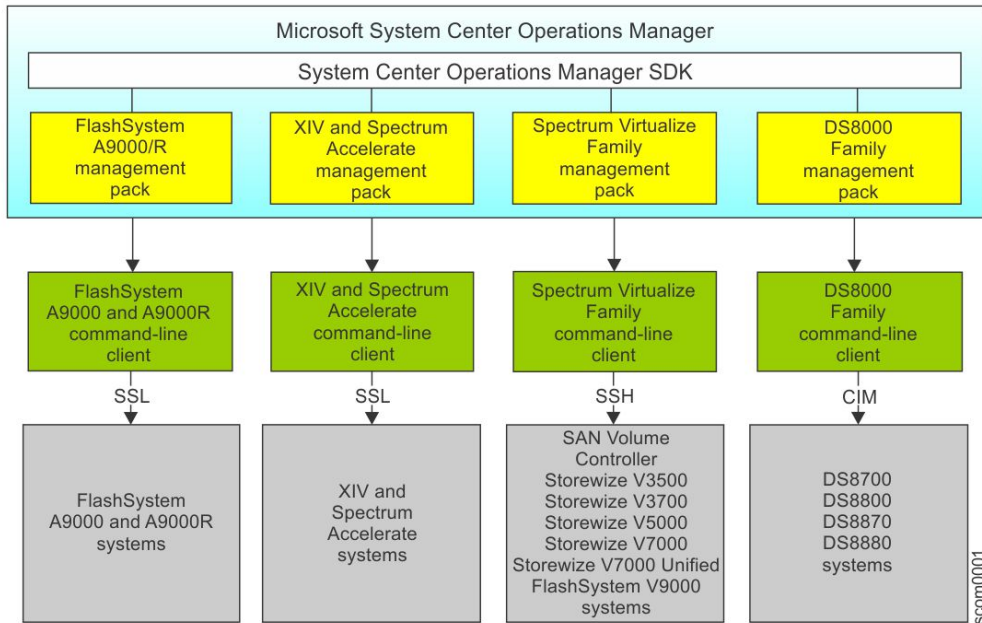
Concept diagram

The IBM® Storage Management Pack comprises four separate management packs, each matching one or more IBM storage systems.

Accordingly, you can import a management pack into Microsoft SCOM for each IBM storage system.

The following block diagram illustrates how all management packs are integrated in Microsoft SCOM and connect to the storage systems.

Figure 1. Individual management packs for IBM storage systems



The IBM management packs use different client types and communication channels to connect to their backend storage systems:

- The FlashSystem A9000/R management pack (for FlashSystem A9000 and FlashSystem A9000R) and the XIV® and Spectrum Accelerate management pack (for XIV and Spectrum Accelerate) use the supported storage systems' respective command-line clients and communicate with their storage systems over SSL.
- The Storwize® family management pack (for Storwize, SAN Volume Controller, and FlashSystem storage systems) uses the supported storage systems' respective command-line clients and communicate with their storage systems over SSH.
- The DS8000® Family management pack (for DS8700, DS8800, DS8870, and DS8880) uses a DS8000 client and communicates with the DS8000 storage system using the SMI-S standard Common Information Model (CIM) agent.

Compatibility and requirements

For complete and up-to-date information about compatibility and requirements of the IBM® Storage Management Pack for Microsoft SCOM, refer to the latest release notes.

Before you proceed

Before you proceed to the installation and usage of the IBM® Storage Management Pack, you need to obtain the required user privileges for accessing the specific IBM storage systems that you intend to monitor from Microsoft SCOM.

Use your IBM storage system management GUI (or contact your storage administrator) to define your user account on the storage system in the appropriate user permission group.

Unless specified otherwise in the release notes of the IBM Storage Management Pack for Microsoft SCOM, your storage system user account should be defined in:

- **Monitor** user group – applicable to Storwize®, SAN Volume Controller, FlashSystem storage systems using Spectrum Virtualize software, and DS8000® family storage system.
- **Read Only** category – applicable to XIV®, Spectrum Accelerate, FlashSystem A9000, and FlashSystem A9000R.

Installation

This chapter describes the installation of the IBM® Storage Management Pack for Microsoft SCOM, and includes the following sections:

Note:

- You can install the IBM Storage Management Pack on the Microsoft SCOM management server and on all site servers that run SCOM agents. This allows monitoring data to be collected by each SCOM agent service, which then sends the data to the SCOM management server.
- As a best practice, install IBM Storage Management Pack on SCOM agents. If you have many storage arrays to monitor, it is also recommended to distribute the monitoring over multiple SCOM agents, in order to balance the load across the agents.
- [Downloading the IBM Storage Management Pack](#)
Download the IBM Storage Management Pack onto the host on which Microsoft SCOM is installed and used.
- [Installation package contents](#)
Some components in the installation package are required and some are optional, as detailed in the following table.
- [First-time installation vs. upgrade](#)
If a previous version of the IBM Storage Management Pack is already installed, you can upgrade it.
- [Running the installation wizard](#)
To install the IBM Storage Management Pack, run the installation wizard as described in the following procedure.
- [Installing the Microsoft Operations Manager SDK on an agent server](#)
The Microsoft Operations Manager Software Development Kit (SDK) is required for any IBM Storage Management Pack that runs on a SCOM agent server. The SDK is not installed by default on the SCOM agent server, and you need to install it manually.
- [Uninstalling management packs](#)
When any specific management pack is no longer needed, you can remove it individually from Microsoft SCOM or, alternatively, you can uninstall all management packs together.

Downloading the IBM Storage Management Pack

Download the IBM® Storage Management Pack onto the host on which Microsoft SCOM is installed and used.

About this task

You can find the IBM Storage Management Pack for Microsoft SCOM installation package on the [IBM Fix Central website](#).

Procedure

Two packages are available for download. Download the executable package that matches the Windows bit version that you are using on the host:

- IBM_Storage_MP_for_SCOM-windows-x86-2.8.0.exe – for 32-bit Windows Server versions
- IBM_Storage_MP_for_SCOM-windows-x64-2.8.0.exe – for 64-bit Windows Server versions

Installation package contents

Some components in the installation package are required and some are optional, as detailed in the following table.

Table 1. Installation package contents

Component	Description	Required or optional
SCOM-control utility (scomu.cmd)	A stand-alone command-line interface (CLI) tool for configuration and diagnostics.	Required
Upgrade utility (upgrade_config.cmd)	A CLI utility for upgrading from version 1.1.1 or earlier.	Optional
DS8000® Family management pack	A module for monitoring DS8000 systems through Microsoft SCOM.	Optional
Storwize® Family management pack	A module for monitoring Storwize, SAN Volume Controller and FlashSystem storage systems using Spectrum Virtualize software through Microsoft SCOM.	Optional
XIV® and Spectrum Accelerate management pack	A module for monitoring XIV and Spectrum Accelerate systems through Microsoft SCOM.	Optional
FlashSystem A9000/R management pack	A module for monitoring FlashSystem A9000 and FlashSystem A9000R systems through Microsoft SCOM.	Optional

Note: The management packs are not automatically imported to Microsoft SCOM. You must manually import each pack that you want to use.

First-time installation vs. upgrade

If a previous version of the IBM® Storage Management Pack is already installed, you can upgrade it.

When you run the installation (see [Running the installation wizard](#)) on a host with an existing installation of the IBM Storage Management Pack, the upgrade wizard is automatically invoked and it guides you through the upgrade process.

Important:

- After the upgrade, you need to delete and then re-import the management packs. For more information, see [Removing a specific management pack](#) and [Importing management packs to Microsoft SCOM](#).
- No IBM Storage events and alerts are kept in the database after the upgrade.

If you are upgrading to IBM Storage Management Pack for Microsoft System Center Operations Manager 2.8.0 by installing it over version 1.1.1, run the **upgrade_config.cmd** CLI utility after version 2.8.0 is installed, in order to restore the earlier configurations.

For example:

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>upgrade_config.cmd  
Upgrade complete.
```

Running the installation wizard

To install the IBM® Storage Management Pack, run the installation wizard as described in the following procedure.

Before you begin

Attention: Before installing, updating, or uninstalling the IBM Storage Management Pack, close the configuration shell (**scomu.cmd**) and all other running applications that may be using the IBM Storage Solutions External Runtime Components (such as the IBM XIV® Host Attachment Kit). This is to avoid errors or disruptive restart of the host server.

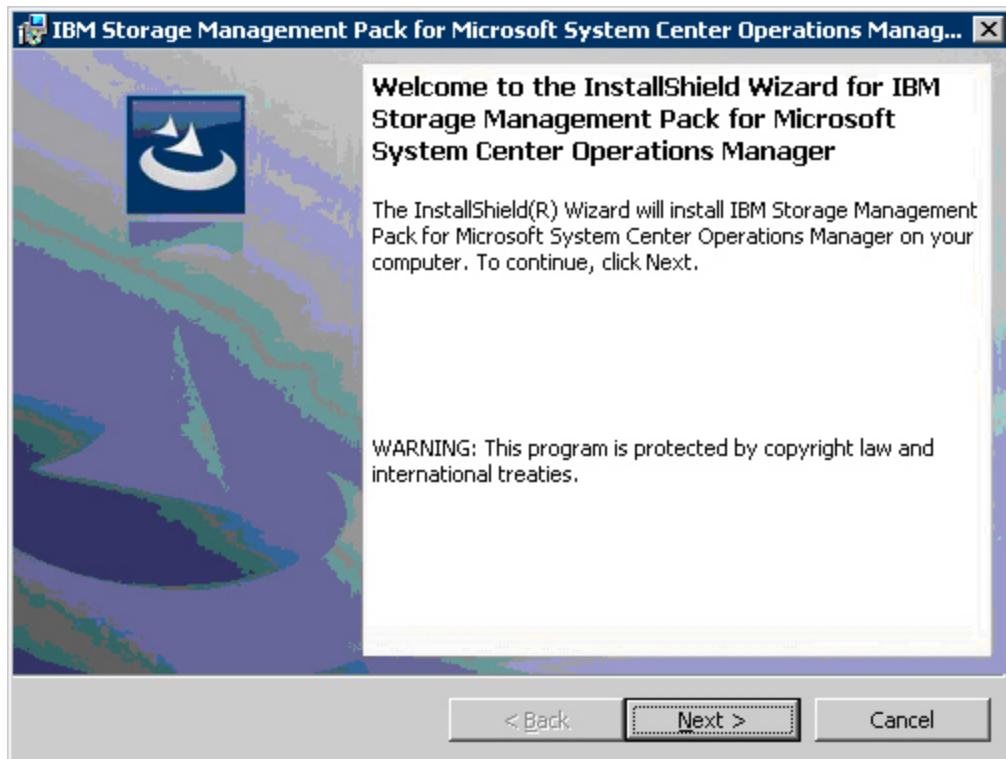
About this task

You can install the IBM Storage Management Pack on the Microsoft SCOM management server and on all site servers that run SCOM agents. This allows monitoring data to be collected by each SCOM agent service, which then sends the data to the SCOM management server.

Procedure

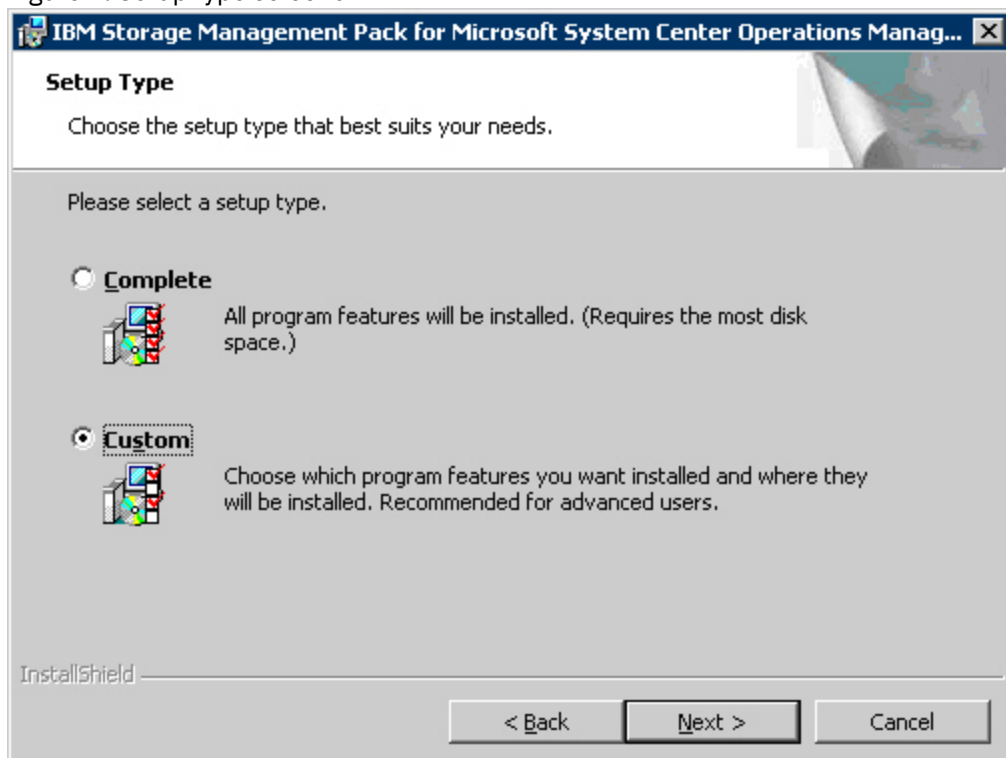
1. Run the executable file that you have downloaded (see [Downloading the IBM Storage Management Pack](#)).
The welcome panel of the installation wizard is displayed.

Figure 1. IBM Storage Management Pack for Microsoft SCOM – Installation Wizard



2. Click Next. The License Agreement panel is displayed.
3. Read and accept the terms of the license agreement, and then click Next. The Setup Type panel is displayed.

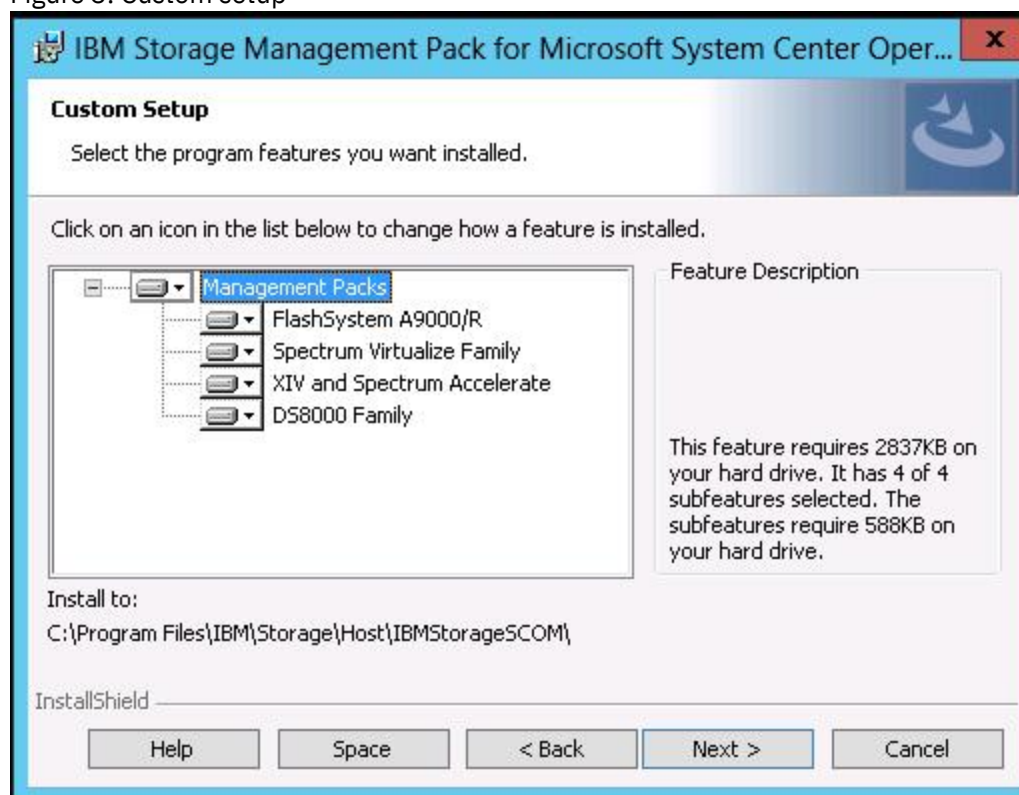
Figure 2. Setup type selection



4. Select the setup type:
 - Complete – Select this option to install all management packs (see [Installation package contents](#)).
 - Custom – Select this option to install only the management packs that you specify.

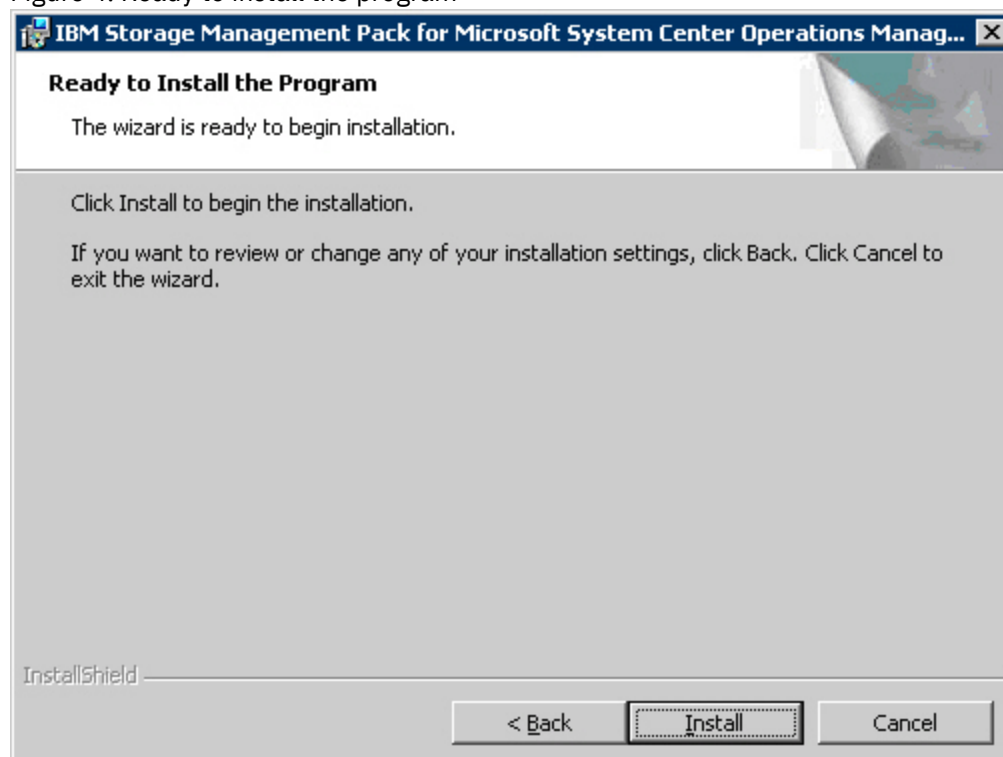
5. Click Next. If you previously selected Custom, the Select Features panel is displayed, and you can select the specific management packs that you want to install.

Figure 3. Custom setup



6. Click Next.
The Ready to Install the Program panel is displayed.

Figure 4. Ready to install the program



7. Click Install. The installation process begins, and files are copied to the following directory:
%ProgramFiles%\IBM\Storage\Host\IBMStorageSCOM
8. After the installation process is complete, click Finish.

Installing the Microsoft Operations Manager SDK on an agent server

The Microsoft Operations Manager Software Development Kit (SDK) is required for any IBM® Storage Management Pack that runs on a SCOM agent server. The SDK is not installed by default on the SCOM agent server, and you need to install it manually.

Before you begin

The Microsoft Operations Manager SDK component must be installed on the SCOM agent server **only after** the IBM Storage Management Pack is installed.

For the latest up-to-date information about this SDK, refer to the [MSDN web page for System Center 2012 – Operations Manager SDK](#).

Note: The term *agent server* refers to any host computer on which a SCOM agent runs in the background, as opposed to the server upon which the actual SCOM platform is installed (referred to as *management server*).

Procedure

There are two methods of installing the Microsoft Operations Manager SDK on the SCOM agent:

- Install the SDK on the agent server.
The SDK is installed in one of the following directories, depending on the Microsoft SCOM version that you are using:
 - C:\Program Files\System Center 2012\Operations Manager\Console\SDK Binaries
- Copy the SDK from the management server to the agent server in the following manner:
 1. On the **management server**, find the 'SDK Binaries' folder located in one of the following directories, depending on the Microsoft SCOM version that you are using:
 - C:\Program Files\System Center 2012\Operations Manager\Server
 - C:\Program Files\Microsoft System Center 2012 R2\Operations Manager\Server
 2. Copy the SDK Binaries folder to one of the following directories on the **agent server**:
 - Default directory for Microsoft SCOM 2012 R2:
C:\Program Files\Microsoft Monitoring Agent\Agent
 - Default directory for Microsoft SCOM 2012:
C:\Program Files\System Center Operations Manager\Agent
 - Any local directory that you have defined in a configuration file named **SDKdir.cfg**. The file must be placed in:
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\config

The **SDKdir.cfg** configuration file should contain only one text line specifying the directory path.

Uninstalling management packs

When any specific management pack is no longer needed, you can remove it individually from Microsoft SCOM or, alternatively, you can uninstall all management packs together.

Procedure

Accordingly, the following subsections describe:

- [Removing a specific management pack](#)
- [Uninstalling all management packs](#)
- [Removing a specific management pack](#)
This section describes how to remove a specific management pack.
- [Uninstalling all management packs](#)
This section describes how to completely uninstall all IBM management packs.

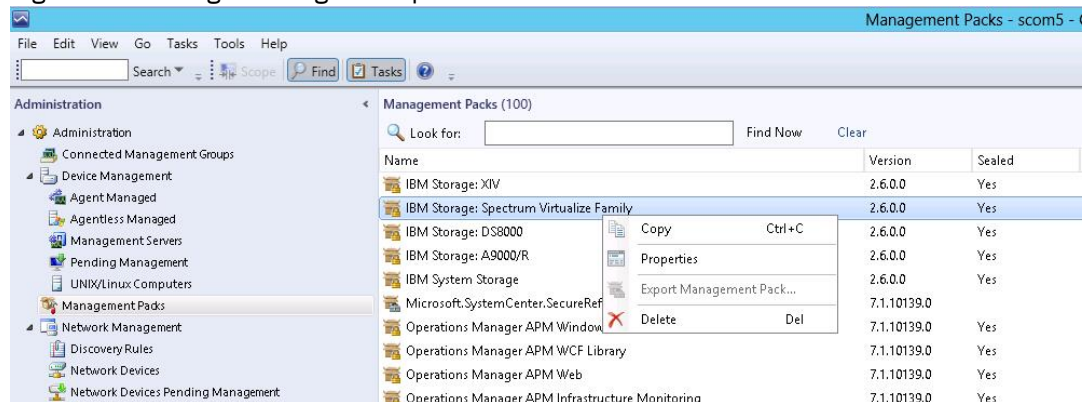
Removing a specific management pack

This section describes how to remove a specific management pack.

Procedure

1. On the Administration panel, click Management Packs.
2. On the Management Packs list, select the management pack that you want to remove.
3. Right-click the management pack, and select Delete from the pop-up menu. Alternatively, press Delete or Del on the keyboard when the row of the management pack is selected.

Figure 1. Deleting a management pack



Important: If the management pack you deleted is the last remaining pack in the Operations Manager, you must delete the IBM® Storage common management pack as well.

Uninstalling all management packs

This section describes how to completely uninstall all IBM® management packs.

Procedure

1. Select and delete each management pack as explained in [Removing a specific management pack](#).
2. Go to Control Panel > Add/Remove Programs, and uninstall IBM Storage Management Pack for Microsoft SCOM.

Configuration

After the IBM® Storage Management Pack for Microsoft SCOM has been successfully installed, you can configure it.

Configuring the IBM Storage Management Pack involves different tasks, as described in the following sections:

- [Using the command-line utility](#)
The IBM Storage Management Pack includes a standalone command-line interface (CLI) utility, **scomu.cmd**, which you can use from a desktop shortcut or from the Run command box on the Windows Start menu.
- [Configuring the SCOM management server](#)
Before adding or modifying an IBM storage system, configure the SCOM management server as described in the following sections.
- [Adding IBM storage systems](#)
You can use the **scomu.cmd** utility and the **--add** command to add specific IBM storage systems to the Microsoft SCOM monitoring list.
- [Displaying the monitored storage systems](#)
This section describes how to display the list of SCOM-monitored storage systems.
- [Modifying storage system connection parameters](#)
This section describes modifying storage system connection parameters.
- [Removing a storage system from the monitoring list](#)
This section describes how to remove a storage system from the list of SCOM-monitored IBM storage systems.
- [Changing event severity levels](#)
You can use the **scomu.cmd** CLI utility to change the severity level of logged events.
- [Importing management packs to Microsoft SCOM](#)
If any specific management pack (for a storage system type) is not already imported, you can import it to the Microsoft SCOM environment by performing the following procedure.
- [Setting the storage system discovery and event collection intervals](#)
Before or at any time after you start using the IBM Storage Management Pack, you can set the time intervals that define the rate by which Microsoft SCOM discovers new storage systems and collects information about new events.

Using the command-line utility

The IBM® Storage Management Pack includes a standalone command-line interface (CLI) utility, **scomu.cmd**, which you can use from a desktop shortcut or from the Run command box on the Windows Start menu.

Using a set of CLI commands, you can configure the IBM storage systems that are monitored by Microsoft SCOM, as explained in the following subsections.

Note: **scomu.cmd** can also be used to diagnose issues and collect logs for troubleshooting. For more information, see [Diagnostics and troubleshooting](#).

To display the full list of commands and options available for the CLI utility, enter **scomu.cmd --help** in the command prompt window.

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --help
IBM Storage SCOM-control Utility - Version 2.8.0
```

Usage: Usage:

```
scomu.cmd --add [--no-test | --timeout TIMEOUT] [device options]
scomu.cmd --modify [--no-test | --timeout TIMEOUT] [device options]
scomu.cmd --del [device options]
scomu.cmd --list [-t DEVICE_TYPE] [--format FORMAT]
scomu.cmd --test [--timeout TIMEOUT] [device options]
scomu.cmd --setseverity -t DEVICE_TYPE --event_id [EVENT ID] --severity
[SEVERITY]
scomu.cmd --restoreseverity -t DEVICE_TYPE --event_id [EVENT ID]
scomu.cmd --listseverity
scomu.cmd --loglevel -t DEVICE_TYPE [LOG_LEVEL]
scomu.cmd --diag [--no-test]
scomu.cmd --precheck
scomu.cmd --migrate
scomu.cmd --sc-get
scomu.cmd --sc-set [--servername SERVERNAME | --domain DOMAIN | --username
USERNAME |
--password PASSWORD]
scomu.cmd --sc-del
scomu.cmd --sc-check
scomu.cmd --help
```

Options:

```
Main operation mode:
--add          Add a connection
--modify       Modify a connection
--del          Delete a connection
--list         List all connections
--test        Test whether a connection can be established
--loglevel     View the log level, or set log level to ['NOTSET',
'TRACE',
'DEBUG', 'INFO', 'WARNING', 'ERROR', 'CRITICAL']
--diag        Collect diagnostic data
--precheck     Pre-check the environment
--setseverity  Set event severity
--restoreseverity Restore event severity
--listseverity List event severity mappings
--sc-get       Get configurations for System Center
--sc-set       Set configurations for System Center
--sc-del       Delete configurations for System Center
--sc-check     Check configurations for System Center
--migrate      Migrate configurations and synchronize them with System
Center
```

Operation modifiers:

```
-F FILE, --file=FILE Obtain configuration from a file or read the environment
IBM_SCOM_HOME (used only by the service team)
--debug            Display debug information (used by service team)
--no-test          Skip the connection test
```

`--timeout=TIMEOUT` The device connection time-out duration in seconds, which can

be any value between 1s and 3600s. Default value: 60s
`--format=FORMAT` The output format: html (default) or csv

Device options:

`-t DEVICE_TYPE, --dev_type=DEVICE_TYPE`
Set the device type to ['ds8k', 'a9000r', 'svc', 'xiv'], 'ds8k' for IBM System Storage DS8000, 'a9000r' for IBM FlashSystem A9000/R, 'svc' for IBM Spectrum Virtualize Family, 'xiv' for IBM XIV Storage System
`--ip=IP, --host=IP` IP address or hostname
`-U USERNAME, --username=USERNAME`
username
`-P PASSWORD, --password=PASSWORD`
password
`-p PASSPHRASE, --passphrase=PASSPHRASE`
passphrase
`--url=URL` URL, for example <http | https>://<hostname or IP>:<port>
`--namespace=NAMESPACE`
namespace
`--authmode=AUTHMODE`
Set authentication mode to AUTHMODE. "publickey" for a certificate file, "password" for password (can be used for SAN Volume Controller or Storwize V7000 of microcode version 6.3 or later.)
`--certpath=CERTPATH`
certificate file path
`--event_id=EVENT_ID`
event ID
`--severity=SEVERITY`
Set event severity to SEVERITY

Device options for IBM System Storage DS8000:

`-t ds8k --url URL [--username USERNAME] [--password PASSWORD] [--namespace NAMESPACE]`

Device options for IBM Spectrum Virtualize Family:

`-t svc --ip IP [--authmode AUTHMODE] [--username USERNAME] [--password PASSWORD] [--certpath CERTPATH] [--passphrase PASSPHRASE]`

Device options for IBM XIV Storage System:

`-t xiv --ip IP [--username USERNAME] [--password PASSWORD]`

Device options for IBM FlashSystem A9000 or FlashSystem A9000R:

`-t a9000r --ip IP [--username USERNAME] [--password PASSWORD]`

Device options to set System Center configurations:

`--sc-set [--servername SERVERNAME | --domain DOMAIN | --username USERNAME | --password PASSWORD]`

`--servername=SERVERNAME`
The server name of System Center Operations Manager Management Server
`--domain=DOMAIN`
The Windows domain name

Other options:

`-h, --help` Display help information
`--version` Display the IBM Storage Management Pack version number

Examples:

`scomu.cmd --add -t xiv --ip 192.0.2.10 -U u1 -P 123 # adds a connection`
`scomu.cmd --add -t a9000r --ip 192.0.2.10 -U u1 -P 123 # adds a connection`


```

scomu.cmd --add -t svc --ip 192.0.2.10 --authmode password --username usr1
--password pass1 # adds a connection
scomu.cmd --add -t svc --no-test --ip 192.0.2.10 --authmode password
--username usr1 --password pass1 # adds a connection
scomu.cmd --modify -t xiv --ip 192.0.2.10 -P x # modifies a connection
scomu.cmd --modify -t a9000r --ip 192.0.2.10 -P x # modifies a connection
scomu.cmd --del -t svc --ip 192.0.2.10 # deletes a connection
scomu.cmd --list # lists all connections
scomu.cmd --test -t xiv --ip 192.0.2.10 -U u1 -P 123 # tests a connection
scomu.cmd --test -t a9000r --ip 192.0.2.10 -U u1 -P 123 # tests a connection
scomu.cmd --loglevel -t ds8k ERROR # sets log level
scomu.cmd --setseverity -t svc --event_id 980001 --severity information # set
severity in SCOM MP of event 980001 to
information
scomu.cmd --restoreseverity -t svc --event_id 980001 # restore severity SCOM MP
of event 980001 to default
scomu.cmd --listseverity # list all customized event severity mappings
scomu.cmd --sc-get # get configurations for System Center
scomu.cmd --sc-set --servername scomsrv01 --domain domain01 --username usr
--password pass # set configurations for System Center in
agent
scomu.cmd --sc-set --servername localhost # set configurations for System Center
in management server
scomu.cmd --sc-del # delete configurations for System Center
scomu.cmd --sc-check # check configurations for System Center
scomu.cmd --migrate # migrate configurations and synchronize them with System
Center

```

Configuring the SCOM management server

Before adding or modifying an IBM® storage system, configure the SCOM management server as described in the following sections.

Note: The IBM Storage Management Pack only works if the SCOM Root Management Server (RMS) and SCOM agents are deployed in the same domain.

- [Checking the existing management server configuration](#)
This section describes how to check the credential configuration of the management server before adding or modifying specific IBM storage systems to the Microsoft SCOM monitoring list.
- [Setting the management server domain and credentials](#)
The management server domain and credential information should be configured before adding or modifying specific IBM storage systems in the Microsoft SCOM monitoring list.
- [Deleting the management server information](#)
When required, you can delete the management server information.

Checking the existing management server configuration

This section describes how to check the credential configuration of the management server before adding or modifying specific IBM® storage systems to the Microsoft SCOM monitoring list.

About this task

You can use the **SCOMU.cmd** utility and the **--sc-check** command to check the credential configuration of the management server.

Procedure

To check the connection with the management server, enter **scomu.cmd --sc-check**.

Example

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --sc-check
There is no System Center configuration.
```

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --sc-check
Checking the connection to the management server...
The connection to the management server is OK.
```

What to do next

If the management server configuration is missing or incorrect, use **--sc-set** to configure or modify the management server info. See the detailed explanation in [Setting the management server domain and credentials](#).

Setting the management server domain and credentials

The management server domain and credential information should be configured before adding or modifying specific IBM® storage systems in the Microsoft SCOM monitoring list.

Procedure

You can use the **SCOMU.cmd** utility and the **--sc-set** command to configure the management server information.

1. To configure the management server information on the agent, type the following details in a single command line:
 - Server name (**--servername**) of the management server.
 - Domain (**--domain**) of the management server.
 - User name (**--username**) and password (**--password**).Important:
 - If the management server user account and software development kit (SDK) user account are different, use the username and password of the SDK user account.
 - The domain of the management server must be the same domain of the SCOM agent nodes.
2. To configure the management server information on the server, type the following details in a single command line:
 - Server name (**--servername**) of the management server.

Example

The following is an example of configuring the management server information on the agent:

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --sc-set
--servername scom1234.domain.com --domain scom.domain.com
--username administrator --password pass
```

The following is an example of configuring the management server information on the server:

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --sc-set
--servername localhost
```

What to do next

If you want to delete the management server information, use the **--sc-del** command.

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --sc-del
Checking the connection to the management server...
The connection to the management server is OK
The connection to the management server is deleted
```

If you want to get the management server information, use **--sc-get** command.

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --sc-get
Management Server: scom1234
Windows domain: scom.domain.com
Username: administrator
Password: *****
```

Deleting the management server information

When required, you can delete the management server information.

About this task

You can use the **SCOMU.cmd** utility and the **--sc-del** command to delete the management server information.

Example

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --sc-del
Checking the connection to the management server...
The connection to the management server is OK.
The connection to the management server is deleted.
```

Adding IBM storage systems

You can use the **SCOMU.cmd** utility and the **--add** command to add specific IBM® storage systems to the Microsoft SCOM monitoring list.

Management packs must be imported into the Microsoft SCOM environment before adding IBM storage systems. If the management pack is not yet imported, import it as specified in [Importing management packs to Microsoft SCOM](#).

Notes:

- After importing a management pack, check the connection with the SCOM server using **scomu.cmd --sc-check**. If the connection is not OK, you should correct it before adding IBM storage systems
- When adding a storage system to the monitoring list, the connection to the storage system is tested before it is added. You can skip the testing by specifying **--no-test** when adding the storage system.
- [Adding a DS8000 system](#)
This section describes how to add a DS8000® system to the list of SCOM-monitored IBM storage systems.
- [Adding a Spectrum Virtualize Family system](#)
This section describes how to add a SAN Volume Controller, Storwize series, or FlashSystem V9000 system to the list of SCOM-monitored IBM storage systems.
- [Adding an XIV or Spectrum Accelerate system](#)
This section describes how to add an XIV® or Spectrum Accelerate system to the list of SCOM-monitored IBM storage systems.
- [Adding a FlashSystem A9000 or FlashSystem A9000R system](#)
This section describes how to add a FlashSystem A9000 or FlashSystem A9000R system to the list of SCOM-monitored IBM storage systems.

Adding a DS8000 system

This section describes how to add a DS8000® system to the list of SCOM-monitored IBM® storage systems.

About this task

The DS8000 management pack connects to the DS8000 storage system through a DS CIM agent. The DS CIM agent runs embedded on the DS8000 system or in proxy mode, depending on the microcode version (for more information, refer to the release notes).

Procedure

To add a DS8000 system to the monitoring list, type the following details in a single command line:

- Type of system to be added (**-t**) – Use "ds8k" to specify DS8000 as the system type.
- URL (**--url**) – Web address of the DS CIM agent
- Namespace (**--namespace**) – CIM namespace of the DS CIM agent (for example: root/ibm)
- Login user name (**--username**) and password (**--password**) – For a proxy DS CIM agent, use the CIM agent user account. For an embedded DS CIM agent, use the DS8000 user account.

Example

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd --add -t ds8k --url https://host1.domain1.com:6989
--namespace root/ibm --username usr1 --password pwd1
Connecting to the device ...
1 IBM DS8000 is found.
device ID: xx, code level: x.x.x.x, CIM server version: x.x.x.x
```

```
The connection is OK.
```

```
Trying to add the connection.  
New connection is added.
```

Adding a Spectrum Virtualize Family system

This section describes how to add a SAN Volume Controller, Storwize series, or FlashSystem V9000 system to the list of SCOM-monitored IBM® storage systems.

Procedure

After the **--add** command, specify the following parameters (CLI arguments followed by values):

- IP address (**--ip**) or host name (**--host**) of the SAN Volume Controller, Storwize series, or FlashSystem V9000 system.
- Type of system to be added (**-t**) – Use "svc" to specify SAN Volume Controller, a Storwize series system, or FlashSystem V9000 as the system type.
- Authentication mode (**--authmode**) – You can specify the public key mode (publickey), or, if you are using microcode version 6.3 or later – you can specify the password mode (password).
 - If the public key authentication mode is used, enter the authentication user name (**--username**) and then the folder location and name of the private SSH key (**--certpath**). If the SSH requires a passphrase (**--passphrase**), enter it as well.

For example:

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>  
scomu.cmd --add -t svc --ip 192.100.200.150  
--authmode publickey --username john1 --certpath c:\svc.cert --  
passphrase xxxxx  
Connecting to the device ...  
1 IBM SAN Volume Controller is found.  
cluster ID: xx, code level: x.x.x.x, location: local  
  
The connection is OK.  
Trying to add the connection.  
New connection is added.
```

- If the password authentication mode is used (applicable only to microcode version 6.3 or later), enter the authentication user name (**--username**) and then the authentication password (**--password**).

For example:

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>  
scomu.cmd --add -t svc --ip 192.100.200.150  
--authmode password --username john1 --password xxxxxxxxxx  
Connecting to the device ...  
1 IBM SAN Volume Controller is found.  
cluster ID: xx, code level: x.x.x.x, location: local  
  
The connection is OK.  
Trying to add the connection.  
New connection is added.
```

Important:

- If you are using a SAN Volume Controller system 6.1, only "admin" is accepted as the user name. Using "admin" does not necessarily mean that you have administrator credentials, but rather a user name

spelled as "admin". It also does not mean that the matching user name defined on the storage system is also "admin". The pairing between the SCOM Management Pack user and the storage system user account is performed only by the SSH key pairing (any valid SSH key grants access).

- The private SSH key (in all cases in which it is used) must be in the OpenSSH format. If your key is not in the OpenSSH format, you can use a certified OpenSSH conversion utility. For more information, see the [OpenSSH website](#).

Adding an XIV or Spectrum Accelerate system

This section describes how to add an XIV® or Spectrum Accelerate system to the list of SCOM-monitored IBM® storage systems.

About this task

SCOM 2.8.0 includes XIV multi-tenancy support, which applies to XIV and Spectrum Accelerate 11.5 or later. To use multi-tenancy support, a non-domain user must have global visibility and then can have access only when the access policy is set to "Open."

Note: SCOM only accepts non-domain LDAP users.

Procedure

To add an XIV or Spectrum Accelerate system to the monitoring list, use **-t xiv** to specify XIV as the system type, and then specify the IP address (**--ip**) or host name (**--host**) of the XIV or Spectrum Accelerate system, followed by the **--username** and **--password** login details.

Example

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd --add -t xiv --ip 192.0.2.10 --username usr4 --password pwd4
Connecting to the device ...
1 IBM XIV Storage System is found.
device ID: xx, code level: x.x.x.x

The connection is OK.
Trying to add the connection.
New connection is added.
```

Adding a FlashSystem A9000 or FlashSystem A9000R system

This section describes how to add a FlashSystem A9000 or FlashSystem A9000R system to the list of SCOM-monitored IBM® storage systems.

About this task

SCOM 2.8.0 includes XIV® multi-tenancy support, which applies to FlashSystem A9000 and A9000R 12.0.1 or later. To use multi-tenancy support, a non-domain user must have global visibility and then can have access only when the access policy is set to "Open."

Note: SCOM only accepts non-domain LDAP users.

Procedure

To add a FlashSystem A9000 or FlashSystem A9000R system to the monitoring list, use **-t a9000r** to specify A9000 or A9000R as the system type. Then specify the IP address (**--ip**) or host name (**--host**) of the A9000 or A9000R system, followed by the **--username** and **--password** login details.

Example

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd --add -t a9000r --ip 192.0.2.10 --username usr4 --password pwd4
Connecting to the device ...
1 IBM FlashSystem A9000R Storage System is found.
device ID: xx, code level: x.x.x.x
```

```
The connection is OK.
Trying to add the connection.
New connection is added.
```

Displaying the monitored storage systems

This section describes how to display the list of SCOM-monitored storage systems.

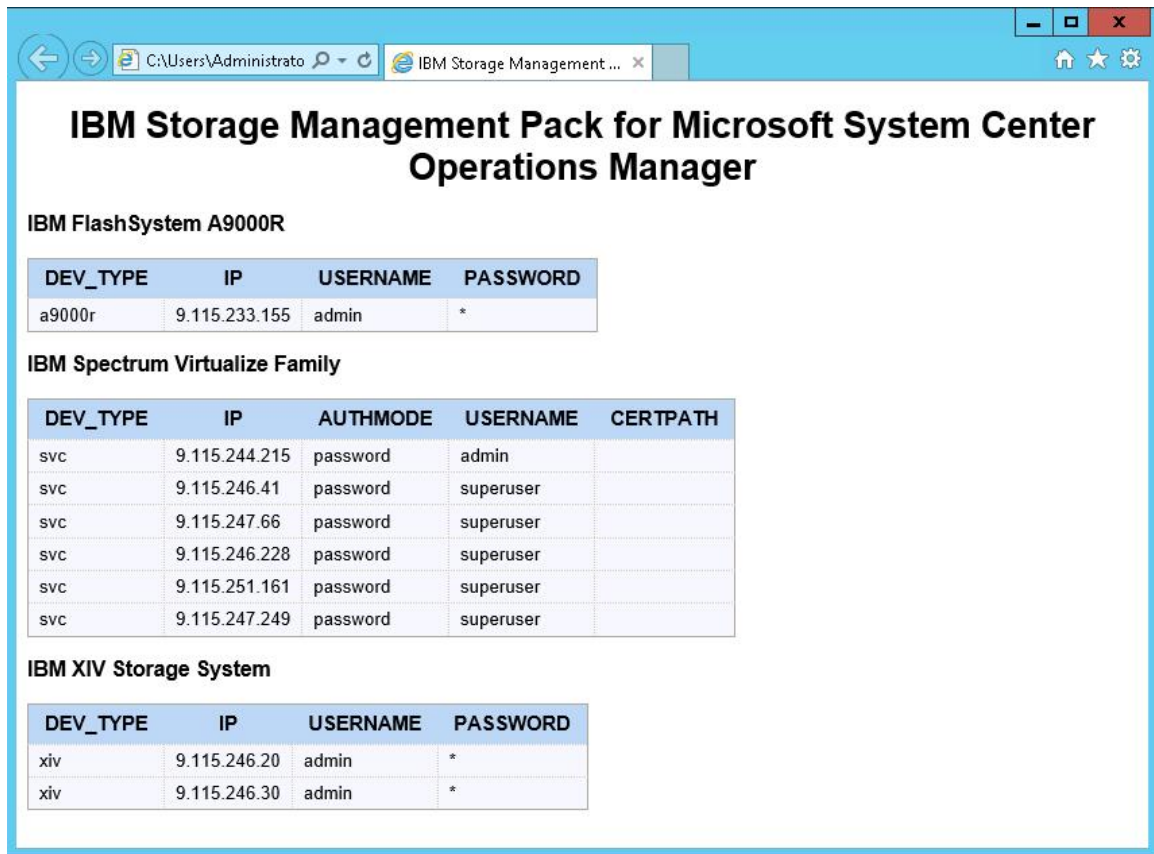
Procedure

To view the list of monitored storage systems, enter **scomu.cmd --list**.
The default output format is HTML, and the list is displayed in the default web browser.

Example

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --list
9 connections are found.
```

Figure 1. HTML output



What to do next

To display the list in comma-separated values (CSV) format, add **--format csv** to the command. For example:

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --list --format csv
9 connections have been found.
```

```
DEV_TYPE,IP,USERNAME,PASSWORD
a9000r,9.115.233.155,admin,*
```

```
DEV_TYPE,IP,AUTHMODE,USERNAME,CERTPATH
svc,9.115.244.215,password,admin,
svc,9.115.246.41,password,superuser,
svc,9.115.247.66,password,superuser,
svc,9.115.246.228,password,superuser,
svc,9.115.251.161,password,superuser,
svc,9.115.247.249,password,superuser,
```

```
DEV_TYPE,IP,USERNAME,PASSWORD
xiv,9.115.246.20,admin,*
xiv,9.115.246.30,admin,*
```

Modifying storage system connection parameters

This section describes modifying storage system connection parameters.

Procedure

To modify the connection parameters for a specific monitored storage system, enter **--modify** followed by the system to be modified, the new parameter names and values.

Example

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd --modify -t xiv --ip 192.0.2.10 --username usr5
Connecting to the device ...
1 IBM XIV Storage System is found.
device ID: xx, code level: x.x.x.x

The connection is OK.
Trying to modify the connection.
The connection is modified.
```

Removing a storage system from the monitoring list

This section describes how to remove a storage system from the list of SCOM-monitored IBM® storage systems.

Procedure

To remove the storage system from the monitored list, enter **--del** and then the IP address or host name of the storage system.

Example

```
C:\Program Files\IBM\StorageMPIBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd --del -t xiv --ip 192.0.2.40
1 connection is deleted.
```

Changing event severity levels

You can use the **scomu.cmd** CLI utility to change the severity level of logged events.

About this task

Depending on your environment and preferences, you can change the default severity level of logged events. This allows you to set automated alerts for events that their default severity does not match your particular environment and preference. You can lower the severity level of events about which you do not want to be alerted, or raise the severity level of events about which you do want to be alerted.

Note:

- This feature is supported only with Storwize®, SAN Volume Controller, and FlashSystem storage systems using Spectrum Virtualize software.
- The default alert severity level is Warning.

Use the **--setseverity** command to change event severity levels, as described in the following procedure.

Procedure

After the **--setseverity** command, specify the following parameters (CLI arguments followed by values):

- Type of system for which the severity change should be made – Use **-t** followed by "svc".
- ID of the event for which you want to change the severity level – Use **--event_id** followed by the ID number of the event.
- The severity level that you want to set for the event – Use **--severity** followed by the name of the severity level that you want to set.

Note: Different severity level types are available depending on the IBM® storage system that you are using. For more information, see [Monitoring](#).

Example

```
scomu.cmd --setseverity -t svc --event_id 980001 --severity information
```

What to do next

- To display a list of all the customized severity levels, use the **--listseverity** command as follows:

```
scomu.cmd --listseverity
```

- If you want to restore the severity level of a certain event to its default severity, use the **--restoreseverity** command as shown in this example:

```
scomu.cmd --restoreseverity -t svc --event_id 980001
```

Importing management packs to Microsoft SCOM

If any specific management pack (for a storage system type) is not already imported, you can import it to the Microsoft SCOM environment by performing the following procedure.

Before you begin

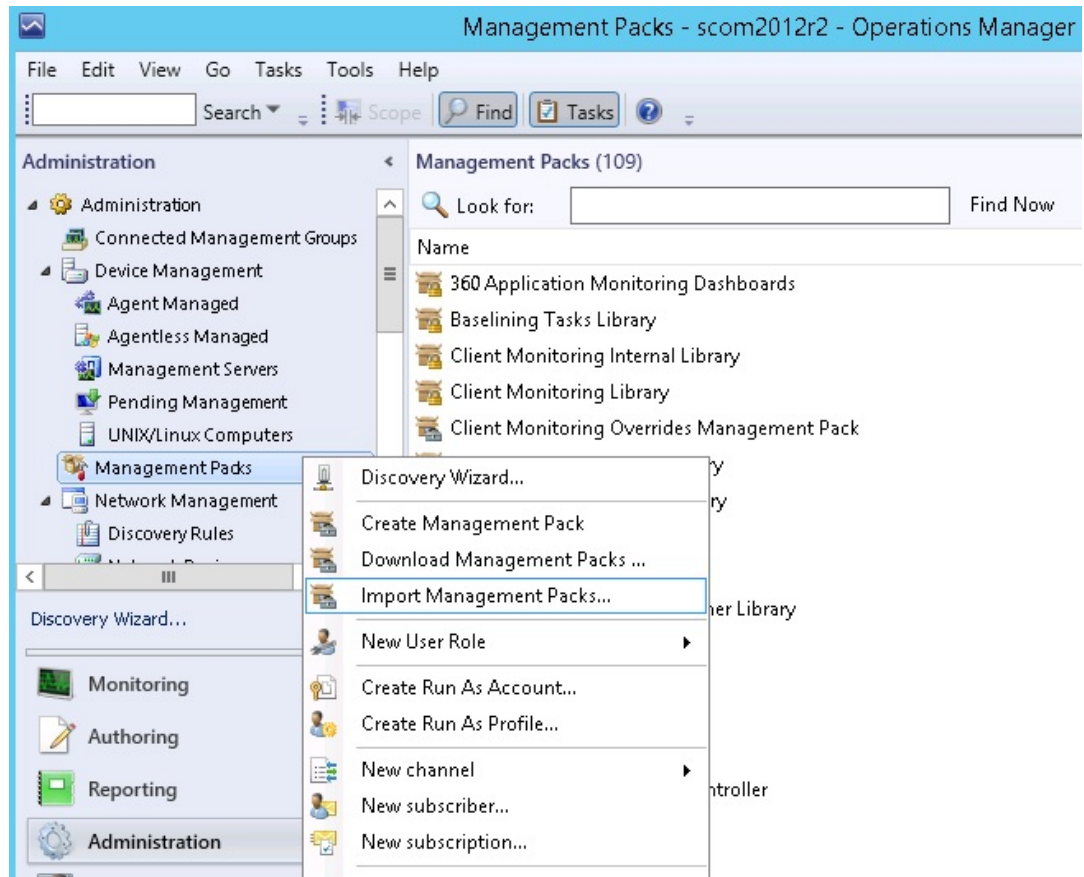
Important: Any management pack that was previously imported with version 1.3.0 or earlier must be deleted before importing management packs with newer versions of the IBM® Storage Management Pack for Microsoft SCOM. For more information, see [Removing a specific management pack](#).

Procedure

To import an IBM management pack in Microsoft SCOM 2012 or 2012 R2:

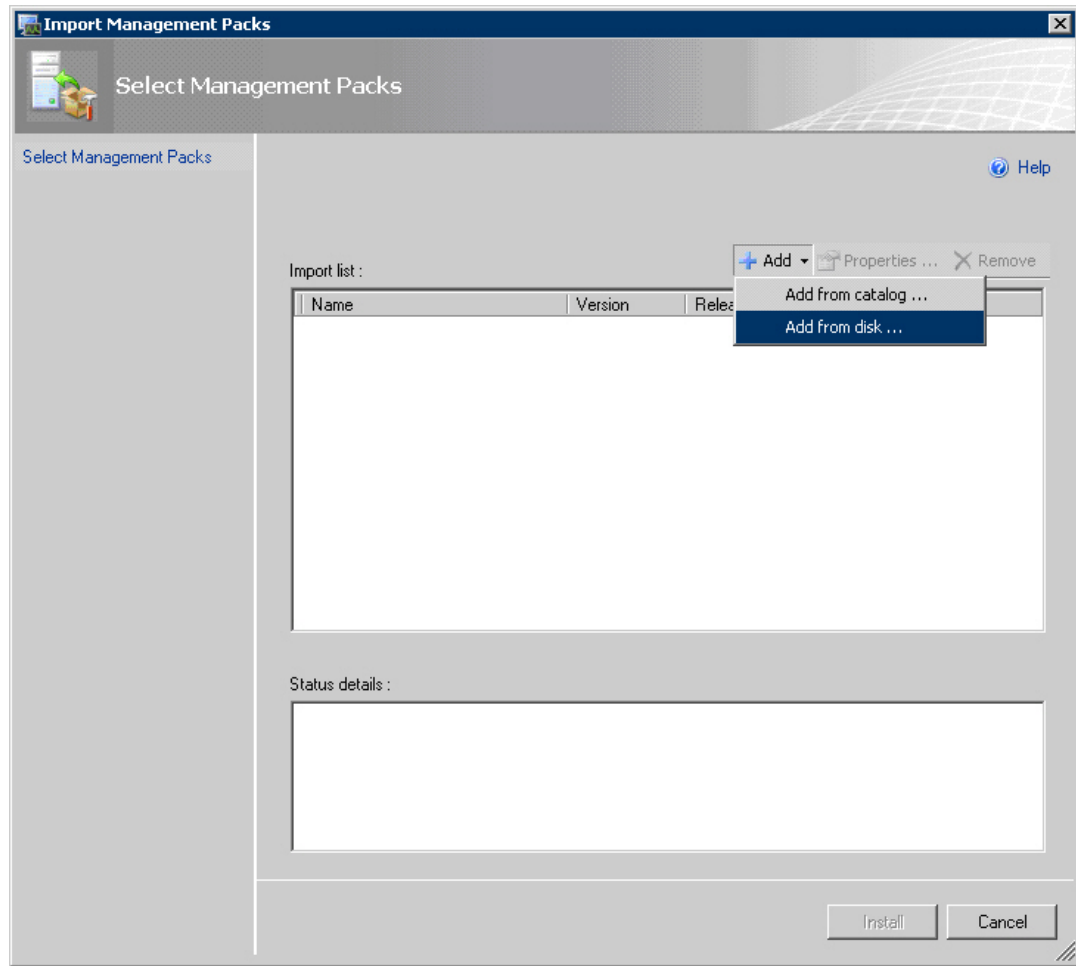
1. On the Administration panel, right-click Management Packs, and select Import Management Packs. The Import Management Pack dialog box is displayed.

Figure 1. Import Management Packs selected



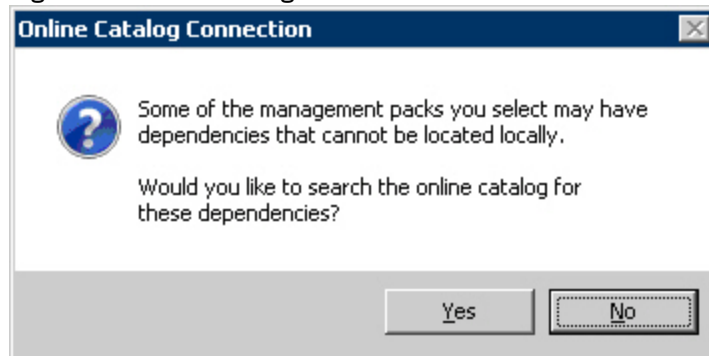
2. Click Add, and then click Add from disk.

Figure 2. Add from disk



The Online Catalog Connection confirmation is displayed.

Figure 3. Online Catalog Connection Confirmation



3. Click No to locate the management pack locally.

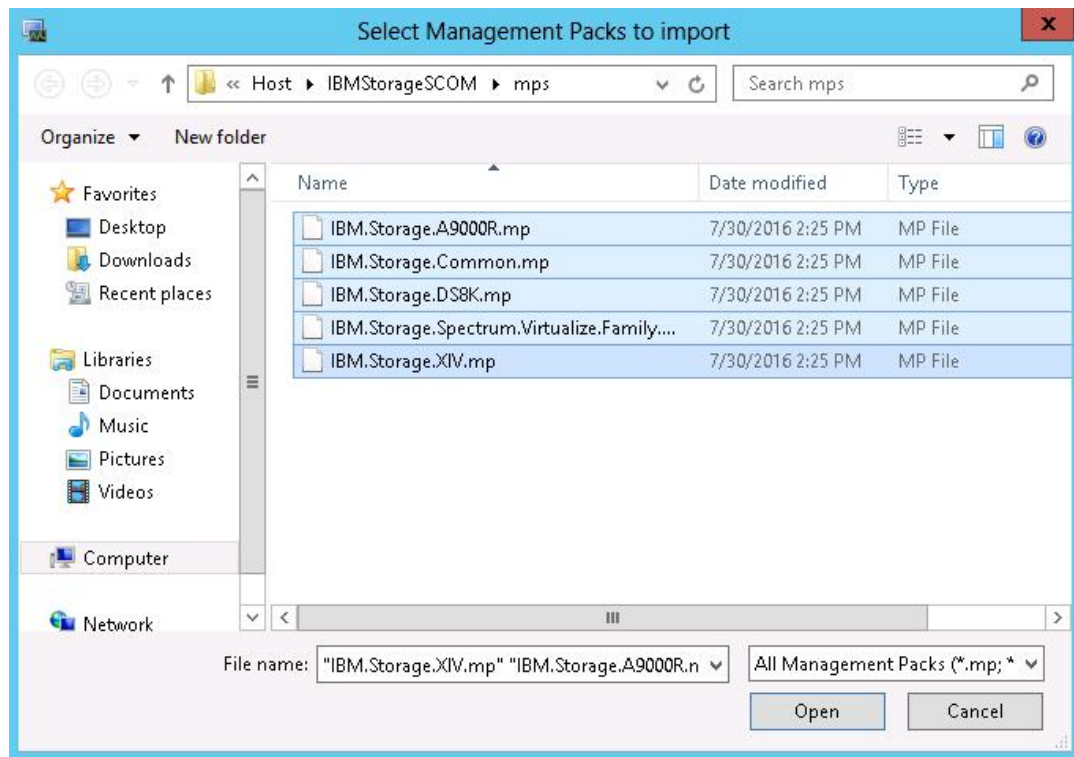
The Select Management Packs to Import dialog box is displayed.

4. Access the %ProgramFiles%\IBM\Storage\Host\IBMStorageSCOM\mps directory and select the following files:

- IBM.Storage.Common.mp
- The file of the management pack that you want to add (for example, select IBM.Storage.DS8K.mp for adding the DS8000® management pack). You can select more than one management pack by pressing the CTRL key when selecting.

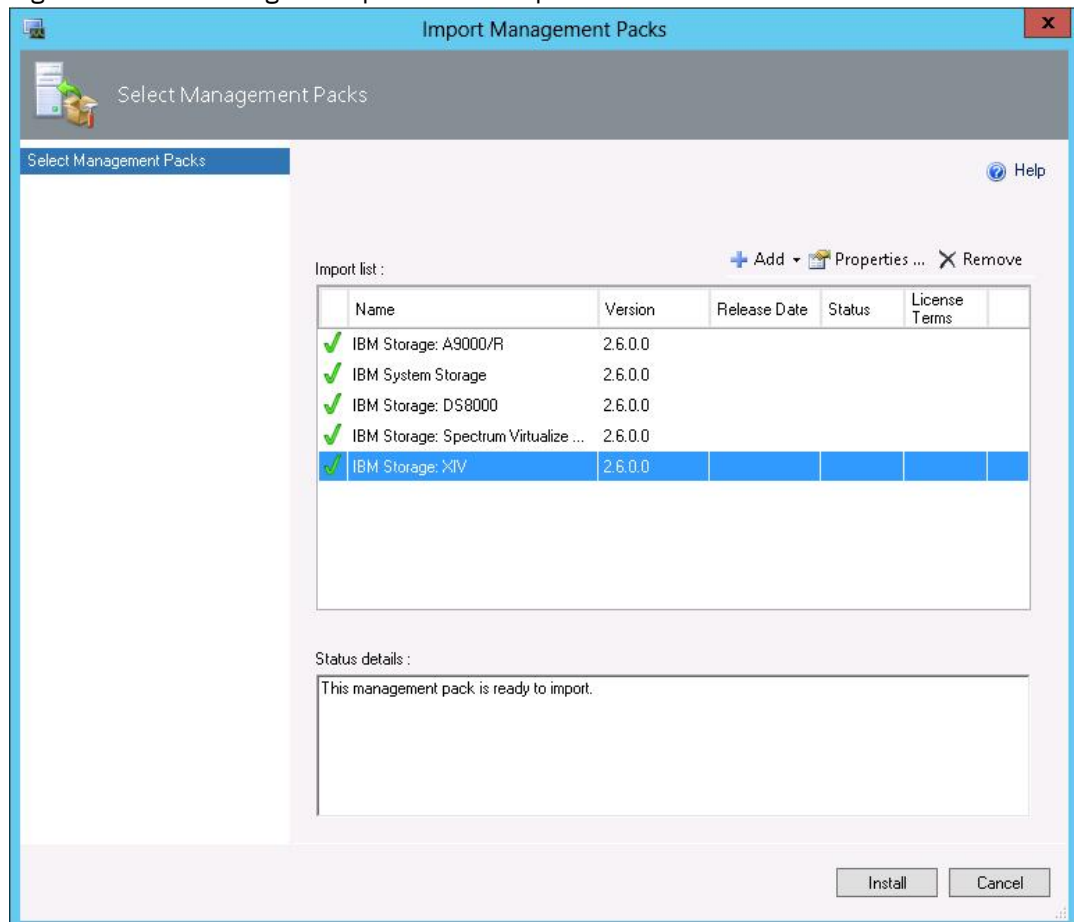
Important: You must select the IBM.Storage.Common.mp file together with the first management pack that you add. After this initial addition, you do not need to select IBM.Storage.Common.mp file again.

Figure 4. Pack file selection



5. When the files are selected, click Open. The Import Management Packs dialog box lists the management packs to be added.

Figure 5. List of management packs to be imported



6. Click Install to start the import. When the management packs are successfully imported, click Close.

Setting the storage system discovery and event collection intervals

Before or at any time after you start using the IBM® Storage Management Pack, you can set the time intervals that define the rate by which Microsoft SCOM discovers new storage systems and collects information about new events.

- [Setting the storage system discovery intervals](#)
This section describes how to set the storage system discovery intervals.
- [Setting the event collection intervals](#)
This section describes how to set the storage system event collection intervals.

Setting the storage system discovery intervals

This section describes how to set the storage system discovery intervals.

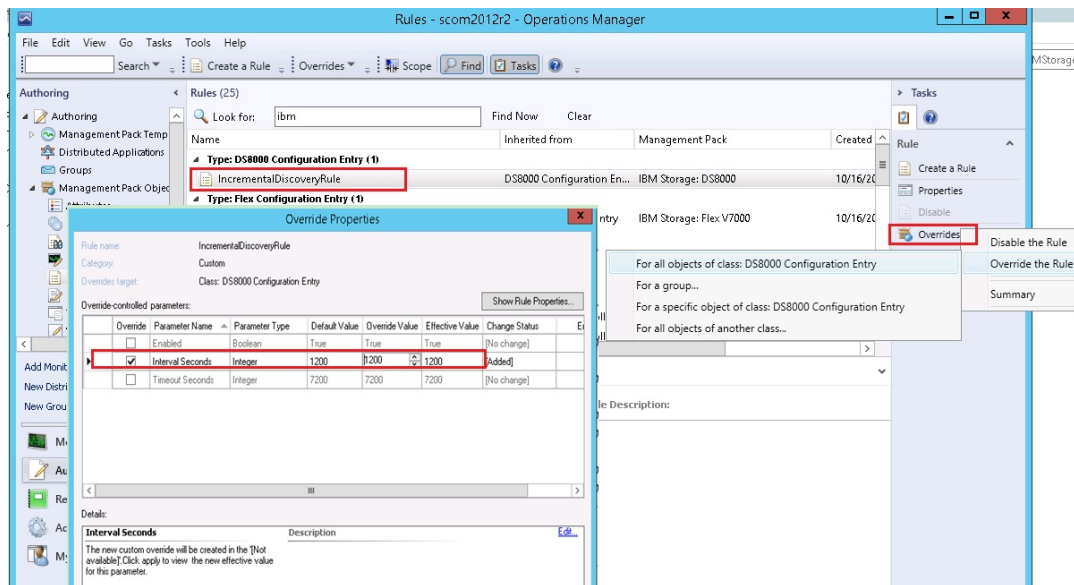
Procedure

The default interval for the discovery of DS8000® storage systems is 20 minutes. The default interval for the discovery of all other IBM® storage systems is 10 minutes.

To change the IBM storage system discovery interval in Microsoft SCOM 2012:

1. Click the Microsoft SCOM Authoring pane.
2. Select Rules, and then select IncrementalDiscoveryRule for the relevant management pack.
3. In the Actions pane (located on the right), select Overrides...> Override the Rule...> For all objects of class.
The Override Properties dialog box is displayed.
4. Select Override for Interval Seconds, and then enter a new numerical Override Value. The numerical value that you enter defines the number of seconds for the interval.
5. Click Apply.
The new discovery interval is set.

Figure 1. Interval setting for storage system discovery



Setting the event collection intervals

This section describes how to set the storage system event collection intervals.

About this task

If you need SCOM to collect storage system events at a higher or a lower frequency, you can change the event collection time interval as explained in the following procedure.

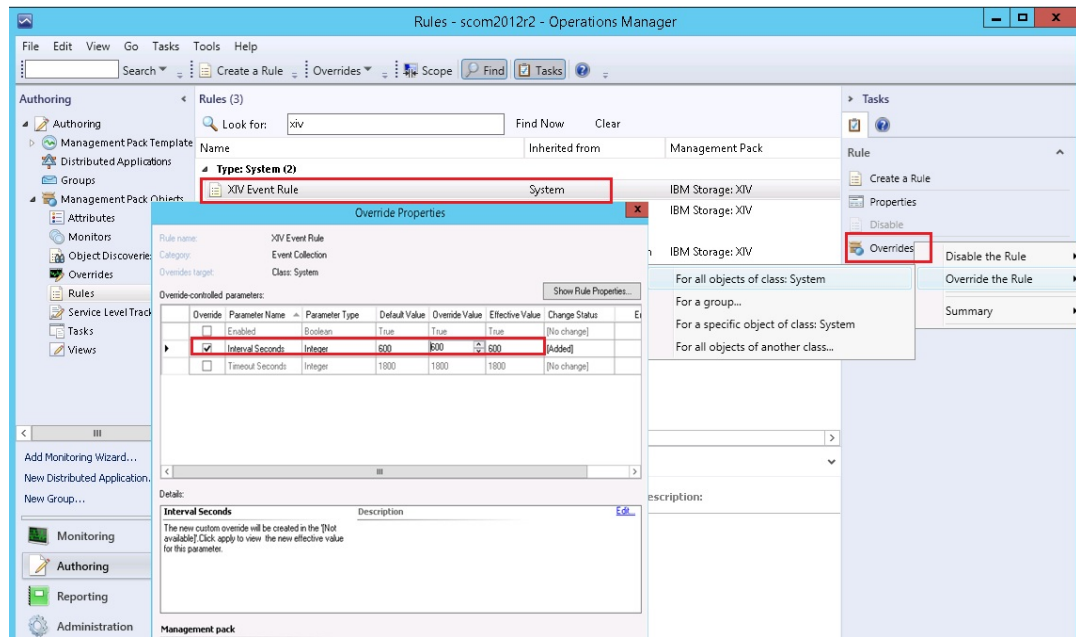
Note: Storage system event collection is not supported by DS8000® storage systems.

Procedure

The default interval for event collection of any IBM® storage system (except DS8000) is set to 10 minutes. Perform the following procedure to change the collection interval.

1. Click the Microsoft SCOM Authoring pane.
2. Select Rules, and then select Event Rule for the relevant management pack.
3. In the Actions pane (located on the right), select Overrides...> Override the Rule...> For all objects of class: System.
The Override Properties dialog box appears.
4. Select Override for Interval Seconds, and then enter a new numerical value Override Value.
The numerical value that you enter defines the number of seconds for the interval.
5. Click Apply.
The new event collection interval is set.

Figure 1. Interval setting for event collection



Monitoring

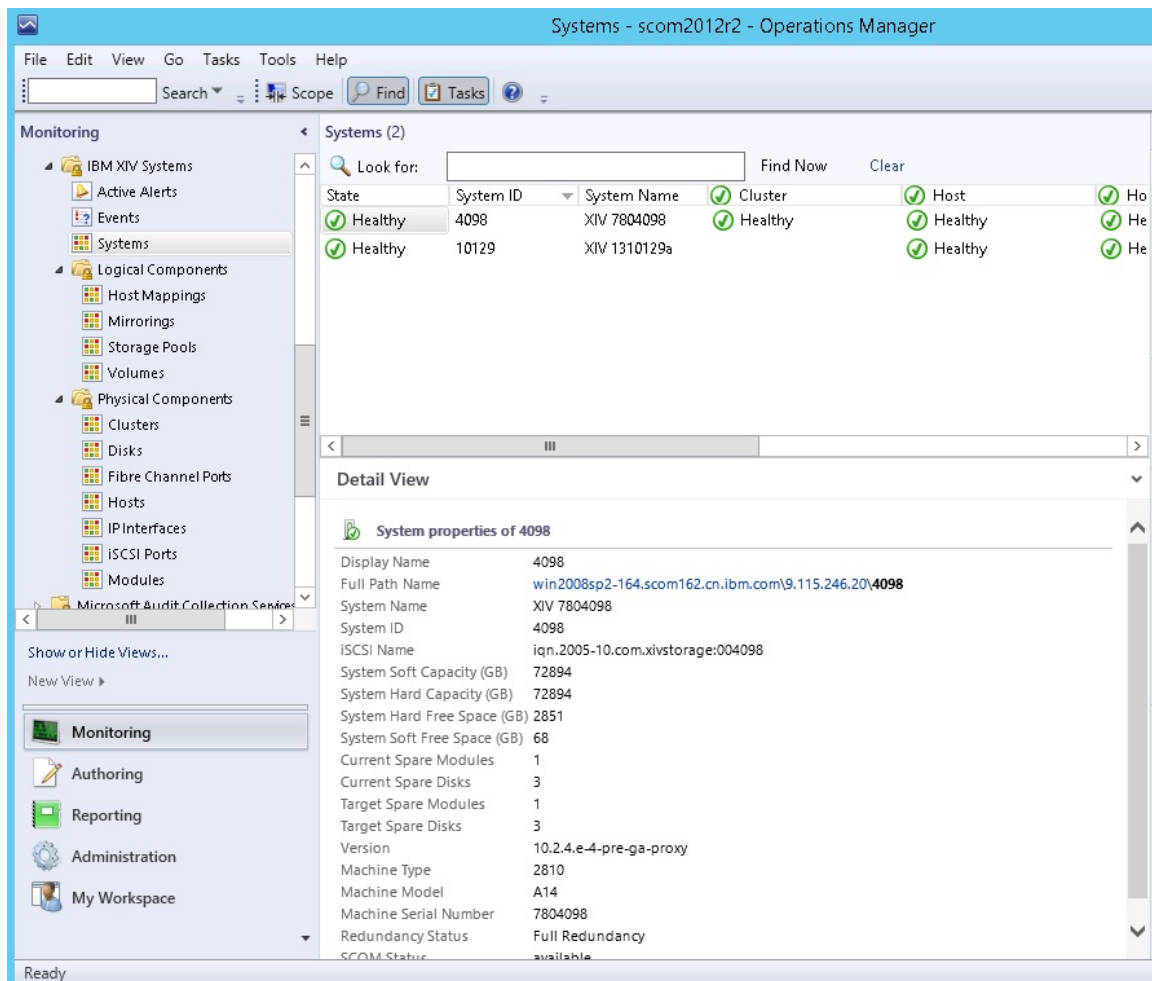
After installing the IBM® Storage Management Pack, configuring the management server, and adding IBM Storage Systems, you can use the Monitoring tab of the Microsoft SCOM console to monitor the storage systems.

Note: The examples in this chapter are from Microsoft SCOM 2012 R2.

To start the monitoring, click the Monitoring tab on the left pane of the Operations Manager console, and then expand the IBM System Storage folder, located on the Monitoring tree.

Depending on the installed management packs, the subfolders under IBM System Storage display the information about the different IBM storage systems that are monitored via Microsoft SCOM.

Figure 1. Monitoring Tree



Under each management pack subfolder (of a storage system type), the following options are available:

- **[Monitoring alerts](#)**
This section describes how to monitor alerts for IBM storage systems.
- **[Monitoring events](#)**
This section describes how to monitor events for IBM storage systems.
- **[Monitoring systems](#)**
This section describes how to monitor IBM storage systems.
- **[Monitoring physical and logical components](#)**
This section describes monitoring physical and logical components.
- **[Viewing diagrams](#)**
In addition to monitoring the IBM storage systems through a table and an information pane (as described in the previous sections), you can view any information object in a diagram.

Monitoring alerts

This section describes how to monitor alerts for IBM® storage systems.

About this task

You can monitor two types of alerts:

- **Health monitoring alerts** – Alerts about the health state of the monitored storage components. Health monitoring alerts are applicable to all the supported IBM storage systems. For example, an alert is created when the health state of a certain component changes from Healthy to Critical.
- **Event log alerts** – Alerts about system events that are defined as error or warning events. Event log alerts are **not applicable to DS8000® systems**, but are applicable to all the other supported IBM storage systems and are monitored as follows:
 - For Storwize®, SAN Volume Controller, and FlashSystem storage systems using Spectrum Virtualize software, **Error** events are displayed in SCOM as **Warning** alerts.

Note:

 - To increase or decrease alerting regarding certain events of Storwize, SAN Volume Controller, and FlashSystem storage systems using Spectrum Virtualize software, change the severity level of any event as explained in [Changing event severity levels](#).
 - For more information about Storwize, SAN Volume Controller, or FlashSystem error events, refer to the 'Error event IDs and error codes' section within the Messages and codes section of your product documentation.
 - For XIV®, Spectrum Accelerate, FlashSystem A9000, and FlashSystem A9000R systems, Major and Critical events are displayed in SCOM as Critical alerts, while Minor and Warning events are displayed in SCOM as Warning alerts.

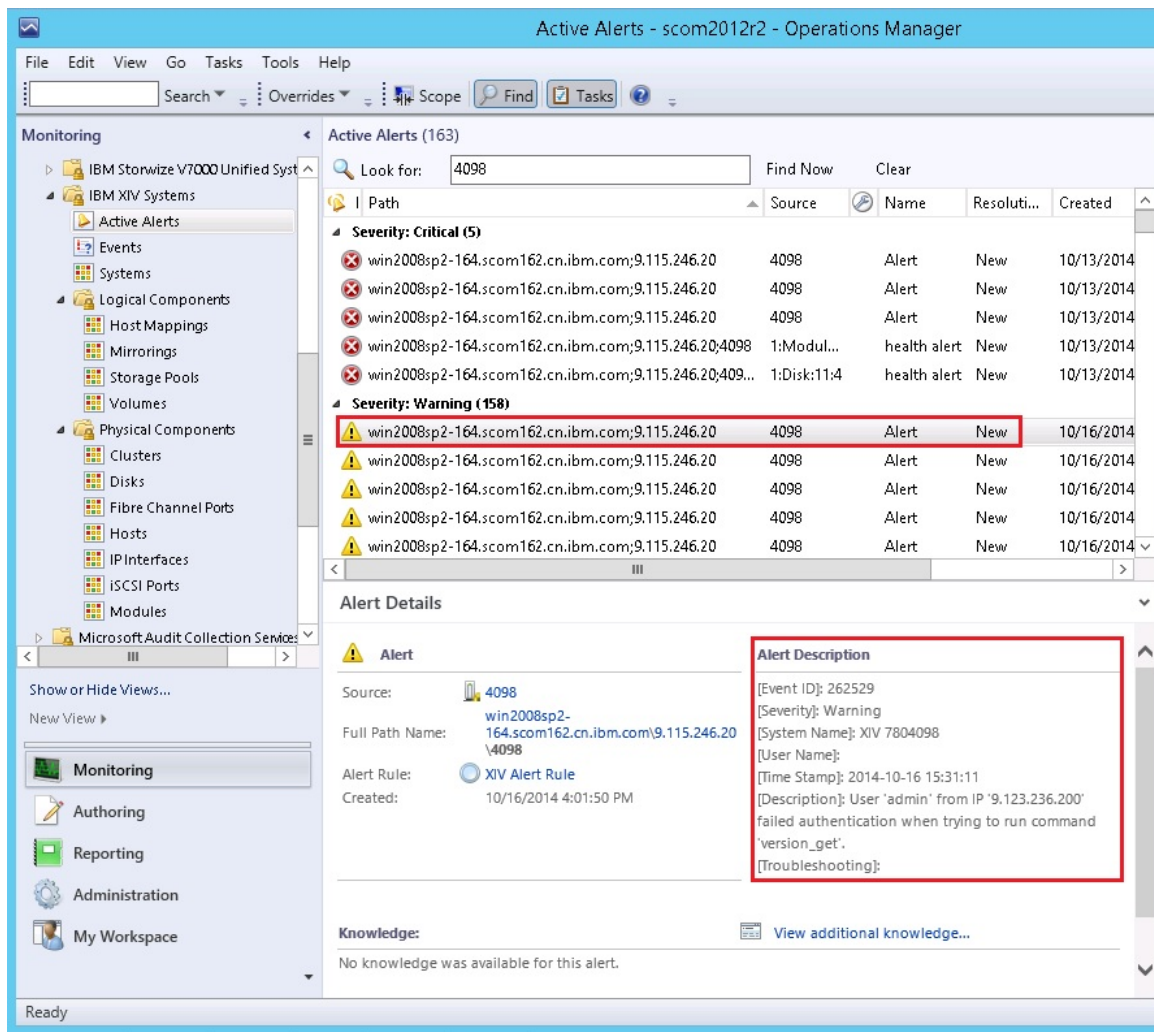
Note: The alert severity level of XIV, Spectrum Accelerate, FlashSystem A9000, and FlashSystem A9000R system events cannot be modified.

Procedure

To view more details regarding a specific alert, select its row.

A detailed description of the alert is displayed in the Alert Details pane (below the alerts list).

Figure 1. Alert Monitoring



Monitoring events

This section describes how to monitor events for IBM® storage systems.

About this task

Events are displayed differently in the management packs:

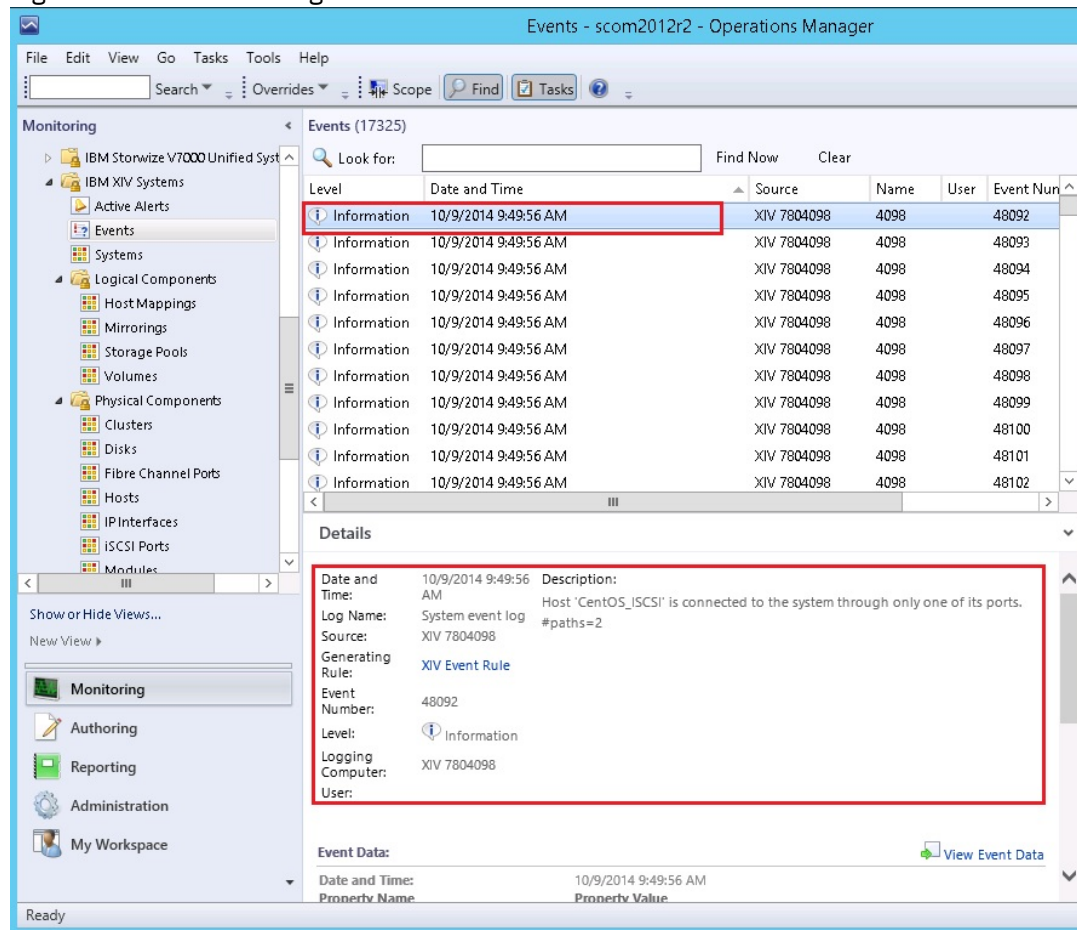
- For Storwize®, SAN Volume Controller, and FlashSystem storage systems using Spectrum Virtualize software, Information and Configuration events are displayed.
Note: For more information about the Information and Configuration events, refer to the 'Informational events' and 'Configuration event IDs' sections of your product documentation.
- For XIV®, Spectrum Accelerate, FlashSystem A9000, and FlashSystem A9000R systems, all event levels are displayed: Information, Error, and Warning.
- For the DS8000® systems, events are not displayed.

Note: By default, the list of events is refreshed every 10 minutes. You can change the default interval as explained in [Setting the event collection intervals](#).

Procedure

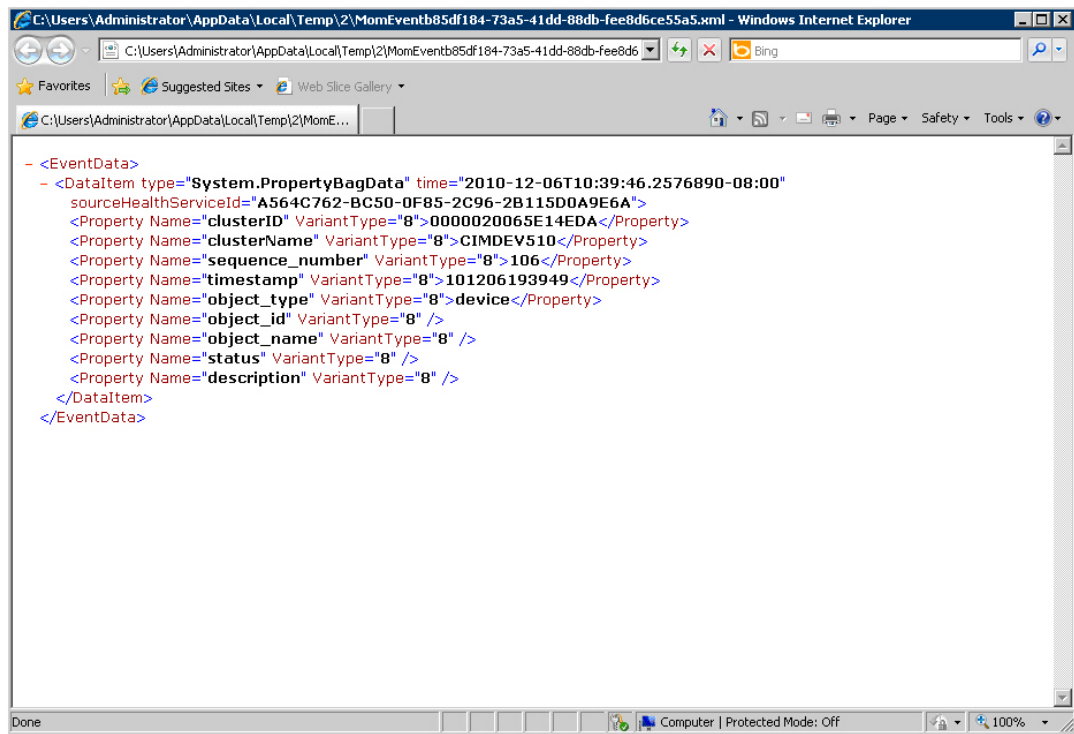
- To view more details regarding a specific event, select its row.
A detailed description of the event is displayed in the Event Details pane (below the events list).

Figure 1. Event Monitoring



- To view the raw data of the selected event, click View Event Data.
The XML code is displayed in your system's default browser or XML viewer, as shown in the following figure.

Figure 2. Event data in XML format



Monitoring systems

This section describes how to monitor IBM® storage systems.

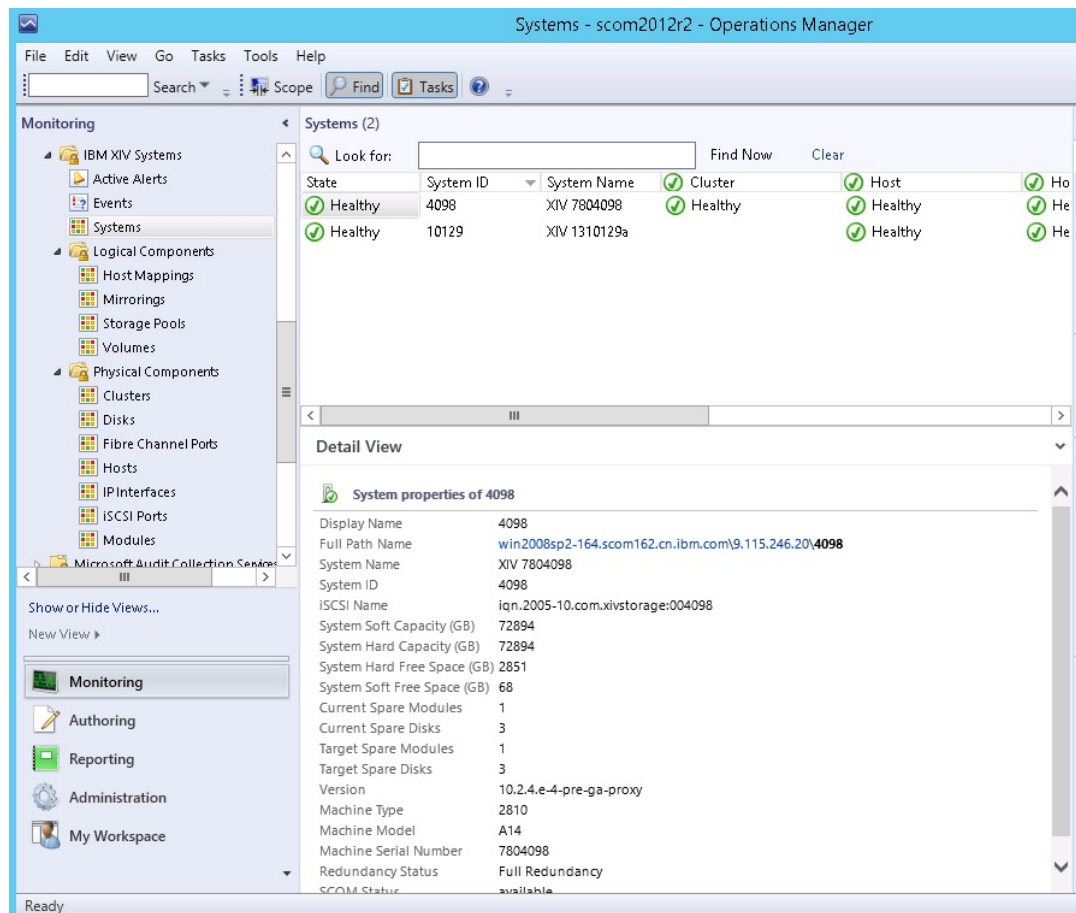
About this task

The Systems monitoring module provides a global health view of the monitored IBM storage systems and their associated components and objects (disks, volume group, volume mapping, and so on) in one general list.

Procedure

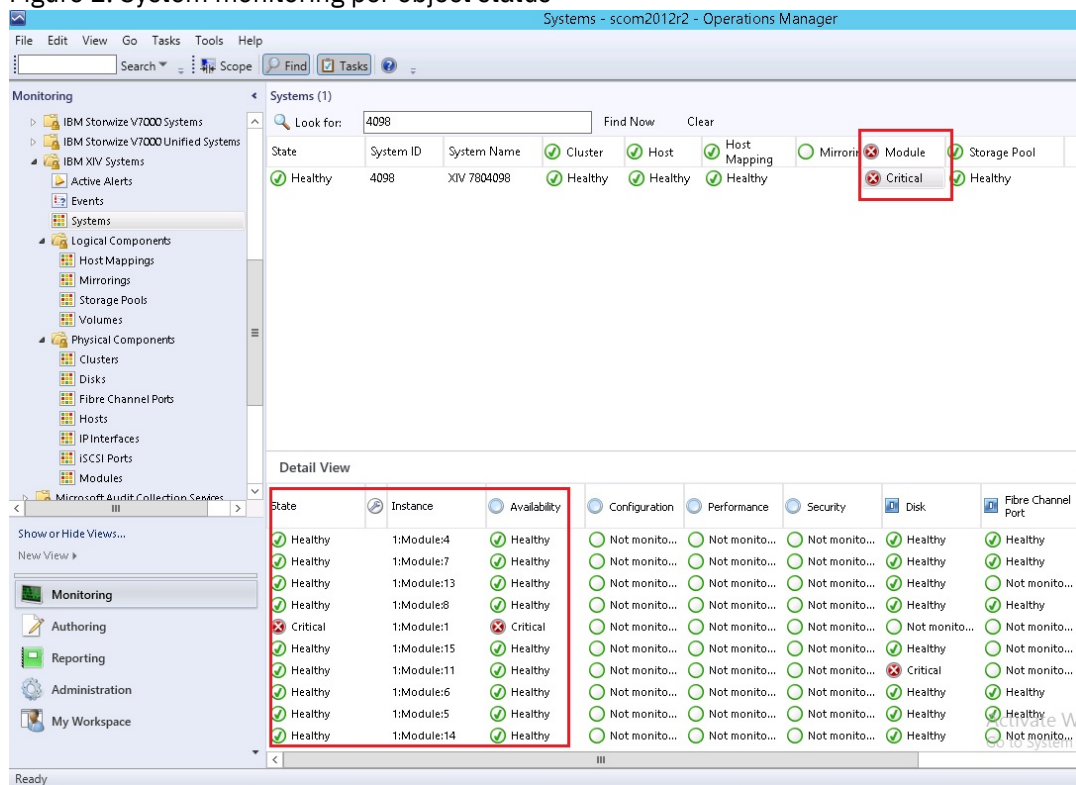
- To view more detailed information about a specific system component or object, click on its row. The details are displayed in the Detailed View pane located below the systems list.
- Notes:
- By default, the systems monitoring list is refreshed every 10 minutes (20 minutes for DS8000®). You can change this interval as described in [Setting the storage system discovery intervals](#).
 - SAN Volume Controller is monitored by clusters and not by systems. Therefore, its equivalent monitoring tree level displays 'Clusters' instead of 'Systems'.

Figure 1. System monitoring per system ID



- Alternatively, you can click on a specific component cell on a specific column to see its associated components and details in the Detailed View pane.
Note: Only the object availability is monitored. The object status can be Healthy, Warning, or Critical.

Figure 2. System monitoring per object status



Monitoring physical and logical components

This section describes monitoring physical and logical components.

About this task

Each management pack folder includes two sub-folders that you can use to monitor two major types of components:

- Physical components – Hardware components that a storage system comprises.
- Logical components – User-defined storage entities that can be modified during operation and added or removed per specific use as necessary.

The following table summarizes the logical and physical components that are monitored for each IBM® storage system.

Table 1. Monitored physical and logical components per storage system

Storage system	Logical components	Physical components
DS8000 family	<ul style="list-style-type: none">• Array• Array site• Extent pool• IBM FlashCopy®• Host volume mapping• Rank• Standard volume• Space-efficient (SE) volume• Virtual pool• Volume group	<ul style="list-style-type: none">• Disk• FC port• Host port
Storwize®, SAN Volume Controller, IBM FlashSystem® storage systems using Spectrum Virtualize software	<ul style="list-style-type: none">• FlashCopy consistency group• FlashCopy mapping• Host mapping• Remote Copy consistency group• Remote Copy relationship• Storage pool• Volume	<ul style="list-style-type: none">• Array• Drive• Enclosure• FCoE port• Fibre Channel port• Host• iSCSI port• MDisk• Node

Storage system	Logical components	Physical components
<ul style="list-style-type: none"> • IBM XIV® Storage System • IBM Spectrum Accelerate 	<ul style="list-style-type: none"> • Mapping • Mirror • Pool • Volume 	<ul style="list-style-type: none"> • Cluster • Disk • FC Port (does not apply to Spectrum Accelerate) • Host • IP interface • iSCSI port • Module
IBM FlashSystem A9000 and A9000R	<ul style="list-style-type: none"> • Mapping • Mirror • Pool • Volume 	<ul style="list-style-type: none"> • Cluster • FC Port • Host • IP interface • iSCSI port • Module

Procedure

To view the monitoring details of a specific physical or logical component, click its item on the monitoring tree. The details are displayed in the Detailed View pane.

Figure 1. Volume details

Volumes - scom2012r2 - Operations Manager

File Edit View Go Tasks Tools Help

Search Scope Find Tasks

Monitoring

- IBM Storwize V7000 Systems
- IBM Storwize V7000 Unified Systems
- IBM XIV Systems
 - Active Alerts
 - Events
 - Systems
- Logical Components
 - Host Mappings
 - Mirrorings
 - Storage Pools
 - Volumes
- Physical Components
 - Clusters
 - Disks
 - Fibre Channel Ports
 - Hosts
 - IP Interfaces
 - ISCSI Ports
 - Modules

Microsoft Audit Collection Services

Show or Hide Views... New View ▶

Monitoring

Authoring

Reporting

Administration

My Workspace

Volumes (247)

Look for: Find Now Clear

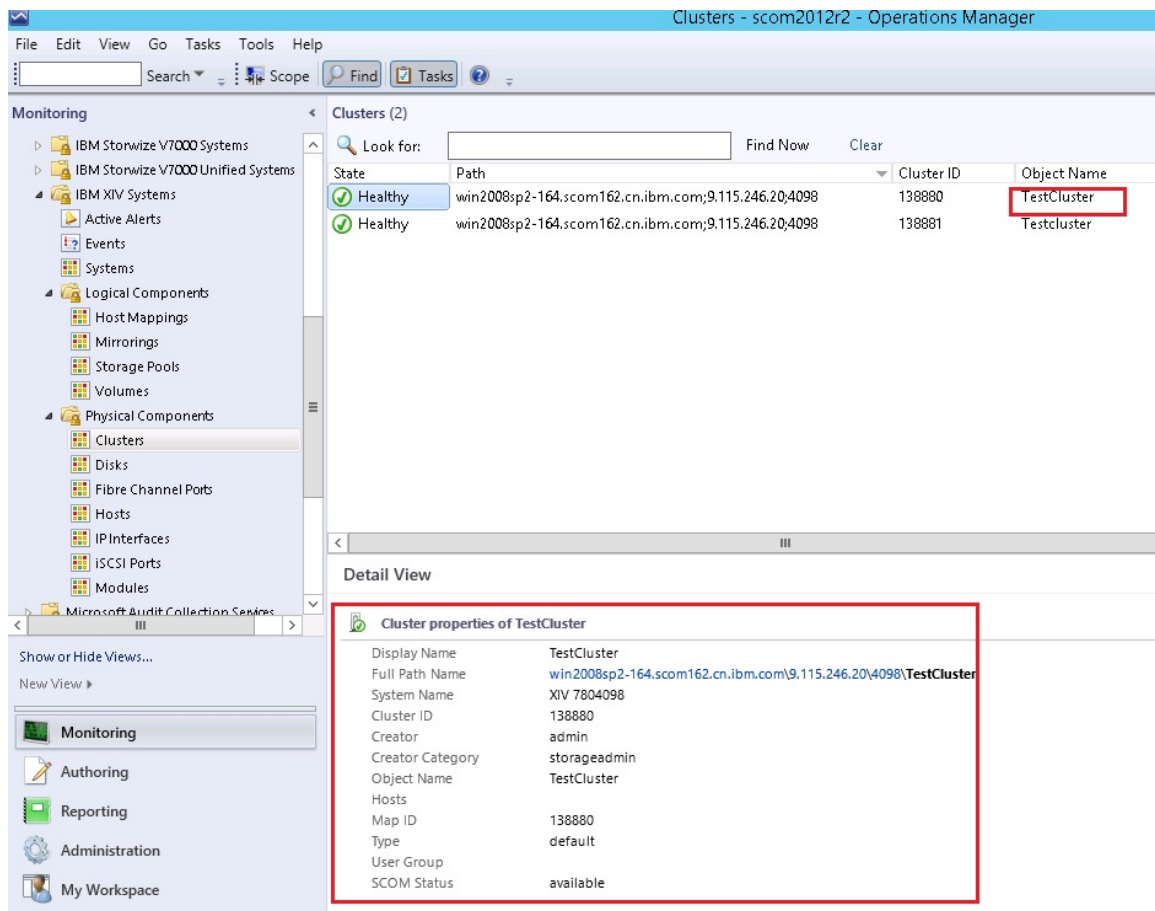
State	Path	Volume ID	Object Name
Healthy	win2008sp2-164.scom...	1476392	xiv_map_vol_test
Healthy	WIN2012-165.scom16...	c87145000b8	xinlii
Healthy	WIN2012-165.scom16...	c86145000b7	xinlii_005
Healthy	WIN2012-165.scom16...	c85145000b6	xinlii_004
Healthy	WIN2012-165.scom16...	c84145000b5	xinlii_003
Healthy	WIN2012-165.scom16...	c83145000b4	xinlii_002
Healthy	WIN2012-165.scom16...	c82145000b3	xinlii_001
Healthy	WIN2012-165.scom16...	c81145000b2	xinli
Healthy	win2008sp2-164.scom...	1471455	x. a.
Healthy	win2008sp2-164.scom...	1471454	x . x .a
Healthy	win2008sp2-164.scom...	328440	Windows2012_IPFWRD
Healthy	win2008sp2-164.scom...	329232	Windows2012_HVSMS
Healthy	win2008sp2-164.scom...	328078	Windows2012_CLEAN
Healthv	win2008sp2-164.scom...	100899	WIN8x64WINXP

Detail View

Volume properties of xiv_map_vol_test

Display Name	xiv_map_vol_test
Full Path Name	win2008sp2-164.scom162.cn.ibm.com\9.115.246.20\4098\UIM\xiv_map_vol_test
System Name	XIV 7804098
Object Name	xiv_map_vol_test
Size (GB)	17
Size (MiB)	16384
Master Name	
Consistency Group	
Pool Name	UIM
Creator	admin
Creator Category	storageadmin
Consistency Group ID	0
Capacity (blocks)	33554432
Modified	no

Figure 2. Cluster details



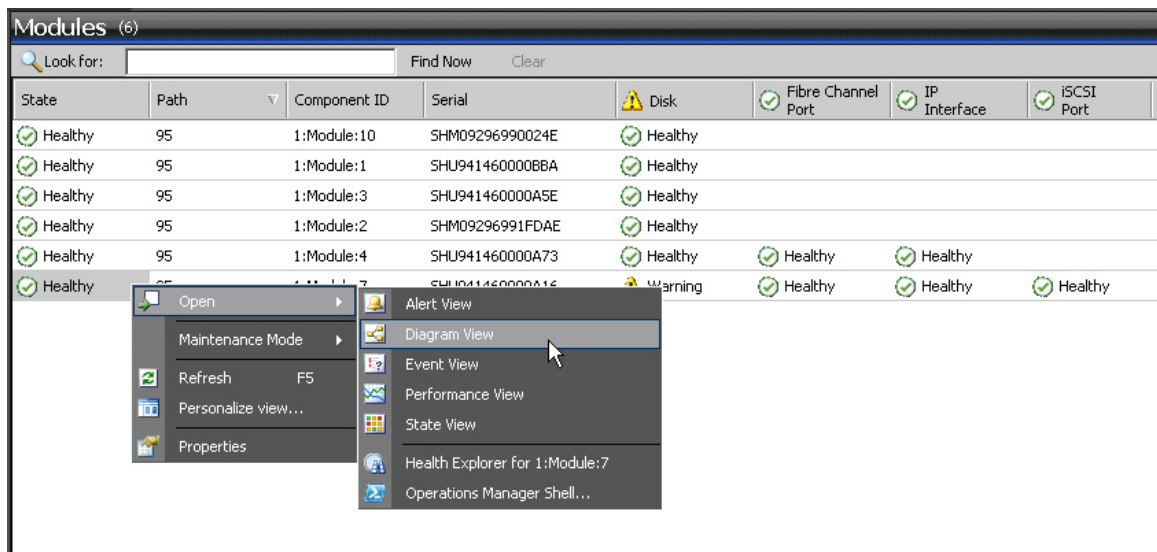
Viewing diagrams

In addition to monitoring the IBM® storage systems through a table and an information pane (as described in the previous sections), you can view any information object in a diagram.

The diagram shows a graphic representation of the selected object, as well as its relationship with other objects. This viewing option helps you obtain a clear picture of the object condition and its influence on other objects in real time.

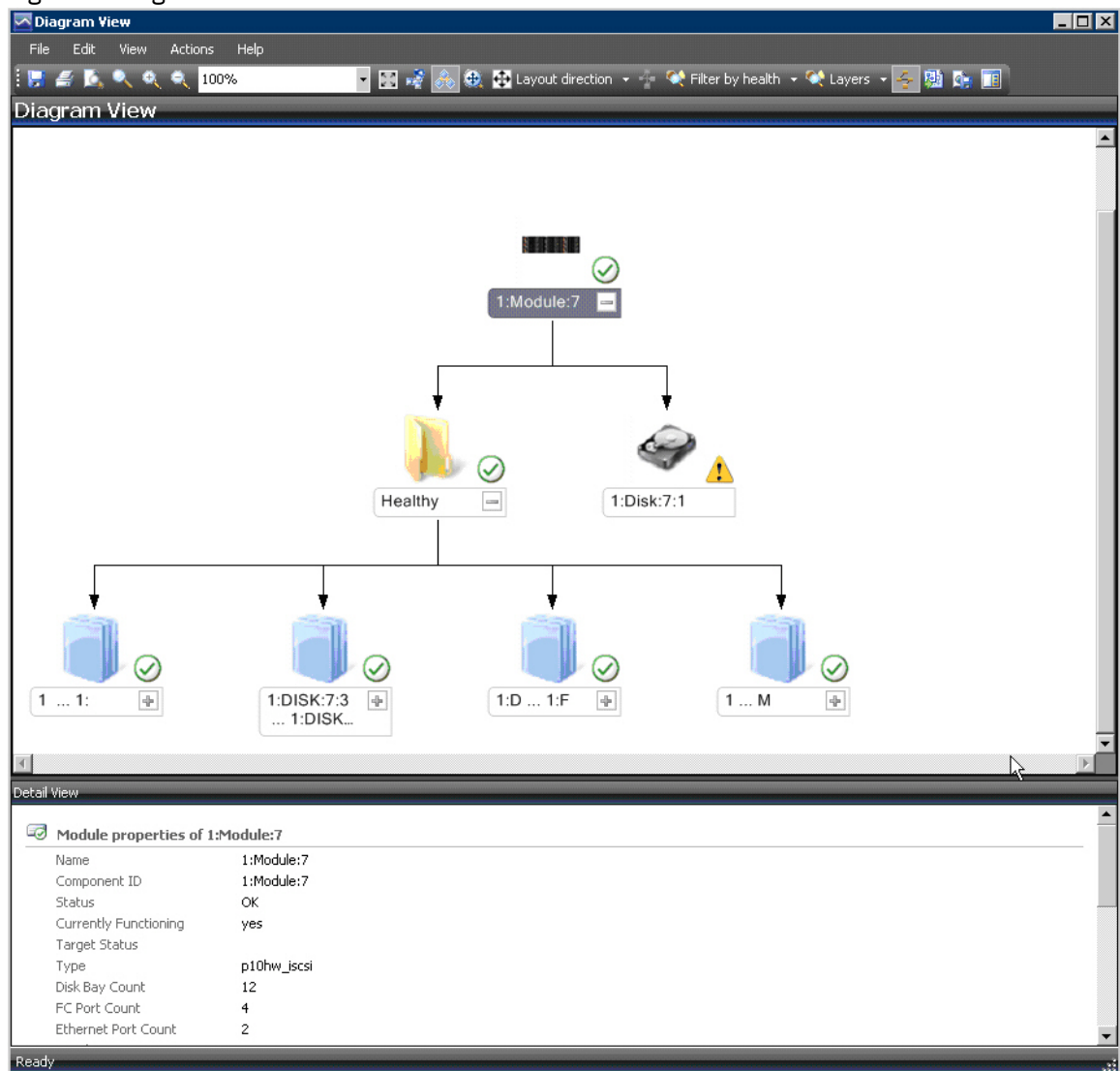
To display a diagram for a selected object on the table, right-click the object, and then select **Open...>Diagram View** from the pop-up menu.

Figure 1. Opening Diagram View



The displayed diagram shows the object icon, current status and relationships. You can click any icon in the diagram to display more information in the Detailed View pane.

Figure 2. Diagram View



Diagnostics and troubleshooting

This chapter describes diagnostic and troubleshooting information.

You can use the **scomu.cmd** utility to perform different diagnostic tasks, as described in the following sections:

- [Testing the connection to the SCOM management server](#)
- [Testing the connectivity to storage systems](#)
- [Setting the logging level](#)
- [Collecting diagnostic information](#)
- [Checking the running environment](#)

For troubleshooting info, refer to [Troubleshooting](#).

- [Testing the connection to the SCOM management server](#)
You can check whether the Microsoft SCOM agent can successfully connect to the SCOM management server using the **scomu.cmd --sc-check** command.
- [Testing the connectivity to storage systems](#)
When required, you can check whether the Microsoft SCOM server can successfully connect to the storage system using the **scomu.cmd --test** command.
- [Setting the logging level](#)
You can set the logging level for each management pack, so that the logging is performed only for events with severity level equivalent or lower than the severity level that you set.
- [Collecting diagnostic information](#)
Use the **scomu.cmd --diag** command to collect diagnostic information and include the generated tar file when reporting the issue.
- [Checking the running environment](#)
Use the **scomu.cmd --precheck** command to check whether the running environment of the management packs is correctly set, and whether the installed libraries are corrupted.
- [Troubleshooting](#)
The following table lists some typical problems that you might encounter, along with the possible solution for each problem.

Testing the connection to the SCOM management server

You can check whether the Microsoft SCOM agent can successfully connect to the SCOM management server using the **scomu.cmd --sc-check** command.

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>scomu.cmd --sc-check
Checking the connection to the management server...
The connection to the management server is OK.
```

Testing the connectivity to storage systems

When required, you can check whether the Microsoft SCOM server can successfully connect to the storage system using the **scomu.cmd --test** command.

If the network is slow, you can set the timeout value for the connection, using the **scomu.cmd --timeout** command. The default timeout is 60 seconds.

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd --test -t ds8k --url https:// host1.domain1.com:6989
--namespace root/ibm --username usr1 --password pwd1 --timeout=300
Connecting to the device ...
1 IBM DS8000 Storage System is found.
device ID: xx, code level: x.x.x.x, CIM server version: x.x.x.x

The connection is OK.
```

Setting the logging level

You can set the logging level for each management pack, so that the logging is performed only for events with severity level equivalent or lower than the severity level that you set.

The IBM® Storage management packs logs activity in the following directory:
%ProgramFiles%\IBM\Storage\Host\IBMStorageSCOM\log

The possible logging levels are: Critical, Error, Warning, Info, Debug, or Trace.

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd -t ds8k --loglevel
Log level is INFO.
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd -t ds8k --loglevel DEBUG
Log level is set to DEBUG.
```

Collecting diagnostic information

Use the **scomu.cmd --diag** command to collect diagnostic information and include the generated tar file when reporting the issue.

The tar file is located in the following directory: %ProgramFiles%\IBM\Storage\Host\IBMStorageSCOM

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd --diag
"C:\PROGRA~1\IBM\STORAG~1\scom_20101019202551_1t_ras.tgz"
is created with diagnostic data.
```

Checking the running environment

Use the **scomu.cmd --precheck** command to check whether the running environment of the management packs is correctly set, and whether the installed libraries are corrupted.

```
C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\bin>
scomu.cmd --precheck
The pre-check is successful. No error is found.
```

Troubleshooting

The following table lists some typical problems that you might encounter, along with the possible solution for each problem.

Note:

- For additional up-to-date troubleshooting information, refer to the Known Issues section in the latest release notes.
- Check the SCOM event log to obtain any relevant information that might help in troubleshooting. Check for event ID 700 to trace any fatal error.

Table 1. Typical problems and possible solutions

Problem	Possible solution
<p>During the installation, the following error message may appear:</p> <p>The installation package is not supported by the processor type.</p> <p>This problem might occur when you are installing a 32-bit package on a 64-bit operating system, or vice versa.</p>	<p>Check which bit version of the operating system you are using, and run the matching installation package.</p>
<p>No storage system is listed under Systems or Clusters.</p>	<p>Use the scomu.cmd --list command to check the list of monitored storage systems. Use the scomu.cmd --test command to check the connection to each storage system.</p>
<p>The connection to DS8000® storage systems fails.</p>	<p>Make sure that the web address of the DS CIM agent is correct. The protocol is usually HTTPS and not HTTP. By default, the embedded DS CIM agent communicates through port 6989, and the proxy agent communicates through port 5989.</p>
<p>Event information is not synchronized with System information.</p> <p>In some cases, the information displayed under Events is not immediately synchronized with the information under Systems.</p> <p>For example, the creation of a new volume may be registered as an event, but may not be displayed under Systems, or vice-versa.</p>	<p>This occurs due to a default data refresh interval in Events is 10 minutes (DS8000 is 20 minutes), and in Systems it is 30 minutes. Accordingly, wait until the next refresh interval for the synchronization to occur. In addition, if numerous events are generated within a short time, only the last 300 events are reported (fewer events are reported for SAN Volume Controller with microcode 5.1.0 or later).</p> <p>This is an intended restriction that is imposed due to performance considerations.</p>

Problem	Possible solution
IBM® management packs still appear in Microsoft SCOM after uninstallation.	<p>IBM management pack entries may remain in Microsoft SCOM after uninstallation. This occurs when installed management packs are not manually deleted from SCOM prior to uninstalling the IBM Storage Management pack via the Windows Control Panel. Accordingly, you must manually remove the IBM management packs from the Administration pane of Microsoft SCOM (before or after you use the Windows Control Panel to uninstall the IBM Storage Management Pack).</p> <p>For more information, refer to the Microsoft SCOM documentation.</p>
Delay in storage systems display.	<p>After you import a management pack to Microsoft SCOM, it might take several minutes before the relevant storage systems are displayed, and it might take several minutes more before all health state icons are correctly presented.</p> <p>You can encounter this delay depending on the following circumstances:</p> <ul style="list-style-type: none"> • Network traffic • The number of monitored storage systems • The performance of the Microsoft SCOM database.
Reset to default has no effect on the order of columns.	<p>Under Alerts or Systems, columns cannot be restored to their default order after it is manually changed, and the Reset to Default option in Personalize View has not effect on the order of columns.</p> <p>Due to this limitation of Microsoft SCOM, you need to re-order the columns manually.</p>
Status icon of newly discovered systems displays a wrong status.	<p>Immediately after the storage systems are discovered, the status icon (Healthy, Warning or Critical) does not indicate the actual state of the system. This may occur due to data refresh timing in Microsoft SCOM.</p> <p>Press F5 to manually refresh the displayed status information.</p>
Modified sticky views are kept after re-importing management packs.	<p>Microsoft SCOM allows you to use modifiable sticky views that are kept across sessions even after removing the IBM management packs from the Administration pane and re-importing them.</p> <p>To resolve this, use the Reset to Default option in Personalize View.</p>

Problem	Possible solution
<p>Management packs cannot be removed due to a dependency.</p> <p>When attempting to delete an IBM management pack, a message appears and states that due to a dependency on the Default Management Pack, you must first remove the Default Management Pack.</p>	<p>This message, which is normal in Microsoft SCOM, appears whenever one or more manual overrides were defined for the rules or monitors in the IBM management pack. Such overrides are saved in either the default management pack, or in the IBM management pack.</p> <p>To resolve this, save the overrides in a custom management pack, and then delete the existing overrides or import new ones if necessary.</p>
<p>When the IBM Storage Management Pack is installed on a SCOM agent and the connected storage system has a large amount of volumes (about 300 volumes per storage system), the discovery data package may exceed the SCOM size limit (4MB).</p> <p>In such a case, a relevant alert message (event ID: 2015) is added to the SCOM event log.</p>	<p>Consider installing the IBM System Storage® Management Pack on the SCOM management server.</p>
<p>While adding IBM storage, the following error message may appear:</p> <p>The Monitor Computer object required by the storage system is not found in the management server.</p>	<p>Delete the management pack and re-import the management pack in the Operation Manager control panel, and then wait for the Monitor Computer to be discovered.</p> <p>Alternatively, shorten the Monitor Computer discovery time. Click the Microsoft SCOM Authoring pane, select ObjectDiscoveries for the relevant storage system type, then in the Actions pane, select Overrides, Override the Rule, For all objects of class: Window Computer.</p>
<p>The following error message may appear when configuring IBM storage after upgrade from version 1.1.0 to a newer version:</p> <p>Fail to parse C:\PROGRA~1\IBM\Storage\Host\IBMSTO~1\config\DeviceConfig.xml.</p>	<p>Run upgrade_config.cmd from IBM standalone command-line interface (CLI) utility, as explained in First-time installation vs. upgrade.</p>
<p>The following error may appear in C:\Program Files\IBM\Storage\Host\IBMStorageSCOM\log\scsdk.log:</p> <pre> 2013-05-30 09:33:39,595 ERROR 724# do_discovery fail. Traceback (most recent call last): File "scsdk", line 39, in _call_ File "scsdk", line 158, in do_discovery Exception: The Configuration "9.115.246.54" of the MonitorComputer "scm- 167.scom145.cn.ibm.com" does not exist. Fail to save its discovery data. 2013-05-30 09:33:39,830 INFO 724# SDK CLI end </pre>	<p>The OpsMgr configuration service failed to send the dirty state notifications to the dirty OpsMgr Health Services. This may occur because the root OpsMgr health service is not running.</p> <p>Restart the healthy service on the SCOM management server.</p>

Notices

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