

**Hitachi Infrastructure Adapter for
Microsoft® System Center
Operations Manager
Consolidated Installer User's Guide
v01.10.0**

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Preface

This document describes and provides instructions for using Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager.

Please read this document carefully to understand how to use this product, and maintain a copy for reference purposes.

This preface includes the following information:

- [List of User's Guides](#)
- [Intended Audience](#)
- [Product Version](#)
- [Release Notes](#)
- [Document Revision Level](#)
- [Document Organization](#)
- [Document Conventions](#)
- [Related Documents](#)
- [Conventions for Storage Capacity Values](#)
- [Getting Help](#)
- [Comments](#)

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

List of User's Guides

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager is a collection of two sub-products. One sub-product is for use with Hitachi storage products, while the other is for use with Hitachi Compute products.

In addition to this Consolidated Installer User's Guide, two additional user guides are included for each sub-product.

#	User's Guide	Description
1	Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager Consolidated Installer User's Guide	This User's Guide includes installation instructions that pertain to both sub-products—this is the User's Guide you're now reading.
2	Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager User's Guide (for Compute Systems)	This User's Guide describes how to configure and use the Hitachi Compute Adapter for Microsoft® System Center Operations Manager, which is the compute-oriented sub-product.
3	Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager User's Guide (for Storage)	This User's Guide describes how to configure and use the Hitachi Storage Adapter for Microsoft® System Center Operations Manager, which is the storage-oriented sub-product.

Intended Audience

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

This document assumes the following:

- The reader has a good understanding of Enterprise storage arrays and their basic functions.

- The reader is familiar with Hitachi Unified Storage (HUS), Virtual Storage Platform (VSP), Hitachi Unified Storage VM (HUS VM), Virtual Storage Platform G1000 (VSP G1000), Virtual Storage Platform Gx00 (VSP Gx00), Virtual Storage Platform Fx00 (VSP Fx00), and Virtual Storage Platform G1500 and F1500 storage arrays.
- The reader is familiar with Hitachi NAS Platform (HNAS).
- The reader is familiar with Microsoft System Center Operations Manager.
- The reader is familiar with Hitachi Compute Blade 500/2000/2500 and Compute Rack 200 servers.
- The reader is familiar with QuantaPlex T41S-2U servers.

Product Version

This Consolidated Installer User's Guide applies to the following software version:

- Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager v01.10.0

Release Notes

With this User's Guide is a separate release notes document, which may contain product information and requirements that became available after this guide was published. Be sure to review the release notes before installation.

Document Revision Level

Revision	Date	Description
MK-92SCOM010-00	October 2013	Initial Release
MK-92SCOM010-01	January 2014	Updated for v01.1.0
MK-92SCOM010-02	July 2014	Updated for v01.2.0
MK-92SCOM010-03	October 2014	Updated for v01.3.0
MK-92SCOM010-04	January 2015	Updated for v01.4.0
MK-92SCOM010-05	May 2015	Updated for v01.5.0
MK-92SCOM010-06	October 2015	Updated for v01.6.0
MK-92SCOM010-07	March 2016	Updated for v01.7.0
MK-92SCOM010-08	May 2016	Updated for v01.8.0
MK-92SCOM010-09	August 2016	Updated for v01.9.0
MK-92SCOM010-10	November 2016	Updated for v01.10.0

Document Organization

The following table provides an overview of the contents and organization of this document. Click the [chapter title](#) in the left column to go to that chapter. The first page of each chapter provides links to the sections in that chapter.

Chapter	Description
Overview	Provides an overview of the Hitachi Management Packs for Microsoft SCOM and describes the specifications and operations.
Requirements and Installation	Specifies the system requirements and provides instructions for preparing and installing Hitachi Management Pack for Microsoft SCOM operations.
Restrictions and Considerations	Describes restrictions and points to be considered when installing and using the software.
Dual Connectors	Describes the additional steps required set up dual Hitachi Infrastructure Adapters for Microsoft® System Center Operations Manager on multiple servers.
Troubleshooting	Explains how to contact Hitachi Data Systems if you have problems with the product.
Messages	Lists the error, information, and warning messages output by the software.





Chapter	Description
Glossary	Defines the terms, acronyms and abbreviations used in this document.

Document Conventions

This document uses the following typographic conventions:

Convention	Description
Bold	Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels. Example: Click OK .
<i>Italic</i>	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: <i>copy source-file target-file</i> Angled brackets (<>) may also be used to indicate variables.
screen/code	Indicates text on the screen or that you enter. Example: # pairdisplay -g oradb
<> angled brackets	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: # pairdisplay -g <group> An italic font may also be used to indicate variables.
[] square brackets	Optional values. Example: [a b] indicates that you can select a, b, or nothing.
{ } braces	Required or expected values. Example: { a b } indicates that you must select either a or b.
vertical bar	A choice between two or more options or arguments. Examples: [a b] indicates that you can select a, b, or nothing. { a b } indicates that you must select either a or b.

This document uses the following icons to draw attention to information:

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

Related Documents

The documents listed in the table below are related to this product:

Document	P/N
Microsoft® technical documentation for System Center Operations Manager	
Hitachi Storage Navigator Modular 2 Advanced Settings User's Guide	MK-97DF8039
Hitachi Storage Adapter for Microsoft® Windows PowerShell User's Guide	MK-99DF8228
Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager User's Guide (for Compute Systems)	MK-92SCOM009
Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager User's Guide (for Storage)	MK-92SCOM008
Hitachi Virtual Storage Platform Provisioning Guide for Open Systems	MK-90RD7022
Hitachi Virtual Storage Platform Hitachi Storage Navigator User Guide	MK-90RD7027
Hitachi Unified Storage VM Block Module Provisioning Guide	MK-92HM7012
Hitachi Unified Storage VM Block Module Hitachi Storage Navigator User Guide	MK-92HM7016
Hitachi Virtual Storage Platform G1000 Provisioning Guide for Open Systems	MK-92RD8014

Hitachi Virtual Storage Platform G1000 Global-Active Device User Guide	MK-92RD8072
Hitachi Virtual Storage Platform G1000 Hitachi Universal Volume Manager User Guide	MK-92RD8024
Provisioning Guide for Hitachi Virtual Storage Platform Gx00 and Fx00 Models	MK-94HM8014
Hitachi Virtual Storage Platform System Administrator Guide	MK-94HM8016
Hitachi Command Control Interface User and Reference Guide	MK-90RD7010
Hitachi Command Suite User Guide	MK-90HC172
Hitachi Compute Blade 2000 User's Guide	MK-99BDS2K001
Hitachi Compute Blade 500 Series CLI Console User's Guide	MK-91CB500034
Hitachi Compute Blade 500 Series Web Console User's Guide	MK-91CB500015
Hitachi Compute Rack 210H/220H Remote Management User's Guide	MK-90CRH006
Hitachi Compute Rack 220S Remote Management User's Guide	MK-90CRS004
Hitachi Compute Blade 2500 Series Getting Started Guide	MK-99CB2500003
Hitachi Compute Blade 2500 Series Management Module User Guide	MK-99CB2500004
Compute Blade Built-in LAN Switch Module Software Manual Configuration Commands	MK-99COM087 MK-99COM088
Compute Blade Built-in LAN Switch Module Software Manual Operation Commands	MK-99COM094- MK-99COM095
Compute Blade Built-in LAN Switch Module Software Manual Message Log Reference	MK-99COM092
Compute Blade Built-in LAN Switch Module Software Manual MIB Reference	MK-99COM093
Compute Blade Built-in LAN Switch Module Software Manual Configuration Settings	MK-99COM089 MK-99COM090 MK-99COM091
Hitachi NAS Platform Storage Systems Administration	MK-92HNAS013
Brocade Web Tools Administrator's Guide	
Brocade Access Gateway Administrator's Guide	
Brocade Fabric OS Administrator's Guide	
Brocade Fabric OS Command Reference Manual	
Brocade Fabric OS MIB Reference	
Brocade Fabric OS Message Reference	
Brocade Fabric Watch Administrator's Guide	

Networking OS 7.8 for 1/10Gb LAN Switch Module Application Guide	MK-99CB2500039
Networking OS 7.8 for 1/10Gb LAN Switch Module Command Reference	MK-99CB2500040
QuantaPlex Series T41S-2U/T41SP-2U User's Guide	

Conventions for Storage Capacity Values

We calculate physical storage capacity (for example, disk drive capacity) based on these values:

Physical Capacity Unit	Value
1 KB	1,000 bytes
1 MB	1,000 ² bytes
1 GB	1,000 ³ bytes
1 TB	1,000 ⁴ bytes
1 PB	1,000 ⁵ bytes
1 EB	1,000 ⁶ bytes

We calculate logical storage capacity (for example, logical device capacity) based on these values.

Logical Capacity Unit	Value
1 block	512 bytes
1 KB	1,024 (2 ¹⁰) bytes
1 MB	1,024 KB or 1,024 ² bytes
1 GB	1,024 MB or 1,024 ³ bytes
1 TB	1,024 GB or 1,024 ⁴ bytes
1 PB	1,024 TB or 1,024 ⁵ bytes
1 EB	1,024 PB or 1,024 ⁶ bytes

Getting Help

The Hitachi Data Systems Support Center staff is available 24 hours a day, seven days a week. To reach us, please visit the support Web site for current telephone numbers and other contact information:

<http://www.hds.com/services/support/>.

If you purchased this product from an authorized Hitachi Data Systems reseller, contact that reseller for support.

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

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

Comments

Please send us your comments on this document: doc.comments@hds.com. Include the document title, number, and revision, and refer to specific section(s) and paragraph(s) whenever possible.

Thank you!

(All comments become the property of Hitachi Data Systems Corporation.)



Introduction

The Microsoft® System Center Operations Manager (SCOM) is a performance, health and state monitoring product for Microsoft Windows operating systems. The Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager includes management packs and components that integrate with SCOM to discover and monitor Hitachi Compute Blade and Rack systems, compute devices from other vendors, and Hitachi storage devices.

- [About the Hitachi Infrastructure Adapter for Microsoft® SCOM for Compute Systems](#)
- [About the Hitachi Infrastructure Adapter for Microsoft® SCOM for Storage Systems](#)

About the Hitachi Infrastructure Adapter for Microsoft® SCOM for Compute Systems

The Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager includes the Hitachi Compute Adapter for Microsoft® System Center Operations Manager that integrates with SCOM to discover and monitor Hitachi Compute Blade and Rack systems, as well as devices from other vendors.

The following views are provided in the monitoring pane of the Operations Manager console:

- **Hitachi > Comprehensive Diagram** displays a hierarchical view of all monitored Compute Blade and Rack components.
- **Hitachi > Hitachi Compute Blade Systems > Alert View** displays Compute Blade alerts. Alerts appear in **Connector Alerts** whenever HCCS stops running.
- **Hitachi > Hitachi Compute Blade Systems > Diagram View** displays a hierarchical view of Compute Blade components.
- **Hitachi > Hitachi Compute Blade Systems > Performance View** displays a hierarchical view of Compute Blade performance information.
- **Hitachi > Hitachi Compute Blade Systems > State View** displays a hierarchical view of Compute Blade component status information.
- **Hitachi > Hitachi Compute Rack Systems > Alert View** displays Compute Rack alerts. Connector Alerts displays alerts when HCCS errors occur.
- **Hitachi > Hitachi Compute Rack Systems > Diagram View** displays a hierarchical view of Compute Rack component status information.
- **Hitachi > Hitachi Compute Rack Systems > Performance View** displays Compute Rack performance information.
- **Hitachi > Hitachi Compute Rack Systems > State View** displays Compute Rack component status information.
- **Hitachi > Hitachi Compute Switch** displays LAN Switch and FC switch alerts.
- **Hitachi > Other Vendors > QuantaPlex > Alert View** displays QuantaPlex alerts. Connector Alerts displays alerts when HCCS errors occur.

- **Hitachi > Other Vendors > QuantaPlex > Diagram View** displays a hierarchical view of QuantaPlex components.
- **Hitachi > Other Vendors > QuantaPlex > State View** displays a hierarchical view of QuantaPlex component status information.

Available Management Packs

The following management packs are included:

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

Connector Service Monitoring

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

The Hitachi Server Service Monitoring Management Pack monitors the operating status of the Hitachi Compute Connector Service. For more details, refer to Hitachi Server Service Monitoring.

About the Hitachi Infrastructure Adapter for Microsoft® SCOM for Storage Systems

The Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager includes a component called Hitachi Storage Adapter for Microsoft® System Center Operations Manager that integrates with SCOM to discover and monitor Hitachi storage devices.

The status of registered storage devices is displayed under **Hitachi Storage Systems** which is added to the Monitoring pane of the operations console.

- **Controller** displays the controllers for the monitored storage subsystems.
- **Controller Port** displays the ports for the monitored storage subsystems.
- **Drive** displays the drives for the monitored storage subsystems.
- **EVS** displays EVS information for the monitored storage subsystems.
- **File Server Node** displays the File Server Nodes for the monitored storage subsystems.
- **File System** displays File Systems for the monitored storage subsystems.
- **Link Aggregation** displays the Link Aggregations for the monitored storage subsystems.
- **Link Aggregation Port** displays the Link Aggregation Ports for the monitored storage subsystems.
- **Logical Unit** displays the Logical Units for the monitored storage subsystems.
- **Quorum Device** displays the Quorum Devices for the monitored storage subsystems.
- **Storage Pool** displays the storage pools for the monitored storage subsystems.
- **Subsystem** displays the Hitachi storage subsystems monitored by SCOM.

The management pack provides the following storage performance object views in the Monitoring pane of the Operations Manager (under **Hitachi Storage Systems > Hitachi Storage Systems 3.11 > Performance**).

- **Controller Port Performance** displays controller port performance data for monitored HUS, VSP, HUS VM, VSP G1000, VSP Gx00, VSP Fx00, VSP G1500, and VSP F1500 storage subsystems.
- **HDP Pool Performance** displays HDP pool performance data for monitored HUS, VSP, HUS VM, VSP G1000, VSP Gx00, VSP Fx00, VSP G1500, and VSP F1500 storage subsystems.
- **Logical Unit Performance** displays logical unit performance data for monitored HUS, VSP, HUS VM, VSP G1000, VSP Gx00, VSP Fx00, VSP G1500, and VSP F1500 storage subsystems.
- **RAID Group Performance** displays RAID group performance data for monitored HUS, VSP, HUS VM, VSP G1000, VSP Gx00, VSP Fx00, VSP G1500, and VSP F1500 storage subsystems.

The management pack provides the following storage replication object views which are displayed in the Monitoring pane of the Operations Manager (under **Hitachi Storage Systems > Storage Replication**).

- **HNAS Snapshot** displays snapshots for monitored HNAS file servers.
- **Remote Storage Replication** displays remote storage replication information for monitored storage subsystems.
- **Storage Replication** displays storage replication information for the monitored storage subsystems.

Storage alerts are displayed in **Alerts** under the respective Hitachi Storage Systems folders.

- **Alerts** displays alerts collected from VSP and other SVPs. HNAS and Unified NAS subsystems are not supported.
- **Connector Alerts** displays alerts when HSCS stops running.
- **SNMP Alerts** displays alerts when SCOM receives SNMP traps directly from HUS, VSP, HUS VM, VSP G1000, VSP Gx00, VSP Fx00, VSP G1500, VSP F1500, HNAS, and Unified NAS arrays.

Subsystem health is monitored based on the status of the subsystem's physical components. This release only supports monitoring the components mentioned above.

2

Requirements and Installation

This chapter provides system requirements, installation and uninstallation instructions, and requirements for use:

- [*System Requirements*](#)
- [*Installation Prerequisites*](#)
- [*Pre-installation Tasks*](#)
- [*Account permissions for installing and using the Hitachi Infrastructure Adapter for SCOM*](#)
- [*Installing the Software*](#)
- [*Uninstalling the Software*](#)
- [*Repairing the Software*](#)

System Requirements

Note Only the software and hardware listed below are supported by this release. Please refer to the release notes for the latest information.



Server Hardware Requirements

The new performance feature has more extensive requirements. If you plan to use this feature, see Storage User's Guide for details.


Note Only the software and hardware listed below are supported by this release. Please refer to the release notes for the latest information.




Item	Requirements
CPU	The CPUs must be capable of running an x64 Windows edition
Memory	2 Gigabytes or more
Graphics	800x600, 16-bit color or greater
Disk Space	1 Gigabyte or more
iSCSI	Microsoft iSCSI Software Initiator Version 2.08
Supported HBAs	All HBAs certified by Microsoft operating systems are supported.
Network	Gigabit connection recommended

Supported Software and Hardware

Item	Requirements
Microsoft Windows	<ul style="list-style-type: none">• Microsoft Windows Server 2012 Standard/Datacenter Edition• Microsoft Windows Server 2012 R2 Standard Edition• Microsoft Windows Server 2016 Standard/Datacenter Edition <i>In-place upgrades are not supported.</i>
Microsoft SQL Server	<ul style="list-style-type: none">▪ Microsoft System Center Operations Manager 2012/2012 SP1/2012R2<ul style="list-style-type: none">○ SQL Server 2012 Enterprise, Standard (64-bit)○ SQL Server 2012 SP1 Enterprise, Standard (64-bit)○ SQL Server 2012 SP2 Enterprise, Standard (64 bit)○ SQL Server 2012 SP3 Enterprise, Standard (64 bit)○ SQL Server 2014 Enterprise, Standard (64-bit)

Item	Requirements
	<ul style="list-style-type: none"> ▪ Microsoft System Center Operations Manager 2016 <ul style="list-style-type: none"> ○ SQL Server 2012 SP2 Enterprise, Standard (64 bit) ○ SQL Server 2014 Enterprise, Standard (64-bit) ○ SQL Server 2014 SP1 Enterprise, Standard (64-bit) ○ SQL Server 2016, Enterprise, Standard (64-bit)
Microsoft System Center Operations Manager	<ul style="list-style-type: none"> • 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 <p> Caution Instability in the SCOM software itself may cause the SCOM adapter to function improperly, thus it is recommended that you apply the latest SCOM rollup patch. See the Microsoft website for the SCOM rollup patch and known issues.</p>
Hitachi Storage	<ul style="list-style-type: none"> • Hitachi Unified Storage (HUS110/130/150) • Hitachi Virtual Storage Platform (VSP) • Hitachi Unified Storage VM (HUS VM) • Hitachi Virtual Storage Platform G1000 (VSP G1000) • Hitachi Virtual Storage Platform Gx00 • Hitachi Virtual Storage Platform Fx00 • Hitachi Virtual Storage Platform G1500 • Hitachi Virtual Storage Platform F1500 • Hitachi Network Attached Storage (HNAS 3080/3090), OS version 12.x
Cluster Software	<ul style="list-style-type: none"> • Microsoft Failover Cluster (Windows Server 2012) • Microsoft Failover Cluster (Windows Server 2016)
Hitachi Compute Devices	<ul style="list-style-type: none"> • Hitachi Compute Blade 500 (CB500) <ul style="list-style-type: none"> ○ Supported Blades: 520A/520HB2/520HB4/520A2/540A • Hitachi Compute Blade 2000 (CB2000) <ul style="list-style-type: none"> ○ Supported Blades: X55A2/X55S3/X55R3/X55S4/X55R4/X57A1/X57A2 • Hitachi Compute Blade 2500 (CB2500) <ul style="list-style-type: none"> ○ Supported Blades: 520XB1/520XB2/520HB3/520HB4 • Hitachi Compute Rack (CR) <ul style="list-style-type: none"> ○ Supported Servers: 210H/220H/220S • Hitachi Compute Rack (CR) <ul style="list-style-type: none"> ○ Supported Servers: 210H/220H/220S
Other Vendor	<ul style="list-style-type: none"> • QuantaPlex T41S-2U


Item	Requirements
Compute Devices	
Switches	<ul style="list-style-type: none"> • CB2000 (GV-BE2LSW1N1) • CB500 (GV-BE2LSW2X1-Y and GV-BE2FSW1X1-Y) • CB2500 (GG-BE4LSW1X1-Y)
SOURCEFORGE.NET ipmiutil MSI	<p>This software is needed when Compute devices are being used.</p> <ul style="list-style-type: none"> • If SCOM server is Windows Server 2012 <ul style="list-style-type: none"> ◦ Compatible version: 2.9.1 (ipmiutil.2.9.1.msi) • If SCOM server is Windows Server 2016 <ul style="list-style-type: none"> ◦ Compatible version: 3.0.0 (ipmiutil.3.0.0.msi)
Java SE Runtime Environment	<ul style="list-style-type: none"> • This software is required to monitor storage devices. • Compatible versions: <ul style="list-style-type: none"> ◦ JRE (x64) (1.8.0 or later) <p>Caution  The required version is x64; the x86 (32-bit) version is not usable with this adapter.</p>
Active Directory	<p>When setting up this adapter on the server that participates in a domain which is different from SCOM, the following two accounts are required:</p> <ul style="list-style-type: none"> • An account that belongs to the Domain Admins group of the Domain in which SCOM participates. • An account that has the Domain Admins group of the Domain in which this adapter participates.

Virtualization Environment (for Hitachi storage systems)

Item	OS Installation	Fibre Channel
VMware ESX Server 5.5	Guest OS	X
Microsoft Windows Server 2012 Hyper-V	Host OS	X
	Guest OS	X
Microsoft Windows Server 2016 Hyper-V	Host OS	X
	Guest OS	X

Pre-Operation Requirements Storage

Requirement	Configuration
Licenses	Required array licenses: <ul style="list-style-type: none"> ▪ LUN-Manager ▪ Dynamic Provisioning ▪ ShadowImage (optional) ▪ Copy-on-write Snapshot (optional) ▪ Account Authentication (optional)
Host Ports	(1) FC <ul style="list-style-type: none"> • Hostgroup Security should be enabled on all ports. • LU Mapping mode should be enabled. (2) iSCSI <ul style="list-style-type: none"> • Target Security should be enabled on all ports. • LU Mapping mode should be enabled.
LUs	Supported LU Types: Single, Parent, V-VOL, S-VOL, CM and DMLU.
Controller	An IP address should be assigned to each array controller.
Account Authentication License	The Account Authentication license should be installed and enabled in arrays which require the Account Authentication feature.
Storage Administrator Role	The array account used by this adapter to authenticate should be associated with the Storage Administrator (View Only) role.
Dynamic Provisioning pool(s) and volumes	DP-VOLs should be defined in the SNM2 GUI or CLI for use with the SCOM management pack.

Requirement	Configuration
In-band command device	<p>To monitor Enterprise family storage arrays, including VSP, HUS VM, VSP G1000, VSP Gx00, VSP Fx00, VSP G1500, and F1500, a command device must be created on each monitored array, and be mapped to the computer running the SCOM adapter.</p> <p>The command device must have the following attribute(s) enabled:</p> <ol style="list-style-type: none"> 1. User Authentication <p>If the communication between the command device for the storage array and the SCOM adapter is interrupted for any reason, storage array information may not appear correctly in SCOM.</p> <p>Versions of this adapter prior to v01.7.0 used the command device only to collect performance information. Beginning with v01.7.0, the command device is used to collect information on array objects, in addition to performance information.</p> <p>Caution  Command devices installed in server environments where the SCOM adapter is installed that use non-SCOM adapters are not supported. For example, user authentication for such a command device is not supported, even if it is turned on.</p>
File Server IP Address	HNAS file server IP address

Pre-Operation Requirements for Compute Device

Item	Configuration
Management Network	<p>A valid IP address must be configured for the following module or controller:</p> <ul style="list-style-type: none"> ▪ Management module ▪ BMC
SNMP Agent	<p>SNMP agent must be configured as follows:</p> <ul style="list-style-type: none"> ▪ Valid port number is assigned. ▪ SNMP version must be set to v1/v2c. <p>If SNMP Trap alerts from server are used, configure additional setting for traps:</p> <ul style="list-style-type: none"> ▪ SNMP Trap is enabled ▪ SNMP Trap message is set to HCSM ▪ Configure SNMP Trap level as user option <p>These settings are optional:</p> <ul style="list-style-type: none"> ▪ System Contact Name ▪ Location
SNMP Manager	<p>Both the computer running SCOM itself, and the computer running this SCOM adapter must be registered as SNMP managers on each management module. These settings must be configured:</p> <ul style="list-style-type: none"> ▪ IP address ▪ Port number ▪ SNMP version must be set to v1/v2c ▪ Community name must be non-null
HTTP Port	<p>HTTP service for management module, BMC on the blades or on Compute Rack server must be configured as follows:</p> <ul style="list-style-type: none"> ▪ HTTP must be enabled ▪ Port number must be set to 80
IPMI Accounts	<p>IPMI accounts must be configured in BMCs on all blades or Compute Rack servers. These settings must be configured:</p> <ul style="list-style-type: none"> ▪ Username ▪ Password ▪ Privilege must be Administrator ▪ Account must be enabled
SMASH account	<p>SMASH accounts must be configured in CB500 and CB2500 BMCs. These settings must be configured:</p> <ul style="list-style-type: none"> ▪ Username must be non-null ▪ Password must be non-null ▪ Privilege must be Administrator ▪ Account must be enabled

Installation Prerequisites

Before using Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager, the following items must be installed and configured:

- Microsoft System Center Operations Manager
- Microsoft .NET Framework 3.5 SP1
- Microsoft .NET Framework 4.5 (Windows Server 2012)
- Microsoft .NET Framework 4.6 (Windows Server 2016)
- Microsoft Management Console 3.0
- Ipmitool, an open-source download from SourceForge.net
 - Version 2.9.1 if SCOM server is Windows Server 2012
 - Version 3.0.0 if SCOM server is Windows Server 2016
- Java SE Runtime Environment (x64) 1.8.0 or later
- RAID Manager (Command Control Interface (CCI)) 01-39-03/04 or later

This adapter requires CCI be installed on the SCOM adapter host, and a command device must be mapped from each Enterprise family array before array monitoring can be configured. See the Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager v01.10.0 User's Guide for Storage Systems for more information.

During installation, you must provide an account name and password for the connector service. Refer to Configuring the SCOM Server.

The Hitachi connector service and SCOM must be able to communicate via TCP/IP.

Storage subsystems must have dual controllers, and each controller must be accessible using TCP/IP.

The Hitachi subsystem connector service must be running with adequate Windows security requirements in order to communicate with SCOM, which may be running on a different computer.

The Hitachi connector service uses TCP port 5724 to communicate with SCOM.

The Hitachi connector service uses TCP port 2001 to communicate with Hitachi Device Manager.

The Hitachi connector service uses TCP port 3001 and 3003 to communicate with localhost.

To make use of all Hitachi Compute Adapter for Microsoft® System Center Operations Manager features, IPMIUTIL, which is an open-source download from SourceForge.net, must be installed. After installing IPMIUTIL, it may be necessary to log out, and log in again to completely enable its functionality.

For more information, see:

<http://ipmiutil.sourceforge.net/>

To collect alerts from Enterprise family array SVPs, Hitachi Storage Connector Service uses TCP ports 1099, 51099 and 51100.

Account permissions for installing and using the Hitachi Infrastructure Adapter for SCOM

The tables below lists users and their respective permission levels to install or use the Hitachi Infrastructure Adapter for System Center Operations Manager software as determined by their respective Windows Server 2012 or Windows Server 2016 account permission levels.

Account permissions per Windows Server 2012

Permission to install adapter software	User	Permission to use adapter software
Domain Administrator	Domain Administrator	Yes
	Domain Admin authorized user	Yes
	Domain Admin limited authorized user	Yes
	Local Administrator	Yes
	Local Admin authorized user	Yes
	Local Admin limited authorized user	No
Domain Admin authorized user	Domain Administrator	Yes
	Domain Admin authorized user	Yes
	Domain Admin limited authorized user	Yes
	Local Administrator	Yes
Domain Admin authorized user	Local Admin authorized user	Yes
	Local Admin limited authorized user	No
Domain Admin limited authorized	-	No install

Permission to install adapter software	User	Permission to use adapter software
user		
Local Administrator	Domain Administrator	No
	Domain Admin authorized user	No
	Domain Admin limited authorized user	No
	Local Administrator	Yes
	Local Admin authorized user	Yes
	Local Admin limited authorized user	No
Local Admin authorized user	Domain Administrator	No
	Domain Admin authorized user	No
	Domain Admin limited authorized user	No
	Local Administrator	Yes
	Local Admin authorized user	Yes
	Local Admin limited authorized user	No
Local Admin limited authorized user	-	No install

Account permissions per Windows Server 2016

Permission to install	User	Permission to use
Domain Administrator	Domain Administrator	Yes
	Domain Admin authorized user	Yes
	Domain Admin limited authorized user	Yes
	Local Administrator	Yes
	Local Admin authorized user	Yes
	Local Admin limited authorized user	Yes: run as Administrator
Domain Admin authorized user *Install: run as Administrator	Domain Administrator	Yes
	Domain Admin authorized user	Yes: run as Administrator
	Domain Admin limited authorized user	Yes: run as Administrator
	Local Administrator	Yes: run as Administrator
	Local Admin authorized user	Yes: run as Administrator
	Local Admin limited authorized user	No

Permission to install	User	Permission to use
Domain Admin limited authorized user	-	No install
Local Administrator	Domain Administrator	No
	Domain Admin authorized user	No
	Domain Admin limited authorized user	No
	Local Administrator	Yes
	Local Admin authorized user	Yes
	Local Admin limited authorized user	No
Local Admin authorized user <i>*Install: run as Administrator</i>	Domain Administrator	No
	Domain Admin authorized user	No
	Domain Admin limited authorized user	No
	Local Administrator	Yes
	Local Admin authorized user	<i>Yes: run as Administrator</i>
	Local Admin limited authorized user	No
Local Admin limited authorized user	-	No install

Pre-installation Tasks

Before installing Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager, it may be helpful to use the System Center 2012 Operations Manager Sizing Helper Tool. This tool can assist with designing a SCOM environment. Download it from:

<http://www.microsoft.com/en-us/download/details.aspx?id=29270>


Note The System Center 2012 Operations Manager Sizing Helper Tool can also be helpful before installing the System Center 2016 Operations Manager.



Installing the Software

If the following cases apply, additional environment configuration will be required before and after the installation. For more information, see [Dual Connectors](#).

- When the server on which the Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager is installed is in a domain that does not contain a SCOM instance.
- When Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager is installed on multiple servers.

Note  For dual connections to SCOM, when installing the Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager software on multiple servers, be sure the same version of the software is installed across all instances. Combinations of different adapter versions are not supported.

Consolidated Installer

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager is available for download from the Hitachi Data Systems Support Portal.

The installer file name is:

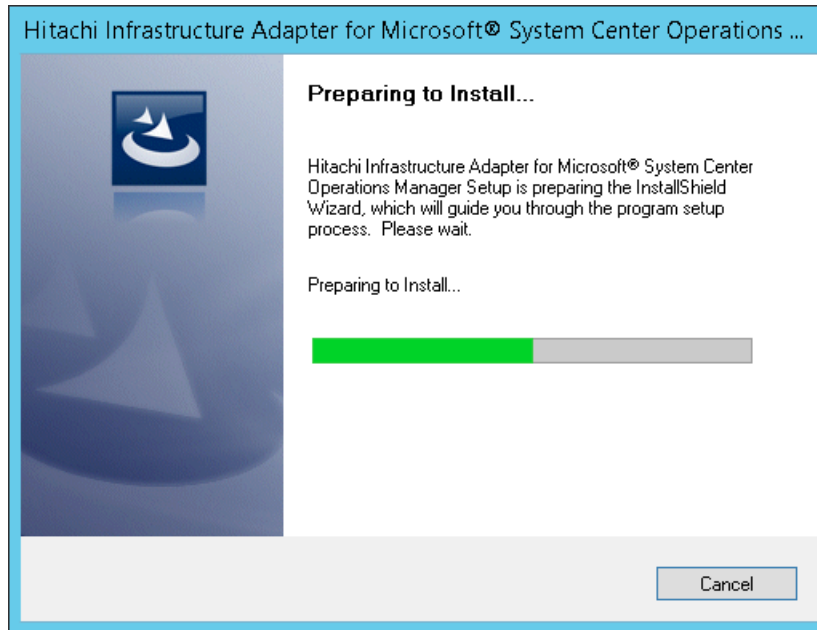
Hitachi-SCOM-Infrastructure-setup(01.10.0)-(x64).exe

This product installs one or two Windows services that collect information about Hitachi hardware and display it in SCOM.

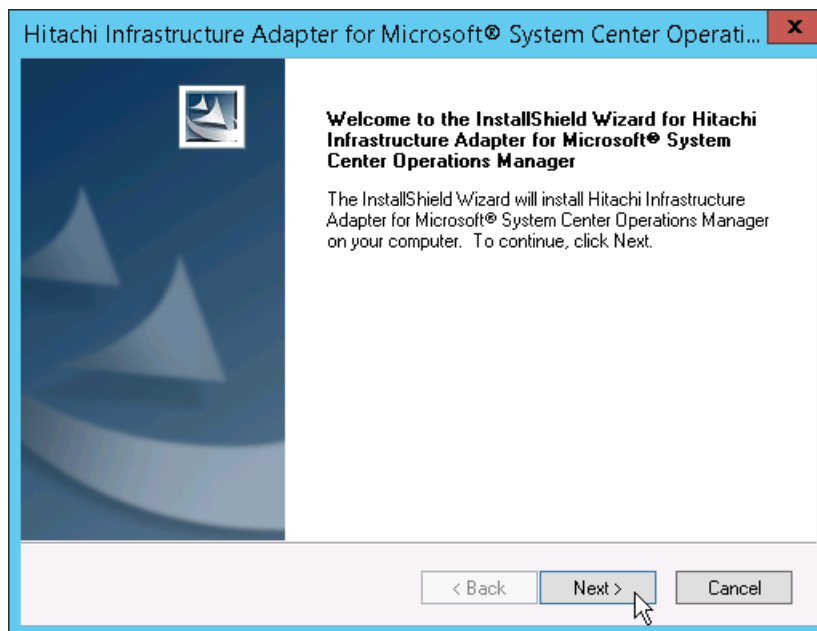
Note  Before installing Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager, verify that Microsoft® System Center Operations Manager 2012 or 2016 is installed and running.

To initiate installation:

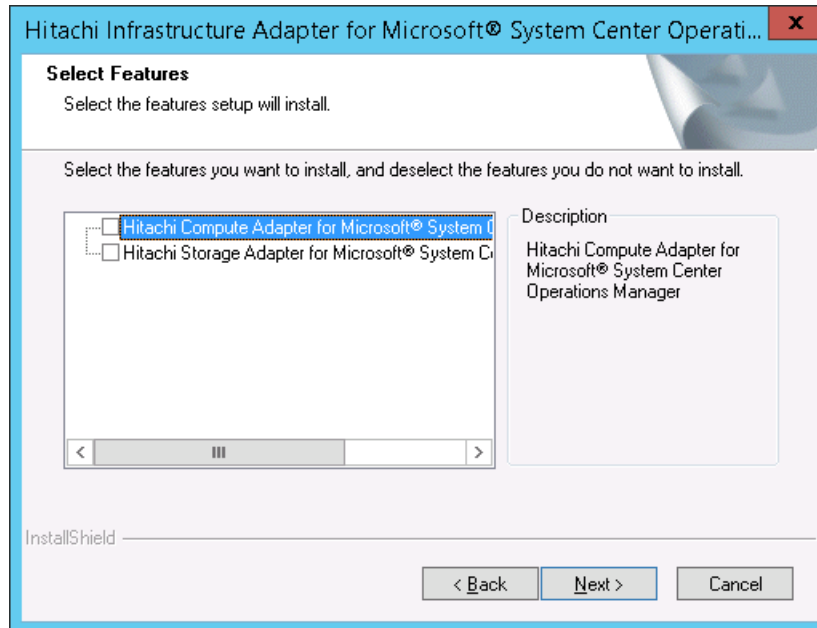
1. Double-click *Hitachi-SCOM-Infrastructure-setup(01.10.0)-(x64).exe* to extract the files and start the install wizard.



2. In the Welcome screen, click **Next**.



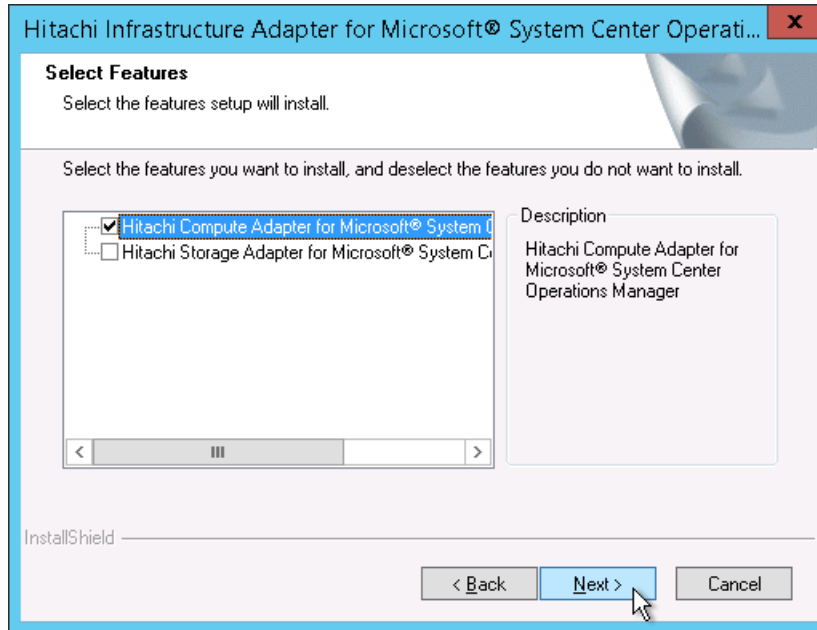
3. Select one or both products you want to install, click **Next**. For installation instructions for each sub-product, see [Installing the Hitachi Compute Adapter for Microsoft SCOM](#) or [Installing the Hitachi Storage Adapter for Microsoft SCOM](#).



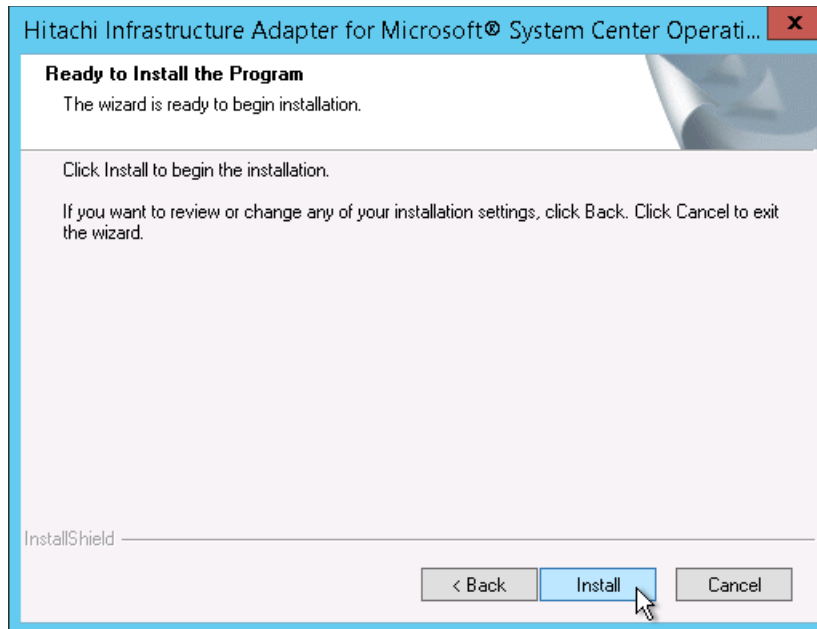
Installing the Hitachi Compute Adapter for Microsoft SCOM

To install the Hitachi Compute Adapter for Microsoft SCOM:

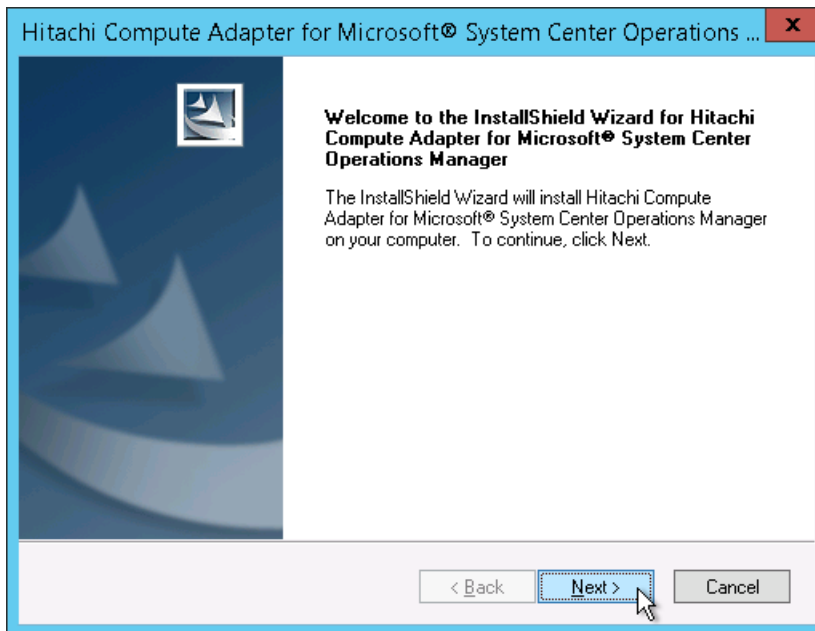
1. Choose the **Hitachi Compute Adapter for Microsoft® System Center Operations Manager** option, then click **Next** to extract the files.



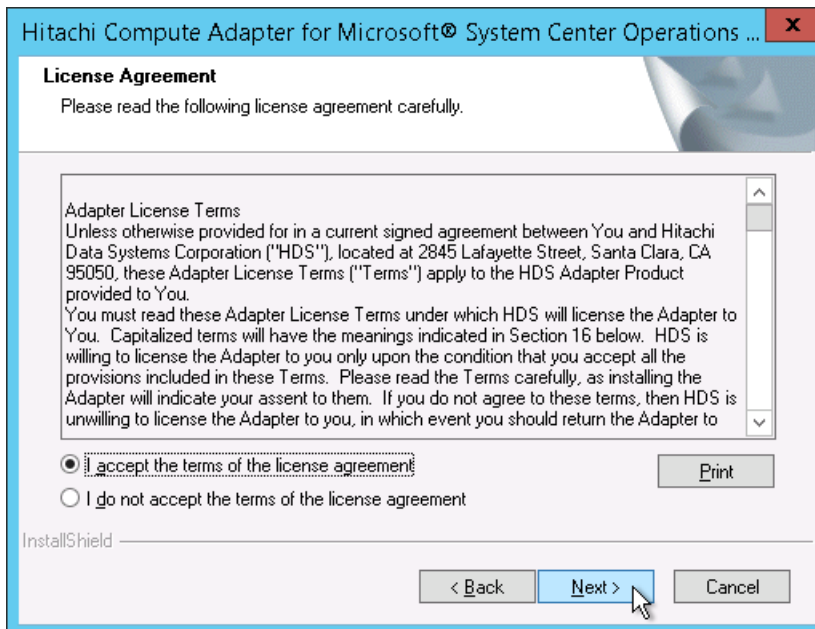
2. Click **Install**.



3. In the Welcome screen, click **Next**.



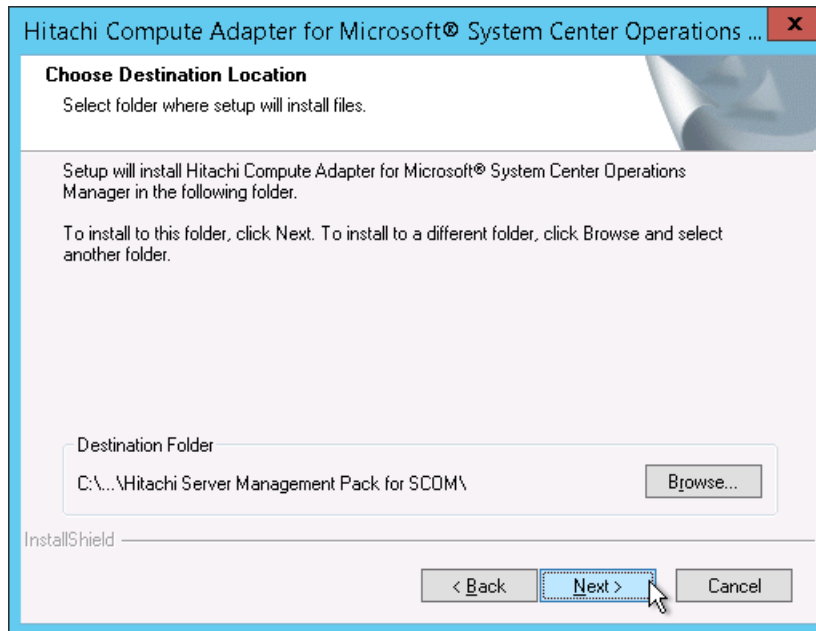
4. Read the license agreement carefully. Choose *I accept the terms of the license agreement*, then click **Next**.



5. In the Choose Destination Location screen, click **Next**. (Optionally, click **Browse** to choose a custom installation folder.)

By default, the software is installed in folder:

<Drive Letter>:\Program Files\Hitachi\Hitachi Server Management Pack for SCOM



6. In the Service Login Information screen, enter the username and password for the user account to be used by the service; click **Next**.

Hitachi Compute Adapter for Microsoft® System Center Operations ...

Service Login Information

Specify the user account to be used by the service. User account must be in the format DOMAIN\Username.

Username:

Password:

Confirm:

InstallShield

< Back Next > Cancel

7. Click **Install** to begin the installation

Hitachi Compute Adapter for Microsoft® System Center Operations ...

Ready to Install the Program

The wizard is ready to begin installation.

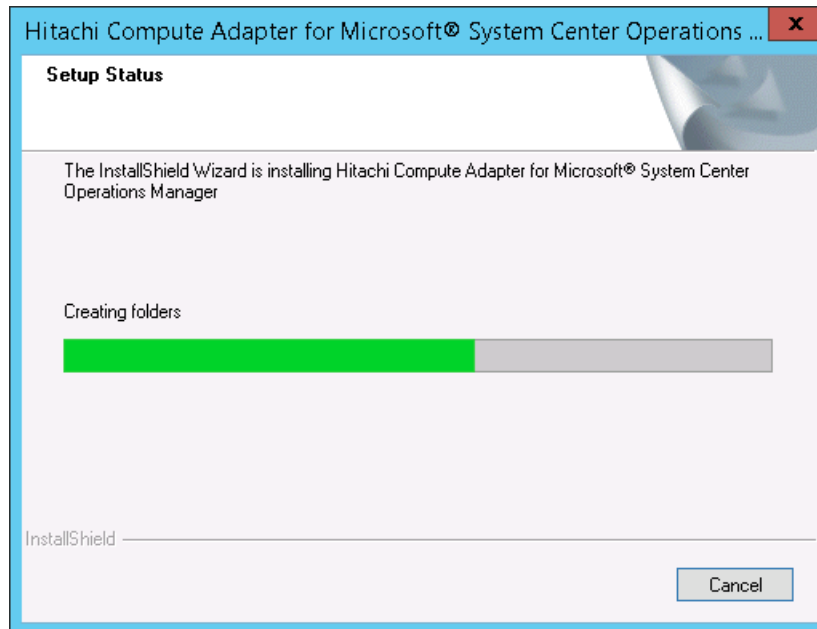
Click Install to begin the installation.

If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.

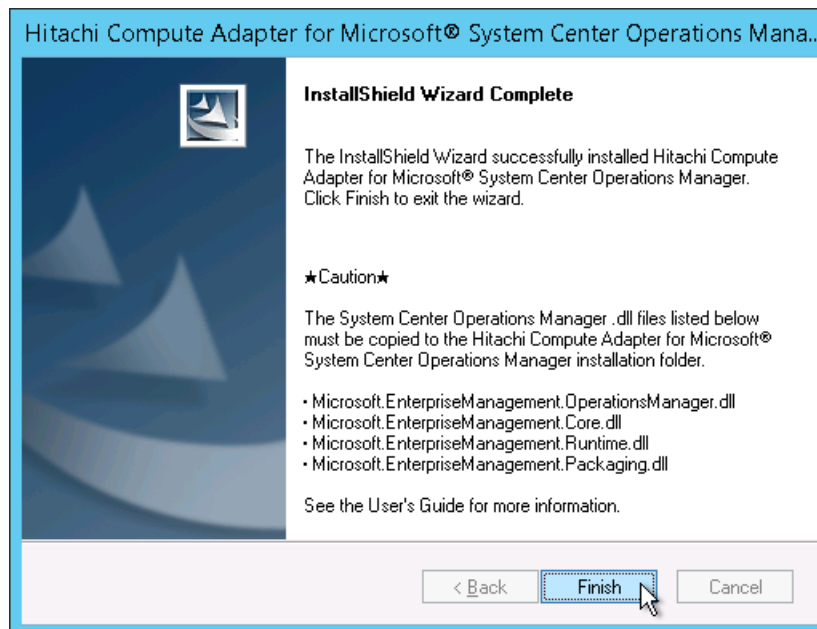
InstallShield

< Back Install Cancel

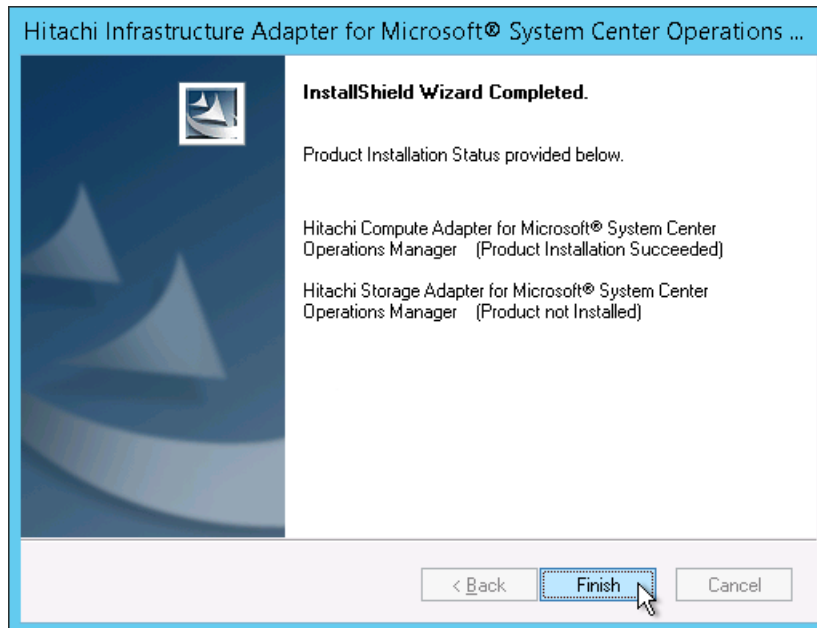
The Setup Status screen shows the progress of the installation.



8. When the installation is complete, review the items listed under **Caution**, then click **Finish**.



9. In the confirmation screen, click **Finish** to close the InstallShield Wizard.



10. Complete the post-installation tasks. See [Post-installation Tasks](#).

Installing the Hitachi Compute Management Pack on a separate server

If you installed the Hitachi Compute Management Pack on a server that does not contain SCOM, perform the following procedure manually.

Note The steps listed below are not necessary if both SCOM and the Hitachi Compute Management Pack are installed on the same server.



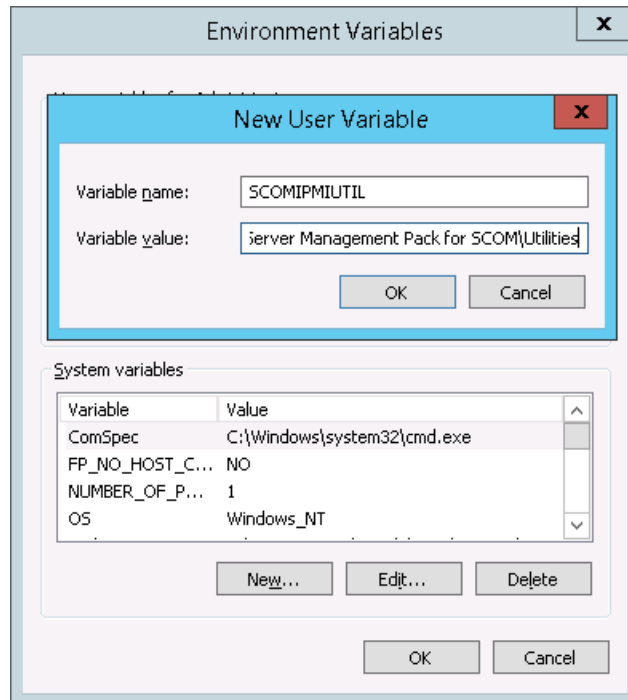
1. On the server on which the Hitachi Compute Management Pack was installed, find and copy the path and all files in the Utilities folder at:

```
<Drive Letter>:\Program Files\Hitachi\Hitachi  
Server Management Pack for SCOM\Utilities
```
2. Paste the Utilities folder in the same path location on the SCOM server (you may also need to create the same folder tree if it is not present).
3. Create an environment variable:

Variable name: *SCOMIPMIUTIL*

Variable Value: *<Drive Letter>:\Program Files\Hitachi\Hitachi Server Management Pack for SCOM\Utilities*

The value of the variable should reflect the path created in Step 2 above.



4. Install the **ipmiutil** utility.

To fully utilize all Hitachi Compute Management Pack functions, you may need to install the **ipmiutil** utility on the SCOM server.

- Install version 2.9.1 if the SCOM server is Windows Server 2012
- Install version 3.0.0 if the SCOM server is Windows Server 2016

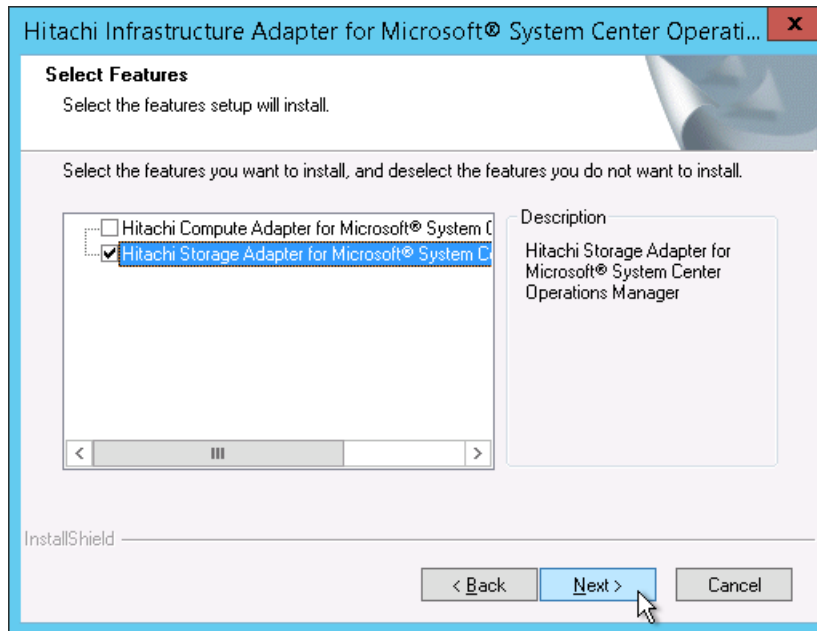
To install **ipmiutil**, refer to the following web site:

<http://ipmiutil.sourceforge.net/>

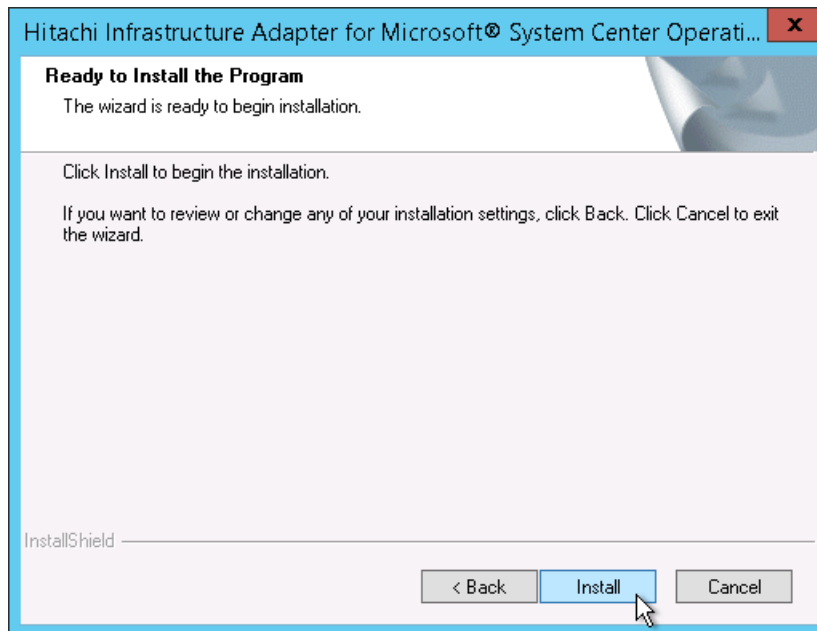
Installing the Hitachi Storage Adapter for Microsoft SCOM

To install the Hitachi Storage Adapter for Microsoft SCOM:

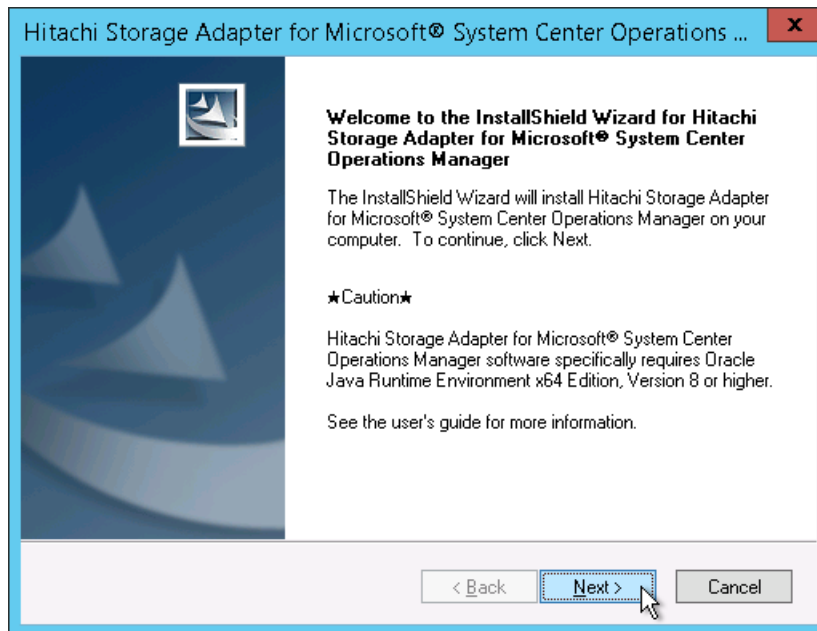
1. Choose the **Hitachi Storage Adapter for Microsoft System Center Operations Manager** option, then click **Next** to extract the files.



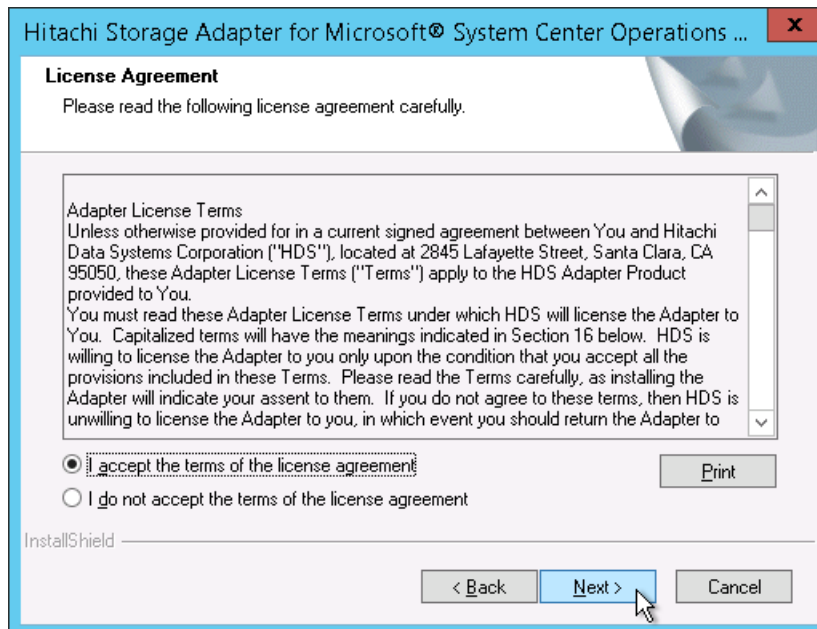
2. Click **Install**.



3. In the Welcome screen, click **Next**.



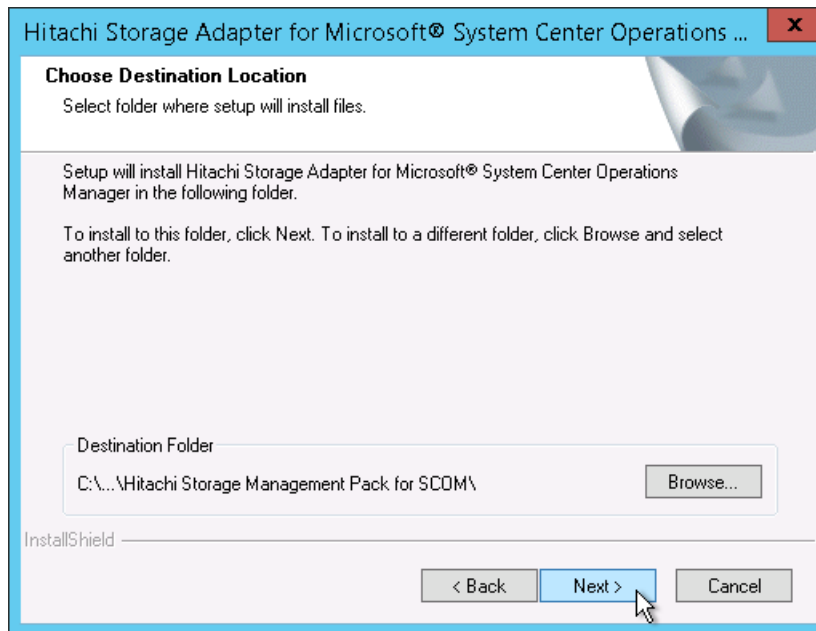
4. Read the license agreement carefully. Choose **I accept the terms of the license agreement**, then click **Next**.



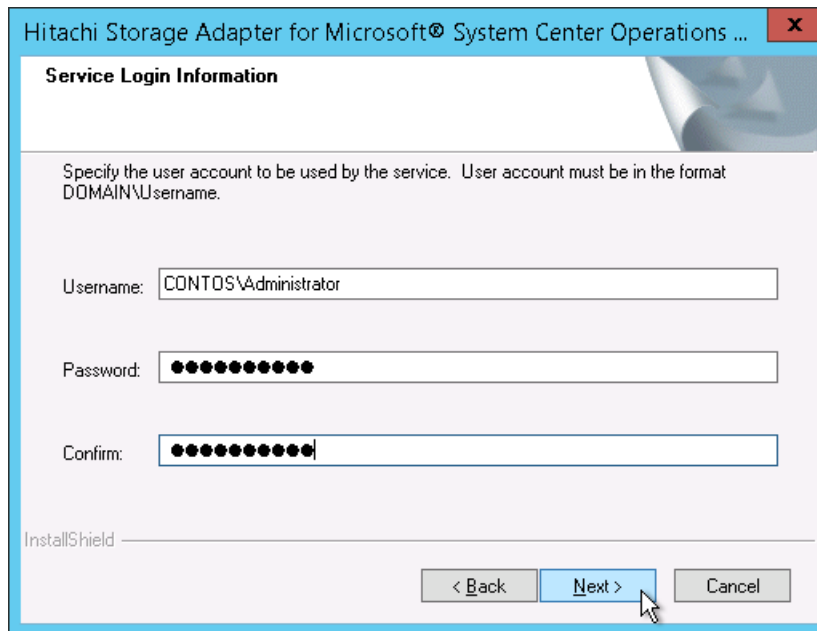
5. In the Choose Destination Location screen, click **Next**. (Optionally, click **Browse** to choose a custom installation folder.)

By default, the software will be installed in this folder:

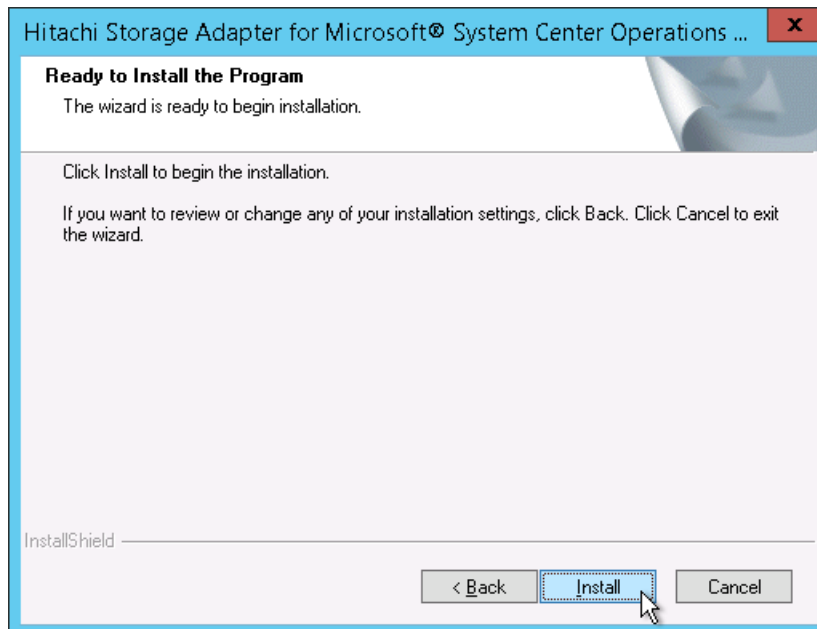
<Drive Letter>:\Program Files\Hitachi\Hitachi Storage Management Pack for SCOM



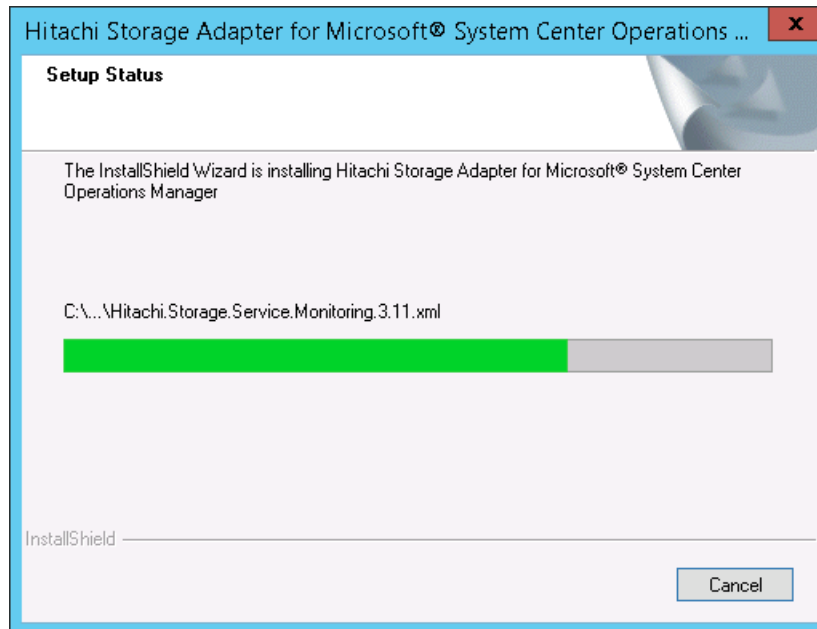
6. In the Service Login Information screen, enter the username and password for the user account to be used by the service; click **Next**.



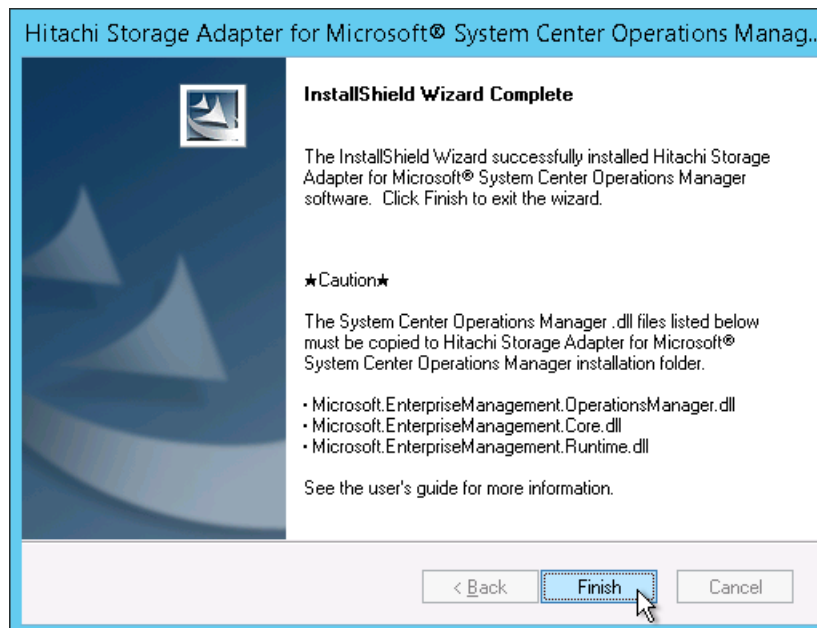
7. Click **Install** to begin the installation.



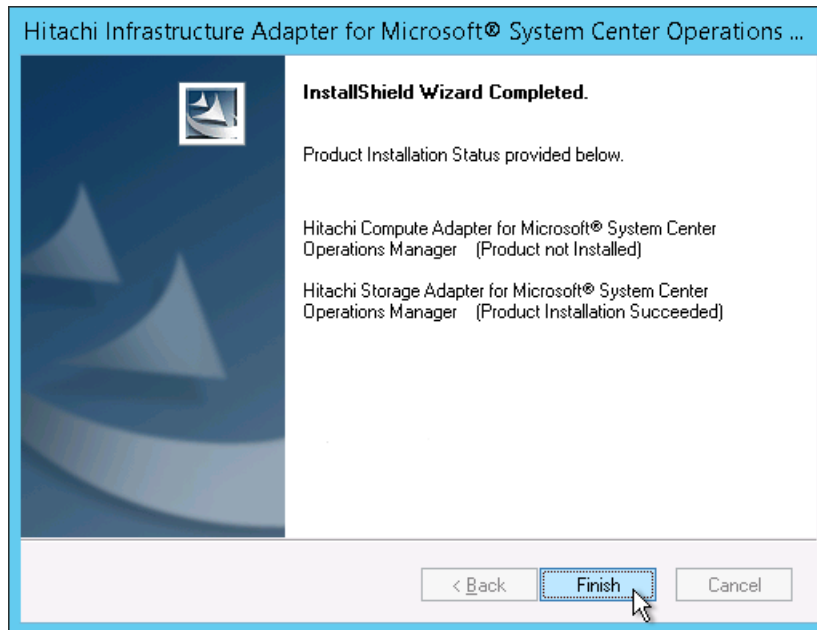
The Setup Status screen shows the progress of the installation.



8. When the installation is complete, review the items listed under **Caution**, then click **Finish** to exit the wizard.



9. In the confirmation screen, click **Finish** to close the InstallShield Wizard.



10. Complete the post-installation tasks. See [Post-installation Tasks](#).

Post-installation Tasks

After installing the Hitachi Compute Adapter for Microsoft SCOM and/or the Hitachi Storage Adapter for Microsoft® SCOM software, you must copy the System Center 2012 or 2016 – Operations Manager SDK .dll library files listed below from their respective Microsoft SCOM installation folders to the Hitachi Storage Adapter for Microsoft® SCOM installation folder and/or the Hitachi Compute Adapter for Microsoft SCOM installation folder.



Note The location of the System Center 2012 or 2016 – Operations Manager SDK installation folder may vary according to the version of your Microsoft System Center Operations Manager.

1. Copy the four .dll library files listed below for your version of Microsoft System Center (2012 or 2016) from their respective Microsoft SCOM installation folders to the **Hitachi Compute Adapter for Microsoft SCOM** installation folder (*..\Program Files\Hitachi\Hitachi Server Management Pack for SCOM*).

For Microsoft Systems Center 2012/2012 SP1/2012 R2

<C>:\Program Files\<Microsoft System Center 2012>\Operations Manager\SDK Binaries

- o Microsoft.EnterpriseManagement.Core.dll*
- o Microsoft.EnterpriseManagement.OperationsManager.dll*
- o Microsoft.EnterpriseManagement.Runtime.dll*

<C>:\Program Files\<Microsoft System Center 2012>\Operations Manager\Setup

- o Microsoft.EnterpriseManagement.Packaging.dll*

For Microsoft Systems Center 2016

<C>:\Program Files\Microsoft System Center 2016\Operations Manager\WebConsole\WebHost\bin\SDK Binaries

- o Microsoft.EnterpriseManagement.Core.dll*
- o Microsoft.EnterpriseManagement.OperationsManager.dll*
- o Microsoft.EnterpriseManagement.Runtime.dll*

<C>:\Program Files\Microsoft System Center 2016\Operations Manager\Setup

- o Microsoft.EnterpriseManagement.Packaging.dll*

2. Copy the three .dll library files listed below from your version of the Microsoft System Center (2012 or 2016) installation folder to the **Hitachi Storage Adapter for Microsoft® SCOM** installation folder (*..\Program Files\Hitachi\Hitachi Storage Management Pack for SCOM*).

For Microsoft Systems Center 2012/2012 SP1/2012 R2

```
<C>:\Program Files\<Microsoft System Center  
2012>\Operations Manager\SDK Binaries
```

- o *Microsoft.EnterpriseManagement.Core.dll*
- o *Microsoft.EnterpriseManagement.OperationsManager.dll*
- o *Microsoft.EnterpriseManagement.Runtime.dll*

For Microsoft Systems Center 2016

```
<C>:\Program Files\Microsoft System Center  
2016\Operations Manager\WebConsole\WebHost\bin\SDK  
Binaries
```

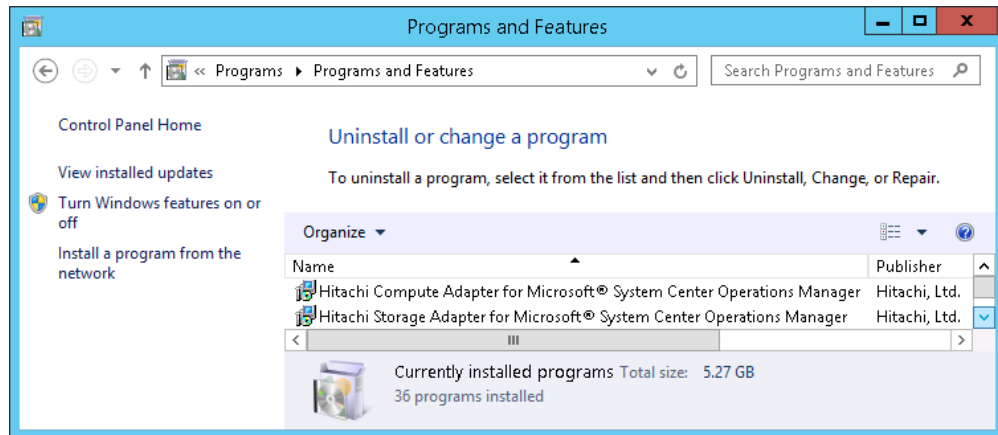
- o *Microsoft.EnterpriseManagement.Core.dll*
- o *Microsoft.EnterpriseManagement.OperationsManager.dll*
- o *Microsoft.EnterpriseManagement.Runtime.dll*

3. Log out of your Windows account, then login again.
4. Start the **Hitachi Compute Connector service** to import the new management packs into the SCOM console. See *Configuring the Hitachi Compute Connector* in the *Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager User's Guide for Compute Systems*.
5. Start the **Hitachi Storage Connector service**. See *Configuring the Hitachi Storage Connector* in the *Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager User's Guide for Storage Systems*.

Uninstalling the Software

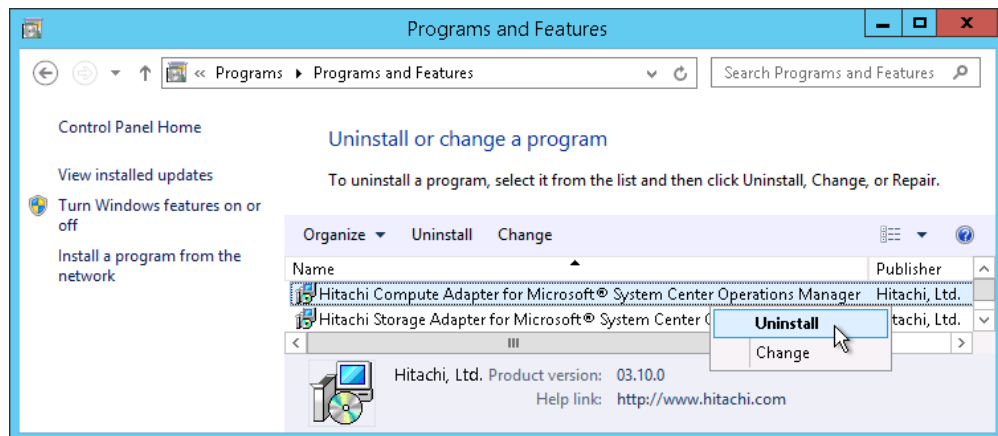
Uninstall either adapter using the Windows Control Panel.

1. From the Start menu, select **Control Panel**.
2. Double-click **Programs and Features**.



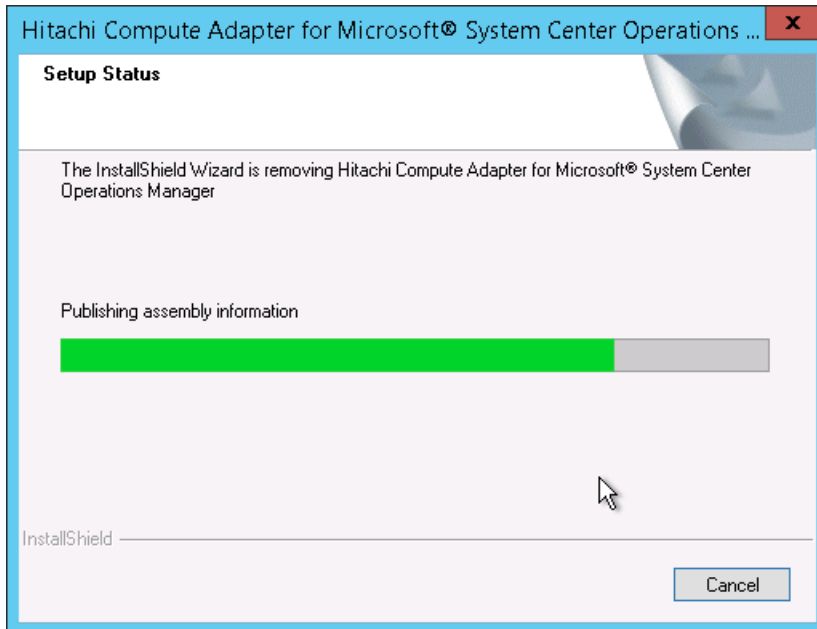
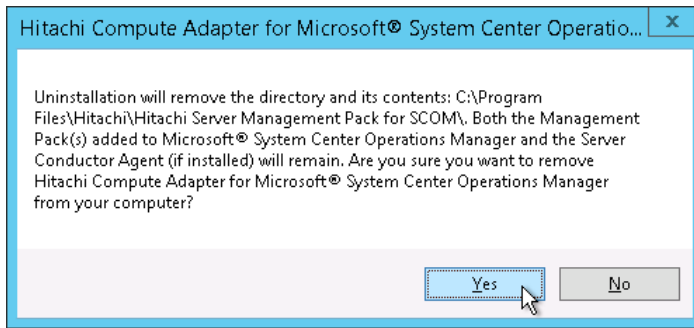
Uninstalling the Hitachi Compute Adapter for Microsoft SCOM

1. In **Control Panel > Programs and Features**, right-click **Hitachi Compute Adapter for Microsoft® System Center Operations Manager**, then select **Uninstall** from the Action menu.

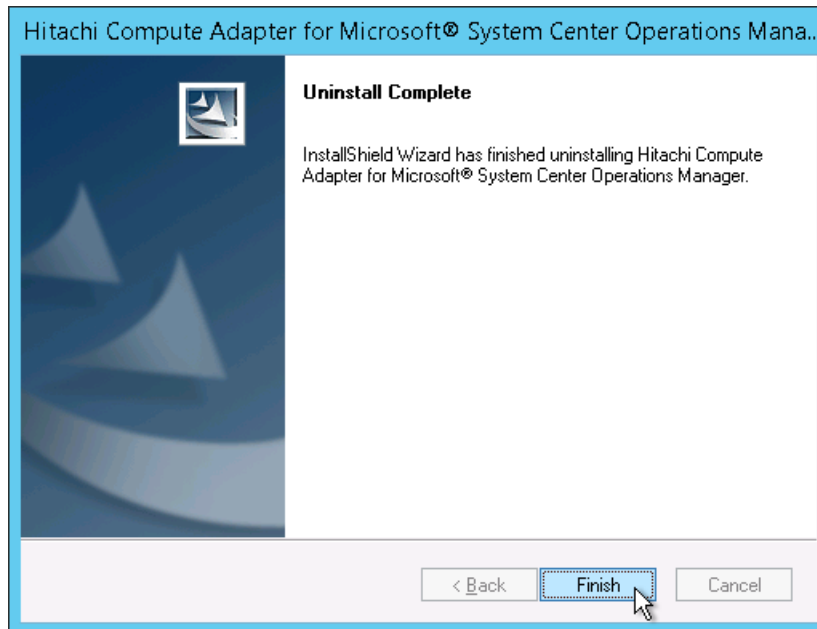


The selection is prepared for uninstallation.

2. Confirm the components you want to uninstall, then click **Yes** to continue.

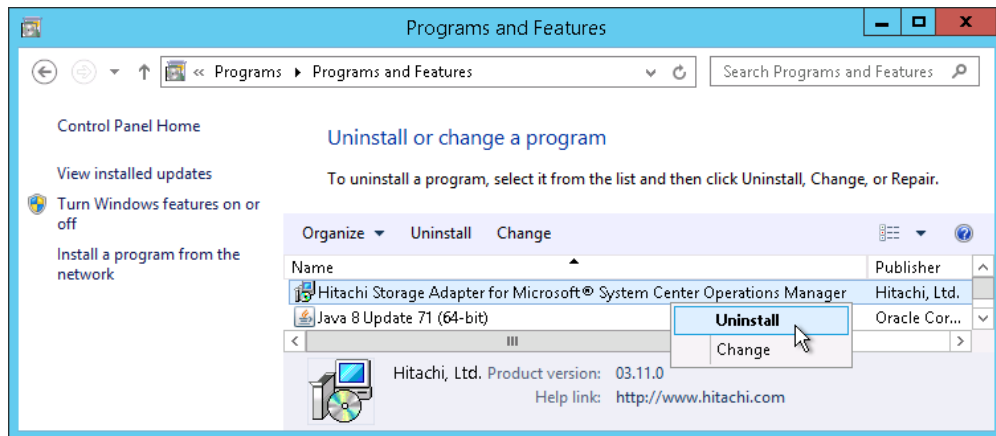


3. When uninstallation is complete, click **Finish** to close the wizard.



Uninstalling the Hitachi Storage Adapter for Microsoft SCOM

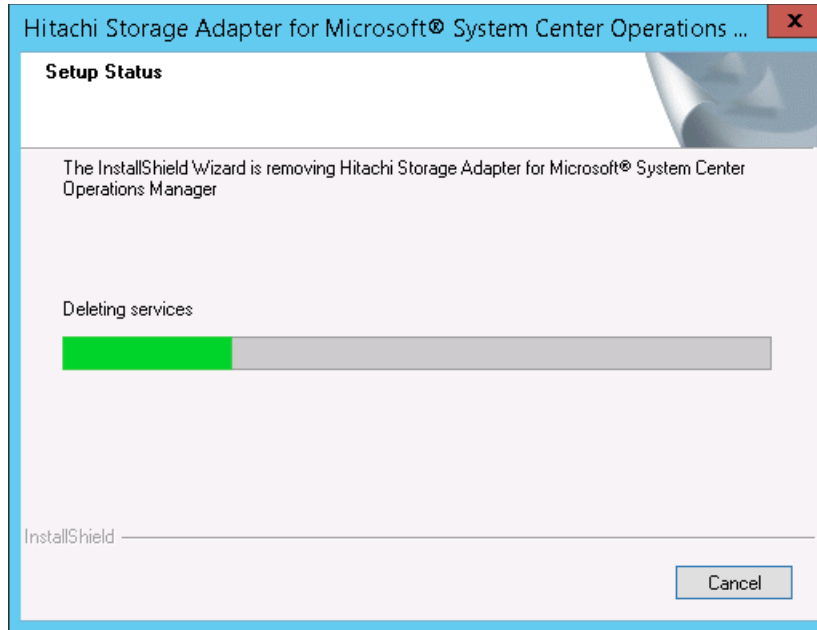
1. In **Control Panel > Programs and Features**, right-click **Hitachi Storage Adapter for Microsoft SCOM**, then select **Uninstall** from the Action menu.



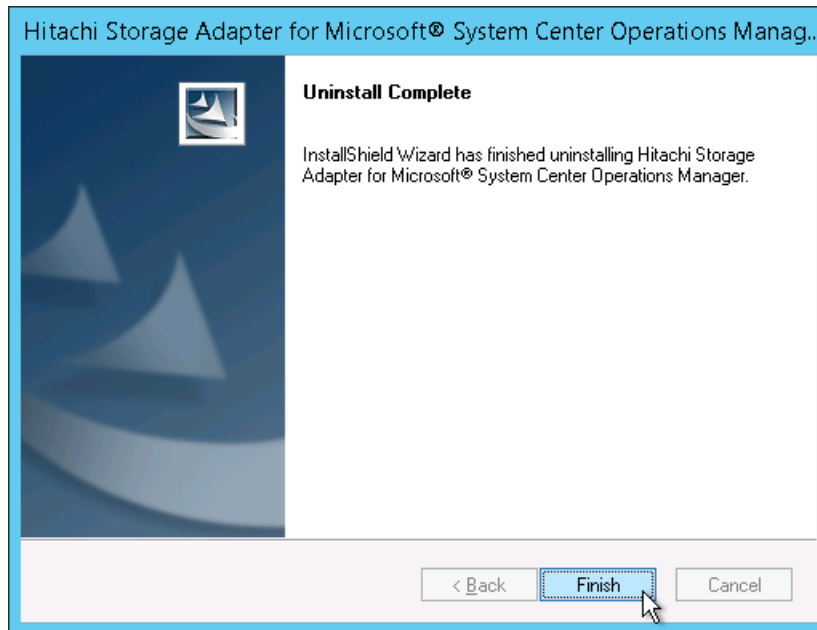
The selection is prepared for uninstallation.

2. Confirm the components you want to uninstall, then click **Yes** to continue.





3. When uninstallation is complete, click **Finish** to close the wizard.



Post-uninstallation Tasks

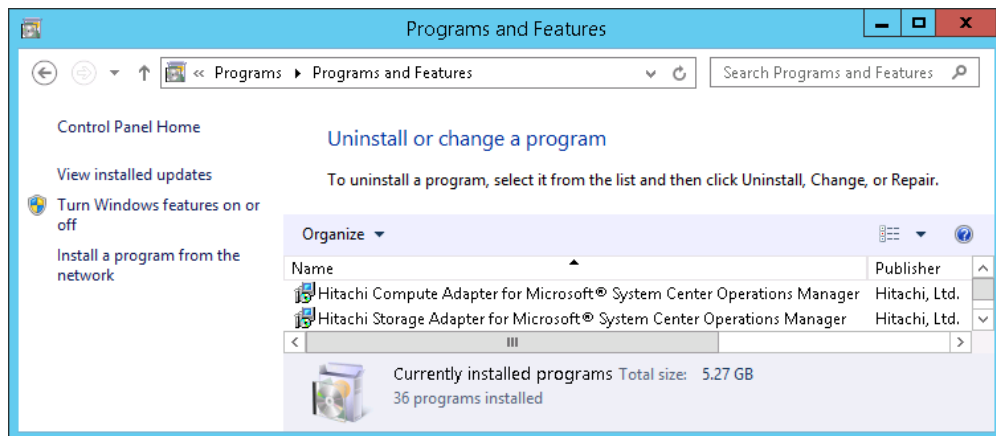
After uninstalling the Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager software, you must delete the System Center 2012 or 2016 – Operations Manager SDK that you copied to the installation folder when you installed the software.

1. Browse to the Hitachi Compute Adapter for Microsoft® System Center Operations Manager installation folder.
2. Delete the following .dll files.
 - *Microsoft.EnterpriseManagement.OperationsManager.dll*
 - *Microsoft.EnterpriseManagement.Core.dll*
 - *Microsoft.EnterpriseManagement.Runtime.dll*
 - *Microsoft.EnterpriseManagement.Packaging.dll*
3. Browse to the Hitachi Storage Adapter Microsoft® System Center Operations Manager installation folder.
4. Delete the following .dll files.
 - *Microsoft.EnterpriseManagement.OperationsManager.dll*
 - *Microsoft.EnterpriseManagement.Core.dll*
 - *Microsoft.EnterpriseManagement.Runtime.dll*

Repairing the Software

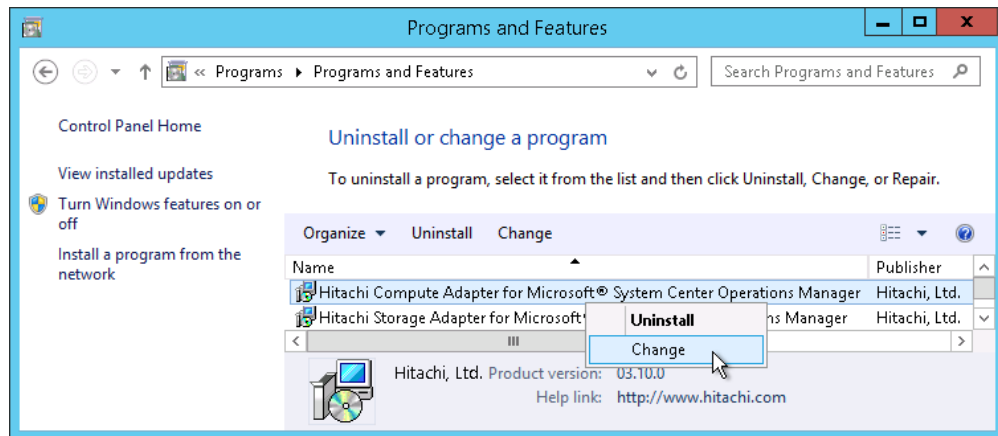
Repair either adapter using the Windows control panel.

1. From the **Start** menu, select **Control Panel**.
2. Double-click **Programs and Features**.



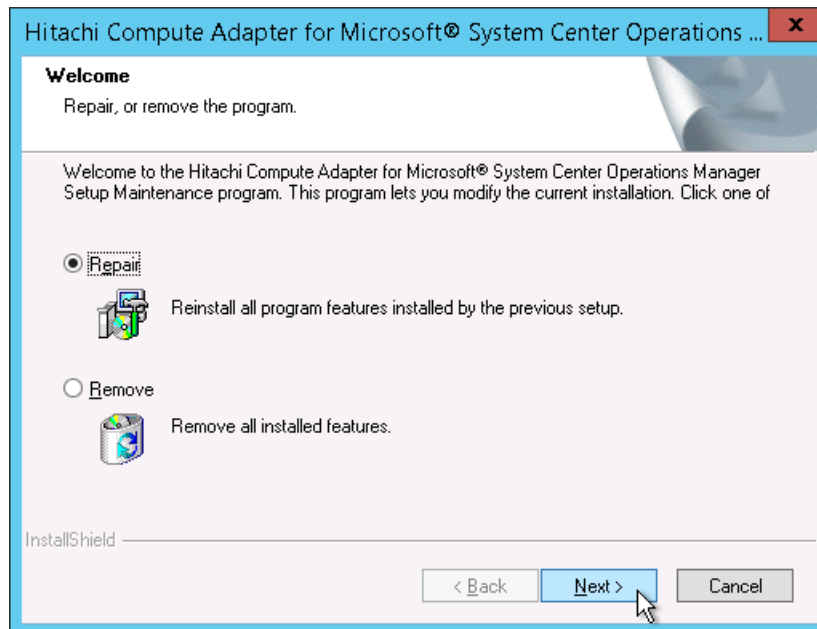
Repairing the Hitachi Compute Adapter for Microsoft SCOM

1. In **Control Panel > Programs and Features**, right-click **Hitachi Compute Adapter for Microsoft® System Center Operations Manager**, then select **Change** from the Action menu.

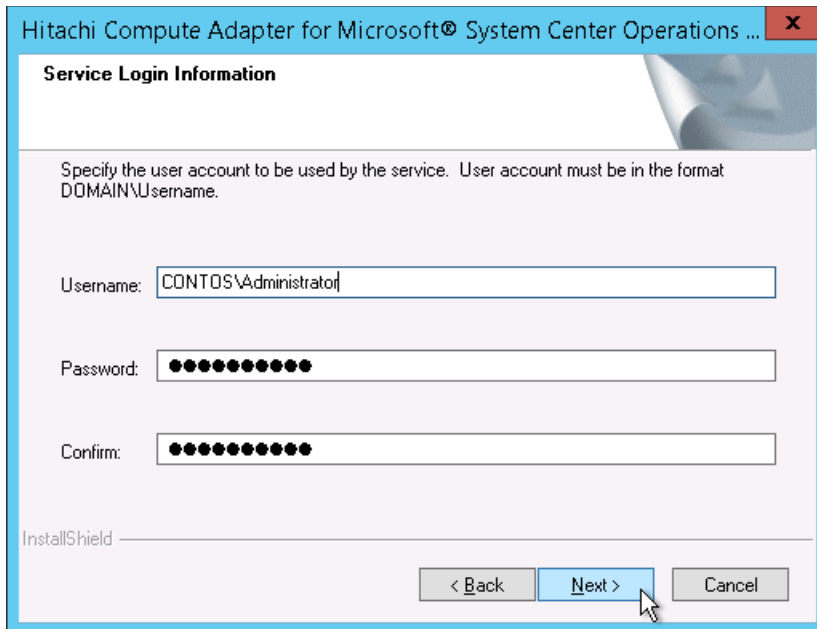


The selection is prepared for repair.

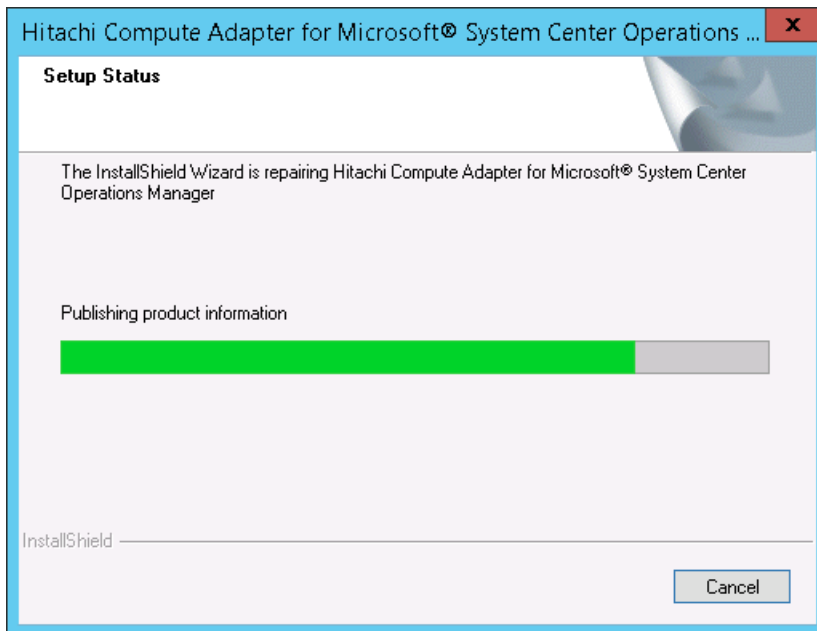
2. In the Welcome screen, select **Repair**, then click **Next**.



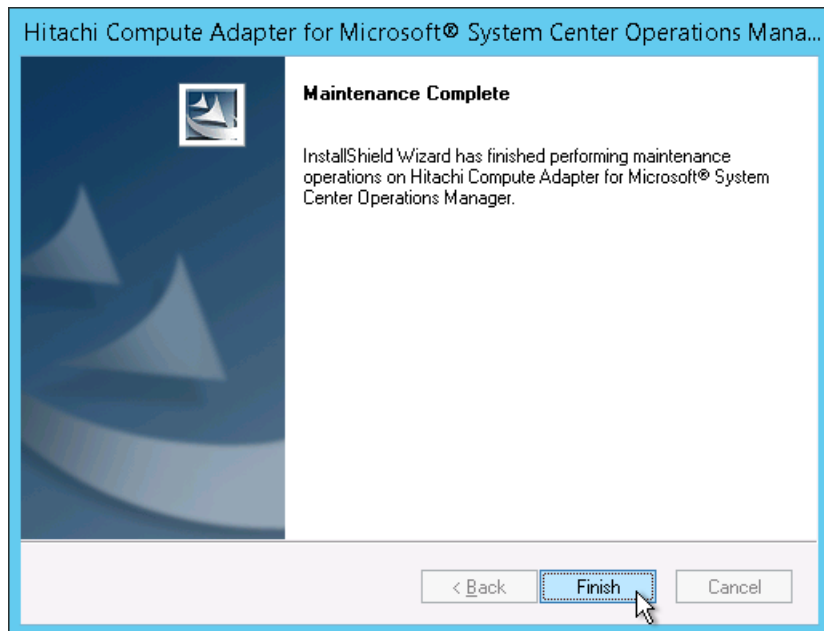
3. In the Service Login Information screen, enter the username and password for the user account to be used by the service; click **Next**.



The Setup Status screen shows the status of the repair.

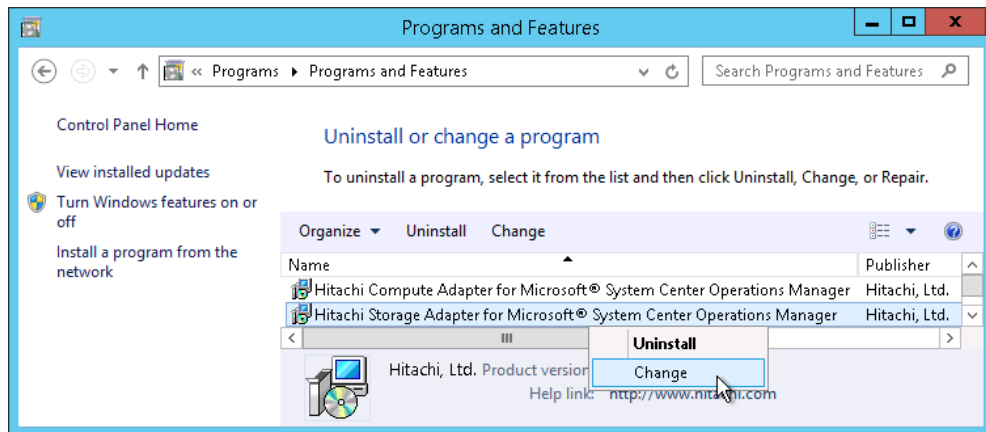


4. When the repair is complete, click **Finish** to exit the wizard.



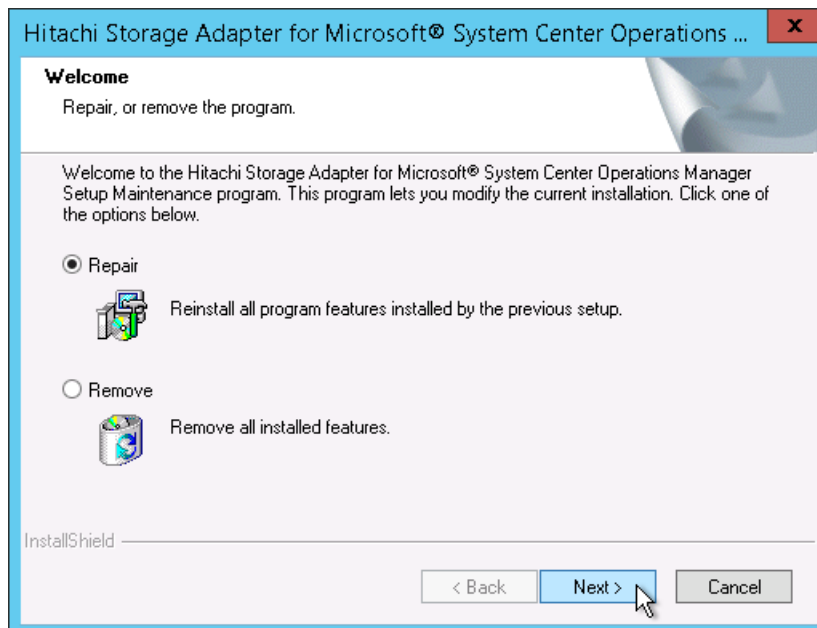
Repairing the Hitachi Storage Adapter for Microsoft SCOM

1. In **Control Panel > Programs and Features**, right-click **Hitachi Storage Adapter for Microsoft® System Center Operations Manager**, then select **Change** from the Action menu.



The selection is prepared for repair.

2. In the Welcome screen, select **Repair**, then click **Next**.



3. In the Service Login Information screen, enter the username and password for the user account to be used by the service; click **Next**.

Hitachi Storage Adapter for Microsoft® System Center Operations ...

Service Login Information

Specify the user account to be used by the service. User account must be in the format DOMAIN\Username.

Username:

Password:

Confirm:

InstallShield

< Back Next > Cancel

The Setup Status screen shows the status of the repair.

Hitachi Storage Adapter for Microsoft® System Center Operations ...

Setup Status

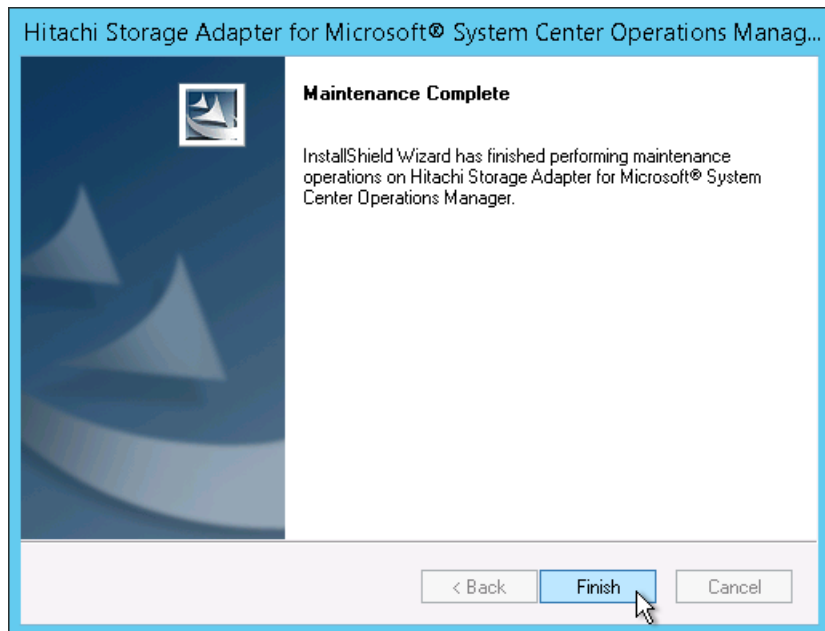
The InstallShield Wizard is repairing Hitachi Storage Adapter for Microsoft® System Center Operations Manager

Copying new files

InstallShield

Cancel

4. When the repair is complete, click **Finish** to exit the wizard.



Restrictions and Considerations

- [Upgrading may clear alerts and performance data](#)
- [Starting Hitachi Storage Connector Configuration](#)
- [Downgrading to a previous version](#)
- [Notes on the account supplied during adapter installation](#)
- [Network Configuration of VSP Gx00 with Unified NAS module/VSP Fx00 with Unified NAS module](#)
- [SNM2 API Limitation](#)
- [QuantaPlex T41S-2U Chassis State/Node State Limitation](#)
- [Upgrading an operating VSP G1000 subsystem to VSP G1500](#)
- [Adding Exclusions to Windows Defender Realtime Protection](#)

Upgrading may clear alerts and performance data

When either the Storage or Server SCOM adapter is upgraded, the existing Hitachi management packs in SCOM may be replaced with newer versions. This happens when the Connector service first starts.

When the management packs are replaced, the existing performance and alert information stored in SCOM may be removed.

Starting Hitachi Storage Connector Configuration

The Hitachi Storage Connector Configuration (HSCC) shortcut on the Windows Start menu should be used to launch the HSCC software.

Since HSCC uses the MMC snap-in framework, it is possible to add HSCC to the MMC, yet this manual configuration may lead to malfunctions.

Downgrading to a previous version


When downgrading to a previous SCOM adapter version, care should be taken to avoid the unintentional combination of an older adapter version with newer configuration files. The simplest way to avoid this combination is to manually remove or rename the installation folder for the SCOM adapter after its uninstallation, before installing the older version.

The SCOM adapters are designed to leave their installation folders (and a few key files therein) on the computer's file system after they have been uninstalled. During upgrades, this allows new SCOM adapter versions to be installed without requiring monitored device details to be tediously re-entered. Yet, this characteristic can cause problems during downgrades.


Specifically, if an older SCOM adapter version loads configuration files saved by a newer version, some devices may appear in the MMC snap-in (and in SCOM) as "UNKNOWN" instead of the device by the normal identifier. These "UNKNOWN" entries may remain in SCOM even after they have been removed from the MMC snap-in.

See the table below to determine which versions of the adapter software can be downgraded to an earlier version.

SCOM Adapter Environment		System Center Environment		Possible to downgrade to SCOM v01.9.0 or earlier?
OS	SCOM Adapter	OS	System Center	
Windows Server 2012	v1.10.0	Windows Server 2012	2012	Yes
			2016	No
		Windows Server 2016	2012	Yes
			2016	No
Windows Server 2016	V1.10.0	Windows Server 2012	2012	No
			2016	No
		Windows Server 2016	2012	No
			2016	No

Warning  Downgrades listed as "No" would require changes to the SCOM adapter installation server and reconfiguration of the System Center, thus they are not supported.

Downgrade steps:

Warning  Prior to downgrading the software, remove any of the following subsystems that have already been registered.

- Unified NAS Module
 - VSP G1500, VSP F1500
-

1. Remove the SCOM adapter management packs by one of the two methods listed below.
 - a) Use the MMC snap-in of the existing version of the adapter to remove the SCOM adapter management packs from SCOM, by using its **Uninstall Management Pack** feature.
 - b) From the SCOM console **Administration > Management Packs** screen, manually remove the management packs listed below.
 - Hitachi Compute Blade 2000
 - Hitachi Compute Blade 500
 - Hitachi Compute Rack 200
 - Hitachi Compute Blade 2500
 - Hitachi QuantaPlex T41S-2U
 - Hitachi.Compute.Switch

- Hitachi Systems Base
2. Uninstall the current SCOM adapter version.
 3. Once the SCOM adapter has been uninstalled, either remove, or re-name the remaining installation folder. By default, this is either:
`C:\Program Files\Hitachi\Hitachi Storage Management Pack for SCOM`
or,
`C:\Program Files\Hitachi\Hitachi Server Management Pack for SCOM`
 4. Install the desired older SCOM adapter version into a new, empty installation folder. Its default installation folder will work, as long as it does not already exist (or is empty, if it does) when the installer begins.
 5. Start the MMC snap-in, and manually add devices back to the list of monitored devices.

Notes on the account supplied during adapter installation

The Windows account supplied during adapter installation should always belong to the same Windows domain as the computer upon which the adapter's being installed.

For instance, when installing the adapter on a computer which resides within a Windows domain named "REDWOOD," the account supplied during installation should resemble REDWOOD\Administrator.

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager v01.6.0 adds an optional Dual Connectors feature, which supports the deployment of two adapter instances, both connected to a single SCOM instance. Some of this feature's supported deployment types involve multiple Windows domains.

When the Dual Connectors feature's used, the computer(s) upon which the adapter's installed and SCOM may reside within separate Windows domains. Under this circumstance, the account entered during the adapter's installation should still belong to the same Windows domain as the computer upon which the adapter's being installed—even if the adapter will ultimately access a SCOM instance in a separate domain.

Though the account supplied during adapter installation may lack the privileges necessary to access SCOM, the Dual Connectors feature includes

the ability to configure the adapter to use a separate Windows account for SCOM access.

Depending on Windows configuration specifics, supplying an account during adapter installation that belongs to an incorrect domain may prevent the adapter from running correctly. Though it may be possible to start the Connector, insufficient account privileges may prevent it both from functioning, and from creating log messages with which to diagnose the problem.

Network Configuration of VSP Gx00 with Unified NAS module/VSP Fx00 with Unified NAS module

For the SCOM to receive SNMP traps from Unified NAS module subsystems, the management LAN segment and data LAN segment must be separated. If the management LAN segment and data LAN segment are the same segment, SNMP traps will not be sent from the GUM and the SCOM will not receive the SNMP traps.

The SCOM must be connected to the management a LAN.

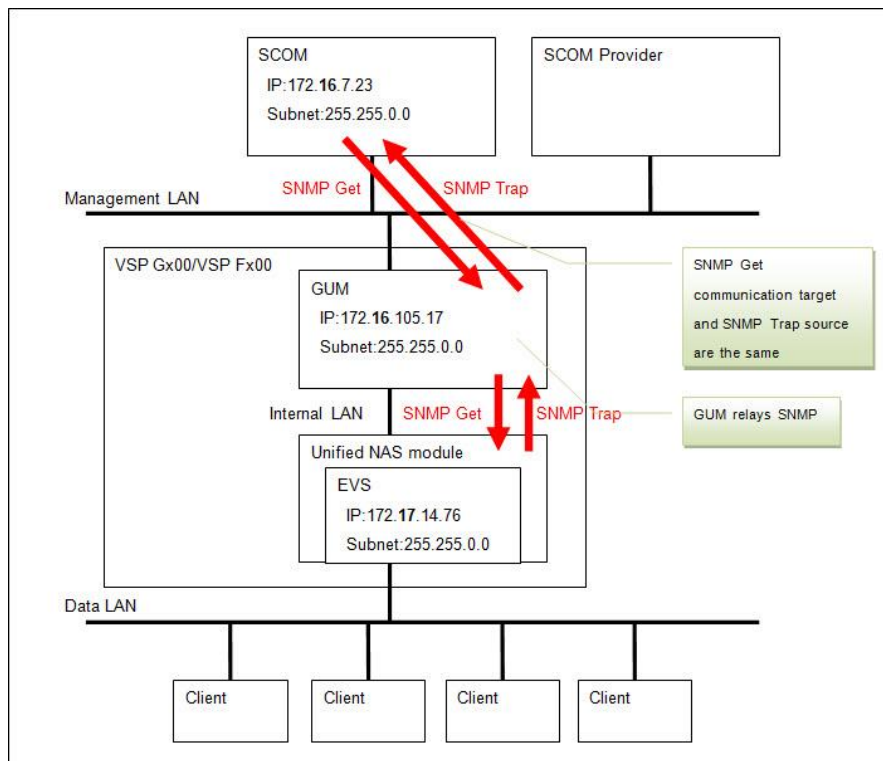


Figure 3-1 Network configuration able to receive SNMP traps

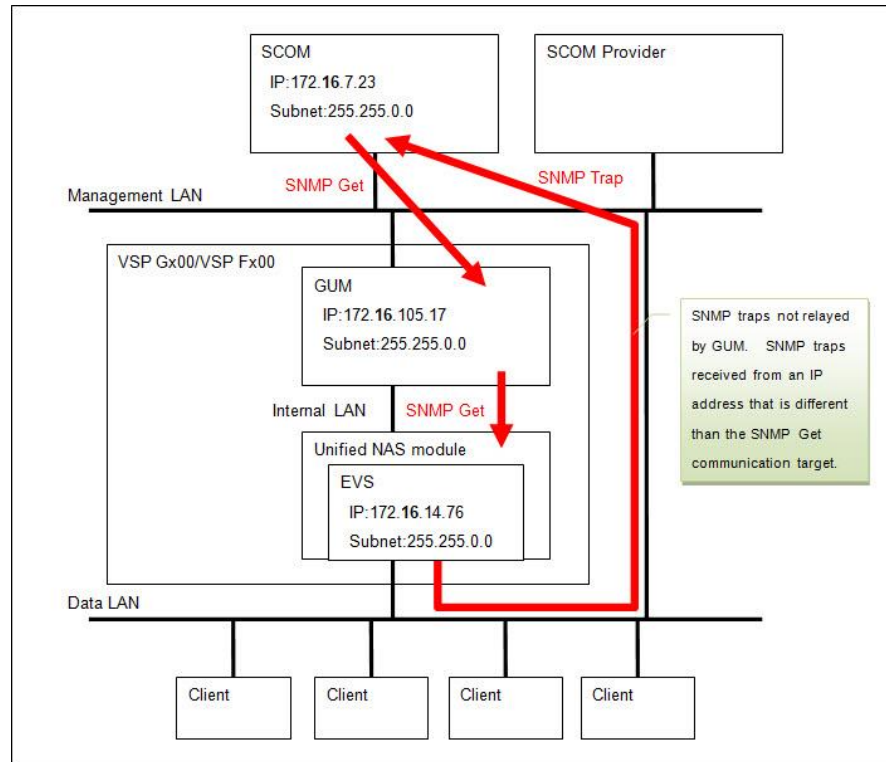


Figure 3-2 Network configuration unable to receive SNMP traps

SNM2 API Limitation

When installing the SCOM adapter, you cannot install other non-SCOM adapter products that use the SNM2 API on the same server where the SCOM adapter is installed.

QuantaPlex T41S-2U Chassis State/Node State Limitation

The state of the chassis for QuantaPlex T41S-2U servers is not determined by directly monitoring the chassis. Instead, the chassis state is determined and displayed by monitoring the fan redundancy state and the power supply state.

The state of the node(s) for QuantaPlex T41S-2U servers is not determined by directly monitoring the node(s). Instead, the node state is determined and displayed by monitoring the state of the connection to the node(s).

Upgrading an operating VSP G1000 subsystem to VSP G1500

If you upgrade a VSP G1000 subsystem while it is operating to a VSP G1500, the display for the VSP G1000 subsystem will appear as UNKNOWN. Remove any VSP G1000 subsystem(s) that appear as UNKNOWN, then add the VSP G1500 subsystem.

Adding Exclusions to Windows Defender Realtime Protection

Turning on the Real-time Protection feature in Windows Defender may cause a degradation in SCOM adapter performance. It is recommended that you add exclusions for the SCOM installation folder and for the Microsoft Management Console.

1. From the **Start** menu, click **Settings > Update & security > Windows Defender**.
2. Under **Exclusions**, click **Add an exclusion**.
3. Click the **Exclude a folder** icon.
4. Navigate to and select the SCOM adapter installation folder, then click **Exclude this folder**.
5. Under **Processes**, click the **Exclude a .exe, .com or .scr process** icon.
6. Enter `mmc.exe`, then click **OK**.

Note Apply the exclusion settings listed above if you are monitoring performance information; otherwise, the performance of the monitoring process may be affected.



4

Dual Connectors

This chapter describes the additional steps required to deploy dual Hitachi Infrastructure Adapters for Microsoft® System Center Operations Manager on multiple servers.

- [*Overview of Dual Connectors*](#)
- [*Adapter Configuration Options A-E*](#)
- [*Configuring Option A: Single Domain, Single Adapter \(Standard Setup\)*](#)
- [*Configuring Option B: Single Domain, Multiple Adapters*](#)
- [*Configuring Option C: Multiple Domains, Multiple Adapters*](#)
- [*Configuring Option D: Multiple Domains, Multiple Adapters, Separate from SCOM*](#)
- [*Configuring Option E: Single Domain, Multiple SCOM*](#)
- [*Assigning Conditional Forwarders*](#)
- [*Configuring Forest Trust between Domains*](#)
- [*Configuring DCOM Access Authorization*](#)
- [*Setting the Adapter Connector number*](#)
- [*Setting the SCOM Account*](#)
- [*Authorizing Access to the WMI Namespace*](#)
- [*Setting Agent Managed Monitoring*](#)

Overview of Dual Connectors

The standard configuration of the Hitachi Infrastructure Adapter software is one adapter per SCOM instance; however, multiple adapters can be configured per SCOM instance. Configuring multiple adapters requires additional settings.

This feature is used for integrated monitoring over separated dual sites by one SCOM server. Also, this feature is used to enhance the availability and load balancing of Hitachi Infrastructure Adapters by monitoring single site with dual adapters.

The number of additional settings required varies according to the number of Hitachi Infrastructure Adapters installed; it also varies according to the configuration of the Windows domain(s) in which the adapters are a part.

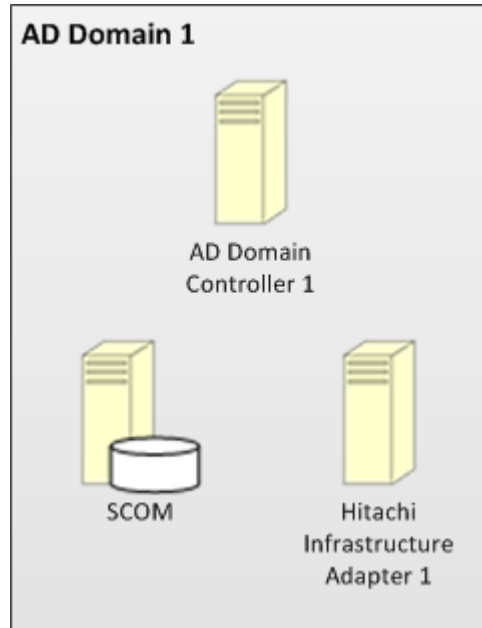
Adapter Configuration Options A-E

Configuration Option		Software	Domain			Description
			#1	#2	#3	
A	Single domain (Standard Configuration)	SCOM	X	-	-	Single Hitachi Infrastructure Adapter set up on one server in the same Windows domain as SCOM.
		Hitachi Infrastructure Adapter 1	X	-	-	
		Hitachi Infrastructure Adapter 2	-	-	-	
B	Single domain, multiple adapters	SCOM	X	-	-	Multiple Hitachi Infrastructure Adapters set up on separate servers in the same Windows domain as SCOM.
		Hitachi Infrastructure Adapter 1	X	-	-	
		Hitachi Infrastructure Adapter 2	X	-	-	

Configuration Option		Software	Domain			Description
			#1	#2	#3	
C	Multiple domains, one adapter per domain	SCOM	X	-	-	Multiple Hitachi Infrastructure Adapters set up on separate servers with one server in the same Windows domain as SCOM and one in a different domain.
		Hitachi Infrastructure Adapter 1	X	-	-	
		Hitachi Infrastructure Adapter 2	-	X	-	
D	Multiple domains, adapters in domains other than domain with SCOM	SCOM	X	-	-	Multiple Hitachi Infrastructure Adapters set up on separate servers in separate domains with none of the servers in the same Windows domain as SCOM.
		Hitachi Infrastructure Adapter 1	-	X	-	
		Hitachi Infrastructure Adapter 2	-	-	X	
E	Single domain, multiple SCOMs, multiple adapters	SCOM 1	X	-	-	Multiple Hitachi Infrastructure Adapters set up on separate servers within a single Windows domain and connected to separate SCOMs that are part of a single Management Group within the domain.
		SCOM 2	X	-	-	
		Hitachi Infrastructure Adapter 1	X	-	-	
		Hitachi Infrastructure Adapter 2	X	-	-	

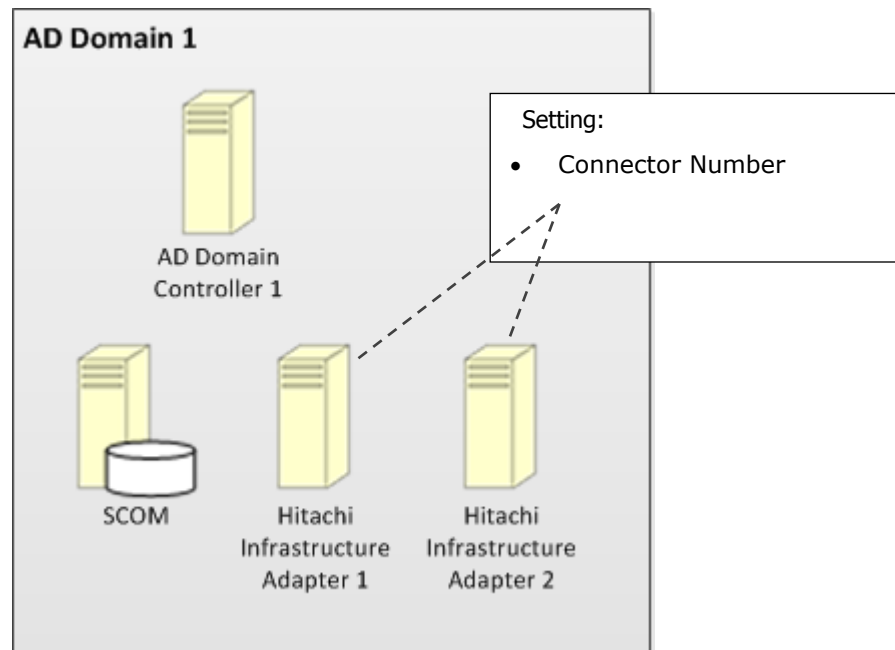
Configuring Option A: Single Domain, Single Adapter (Standard)

No additional settings are required when setting up and configuring a Hitachi Infrastructure Adapter on a server that's in the same Windows domain as SCOM. This configuration is the standard setup.



Configuring Option B: Single Domain, Multiple Adapters

Additional settings are required when installing and configuring multiple Hitachi Infrastructure Adapters on separate servers that are in the same Windows domain as SCOM. The installation and configuration procedure for each adapter is the same. Install the first adapter, then repeat the procedure for the next adapter.



To configure Option B: Single Domain, Multiple Adapters:

1. Install Hitachi Infrastructure Adapter 1. See [Installing the Software](#).
2. Register the target (storage array or compute device) to be monitored by Hitachi Infrastructure Adapter 1. See *Discovering a Subsystem* in the Hitachi Infrastructure Adapter user's guide for your device.
3. Set the SCOM server's IP address in Hitachi Infrastructure Adapter 1. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.

4. Set the connector number for Hitachi Infrastructure Adapter 1. See [Setting the Adapter Connector Number](#).
 - For Hitachi Infrastructure Adapter 1, use connector number 0.
5. Start the Hitachi Infrastructure Adapter 1 service. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
6. Optionally configure service monitoring for Hitachi Infrastructure Adapter 1. See *Hitachi Storage Service Monitoring* in the Hitachi Infrastructure Adapter user's guide for your device.

Note

- If Hitachi Infrastructure Adapter 1 is installed on the same server as SCOM, service monitoring's configured automatically.
 - When selecting objects to manage from the Management Mode selection list, you may choose either option: Agent Managed, or Agentless Managed.
-

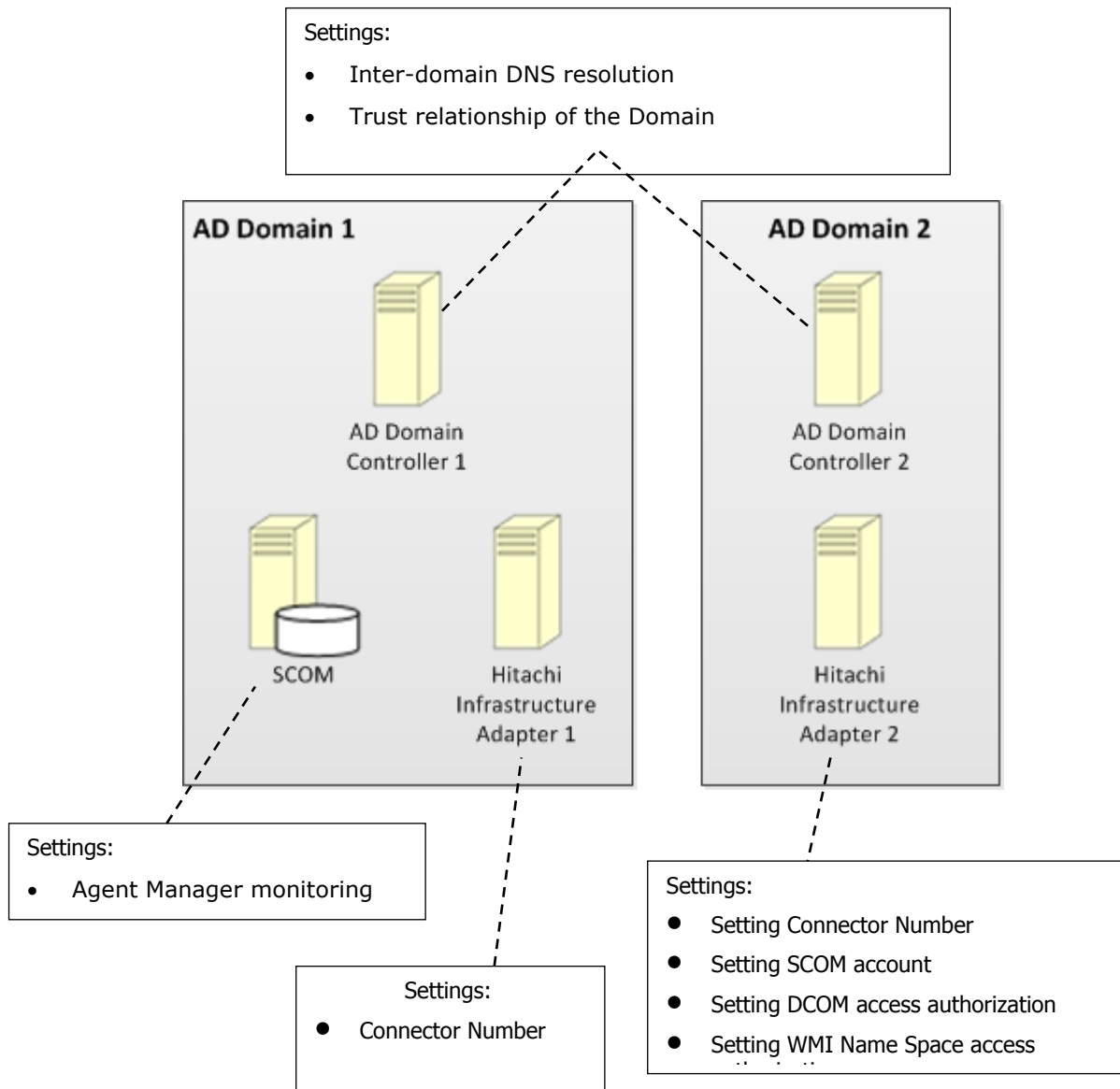
7. Install Hitachi Infrastructure Adapter 2. See [Installing the Software](#).
8. Register the target (storage array or compute device) to be monitored by Hitachi Infrastructure Adapter 2. See *Discovering a Subsystem* in the Hitachi Infrastructure Adapter user's guide for your device.
9. Set the IP address for the SCOM server in Hitachi Infrastructure Adapter 2. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
10. Set the connector number for Hitachi Infrastructure Adapter 2. See [Setting the Adapter Connector Number](#).
 - For Hitachi Infrastructure Adapter 2, use connector number 1.
11. Start the Hitachi Infrastructure Adapter 2 service. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
12. Optionally configure service monitoring for Hitachi Infrastructure Adapter 2. See *Hitachi Storage Service Monitoring* in the Hitachi Infrastructure Adapter user's guide for your device.

Note

- If Hitachi Infrastructure Adapter 2 is installed on the same server as SCOM, service monitoring's configured automatically.
 - When selecting objects to manage from the Management Mode selection list, you may choose either option: Agent Managed, or Agentless Managed.
-

Configuring Option C: Multiple Domains, Multiple Adapters

Additional settings are required when deploying dual Hitachi Infrastructure Adapters on separate servers where one server is in the same Windows domain as SCOM and one server is in a separate Windows domain.



To configure Option C: Multiple Domains, Multiple Adapters:

1. Install Hitachi Infrastructure Adapter 1. See [Installing the Software](#).
2. Register the target (storage array or compute device) to be monitored by Hitachi Infrastructure Adapter 1. See *Discovering a Subsystem* in the Hitachi Infrastructure Adapter user's guide for your device.
3. Set the SCOM server's IP address in Hitachi Infrastructure Adapter 1. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
4. Set the connector number for Hitachi Infrastructure Adapter 1. See [Setting the Adapter Connector Number](#) .
 - For Hitachi Infrastructure Adapter 1, use connector number 0.
5. Start the Hitachi Infrastructure Adapter 1 service. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
6. Optionally configure service monitoring for Hitachi Infrastructure Adapter 1. See *Hitachi Storage Service Monitoring* in the Hitachi Infrastructure Adapter user's guide for your device.

Note



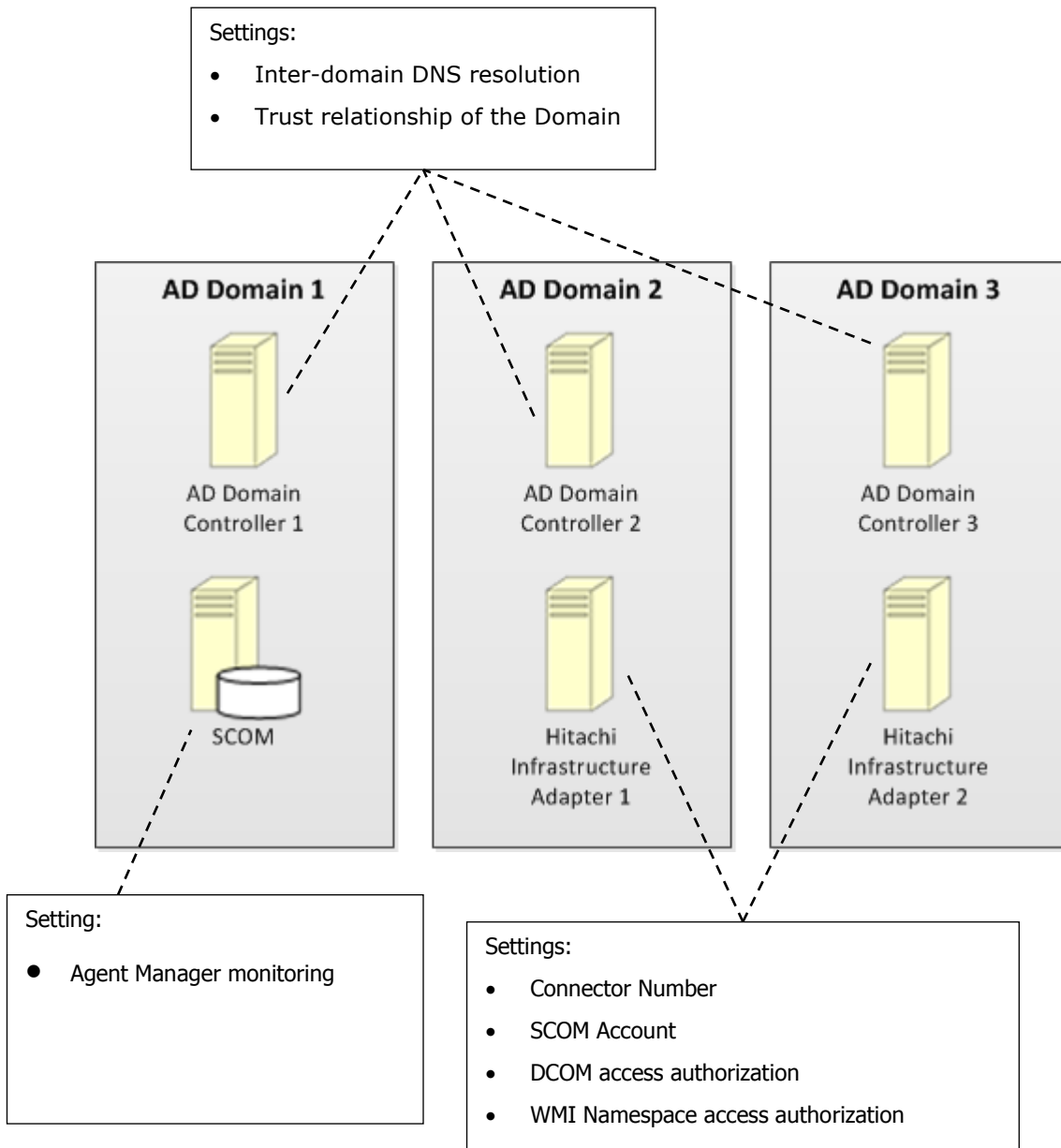
- If Hitachi Infrastructure Adapter 1 is installed on the same server as SCOM, service monitoring's configured automatically.
 - When selecting objects to manage from the Management Mode selection list, you may choose either option: Agent Managed, or Agentless Managed.
-

7. Ensure that inter-domain DNS resolution's established. For instance, if Windows domains A and B have corresponding DNS zones A.net and B.net, it must be possible from within domain B to resolve A.net records, and vice-versa. One way to establish this is to configure the DNS servers to use Conditional Forwarders; see [Setting Conditional Forwarders](#) for more information.
8. Depending on Windows environment configuration specifics, it may be necessary to configure AD Forest Trust between Windows Domains 1 and 2. See [Setting Forest Trust between Domains](#).
9. Install Hitachi Infrastructure Adapter 2. See [Installing the Software](#).

10. Register the target (storage array or compute device) to be monitored by Hitachi Infrastructure Adapter 2. See *Discovering a Subsystem* in the Hitachi Infrastructure Adapter user's guide for your device.
11. Set the SCOM server's IP address in Hitachi Infrastructure Adapter 2. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
12. Set the connector number for Hitachi Infrastructure Adapter 2. See [Setting the Adapter Connector Number](#).
 - For Hitachi Infrastructure Adapter 2, use connector number 1.
13. Configure Hitachi Infrastructure Adapter 2 to use an explicit account with privileges to access SCOM. See [Setting SCOM Account](#).
14. Depending on Windows environment configuration specifics, it may be necessary to configure DCOM access authorization on the server upon which Hitachi Infrastructure Adapter 2 is installed. For more information, see [Setting DCOM Access Authorization](#).
15. Start the Hitachi Infrastructure Adapter 2 service. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
16. Depending on Windows environment configuration specifics, it may be necessary to configure authorization for access to the *root\Hitachi WMI Namespace* on SCOM, which is created by Hitachi Infrastructure Adapter 2. See [Setting WMI Namespace Access Authorization](#).
17. Optionally configure service monitoring of Hitachi Infrastructure Adapter 2. This is the setting to monitor Hitachi Infrastructure Adapter 2 by Agent Managed, which was set up on the server that participates in the different domain. See [Setting the Monitoring of Agent Managed](#).

Configuring Option D: Multiple Domains, Multiple Adapters, Separate from SCOM

Additional settings are required when deploying dual Hitachi Infrastructure Adapters on servers which reside in Windows domains separate from SCOM.



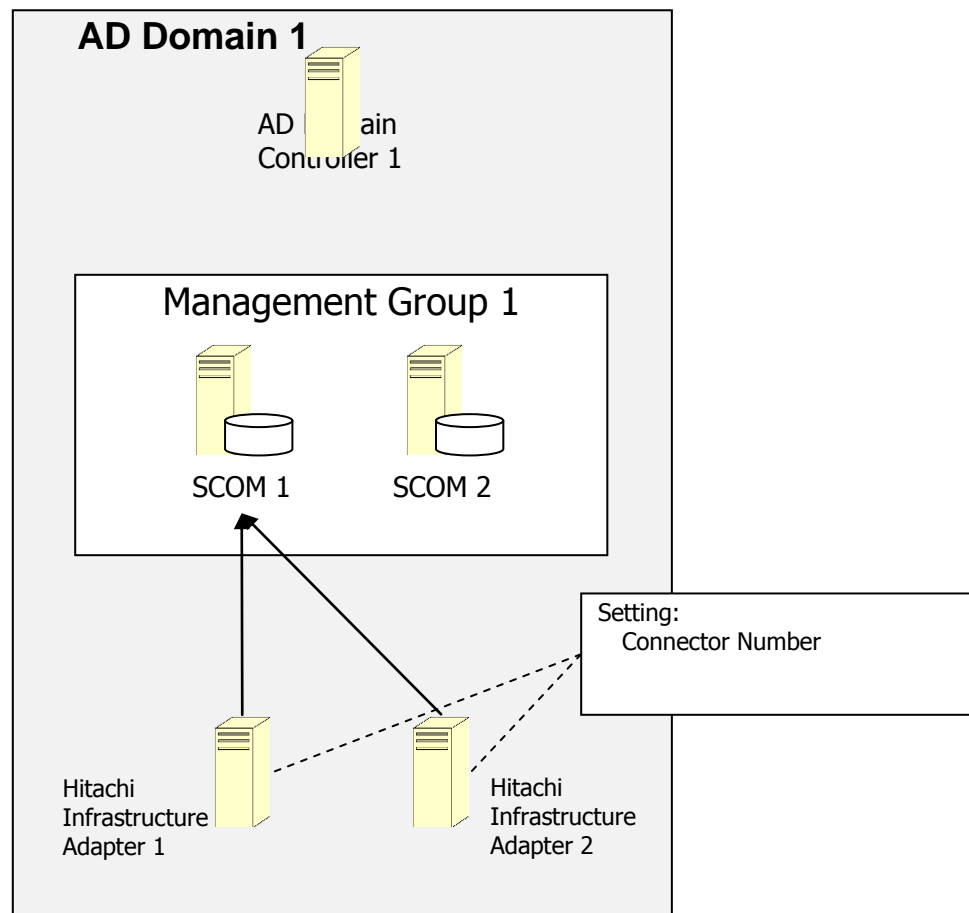
To configure Option D: Multiple Domains, Multiple Adapters, Separate from SCOM:

1. Ensure that inter-domain DNS resolution's established. For instance, if Windows domains A and B have corresponding DNS zones A.net and B.net, it must be possible from within domain B to resolve A.net records, and vice versa. One way to establish this is to configure the DNS servers to use Conditional Forwarders; see [Setting Conditional Forwarders](#).
2. Depending on Windows environment configuration specifics, it may be necessary to configure AD Forest Trust between Windows Domains 1 and 2. See [Setting Forest Trust between Domains](#).
3. Install Hitachi Infrastructure Adapter 1. See [Installing the Software](#).
4. Register the target (storage array or compute device) to be monitored by Hitachi Infrastructure Adapter 1. See *Discovering a Subsystem* in the Hitachi Infrastructure Adapter user's guide for your device.
5. Set the SCOM server's IP address in Hitachi Infrastructure Adapter 1. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
6. Set the connector number for Hitachi Infrastructure Adapter 1. See [Setting the Adapter Connector Number](#).
 - For Hitachi Infrastructure Adapter 1, use connector number 0.
7. Configure Hitachi Infrastructure Adapter 1 to use an explicit account with privileges to access SCOM. See [Setting SCOM Account](#) .
8. Depending on Windows environment configuration specifics, it may be necessary to configure DCOM access authorization on the server on which Hitachi Infrastructure Adapter 1 was installed. See [Setting DCOM Access Authorization](#).
9. Start the Hitachi Infrastructure Adapter 1 service. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
10. Depending on Windows environment configuration specifics, it may be necessary to configure authorization for access to the root\Hitachi WMI Namespace on SCOM, which is created by Hitachi Infrastructure Adapter 1. See [Setting WMI Namespace Access Authorization](#).

11. Optionally configure service monitoring for Hitachi Infrastructure Adapter 1. See *Hitachi Storage Service Monitoring* in the Hitachi Infrastructure Adapter user's guide for your device.
12. Install Hitachi Infrastructure Adapter 2. See [Installing the Software](#).
13. Register the target (storage array or compute device) to be monitored by Hitachi Infrastructure Adapter 2. See *Discovering a Subsystem* in the Hitachi Infrastructure Adapter user's guide for your device.
14. Set the SCOM server's IP address in Hitachi Infrastructure Adapter 2. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
15. Set the connector number for Hitachi Infrastructure Adapter 2. See [Setting the Adapter Connector Number](#).
 - For Hitachi Infrastructure Adapter 2, use connector number 1.
16. Configure Hitachi Infrastructure Adapter 2 to use an explicit account with privileges to access SCOM. See [Setting SCOM Account](#) in this User's Guide.
17. Depending on Windows environment configuration specifics, it may be necessary to configure DCOM access authorization on the server on which Hitachi Infrastructure Adapter 2 was installed. See [Setting DCOM Access Authorization](#).
18. Start the Hitachi Infrastructure Adapter 2 service. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
19. Depending on Windows environment configuration specifics, it may be necessary to configure authorization for access to the root\Hitachi WMI Namespace on SCOM, which is created by Hitachi Infrastructure Adapter 2. See [Setting WMI Namespace Access Authorization](#).
20. Optionally configure service monitoring of Hitachi Infrastructure Adapter 2. This is the setting to monitor Hitachi Infrastructure Adapter 2 by Agent Managed, which was set up on the server that participates in the different Domain. For the setting procedure, see [Setting the Monitoring of Agent Managed](#).

Configuring Option E: Single Domain, Multiple SCOMs, Multiple Adapters

If multiple Hitachi Infrastructure Adapters are set up on separate servers within a single Windows domain, and they are connected to separate SCOM instances that are part of a single Management Group within the domain, then each of the SCOM instances must be assigned a unique connector number.



To configure Option E: Single Domain, Multiple SCOMs, Multiple Adapters:

1. Install Hitachi Infrastructure Adapter 1. See [Installing the Software](#).
2. Register the target (storage array or compute device) to be monitored by Hitachi Infrastructure Adapter 1. See *Discovering a Subsystem* in the Hitachi Infrastructure Adapter user's guide for your device.

3. Set the SCOM 1 server's IP address in Hitachi Infrastructure Adapter 1. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
4. Set the connector number for Hitachi Infrastructure Adapter 1. See [Setting the Adapter Connector number](#).
 - For Hitachi Infrastructure Adapter 1, use connector number 0.
5. Start the Hitachi Infrastructure Adapter 1 service. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
6. Optionally configure service monitoring for Hitachi Infrastructure Adapter 1. See *Hitachi Storage Service Monitoring* in the Hitachi Infrastructure Adapter user's guide for your device.

Note

- If Hitachi Infrastructure Adapter 1 is installed on the same server as SCOM 1, service monitoring's configured automatically.
 - When selecting objects to manage from the Management Mode selection list, you may choose either option: Agent Managed, or Agentless Managed.
-

7. Install Hitachi Infrastructure Adapter 2. See [Installing the Software](#).
8. Register the target (storage array or compute device) to be monitored by Hitachi Infrastructure Adapter 2. See *Discovering a Subsystem* in the Hitachi Infrastructure Adapter user's guide for your device.
9. Set the IP address for SCOM 2 in Hitachi Infrastructure Adapter 2. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.
10. Set the connector number for Hitachi Infrastructure Adapter 2. See [Setting the Adapter Connector number](#).
 - For Hitachi Infrastructure Adapter 2, use connector number 1.
11. Start the Hitachi Infrastructure Adapter 2 service. See *Configuring the Hitachi Storage Connector* in the Hitachi Infrastructure Adapter user's guide for your device.

12. Optionally configure service monitoring for Hitachi Infrastructure Adapter 2. See *Hitachi Storage Service Monitoring* in the Hitachi Infrastructure Adapter user's guide for your device.

Note

- If Hitachi Infrastructure Adapter 2 is installed on the same server as SCOM 2, service monitoring's configured automatically.
 - When selecting objects to manage from the Management Mode selection list, you may choose either option: Agent Managed, or Agentless Managed.
-

Configuring Dual Connectors

This section describes the various procedures for configuring the additional settings required to set up dual Hitachi Infrastructure Adapters.

The Dual Connectors feature supports deployments which include multiple Windows domains, and it depends on their correct configuration. Since these configurations can be complex, and can vary from site to site, some of the procedures described here may not apply to all environments.

Assigning Conditional Forwarders

When SCOM and one or two Hitachi Infrastructure Adapters are installed in separate Windows domains, inter-domain DNS resolution must be established.

For instance, if Windows domains A and B have corresponding DNS zones A.net and B.net, it must be possible from within domain B to resolve A.net DNS records, and vice versa. One way to establish this is to configure the DNS servers to use conditional forwarders.

To assign conditional forwarders to the Windows domain controllers:

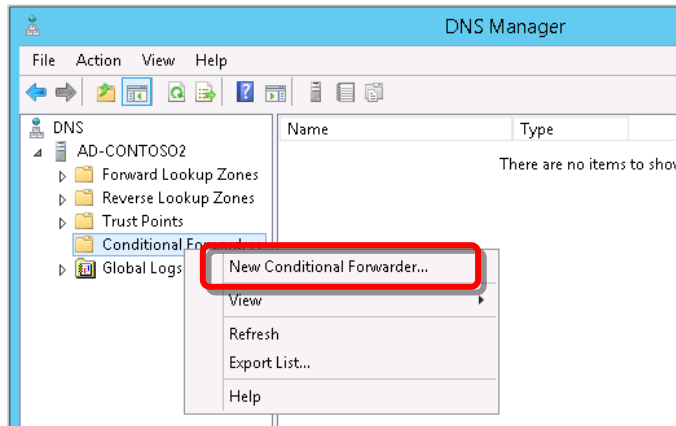
1. Configure your firewall using the settings and port numbers in the table below to enable AD directory communication between the AD domain controllers.

Firewall Settings for Conditional Forwarders

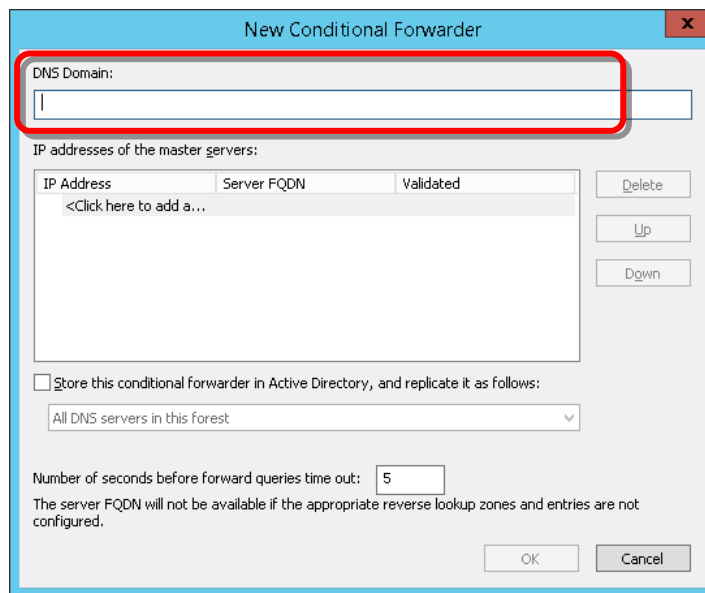
Target Firewall	Port Number	Reference Web site
AD Domain Controller Windows firewall	DNS: TCP/UDP 53	Active Directory and Active Directory Domain Services Port Requirements https://technet.microsoft.com/en-us/library/dd772723(v=ws.10).aspx
	GC: TCP 3268	
Network firewall	DNS: TCP/UDP 53	
	GC: TCP 3268	

2. From the **Start** menu, select **Administrative Tools**.
3. Double-click **DNS** to start the DNS Manager.
4. In the console tree, double-click **Applicable DNS server**.

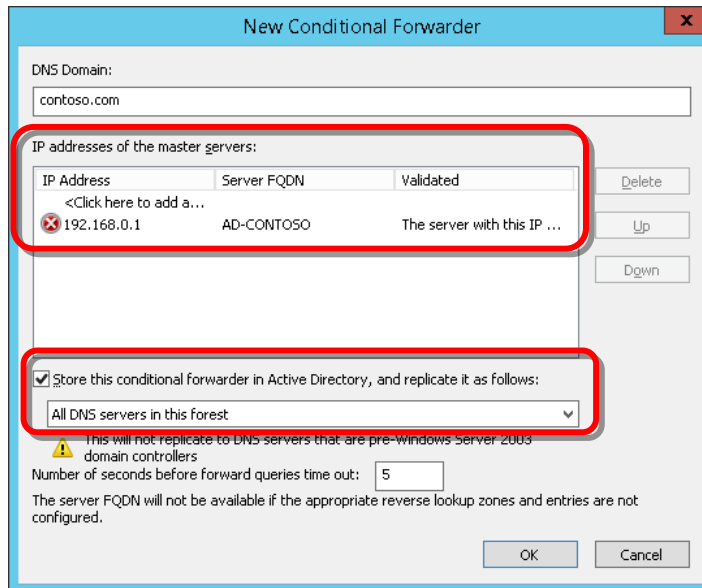
5. Right-click **Conditional Forwarders**, and then select **New conditional forwarder** from the Action menu.



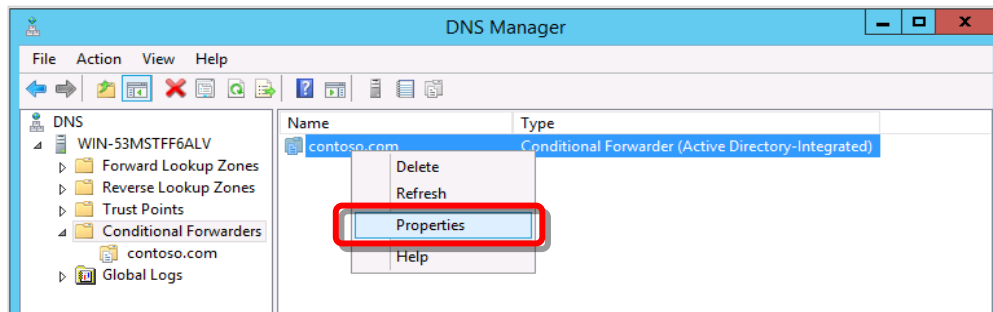
6. In **DNS domain**, enter the zone name of the domain for which you want to forward queries.



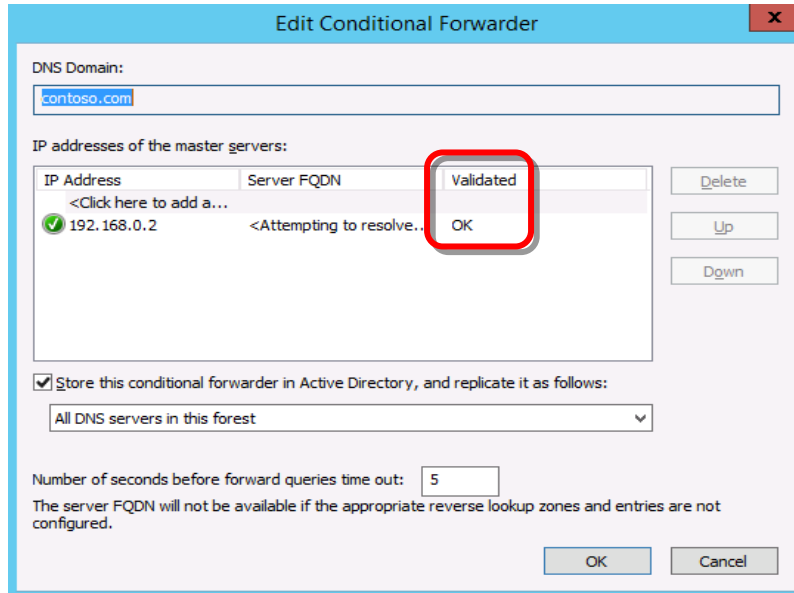
- Click the **IP addresses of the master servers** list, then enter the IP address of the server to which you want to forward queries for the specified DNS zone; press ENTER.



- Check **Store this conditional forwarder in Active Directory, and replicate it as follows**. Click **OK**.
- In the DNS Manager window, right-click the registered domain then select **Properties > Edit**.



10. Verify the IP address has been validated as **OK**, then close the window.



Note If **Validated** is not **OK**, verify that the name of the domain and its IP address were entered correctly.



11. Click **OK**, then close the DNS Manager.

Configuring Forest Trust between Domains

When SCOM and the Hitachi Infrastructure Adapter reside in separate Windows domains, it may be necessary to configure an AD Forest Trust between the two domains. The necessity of this procedure depends on the specifics of your Windows configuration; it may not apply to all environments.

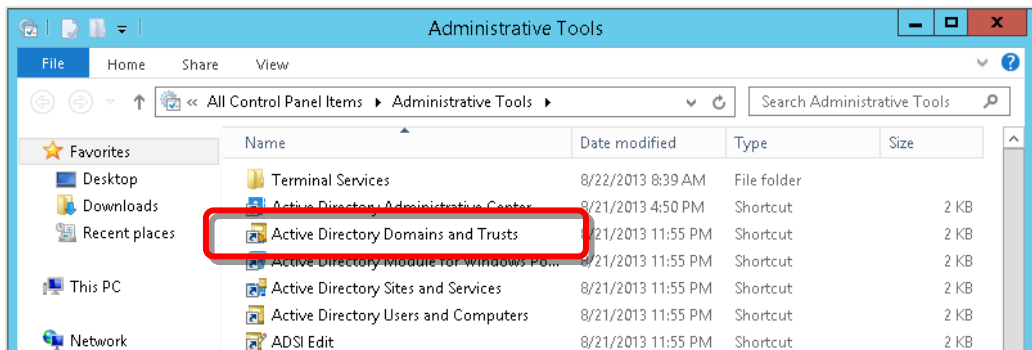
To set a forest trust between domains:

1. Configure your firewall using the settings and port numbers in the table below to enable AD directory communication between the AD domain controllers.

Firewall Settings for Forest Trusts

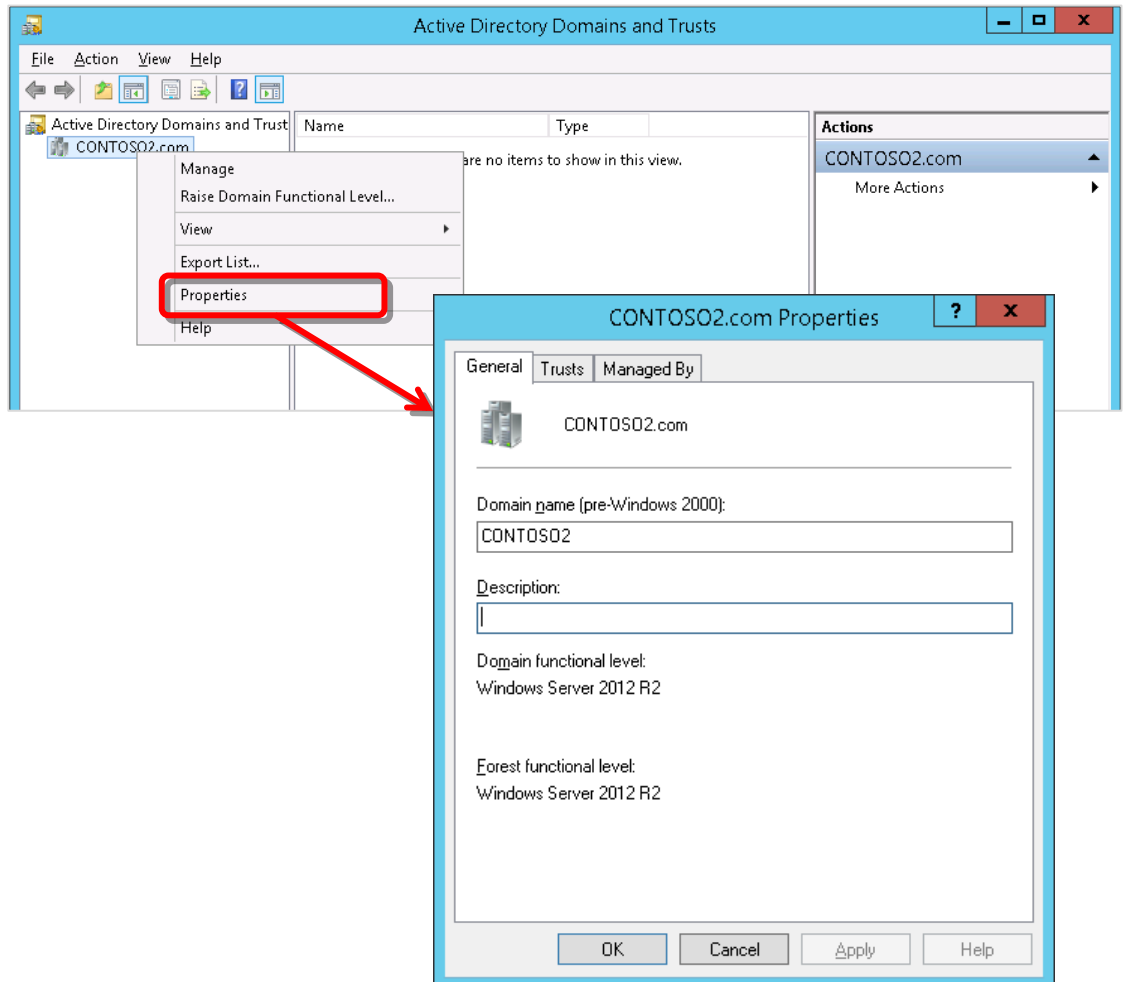
Target Firewall	Port Number	Reference Web site
Windows Firewall of AD Domain Controller	LDAP: TCP/UDP 389	Domain and Forest Trust Tools and Settings https://technet.microsoft.com/library/c756944
	Kerberos: UDP 88	
	Microsoft SMB: TCP 445	
	Endpoint resolution – portmapper: TCP 135	
Firewall on the network	LDAP: TCP/UDP 389	
	Kerberos: UDP 88	
	Microsoft SMB: TCP 445	
	Endpoint resolution – portmapper: TCP 135	

2. From the **Start** menu, select **Administrative Tools**.
3. Select **Active Directory Domains and Trusts**.

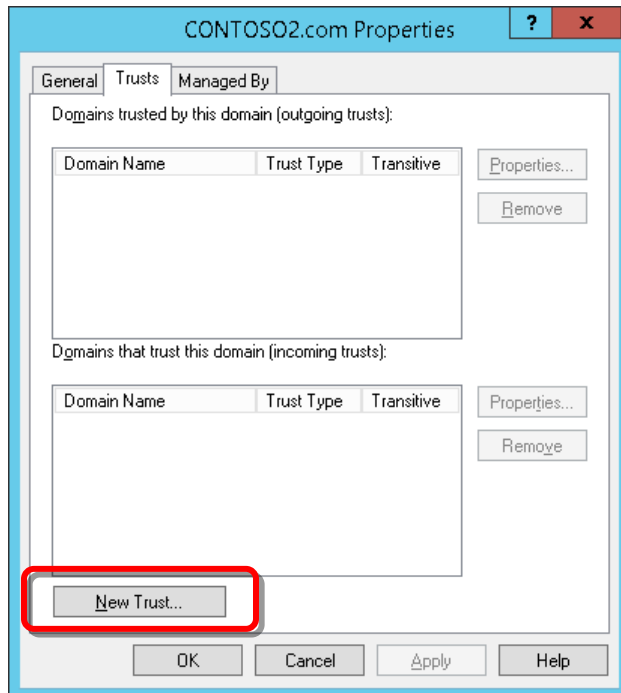




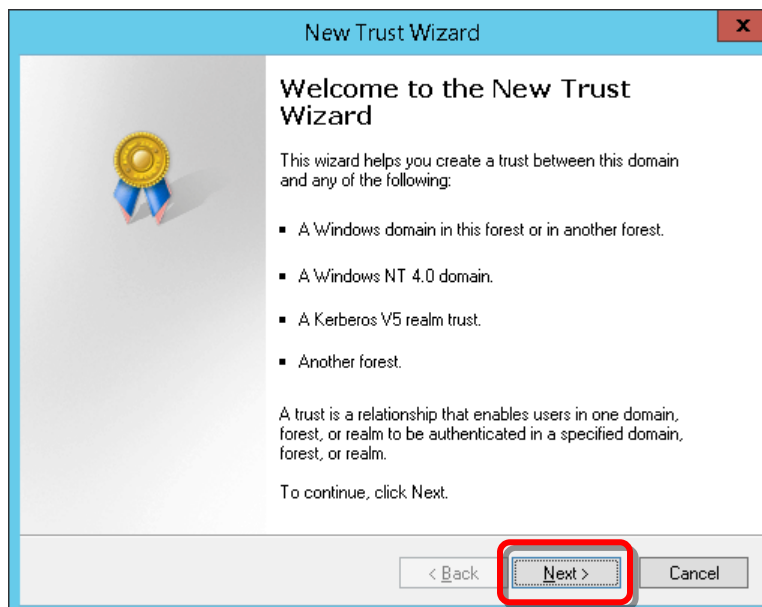
4. Select the applicable DNS server, then select **Properties** from the **Action** menu.



5. Select the **Trusts** tab, then click **New Trust** to open the New Trust Wizard.



6. Click **Next**.



7. In **Name**, enter the DNS zone name for the specified domain, then click **Next**.

The screenshot shows the 'New Trust Wizard' dialog box with the 'Trust Name' step selected. The title bar reads 'New Trust Wizard'. Below the title bar, there is a section titled 'Trust Name' with a gold medal icon and the text: 'You can create a trust by using a NetBIOS or DNS name.' Below this, there is a paragraph: 'Type the name of the domain, forest, or realm for this trust. If you type the name of a forest, you must type a DNS name.' This is followed by two example names: 'Example NetBIOS name: supplier01-int' and 'Example DNS name: supplier01-internal.microsoft.com'. A text input field labeled 'Name:' contains the text 'contoso.com'. At the bottom of the dialog, there are three buttons: '< Back', 'Next >', and 'Cancel'. A red rectangular box highlights the 'Name:' input field.

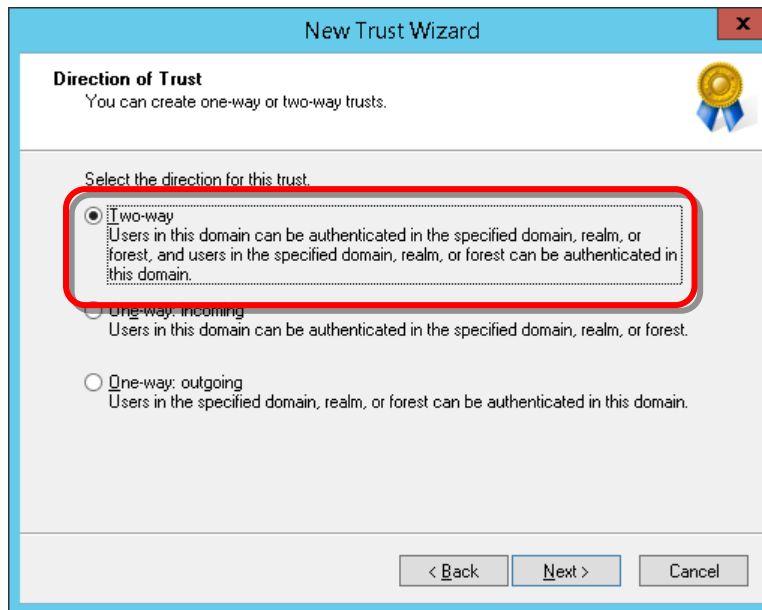
8. For **Trust Type**, choose **Forest trust**, then click **Next**.

The screenshot shows the 'New Trust Wizard' dialog box with the 'Trust Type' step selected. The title bar reads 'New Trust Wizard'. Below the title bar, there is a section titled 'Trust Type' with a gold medal icon and the text: 'This domain is a forest root domain. If the specified domain qualifies, you can create a forest trust.' Below this, there is a paragraph: 'Select the type of trust you want to create.' There are two radio button options: 'External trust' and 'Forest trust'. The 'Forest trust' option is selected. Below the 'Forest trust' option, there is a text box containing the description: 'A forest trust is a transitive trust between two forests that allows users in any of the domains in one forest to be authenticated in any of the domains in the other forest.' At the bottom of the dialog, there are three buttons: '< Back', 'Next >', and 'Cancel'. A red rectangular box highlights the 'Forest trust' radio button and its description.

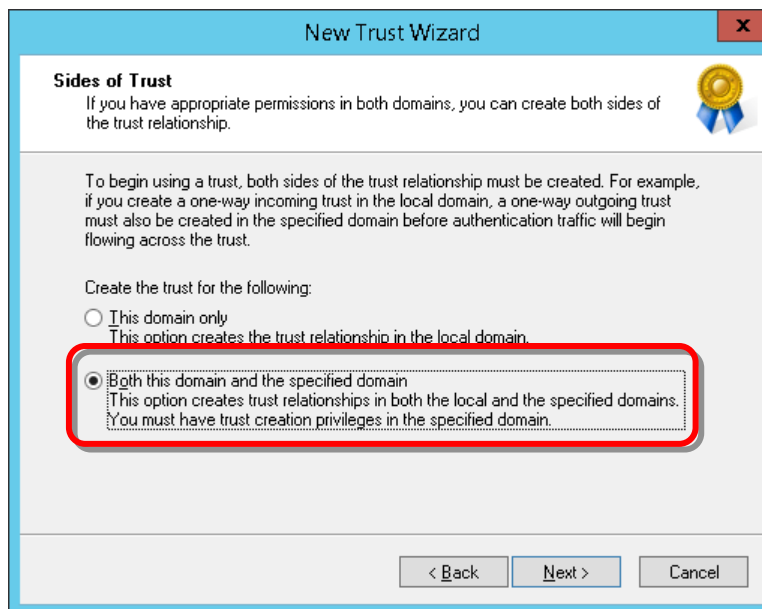


Note If you choose **External trust** as the trust-type option, forest trusts will not be displayed in the selection wizard and the conditional forwarders will not be set correctly.

9. For **Direction of Trust**, choose **Two-way**, then click **Next**.



10. For **Sides of Trust**, choose **Both this domain and the specified domain**; then click **Next**.



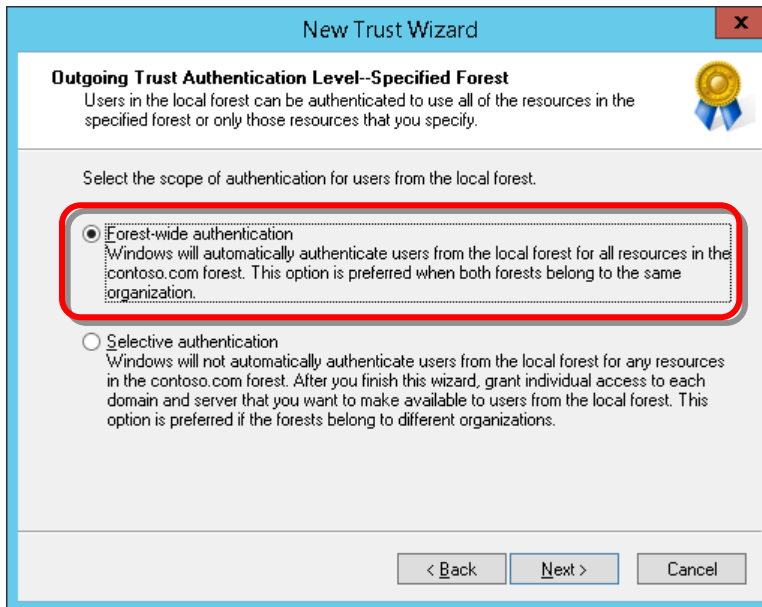
11. Enter the **User name** and **Password** for the specified domain, then click **Next**.

The screenshot shows the 'New Trust Wizard' dialog box with the title 'New Trust Wizard'. The main heading is 'User Name and Password'. Below the heading, it says 'To create this trust relationship, you must have administrative privileges for the specified domain.' and 'Specified domain: contoso.com'. It then asks to 'Type the user name and password of an account that has administrative privileges in the specified domain.' There are two input fields: 'User name:' with a dropdown menu showing 'Administrator' and 'Password:' with a masked password field. A red rectangle highlights these two fields. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

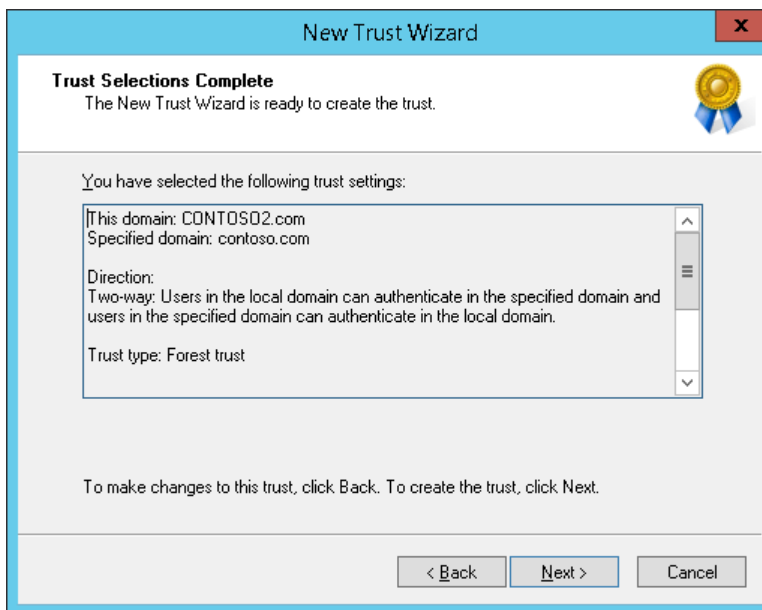
12. For **Outgoing Trust Authentication Level-Local Forest**, choose **Forest-wide authentication**, then click **Next**.

The screenshot shows the 'New Trust Wizard' dialog box with the title 'New Trust Wizard'. The main heading is 'Outgoing Trust Authentication Level-Local Forest'. Below the heading, it says 'Users in the specified forest can be authenticated to use all of the resources in the local forest or only those resources that you specify.' It then asks to 'Select the scope of authentication for users from the contoso.com forest.' There are two radio button options: 'Forest-wide authentication' (which is selected) and 'Selective authentication'. A red rectangle highlights the 'Forest-wide authentication' option. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

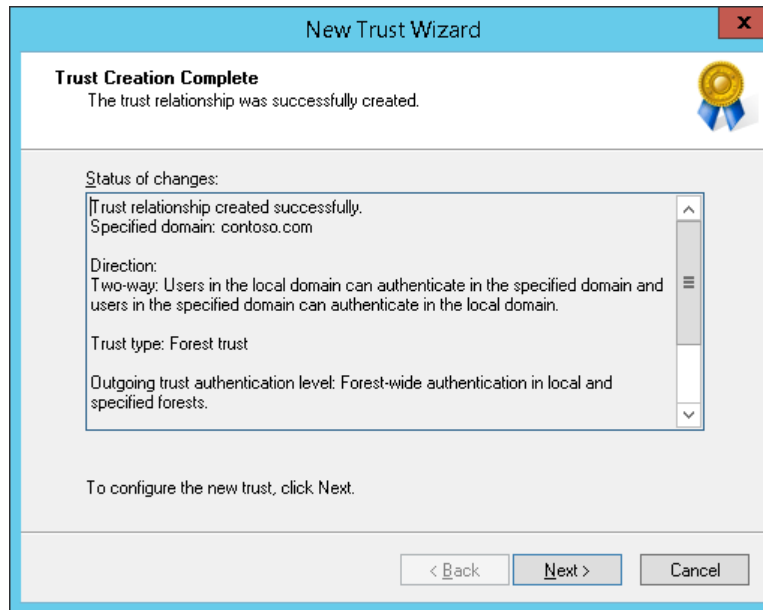
13. For **Outgoing Trust Authentication Level-Specified Forest**, choose **Forest-wide authentication**, then click **Next**.



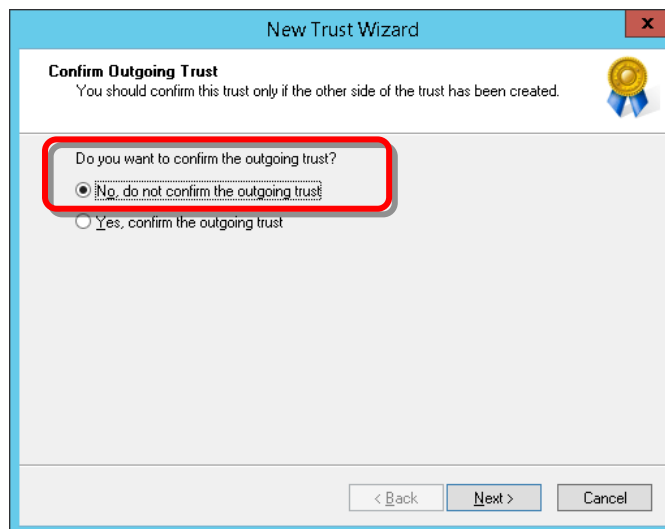
14. Verify your trust selections, then click **Next**.



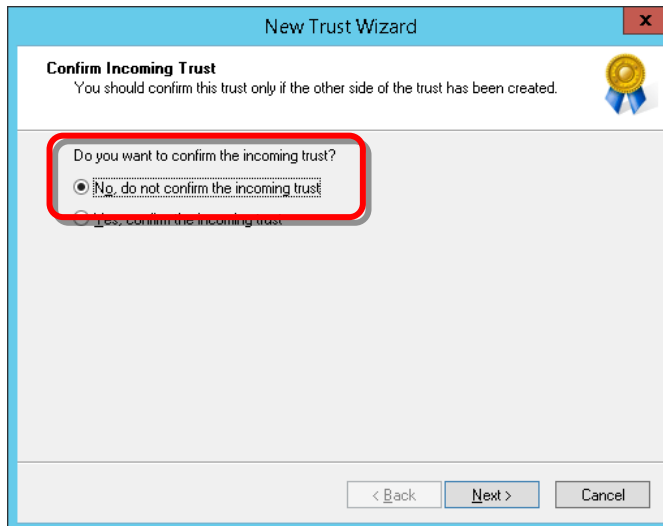
15. Click **Next** to create the trust.



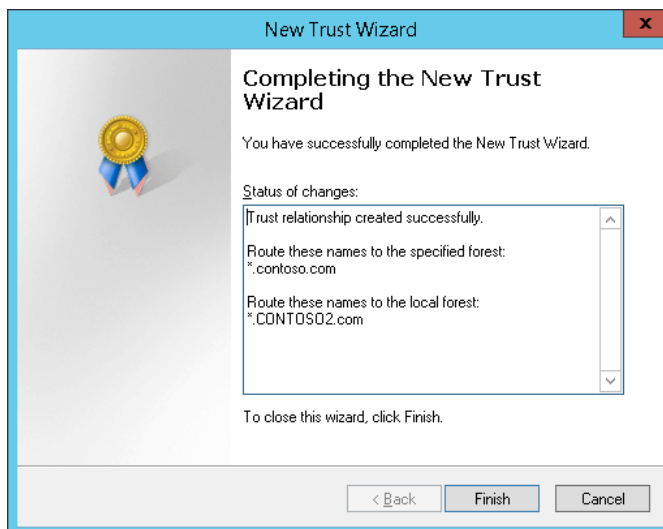
16. In **Confirm Outgoing Trust**, choose **No, do not confirm the outgoing trust**. Click **Next**.



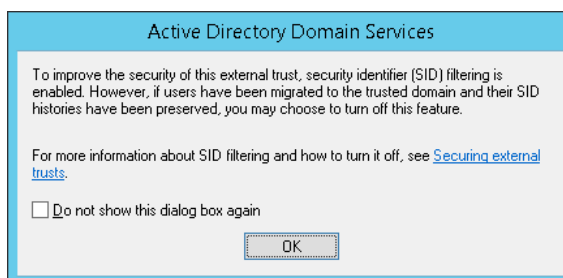
17. In **Confirm Incoming Trust**, choose **No, do not confirm the incoming trust**. Click **Next**.



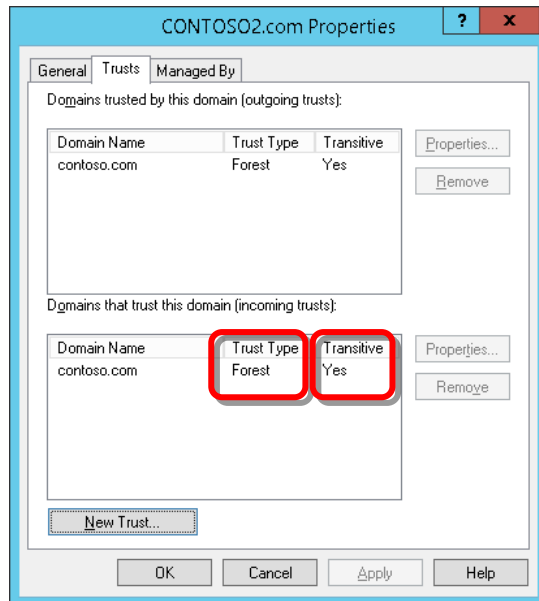
18. Click **Finish** to complete the trust.



19. In Active Directory Domain Services confirmation, click **OK**.



20. On the **Trusts** tab of **Properties** for the selected domain, verify **Trust Type** is **Forest** and **Transitive** is **Yes**. Click **OK**.



21. Close the **Active Directory Domains and Trusts** window.

Configuring DCOM Access Authorization

The specifics of your Windows environment configuration may require you to configure DCOM access authorization.

Once objects representing monitored components have been initially sent to SCOM, their health states are subsequently updated with WMI events. In some environments with multiple Windows domains, choosing to forego this configuration may prevent the adapter from sending these events to SCOM.

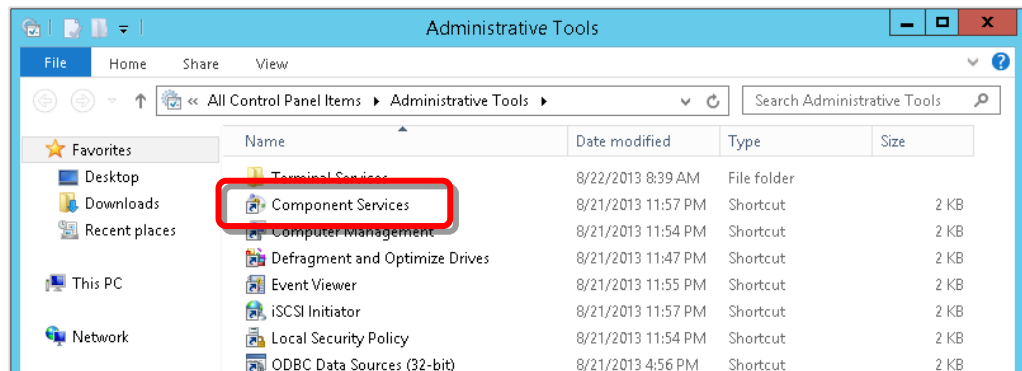
To configure DCOM Access Authorization:

1. Configure your firewall using the settings and port numbers in the table below to enable DCOM communication between the AD domain controller and the Hitachi Infrastructure Adapter.

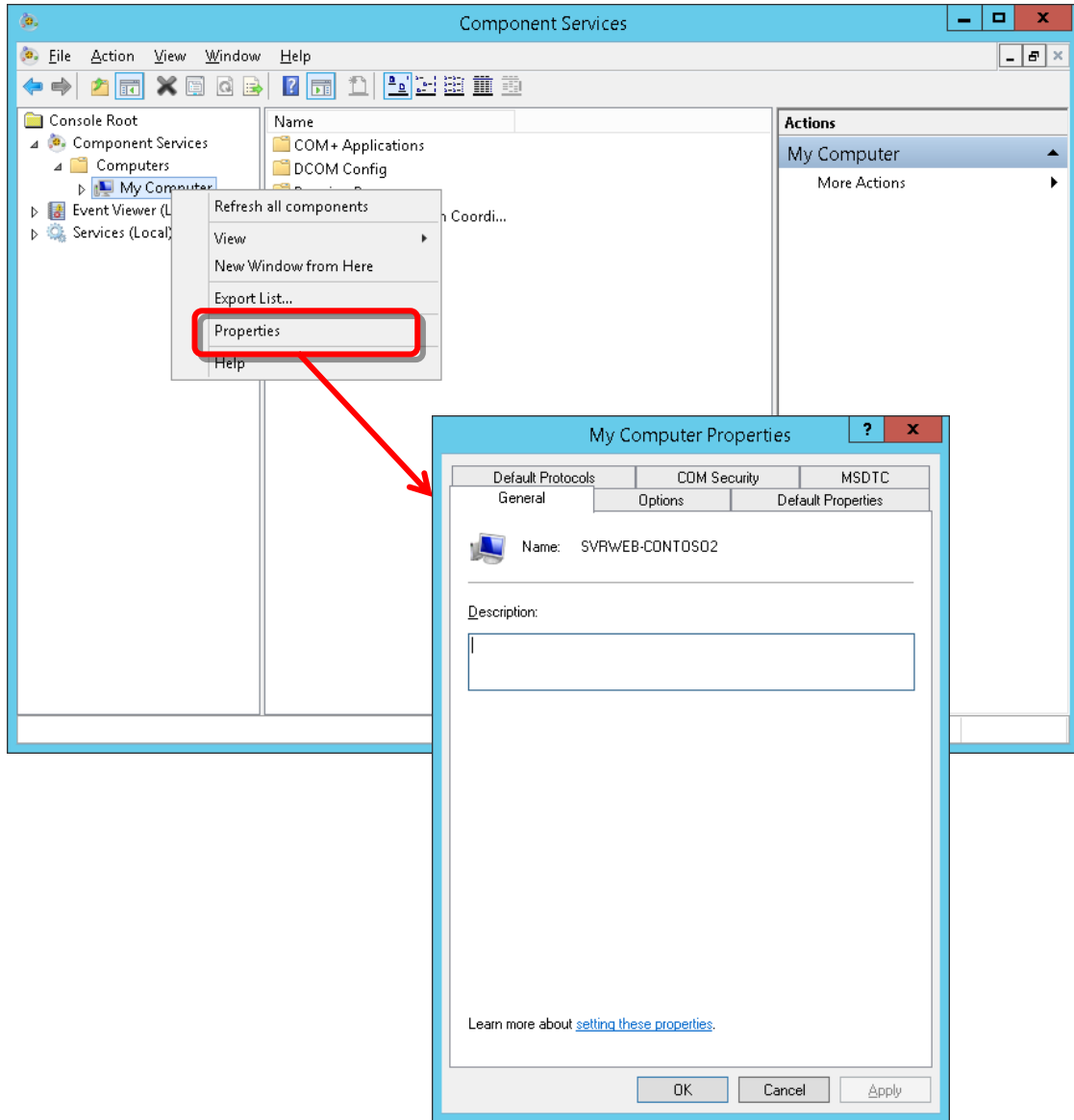
DCOM Access Authorization Firewall Settings

Target Firewall	Port Number	Reference Web site
Windows Firewall of Server on which Hitachi Infrastructure Adapter is set up.	DCOM: TCP 135	Connecting Through Windows Firewall https://msdn.microsoft.com/en-us/library/aa389286(v=vs.85).aspx
	DCOM Dynamic: Dynamic	
Firewall on the network	DCOM: TCP 135	
	DCOM Dynamic: Dynamic	

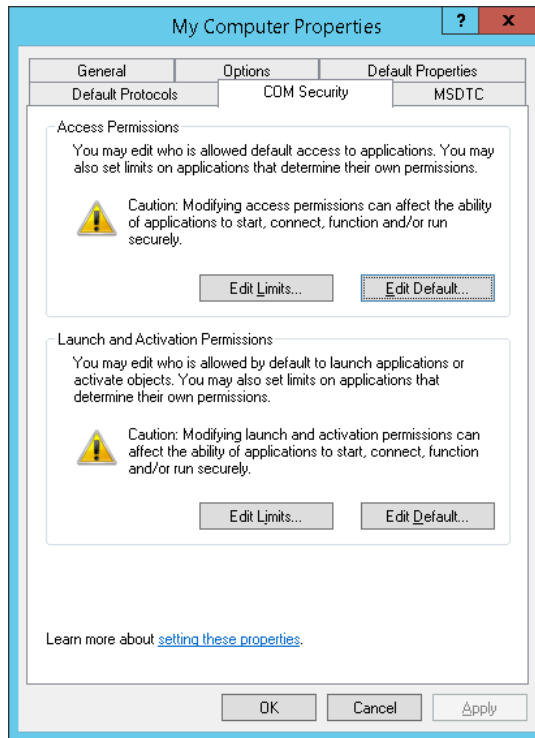
2. From the **Start** menu, select **Administrative Tools**
3. Select **Component Services**.



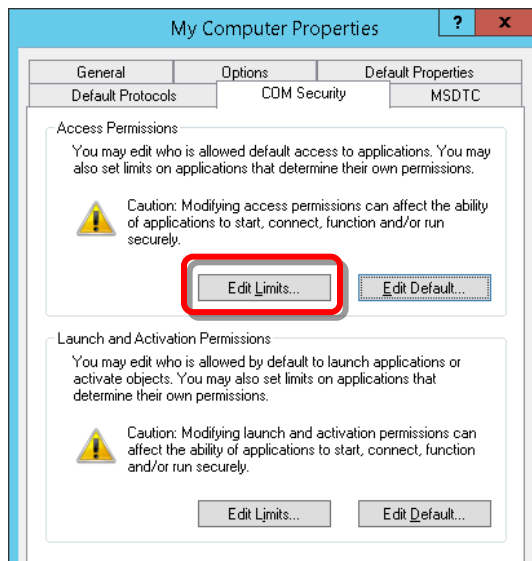
4. Select **Component Services** > **Computers** > **My Computer**, then select **Properties** from the Action menu.



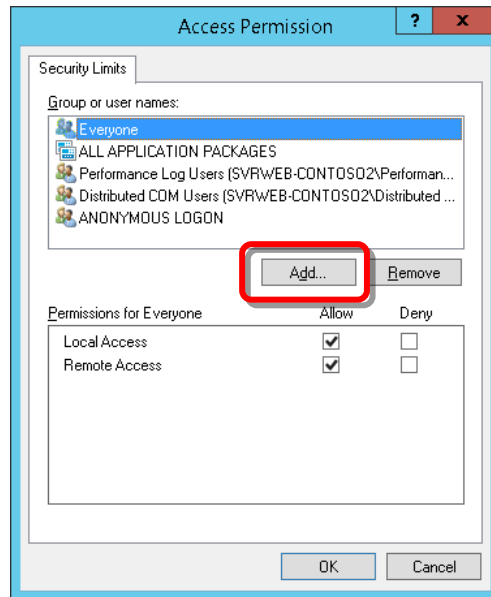
5. In My Computer Properties, select the **COM Security** tab.



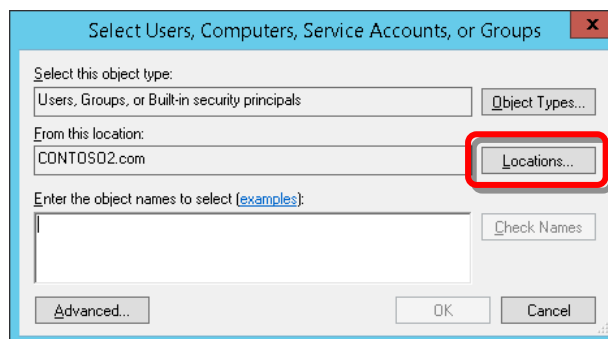
6. In **Access Permissions**, click **Edit Limits**.



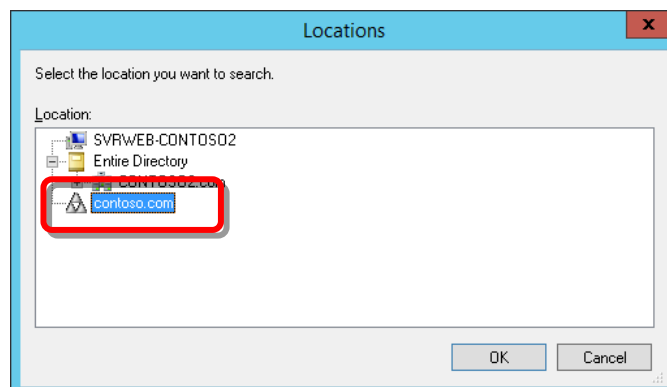
7. In **Access Permission**, click **Add**.



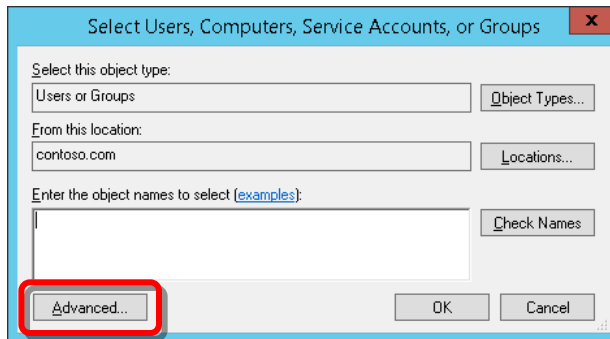
8. In **Select Users, Computers, Service Accounts, or Groups**, click **Locations**.



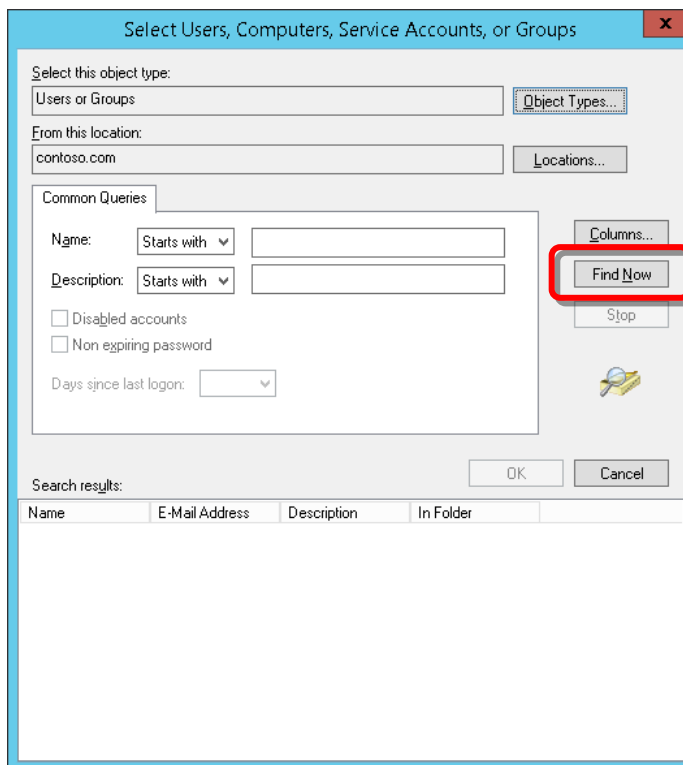
9. In **Locations**, select the domain containing SCOM, then click **OK**.



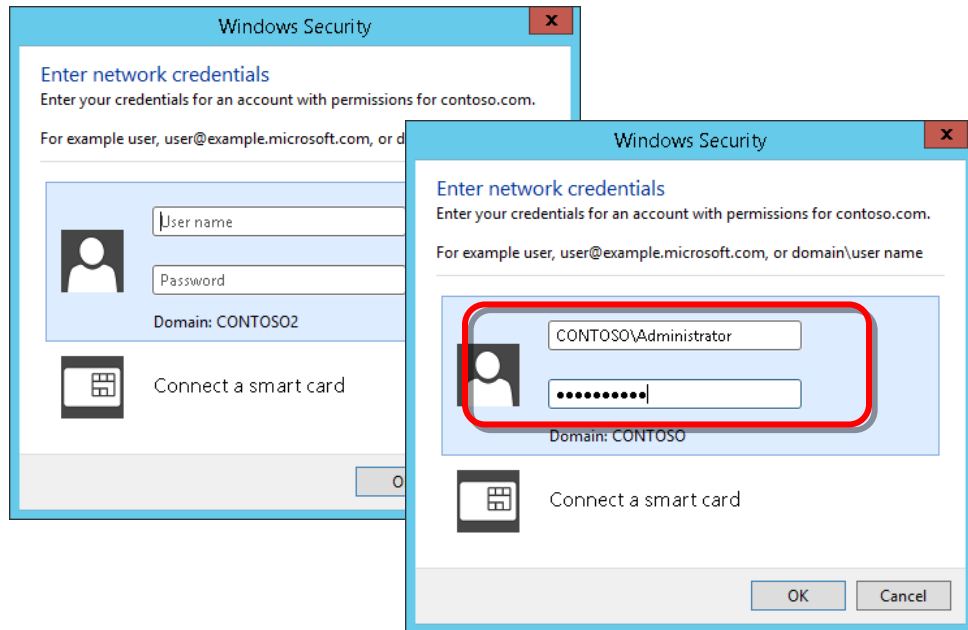
10. In **Select Users, Computers, Service Accounts, or Groups**, click **Advanced**.



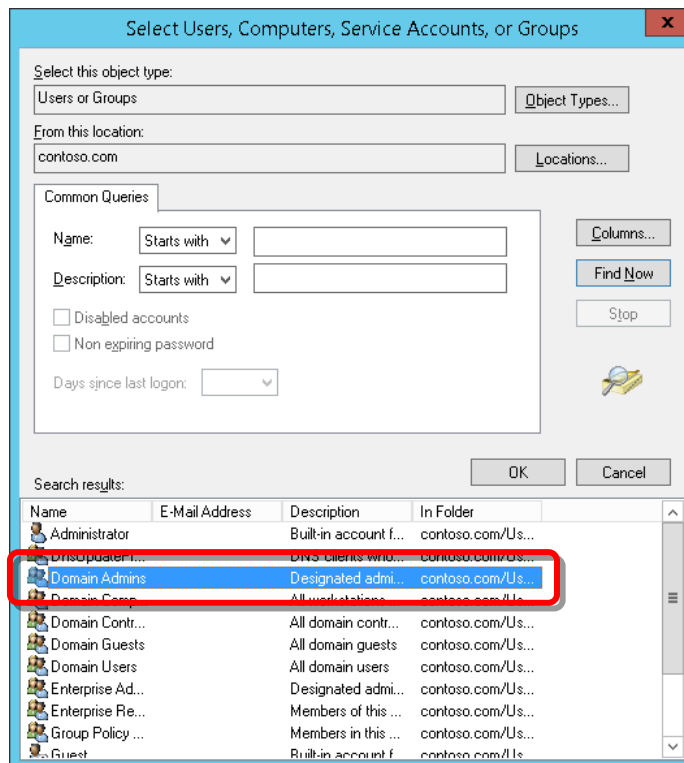
11. Click **Find Now**.



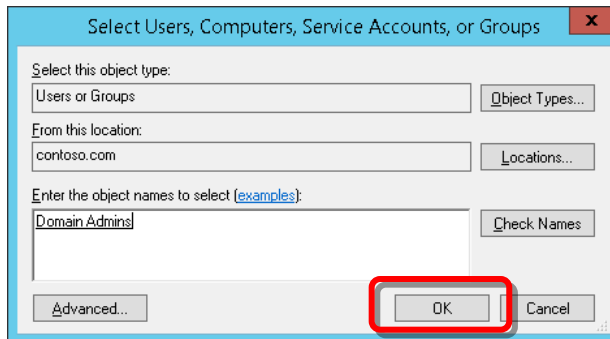
If a Windows Security window is displayed, enter the user name and password for the domain account that you are looking for.



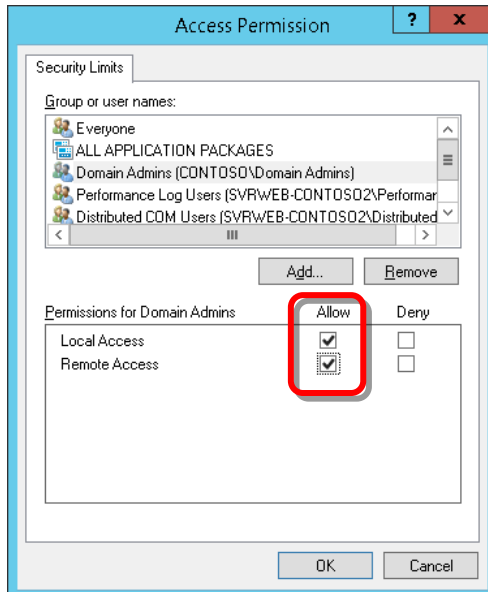
12. In the search results pane, select **Domain Admins**, then click **OK**.



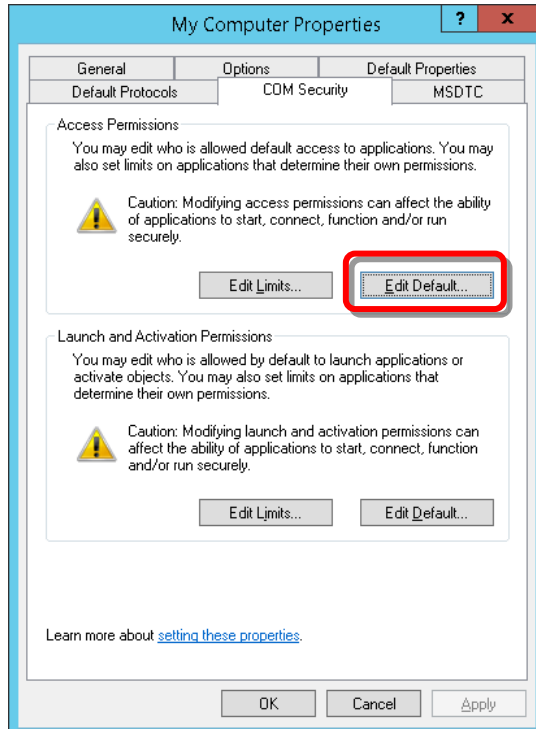
13. Click **OK** to open Access Permissions



14. In **Permissions for Domain Admins**, check the **Allow** option for **Remote Access**, and then click **OK**.

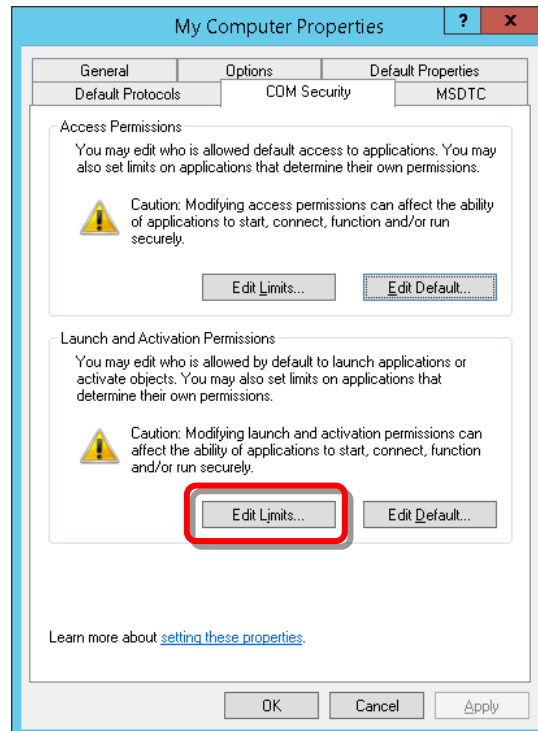


15. Set the default access permissions for Domain Admins.
 - a) In **Accessions Permissions** on the **COM Security** tab, click **Edit Default**.



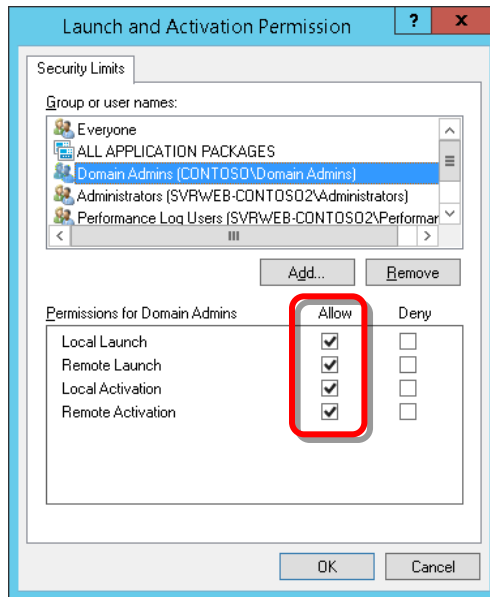
- a) Repeat steps 7-14 of this procedure.

16. Set the launch and activation permissions for Domain Admins.
- a) In **Launch and Activation Permissions** on the **COM Security** tab, click **Edit Limits**.



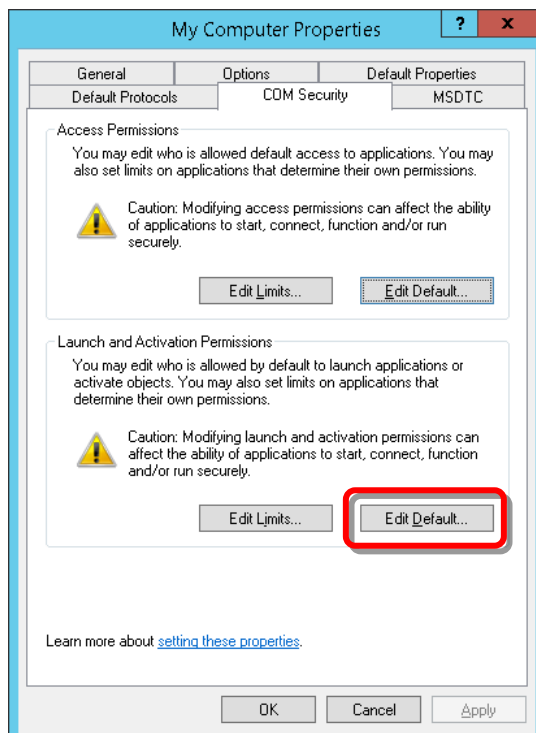
- b) Repeat steps 7-13 of this procedure .

- c) In **Permissions for Domain Admins** in **Launch and Activation Permissions**, check all of the **Allow** options, and then click **OK**.

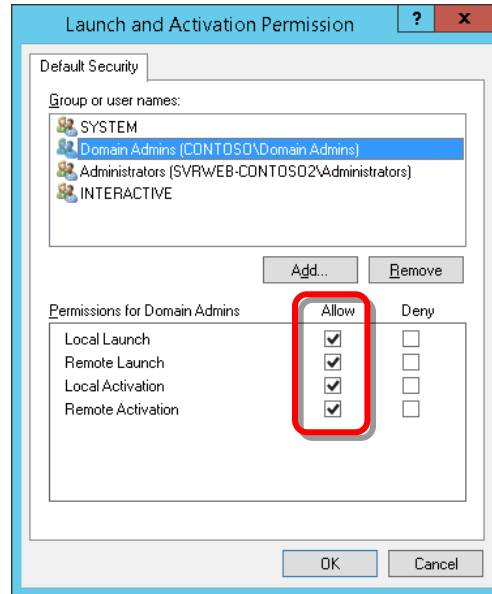


17. Set the default launch and activation permissions for Domain Admins.

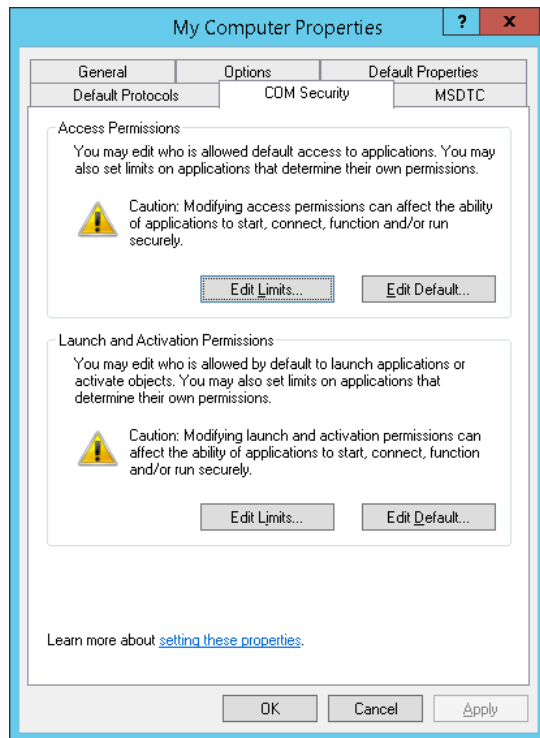
- a) In **Launch and Activation Permissions** on the **COM Security** tab, click **Edit Limits**.




- b) Repeat steps 7-13 of this procedure .
- c) In **Permissions for Domain Admins** in **Launch and Activation Permissions**, check all of the **Allow** options, then click **OK**.

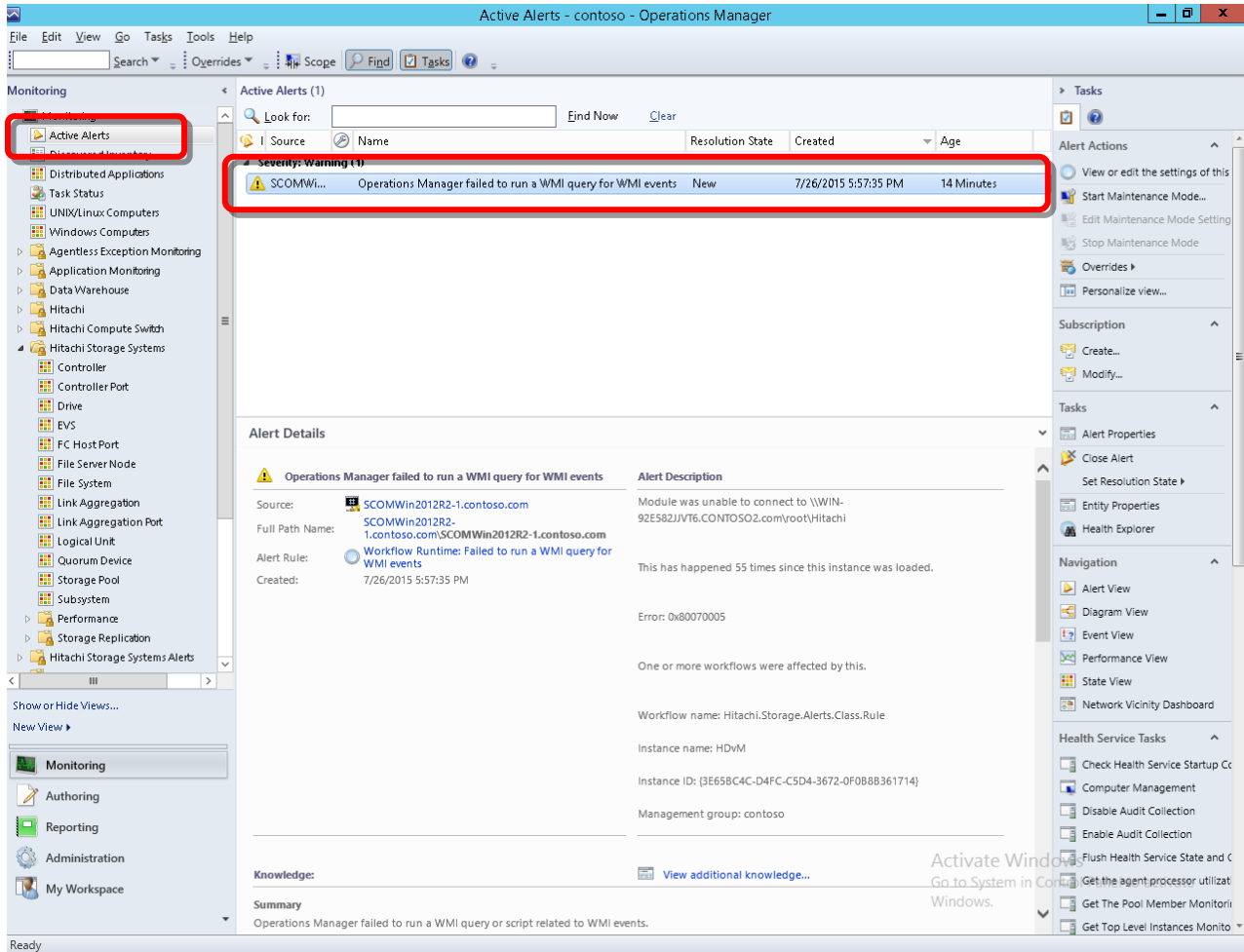


18. In **My Computer Properties**, click **OK** to close the window.



19. When done, close the **Component Services** window.

Caution  If WMI Namespace access authorization or DCOM access authorization is not configured correctly, WMI queries may fail causing a warning to be displayed as an active alert in the Operations Manager. If such an alert appears, verify that access to DCOM and WMI Namespace have been properly authorized for the Domain Admins user group.



The screenshot displays the 'Active Alerts' window in Microsoft Operations Manager. The 'Active Alerts (1)' table shows a single alert with the following details:

Source	Name	Resolution State	Created	Age
SCOMWin...	Operations Manager failed to run a WMI query for WMI events	New	7/26/2015 5:57:35 PM	14 Minutes


The 'Alert Details' section provides the following information:

- Alert Description:** Operations Manager failed to run a WMI query for WMI events
- Source:** SCOMWin2012R2-1.contoso.com
- Full Path Name:** SCOMWin2012R2-1.contoso.com\SCOMWin2012R2-1.contoso.com
- Alert Rule:** Workflow Runtime: Failed to run a WMI query for WMI events
- Created:** 7/26/2015 5:57:35 PM
- Alert Description (continued):** Module was unable to connect to \\WIN-92E582JVT6.CONTO.SO2.com\root\Hitachi
- Alert Description (continued):** This has happened 55 times since this instance was loaded.
- Alert Description (continued):** Error: 0x80070005
- Alert Description (continued):** One or more workflows were affected by this.
- Alert Description (continued):** Workflow name: Hitachi.Storage.Alerts.Class.Rule
- Alert Description (continued):** Instance name: HDvM
- Alert Description (continued):** Instance ID: {3E65B4C4-D4FC-C5D4-3672-0F0B88361714}
- Alert Description (continued):** Management group: contoso

The 'Summary' section states: Operations Manager failed to run a WMI query or script related to WMI events.

Setting the Adapter Connector Number

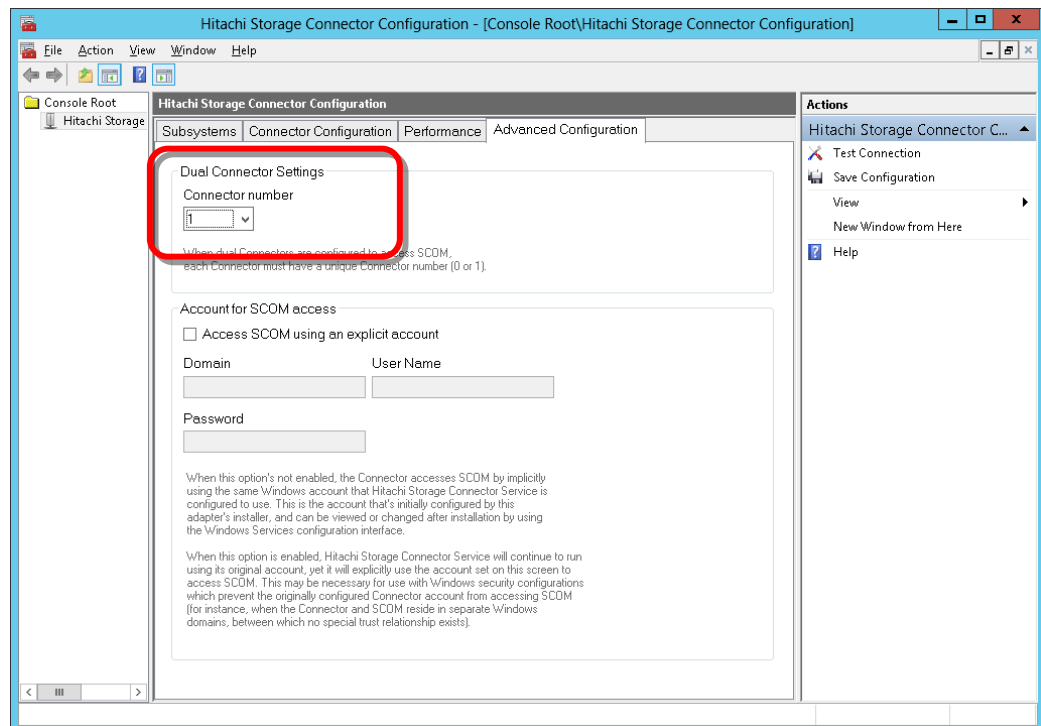
When deploying dual Hitachi Infrastructure Adapters, each adapter must be assigned a unique connector number: either 0, or 1. A maximum of two Hitachi Infrastructure Adapters of each type (storage or compute) can be installed.

Note  Change the connector number setting only when installing Hitachi Infrastructure Adapters on multiple servers. If the connector number is changed when there is only one Hitachi Infrastructure Adapter, information sent with the previous connector number might persist in SCOM. If this occurs, uninstall the management pack to delete all SCOM information.

To set the connector number:

From the **Start** menu, select **Programs**, then open the Hitachi Storage or Compute Connector Configuration.

1. Select the **Advanced Configuration** tab.
2. Under **Dual Connector Settings**, choose a connector number for the adapter, either *0* or *1*.



3. When done, close the Connector Configuration window.

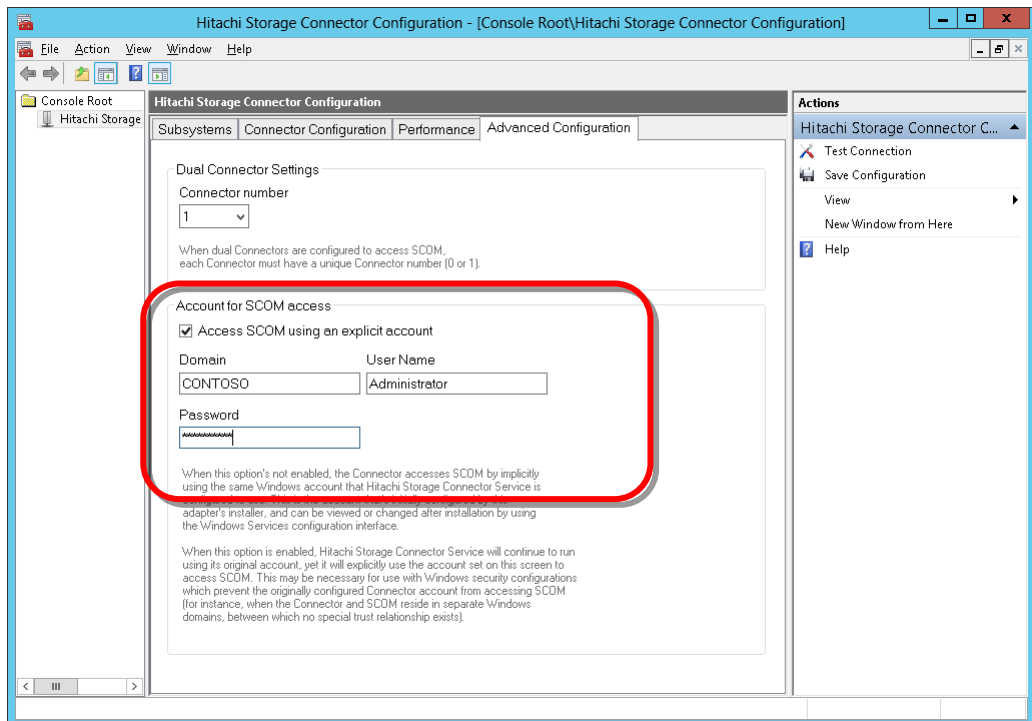
Setting the SCOM Account

If Hitachi Infrastructure Adapter and SCOM reside in two separate Windows domains, it's necessary to configure the adapter to access SCOM using an account other than the account configured during the adapter's installation. This account must belong to the Domain Admins group for the domain in which SCOM resides.

To protect the privacy of this account's password, the password entry box displays a fixed number of asterisks, regardless of the actual password's length.

To set the SCOM account:

1. From the **Start** menu, select **Programs**, then open the Hitachi Storage or Compute Connector Configuration.
2. Select the **Advanced Configuration** tab.
3. In **Account for SCOM access**, check the **Access SCOM using an explicit account** option, then enter the Windows domain account for SCOM access.



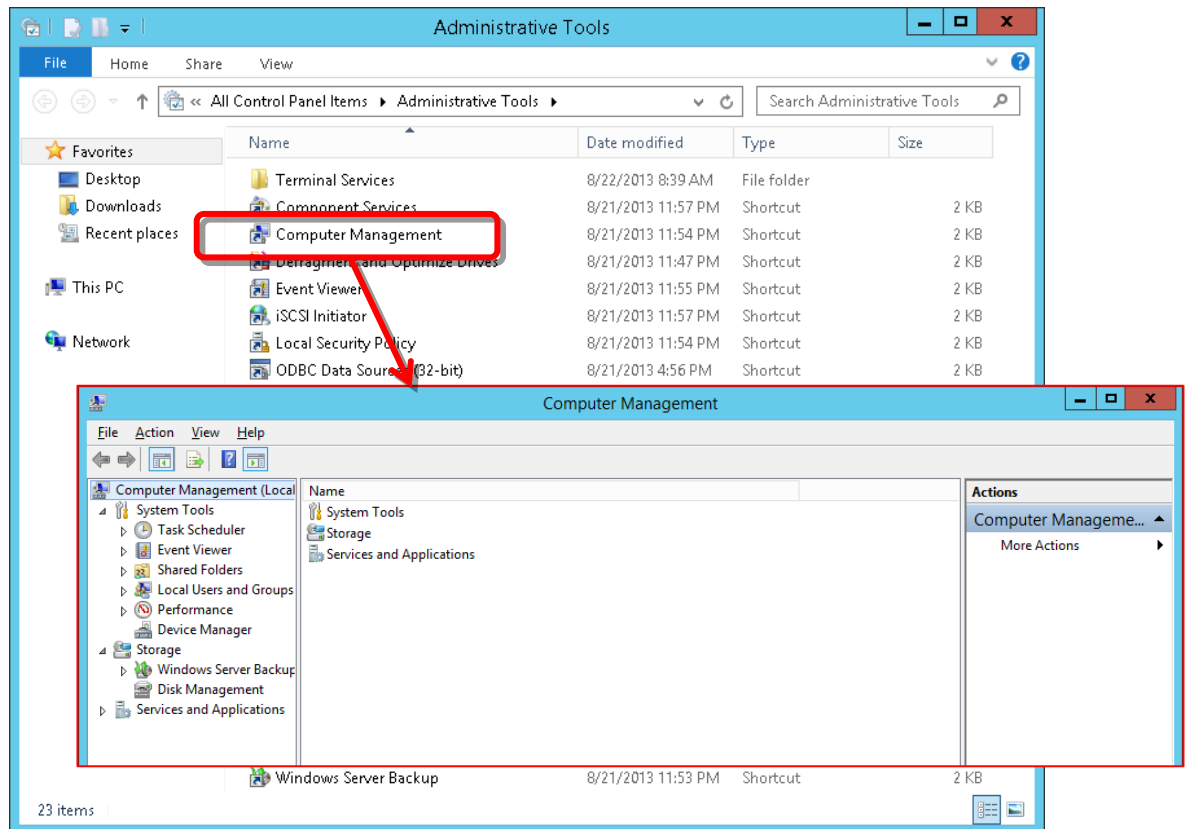
Authorizing Access to the WMI Namespace

Depending on Windows environment configuration specifics, it may be necessary to configure WMI namespace access.

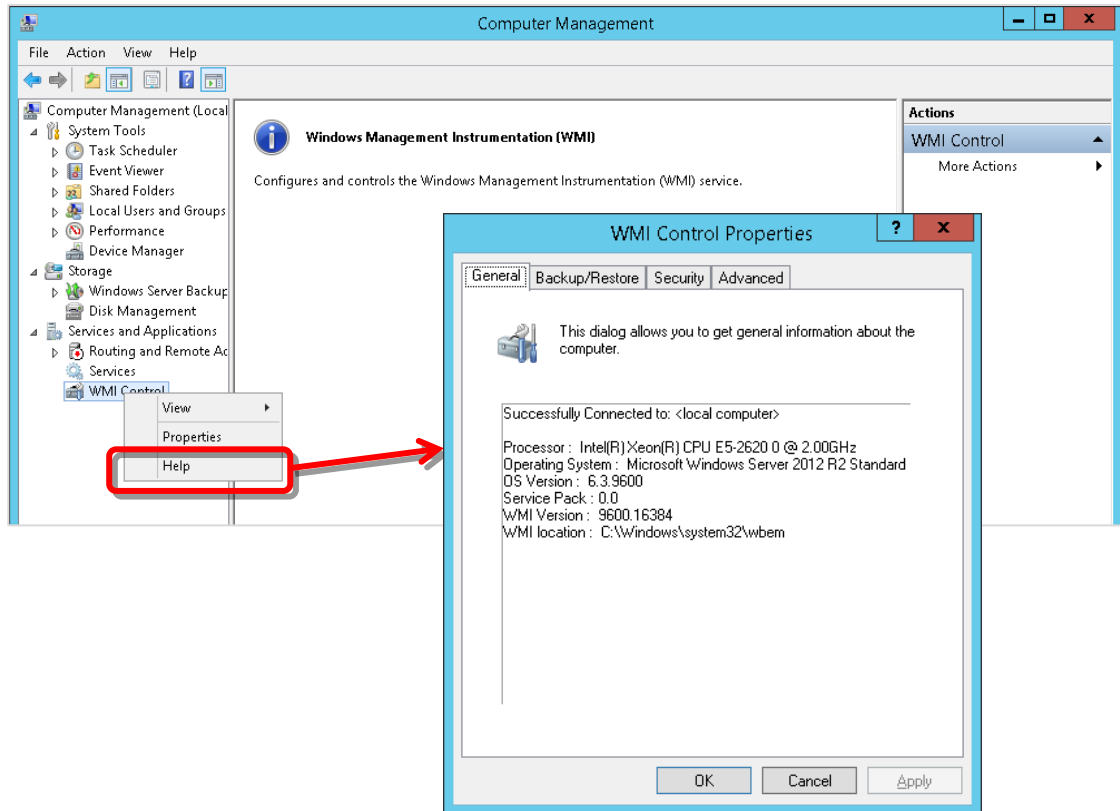
Once objects representing monitored components have been initially sent to SCOM, their health states are subsequently updated with WMI events. In some environments with multiple Windows domains, choosing to forego this configuration may prevent Hitachi Infrastructure Adapter from sending these events to SCOM.

To authorize access to the WMI namespace for the Domain Admin user group in the SCOM domain:

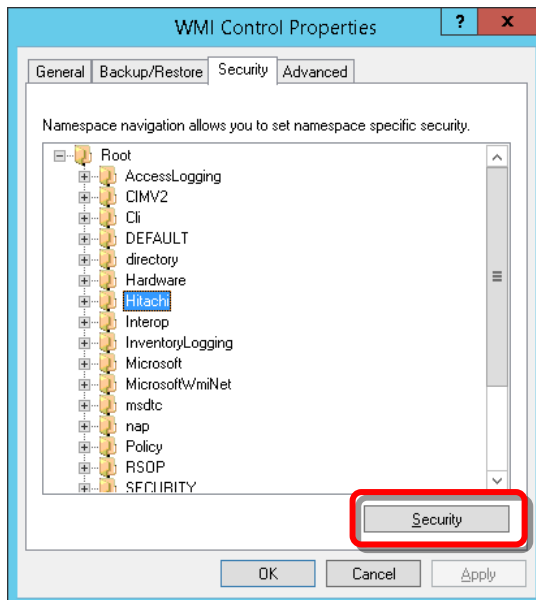
1. From the **Start** menu, select **Administrative Tools**.
2. Double-click **Computer Management**.



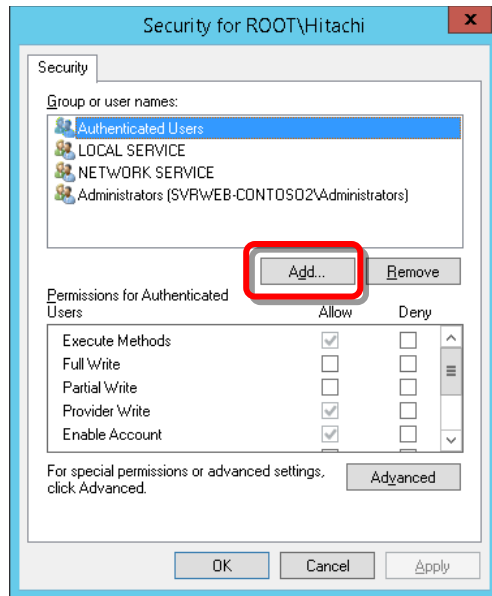
3. In the console tree, expand **Services and Applications**, right-click **WMI Control**, and then select **Properties** from the Action menu.



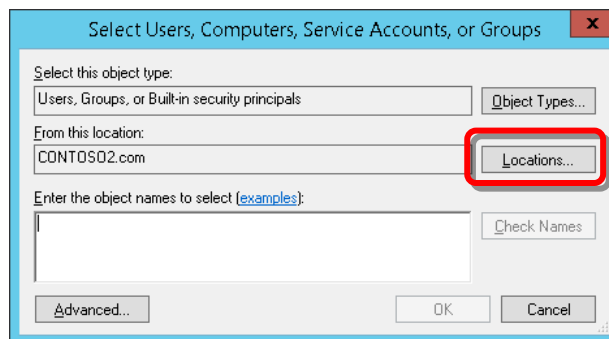
4. On the **Security** tab, select **Root > Hitachi**, then click **Security**.



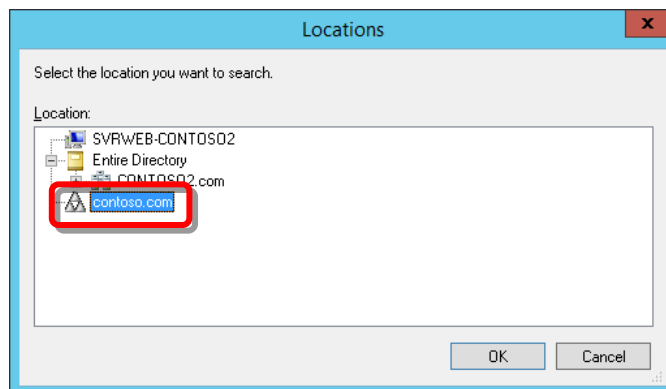
5. In Security for ROOT\Hitachi, click **Add**.



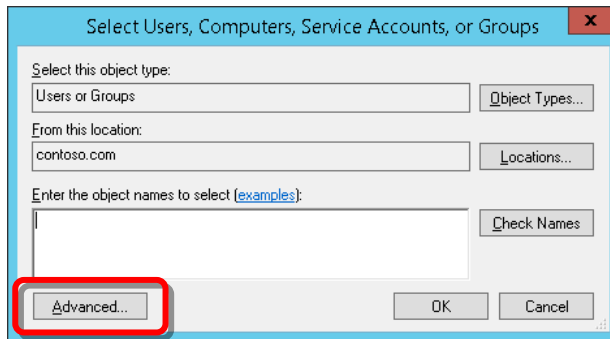
6. In Select Users, Computers, Service Accounts, or Groups, click **Locations**.



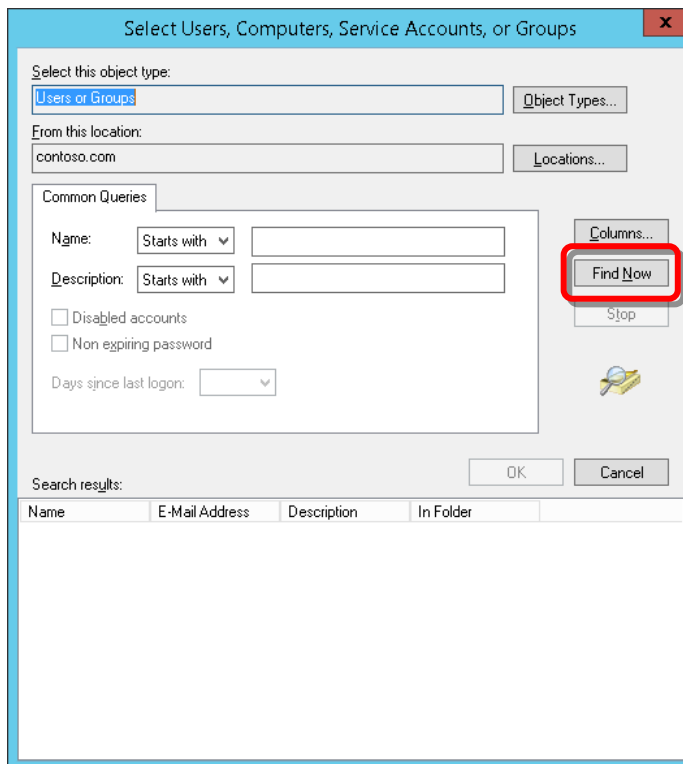
7. In Locations, select the domain containing SCOM, then click **OK**.



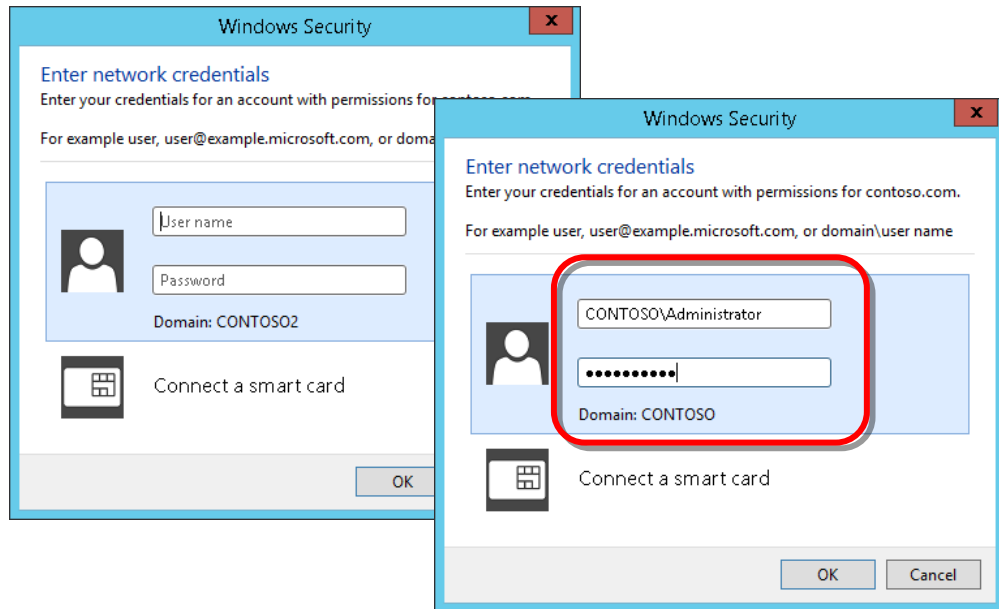
8. Click **Advanced**.



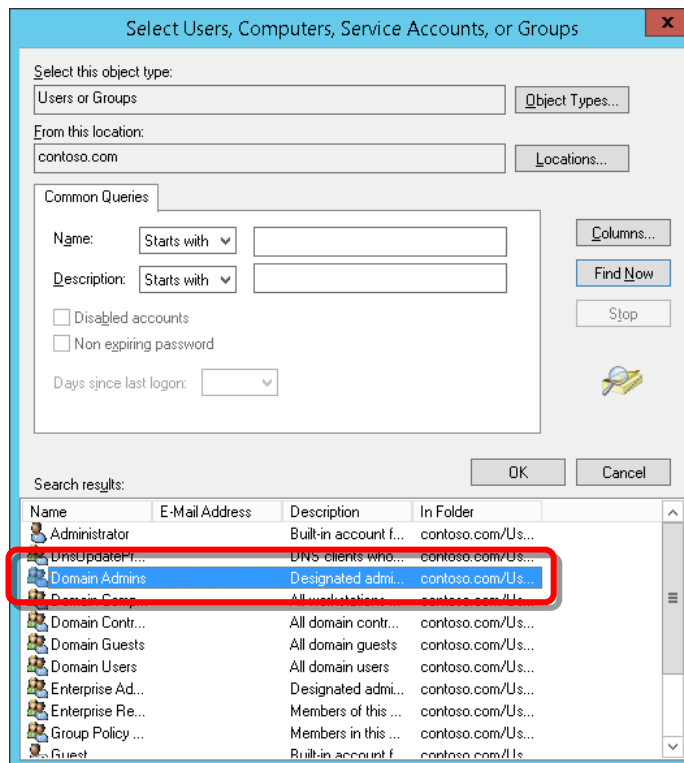
9. Click **Find Now**.



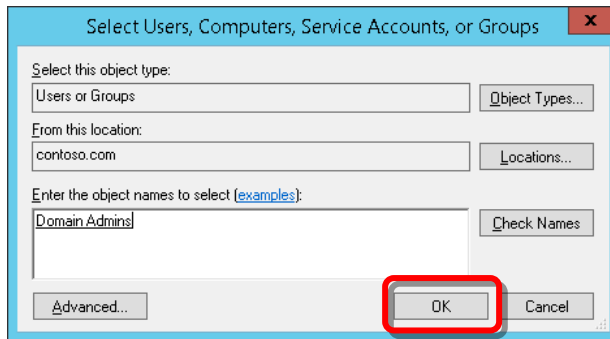
If a Windows Security window is displayed, enter the user name and password for the domain account that you are looking for.



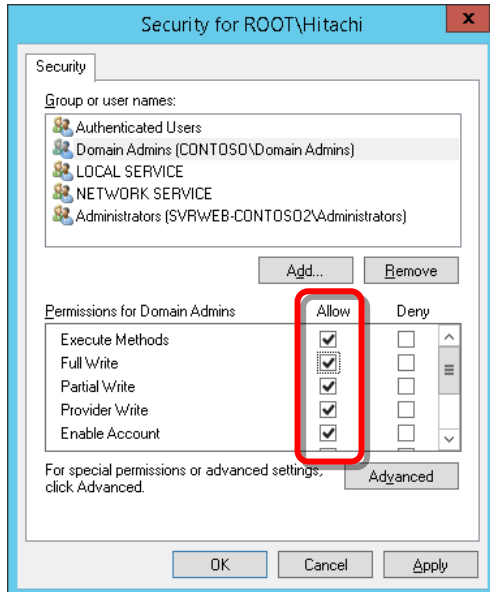
Select **Domain Admins**, then click **OK**.



10. Click **OK**.




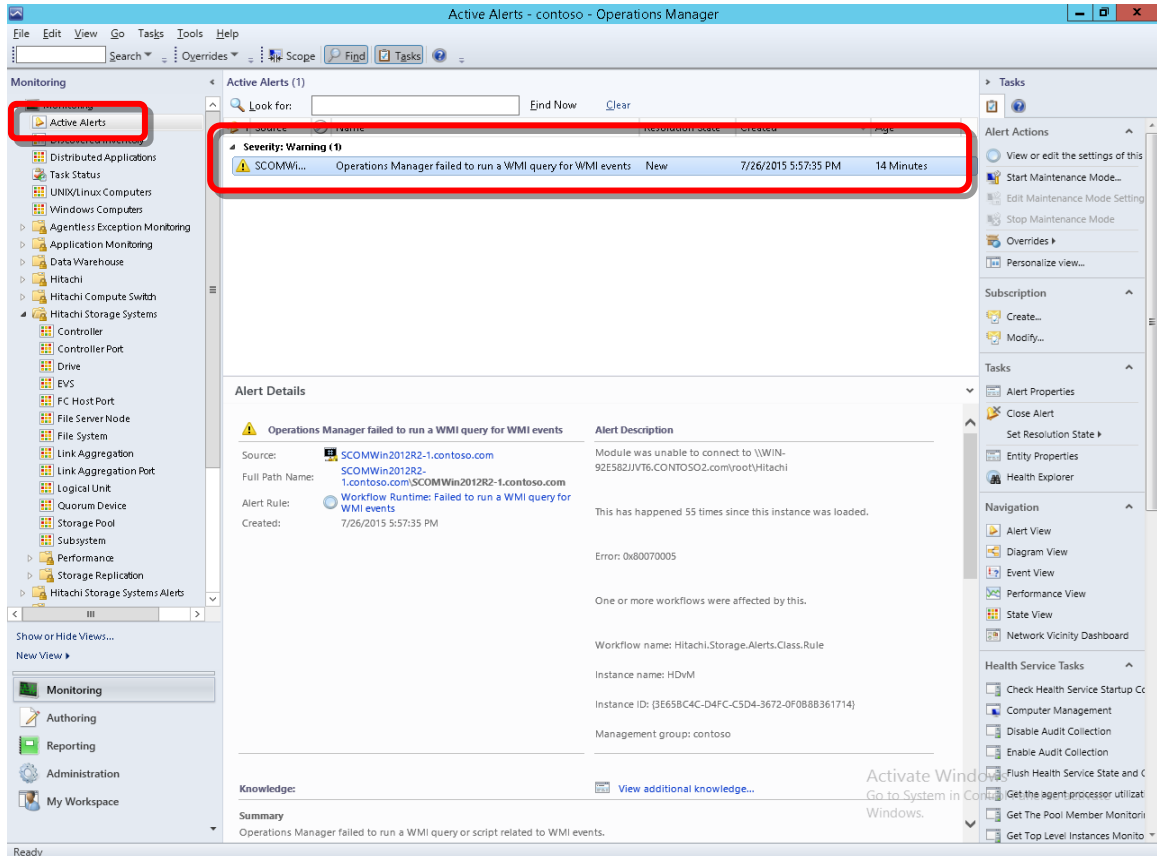
11. In **Permissions for Domain Admins**, check **Allow** for all of the options except **Special permissions**, then click **OK**.



12. In WMI Control Properties, click **OK** to close.

13. Close the Computer Management window.

Caution  If WMI Namespace access authorization or DCOM access authorization is not configured correctly, WMI queries may fail causing a warning to be displayed as an active alert in the Operations Manager. If such an alert appears, verify that access to DCOM and WMI Namespace have been properly authorized for the Domain Admins user group.



Setting Agent Managed Monitoring

When SCOM monitors a server in a separate domain, an agent must be installed on that server to enable Agent Managed service monitoring.

To set up Agent Managed monitoring:

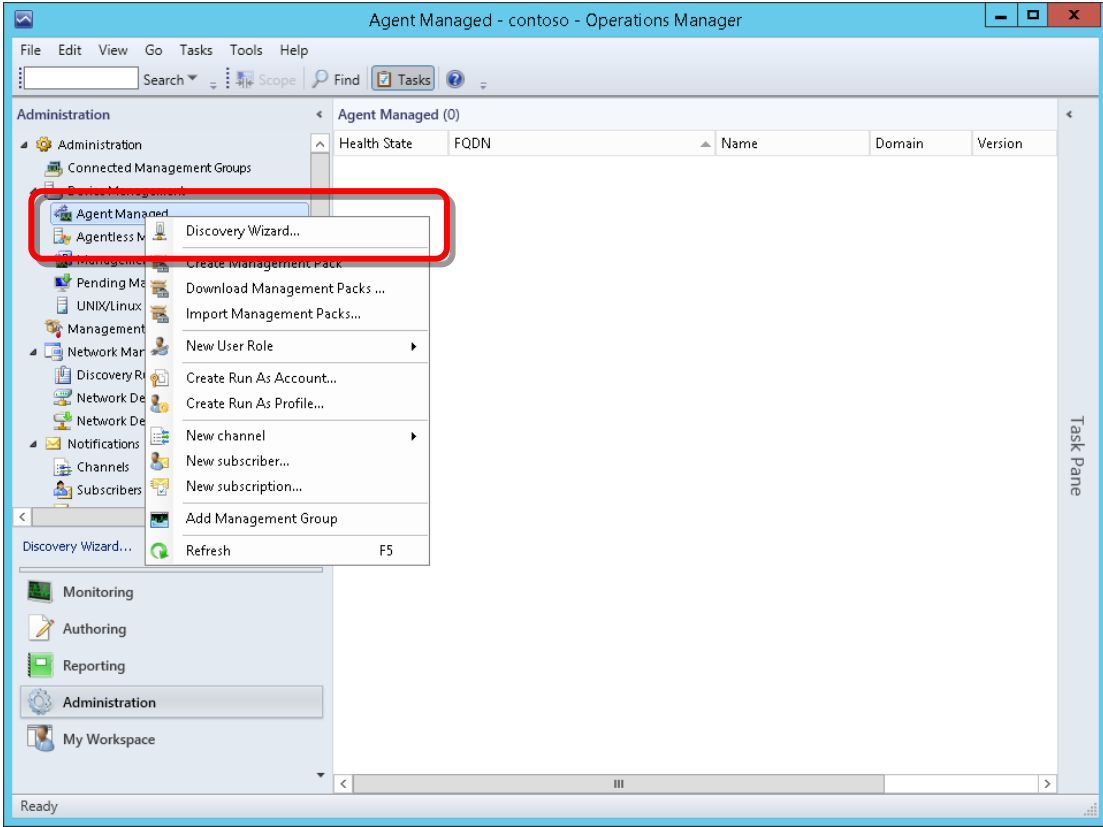
1. Configure your firewall using the settings and port numbers in the table below to enable communication by Agent Managed between the AD domain controller and the Hitachi Infrastructure Adapter.

Agent Managed Firewall Setting

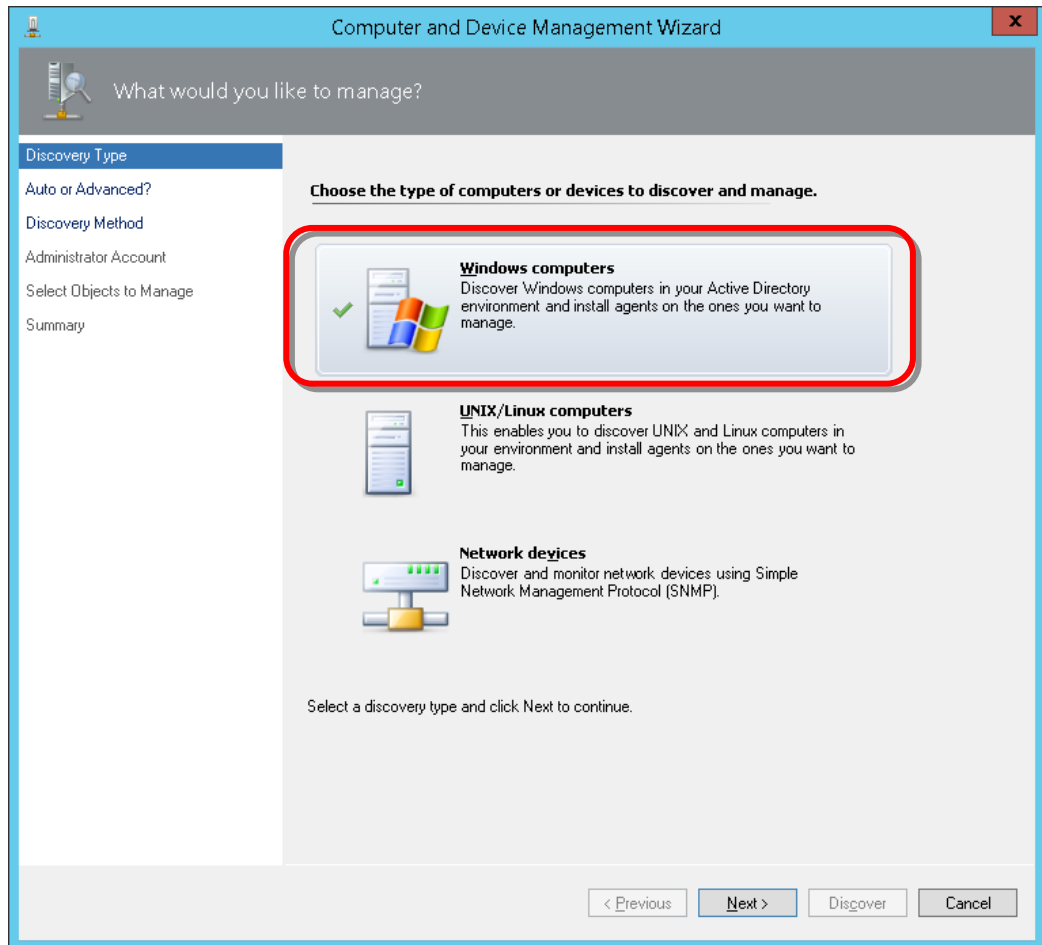
Target Firewall	Port Number	Reference Web site
Windows Firewall of the Server on which Hitachi Infrastructure Adapter is set up.	RPC End Point Mapper: TCP 135	Agent and Agentless Monitoring https://technet.microsoft.com/en-us/library/hh487284.aspx
	RPC Dynamic: Dynamic	
	SMB: TCP/UDP 445	
Firewall on the network	RPC End Point Mapper: TCP 135	Preparing your environment for System Center 2012 R2 Operations Manager https://technet.microsoft.com/en-US/library/dn249696.aspx
	RPC Dynamic: Dynamic	
	SMB: TCP/UDP 445	
		System Requirements: System Center 2012 SP1 - Operations Manager https://technet.microsoft.com/en-US/library/jj656654.aspx
		System Requirements: System Center 2012 - Operations Manager https://technet.microsoft.com/en-US/library/jj656649.aspx
		System Requirements: System Center 2016 - Operations Manager https://technet.microsoft.com/en-us/system-center-docs/system-requirements/system-requirements

2. From the **Start** menu, select **Programs**, then open the Microsoft System Center Operation Manager.
3. Open the **Administration** console tree.

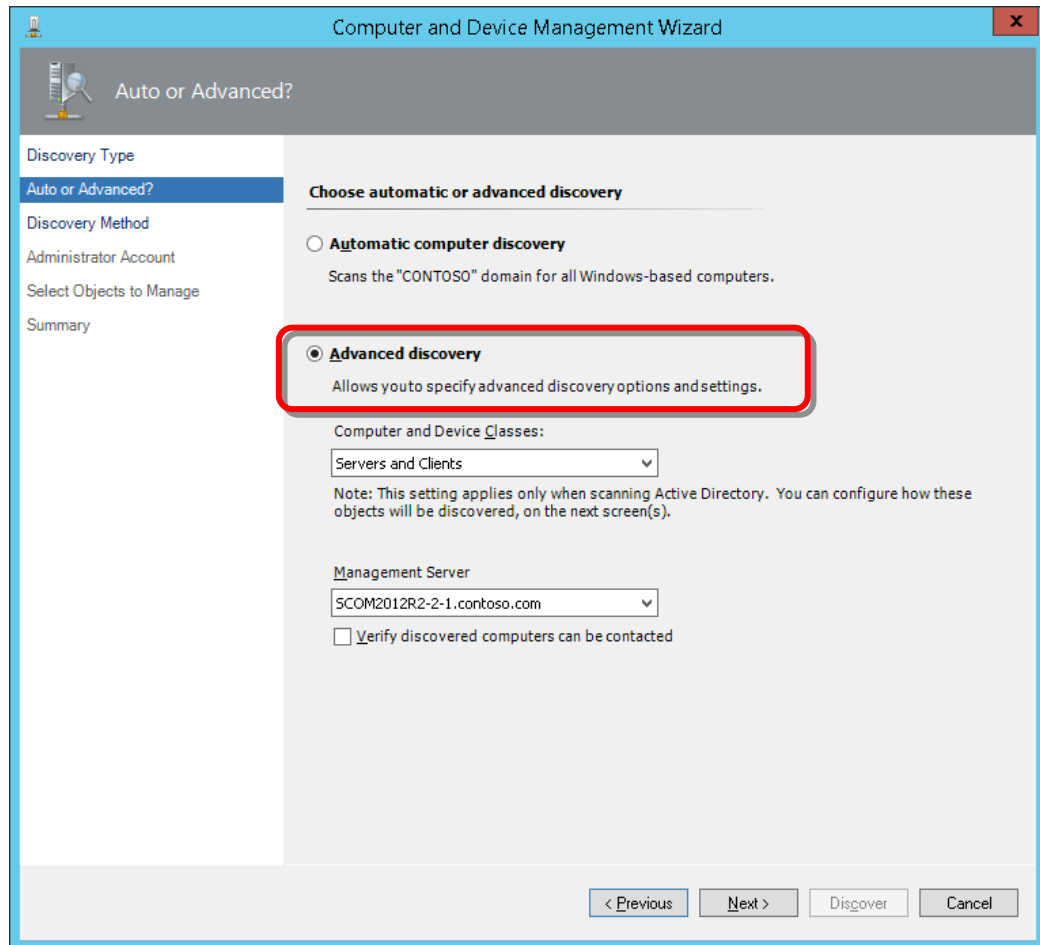
4. Right-click **Agent Managed**, then select **Discovery Wizard** from the **Action** menu.



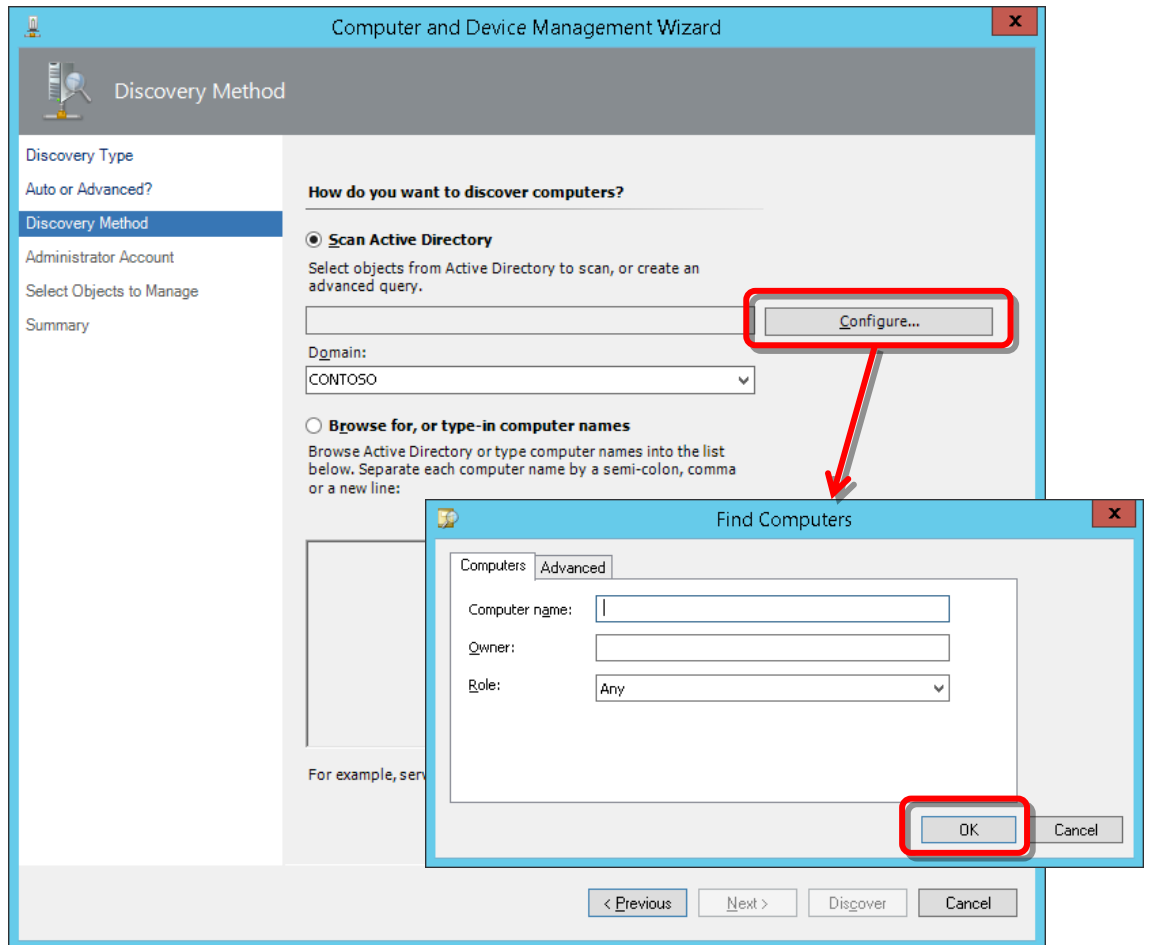
5. In Computer and Device Management Wizard, for **Discovery Type**, choose **Windows computers**, then click **Next**.



6. For auto or advanced discovery, choose the **Advanced discovery** option, then click **Next**.

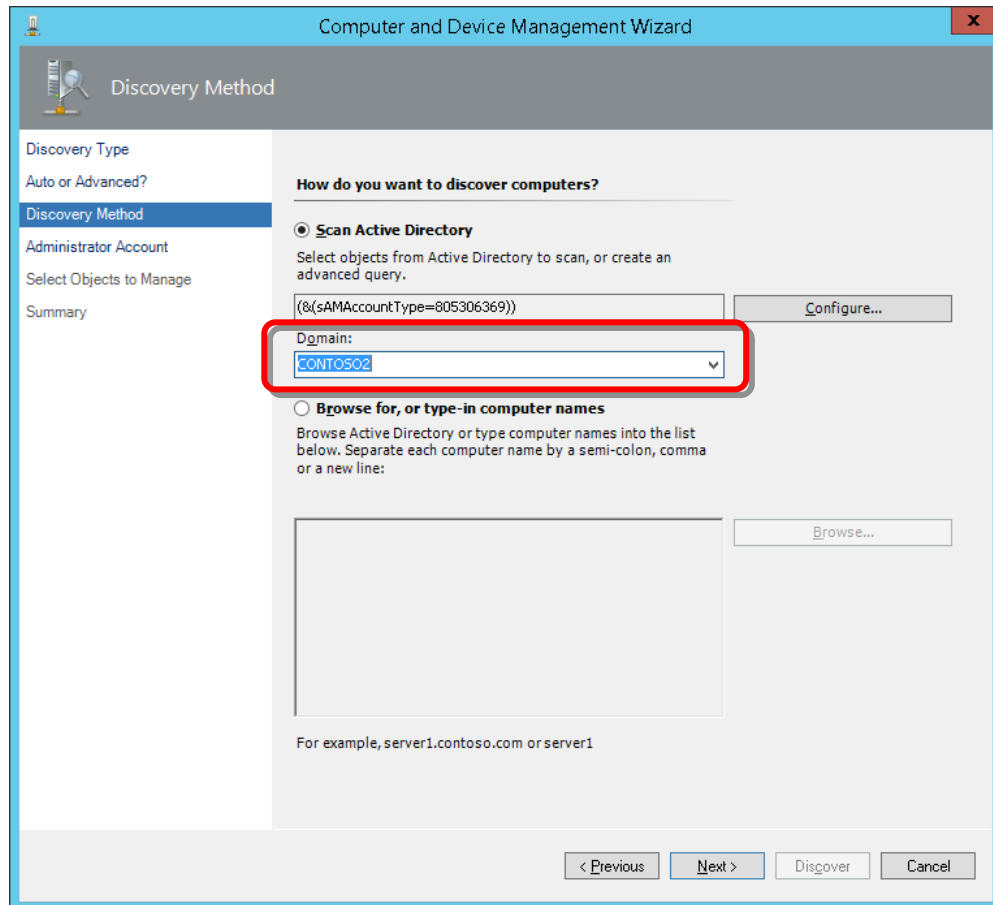


7. For **Discovery Method**, click **Configure** to scan objects in Active Directory.

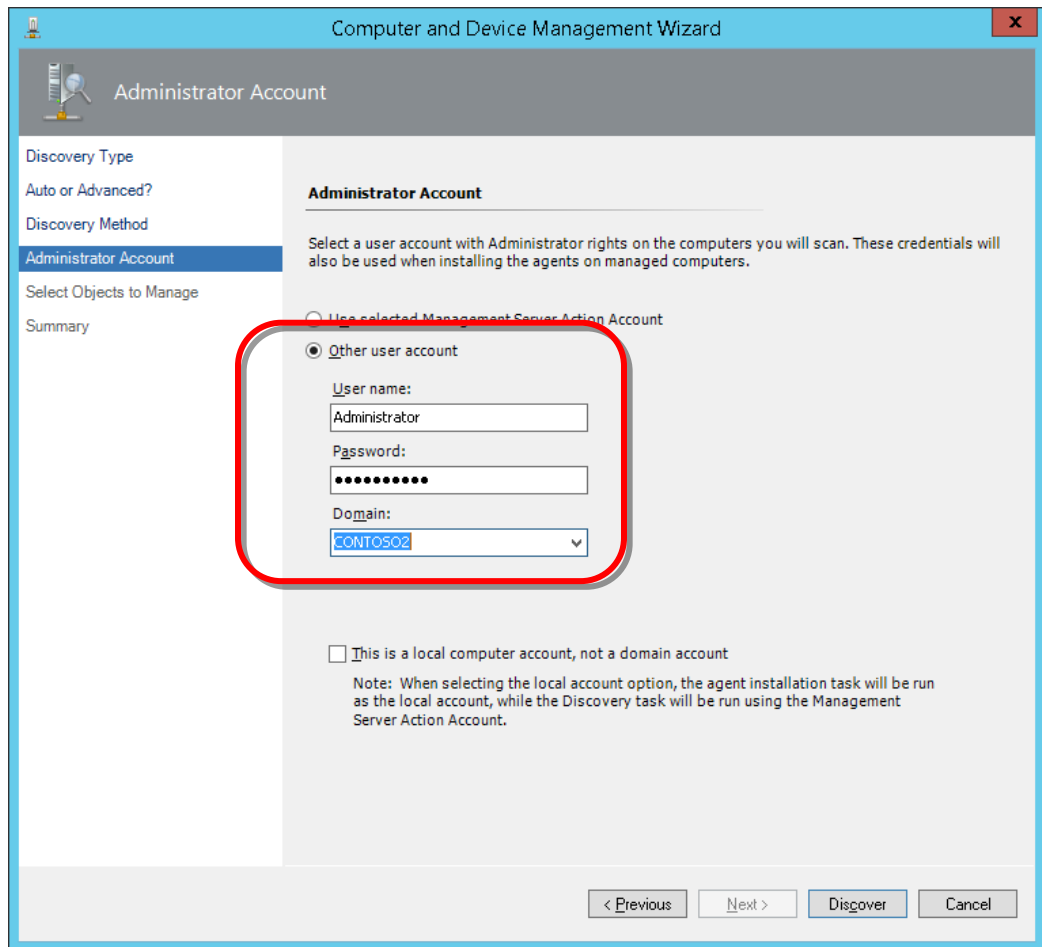


8. In Find Computers, click **OK**.

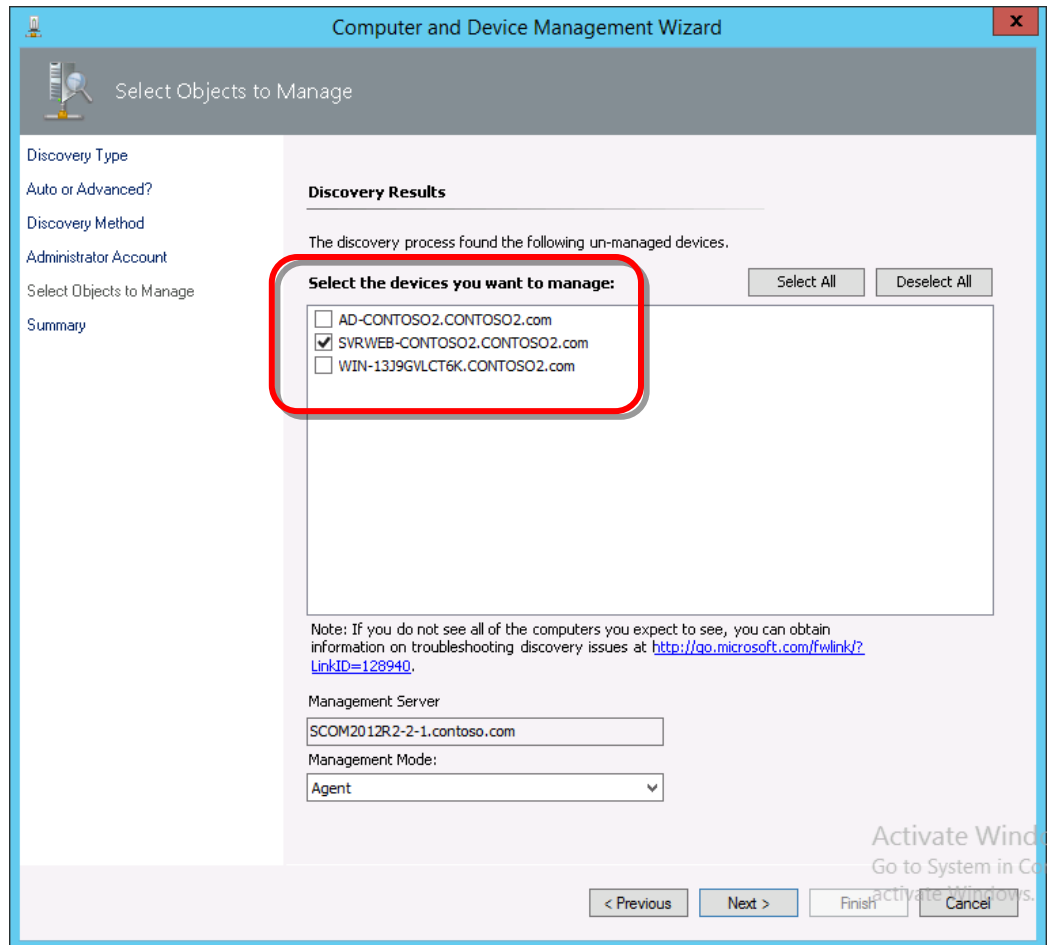
- From **Domain**, choose the domain that includes the server on which the Hitachi Infrastructure Adapter has been installed, then click **Next**.



10. For **Administrator Account**, choose **Other user account**. Enter the user name and password, and choose the domain for the administrator account of the domain that includes the server on which the Hitachi Infrastructure Adapter has been installed; click **Discover**.

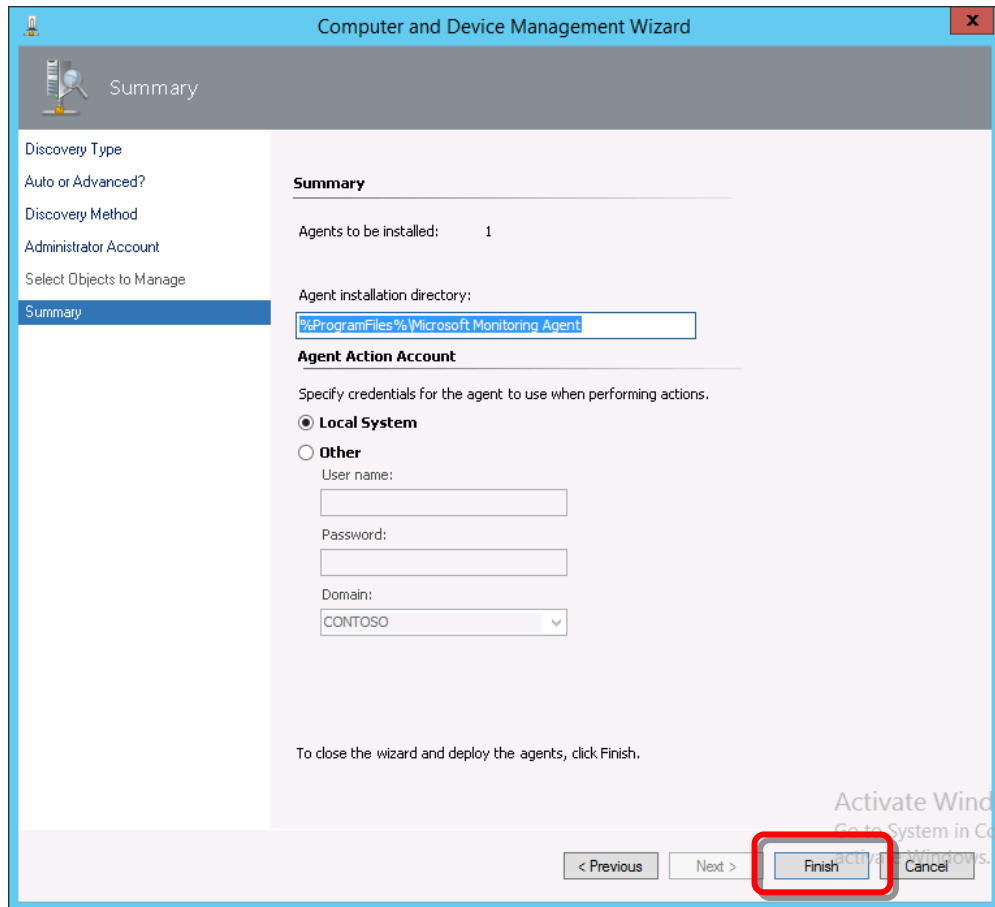


11. In **Discovery Results**, choose the server on which the Hitachi Infrastructure Adapter has been installed.

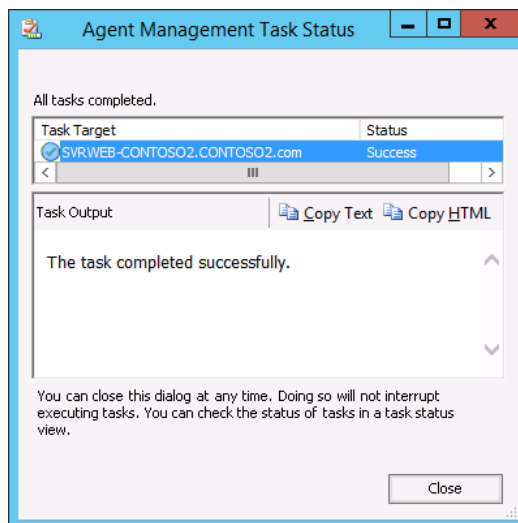


12. From **Management Mode**, choose **Agent**, then click **Next**.

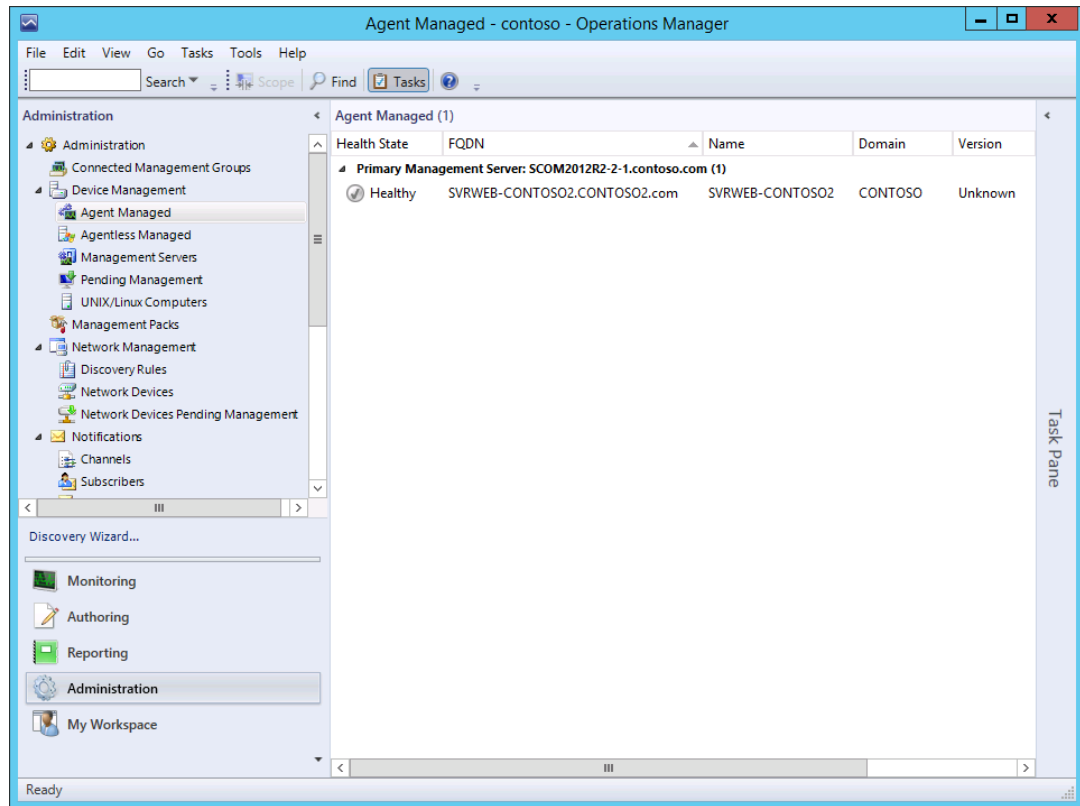
13. In **Summary**, click **Finish** to deploy the agents to the server.



14. When **Status** indicates installation was successful, click **Close**.



15. In **Operations Manager**, confirm that the target server has been registered is displayed in **Agent Managed**.



Note If the target server appears under Pending Managed instead of under Agent Managed, verify that the Forest Trust between Domains is set correctly.





Note If the Trust Type of the Forest Trust between Domains is not set correctly, an error for stopping Health Service is displayed in Active Alerts. If this occurs, verify the Trust Type setting for Forest Trust between Domains is set correctly.

The screenshot displays the 'Active Alerts - contoso - Operations Manager' window. The main area shows a table of active alerts:

Source	Name	Resolution State	Created
WIN-92E582JIVT6.CONTOSO2.com	Health Service Heartbeat Failure	New	7/28/2015 12:18:32 AM

The 'Alert Details' pane for the selected alert provides the following information:

- Created:** 7/28/2015 12:18:32 AM
- Knowledge:** View additional knowledge...
- Summary:** The System Center Management Health Service has stopped on a computer. This alert is generated by a Health Service Watcher. This object is run on the All Management Servers Resource Pool and monitors the health of all System Center Management Health Services in a Management Group. When a System Center Management Health Service fails to heartbeat, as set of Diagnostics are run and Recoveries are then executed to attempt to fix this problem with the remote agent.
- Causes:** This can happen when:
 - The System Center Management Health Service has been stopped.
 - The System Center Management Health Service failed to start up correctly.
 - The System Center Management Health Service has been set to Manual/Disabled and the machine was rebooted.
- Resolutions:** Recoveries may be enabled to restart the agent. In the event that the recovery is disabled or was not successful, you can navigate to the "State Change Events" tab and run the recovery from the details pane. To open the **State Change Events** tab, right-click the alert, point to **Open**, and then click **Health Explorer**. In Health Explorer, select the alert that is in a critical state, and then in the right-hand pane, click the **State Change Events** tab. In the details pane, click the recovery task.

Notes: A diagnostic task for this monitor runs ping. The default firewall settings for computers running Windows Vista or Windows Server 2008 prevent the computers from providing a ping response. To configure these computers to allow incoming ICMP traffic, see "Create an Inbound Rule on Windows Vista or Windows Server 2008" (<http://go.microsoft.com/fwlink/?Linkid=161045>).



5

Troubleshooting

This chapter describes general troubleshooting information, logging, and error messages. It also describes how to get help from the Hitachi Data Systems Support Center.

- ▣ [*General Troubleshooting*](#)
- ▣ [*Logging*](#)
- ▣ [*Error Messages*](#)
- ▣ [*Getting Help*](#)

General Troubleshooting

The table below provides general troubleshooting information.

Problem	Recommended Action
Hitachi Storage Connector Windows service fails to connect to Microsoft Operations Manager	Perform the following diagnostic steps: <ol style="list-style-type: none"> 1. Verify that the Operations Manager hostname is valid using the Hitachi Storage Connector configuration tool. 2. Use the Test Connection feature in the configuration tool to test the Operations Manager connection. 3. Verify that the credentials used by the Hitachi Storage Connector service are still valid and have sufficient privileges to communicate with the Operations Manager host. 4. Verify that the host running the Connector service is member of the same Windows domain as the Operations Manager host.
Hitachi Storage Management Pack for Microsoft SCOM and its Connector settings remain in Operations Manager after uninstalling Hitachi Storage Management Pack for Microsoft SCOM	Re-install Hitachi Storage Management Pack for Microsoft SCOM, then use its "Uninstall Management Packs" feature, found in Hitachi Storage Connector Configuration.
The Hitachi Storage Connector Windows service fails to update the states of monitored components	Perform these steps in the MMC snap-in's Connector Configuration tab: <ol style="list-style-type: none"> 1. Uninstall the Management Packs. 2. Start the Connector Windows service.
The Hitachi Storage Connector Windows service fails to discover VSP, HUS VM, VSP G1000, VSP Gx00, VSP Fx00, VSP G1500, and VSP F1500 arrays	<ul style="list-style-type: none"> ▪ Verify the host running the Windows service has CCI installed, and a Command Device is setup correctly. ▪ The Command Device must have these attributes enabled: <ul style="list-style-type: none"> ▪ Command Device Security ▪ User Authentication
Enterprise family array monitoring is unreliable, and logs related to command device I/O errors appear in HiSystemCenter.log	When the SCOM Connector service communicates with an Enterprise family array using a command device, it creates a new CCI HORCM instance for each task. In some environments, it may be necessary to change the default range of HORCM instance numbers used by the Connector. Please see this adapter's User's Guide for Storage Systems for more information.
The MMC displays an "MMC could not create the snap-in" error while trying to start Hitachi Storage Connector Configuration	Reinstall Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager.
The MMC Snapin displays "Failed to add subsystem" while trying to add an authenticated subsystem using correct credentials	Perform the following diagnostic steps: <ol style="list-style-type: none"> 1. Check the HiSystemCenterCfg.log file. 2. Re-install the Hitachi SCOM MP when Error Code 0x800401F3 is found in the HiSystemCenterCfg.log file.

Problem	Recommended Action
The MMC Snapin fails to start	The account used to start the MMC snap-in must be a member of the Administrators group on the computer(s) running SCOM and Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager. See Account permissions for installing and using the Hitachi Infrastructure Adapter for SCOM .
The Hitachi Connector Service fails to start.	<ul style="list-style-type: none"> ▪ Verify the account that the Connector Windows service is configured to use belongs to the Administrators group. See Account permissions for installing and using the Hitachi Infrastructure Adapter for SCOM. ▪ Verify that the IP address of the server running the "System Center Data Access" Windows service is valid. ▪ Verify that the system clocks of the server running the Hitachi Connector Windows service and server running System Center Data Access are synchronized.
The MMC displays "The SDK service is either not running or not yet initialized."	<ul style="list-style-type: none"> ▪ Verify that the "System Center Data Access" Windows service is running on the server specified in "Enter server address" in the MMC Snapin. ▪ Verify that the system clocks of the server running the Hitachi MMC Snapin, the server running the Hitachi Connector Windows service, and the server running System Center Data Access are synchronized.
Information pertaining to monitored components is out of date	Check the refresh rate in "Connector Configuration" of the Hitachi SCOM MMC Snapin.
Hitachi MP uninstallation fails	<ul style="list-style-type: none"> ▪ Remove any dependent management packs and try again. ▪ Verify there is available space in the operational database. If there is less than 100MB of available space, System Center may become unstable and uninstallation of a management pack may fail. If you increased the size when there was less than 100MB of available space, restart the computer, then retry uninstalling the management pack. ▪ When installing the System Center, the default values for the operational database: <ul style="list-style-type: none"> ▪ Database name: OperationsManager ▪ Size: 1000MB
Hitachi MP uninstallation fails due to an out of space error in the database log	Take the RMS offline, then increase the initial size of the Operations Manager database log file (OperationsManager.ldf) by 1000 MB.
The MMC Configuration Snap-in fails to discover VSP, HUS VM, VSP G1000, VSP Gx00, VSP Fx00, VSP G1500, and VSP F1500 arrays	Verify that the RAID Manager (CCI) is installed and that the command device has been set.
Installation of Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager fails.	<ul style="list-style-type: none"> ▪ Ensure sufficient free disk space exists to complete the installation. For system requirements, see Server Hardware Requirements. ▪ Ensure account used to run the installer belongs to the Administrators group. See Account permissions for installing and using the Hitachi Infrastructure Adapter for SCOM.

Problem	Recommended Action
<p>Blade CPU information fails to appear, and the status of other components is unknown. (Applies to only the CB500 and CB2500)</p>	<p>CB500 and CB2500 CPU information may not be correctly displayed if SMASH authentication fails. Check the SMASH account and port number information used to register the chassis in the MMC snap-in, then compare it with the chassis configuration.</p>
<p>Hitachi Compute Management Pack task operations cannot be executed from the SCOM UI.</p>	<p>Check these SCOM settings:</p> <ul style="list-style-type: none"> ▪ Check the credentials entered when the task was executed. ▪ Ensure that IPMIUTIL is installed in the folder expected by SCOM. <p>Check these MMC Snap-in settings:</p> <ul style="list-style-type: none"> ▪ Ensure that the IP entered during chassis registration was correct. ▪ For CB2000 devices, entering individual blade IPs is required when the management module's firmware is older than "A0360." <p>Check these Compute device settings:</p> <ul style="list-style-type: none"> ▪ Verify that the involved blade or chassis is actually configured to use the IP specified during task execution. ▪ Verify that the chassis or blade IPMI settings are in agreement with those used during task execution.
<p>SNMP traps fail to appear in the SCOM alert views created by the Hitachi MPs.</p>	<p>Before SCOM will display SNMP traps from compute devices, SCOM must be configured to monitor the compute devices as "Network Devices." This is the same procedure used to configure SCOM to monitor any device using SNMP.</p> <p>Ensure the firewall is configured to allow traffic to the "Operations Manager SNMP Trap Listener."</p> <p>Confirm the SNMP trap Windows service is not running—SCOM's own built-in trap listener must be used instead.</p>
<p>Hitachi Compute device information fails to appear in SCOM.</p>	<p>Restart the HCCS.</p>
<p>The states of registered storage systems and server devices are displayed as UNKNOWN</p>	<p>If the states of registered storage systems and server devices are displayed as UNKNOWN on HSCC, HCCC, or SCOM, confirm the following items.</p> <ol style="list-style-type: none"> 1. Confirm that no errors occur in the networking environment. 2. Unregister the target device by HSCC or HCCC, and then register the device again. 3. If you upgraded a VSP G1000 subsystem to a VSP G1500 subsystem while it was operating, the display for the VSP G1000 subsystem will appear as UNKNOWN. Remove any VSP G1000 subsystem(s) that appear as UNKNOWN, then add the VSP G1500 subsystem.

Problem	Recommended Action
In a Dual Connectors configuration, only one of the storage arrays being monitored is displayed in SCOM.	<p>Use Test Connection to verify the connection with the SCOM adapter that is not displaying its registered storage array.</p> <ul style="list-style-type: none"> If the connection fails, check the IP address and account settings. If the IP address and account settings are correct: <ul style="list-style-type: none"> If the versions of the SCOM adapters in a Dual Connectors configuration are not the same, one of the SCOM adapters may fail to connect and the storage array it is monitoring will not be displayed in SCOM. (This use of mixed versions of the SCOM adapter is not supported.) Align the versions of the SCOM adapter among the multiple locations. (See Note in Installing the Software). If the SCOM adapter versions are aligned, but the issue persists: <ul style="list-style-type: none"> Verify that the connector numbers assigned to each adapter have not been duplicated. The connector number for each adapter must be unique.

Logging

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager performs logging as shown in the following table:

Program	Log file	Event Log	Other Output
Hitachi Storage Connector Service	HiSystemCenter.log Uses SNM2API and also outputs log statements to its log files.	Yes	-
Hitachi Compute Connector Service	HiSystemCenter.log Uses SNMP/SMASH API and also outputs log statements to its log files.	Yes	-
Hitachi Storage Connector Configuration	HiSystemCenterCfg.log	Yes	Message dialog
Hitachi Compute Connector Configuration	HiSystemCenterCfg.log	Yes	Message dialog
Installer	-	-	Message dialog

The log levels defined in the Windows registry are shown in the following table:

Log Level	Output to Log File	Output to Event Log	Description
STAT	X	-	Write operational status to the log file.

Log Level	Output to Log File	Output to Event Log	Description
INFO	X	-	Enable informational logging that provides information about the operations. Informational logging option is usually enabled specifically for troubleshooting because it creates a large log file and can slow down performance.
WARN	X	-	The program can continue its process, but alerts the user.
ERROR	X	-	Error occurred and the program stopped processing.
PARAM	X	-	Writes parameter values of the invoked methods to the log file.
All	X	-	Writes all log level statements to the log file.

Log Files

Log files are created in the "log" sub-folder in the Hitachi Infrastructure Adapter for Microsoft System Center Operations Manager's installation folder.

The log files contain a single log item per line. In each log item, the columns shown in the following table are delimited with spaces:

Variable Format	Variable Description										
"[process ID]"	<i>process ID</i> : Process ID of the Hitachi SCOM connector Windows service.										
"[Date-Time]"	<i>Date</i> : MM/DD/YY format, MM: month, DD: date, YY: year <i>Time</i> : hh:mm:ss hh: hour(01-24), mm: minutes, ss: seconds Each value is 2-digits (spaces filled with 0).										
"[Module]"	<i>Module</i> : Class name When the name is less than 7 characters, blanks are filled in to the right.										
"Level"	<i>Level</i> : Log level.										
"Message Code"	Level: Log level <table border="1"> <tbody> <tr> <td>Status message</td> <td>S230####</td> </tr> <tr> <td>Error message</td> <td>E220####</td> </tr> <tr> <td>Warning message</td> <td>W220####</td> </tr> <tr> <td>Info message</td> <td>I220####</td> </tr> <tr> <td>Debug message</td> <td>-----</td> </tr> </tbody> </table>	Status message	S230####	Error message	E220####	Warning message	W220####	Info message	I220####	Debug message	-----
Status message	S230####										
Error message	E220####										
Warning message	W220####										
Info message	I220####										
Debug message	-----										

Variable Format	Variable Description
"{Class::Method(Serial)}:Message"	<i>Class</i> : Class name <i>Method</i> : Method name <i>Serial</i> : Serial number of the storage where the S-VOL resides <i>Message</i> : Message strings

Sample of a log item (appears as one line of continuous text):

```
[3104] [10/01/09-10:12:25] [HI-API ] STAT
{CHiSnmAPI::RegisterDevice(85010071)}:Successfully updated the device info with SNM API
- IP[192.168.29.218/192.168.29.219] DeviceNum[85010071]
```

Log Setting

Log levels can be set by changing the value of the "DebugLevel" variable in HiSystemCenter.config. After changing this value, it may be necessary to re-start the Connector service before the change will take effect.

Values for:

DebugLevel = { MINIMAL | NORMAL | VERBOSE }

Log Generation and Rotation

Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager log files are created when the Connector process starts.

The logging mechanism has these features and characteristics:

- Multiple processes are able to log to a single log file.
- Log files can be automatically rotated when their size reaches a user-specified limit.
- The log files are rotated by incrementing a number appearing at the end, beginning with zero, and increasing to a user-specified limit. For instance: hiSystemCenter.log, hiSystemCenter.log.1, hiSystemCenter.log.2, etc.
- If a write to the current, active log file cannot be performed because the file is locked, the logs will be written to a temporary file with a "tmp" suffix, such as hiSystemCenter.log.tmp.
- Like the normal log files, these temporary log files are also rotated when their size reaches the configurable MaxFileSize limit. For instance: hiSystemCenter.tmp.1, '2, '3, etc.

- If a temporary log file is locked when a log rotation event occurs, an overflow log will be created. These overflow logs are never automatically deleted; they administrator must delete them manually. Overflow logs have a file name format similar to this: hiSystemCenter_<YYYYMMDD_hhmmss>.
- The current, active log files are always named hiSystemCenter.log and hiSystemCenterCfg.log, and are used for the Connector service and the MMC snap-in, respectively.
- Whenever a write to any type of Hitachi log file fails due to the file being locked, a corresponding message will appear in the Windows Event log. For instance:
 - When the adapter log file is locked, a warning log will appear that reads, "Writing to Adapter log stopped."
 - When the adapter log file becomes available for writing again, an information log will appear that reads, "Writing to Adapter log started."
 - Whenever an overflow log is created, a warning log will appear that reads, "Some backup log files are not writable. Writing Overflow log. Please check Adapter log and clean up unused overflow log files."

The version of the logging mechanism is also logged, in this format:

Hitachi Logger version : [X.X.X.X]

Logging Configuration

The configuration values for the logging mechanism are stored in hilogger.config.

MaxFileSize

This configuration setting will appear as: [MaxFileSize=20]. The value must be between 1 and 100, indicating a size limit between 1MB and 100MB. If a value outside of this range is provided, the logging mechanism will revert to its built-in default, which is 10MB.

MaxBackupIndex

This setting will appear as: [MaxBackupIndex=20]. The value must be between 1 and 255. If a value outside of this range is provided, the logging mechanism will revert to its built-in default, which is 5.



Messages

This chapter describes the various messages displayed by Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager.

Error Messages

The following error messages may be found in the error log. The initial letter of the error message is: **E** for Error, **W** for Warning or **I** for Information.

The first two digits express the application type (HCCC or HCCS).

30: HCCC (Hitachi Compute Connector Configuration)

40: HCCS (Hitachi Compute Connector Service)

E2201000

Error Message ID	E2201000
Error Message Text	Device manager authentication failed.
Explanation	
Recommended Action	Confirm the user ID and the password and try again.

E2201001

Error Message ID	E2201001
Error Message Text	Unable to find subsystem information.
Explanation	

Recommended Action	Please confirm the subsystem serial number and rerun the operation again.
--------------------	---

E2201002

Error Message ID	E2201002
Error Message Text	Unable to find LUN information.
Explanation	
Recommended Action	Please confirm the LUN and rerun the operation again.

E2201003

Error Message ID	E2201003
Error Message Text	Input LUN is DMLU.
Explanation	Invalid LU type.
Recommended Action	Please confirm the LUN and the type, and rerun the operation again.

E2201004

Error Message ID	E2201004
Error Message Text	Input LUN is CMD.
Explanation	Invalid LU type.
Recommended Action	Please confirm the LUN and the type, and rerun the operation again.

E2201005

Error Message ID	E2201005
Error Message Text	Input Mount Point is null or empty string.
Explanation	
Recommended Action	Please enter valid mount point.

E2201006

Error Message ID	E2201006
Error Message Text	Input LUN is not free creating virtual volume.
Explanation	
Recommended Action	Please enter a LUN which is not used.

E2201007

Error Message ID	E2201007
Error Message Text	LUN is paired with a ShadowImage.
Explanation	
Recommended Action	Please provide a LUN which is not paired with any secondary volume.

E2201008

Error Message ID	E2201008
Error Message Text	Input LUN for the P-Vol belongs to a V-Vol.
Explanation	
Recommended Action	Please provide a valid LUN for primary volume.

E2201009

Error Message ID	E2201009
Error Message Text	Input LUN is not a virtual volume.
Explanation	
Recommended Action	Please provide a valid LUN for virtual volume.

E220100A

Error Message ID	E220100A
Error Message Text	Input V-Vol is not paired with a P-Vol.
Explanation	
Recommended Action	Please provide valid V-Vol number.

E220100B

Error Message ID	E220100B
Error Message Text	The V-Vol is not to be initialized.
Explanation	
Recommended Action	Please initialize the disk of the V-Vol.

E220100C

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Error Message ID	E220100C
Error Message Text	For the given subsystem type, this LUN is invalid.
Explanation	
Recommended Action	Please provide valid LUN.

E220100D

Error Message ID	E220100D
Error Message Text	For the given subsystem type, this data pool number is invalid.
Explanation	
Recommended Action	Please provide valid data pool number.

E220100E

Error Message ID	E220100E
Error Message Text	V-Vol is not found.
Explanation	
Recommended Action	Please provide valid V-Vol number.

E220100F

Error Message ID	E220100F
Error Message Text	Incorrect model for the subsystem.
Explanation	Confirm the subsystem model and the subsystem serial number and try again.
Recommended Action	Please provide valid subsystem type.

E2201010

Error Message ID	E2201010
Error Message Text	Please verify the specified subsystem type and serial number, and try again.
Explanation	Confirm the subsystem type and serial number and try again.
Recommended Action	Please verify the specified subsystem type and serial number, and try again.

E2201011

Error Message ID	E2201011
------------------	----------

Error Message Text	Failed while trying to get login type for the subsystem: [%%ls]. Error Code: [0x%%08X].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201012

Error Message ID	E2201012
Error Message Text	Add Subsystem failed after retry: IP addresses=%%ls, hr=%%08X.
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E2201013

Error Message ID	E2201013
Error Message Text	Add Subsystem failed : IP addresses=%%ls, hr=%%08X.
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E2201014

Error Message ID	E2201014
Error Message Text	Failed to check subsystem: [%%08d] status, Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E2201015

Error Message ID	E2201015
Error Message Text	Missing Device manager and subsystem login information.
Explanation	
Recommended Action	Please provide valid Device Manager IP address and subsystem login information.

E2201016

Error Message ID	E2201016
Error Message Text	Failed to query subsystem %%d information from the Device Manager XML web service. Error Code: [0x%%08X].

Explanation	
Recommended Action	Please provide valid Device Manager IP address and subsystem login information.

E2201017

Error Message ID	E2201017
Error Message Text	Failed to retrieve RAID group information of subsystem: [%%08d], Error Code: [0x%%08X].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201018

Error Message ID	E2201018
Error Message Text	Cannot retrieve LU: [%%08d:%%04d]. Error Code: [0x%%08X].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201019

Error Message ID	E2201019
Error Message Text	Failed to mount LU: [%%08d:%%04d]. Error Code: [0x%%08X].
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220101A

Error Message ID	E220101A
Error Message Text	Failed to dismount LU: [%%04d] of subsystem: [%%08d] from mount point %%%s, Error Code: [0x%%08X].
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220101B

Error Message ID	E220101B
Error Message Text	Failed to unrepresent LU from all hosts. LU: [%%08d:%%04d], Error Code: [0x%%08X].
Explanation	Internet application error.

E220101C

Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.
Error Message ID	E220101C
Error Message Text	Failed to find management info of subsystem: [%%08d].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220101D

Error Message ID	E220101D
Error Message Text	Failed to present LU: [%%04d] in subsystem: [%%08d]. Error Code: [0x%%08X].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220101F

Error Message ID	E220101F
Error Message Text	Failed to unpresent LU: [%%04d] from the hosts. Error Code: [0x%%08X].
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201021

Error Message ID	E2201021
Error Message Text	Failed to unpresent LU: [%%04d] from the FC hosts. Error Code: [0x%%08X].
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201022

Error Message ID	E2201022
Error Message Text	Failed to unpresent LU: [%%04d] from all FC hosts. Error Code: [0x%%08X]
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201023

Error Message ID	E2201023
Error Message Text	Failed to unpresent LU: [%%04d] from all iSCSI hosts. Error Code: [0x%%08X].
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201024

Error Message ID	E2201024
Error Message Text	Failed to get data pool information [%%0d]. Error Code:[0x%%0X].
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201025

Error Message ID	E2201025
Error Message Text	Failed to create CoW pair for LU: [%%08d:%%04d]. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm the COW pool has enough space for the operation.

E2201026

Error Message ID	E2201026
Error Message Text	Cannot split CoW pair for LU: [%%08d:%%04d].
Explanation	
Recommended Action	Please confirm the COW pool has enough space for the operation.

E2201027

Error Message ID	E2201027
Error Message Text	Failed to get CoW pair S-Vol information.
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201028

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Error Message ID	E2201028
Error Message Text	Invalid LUN for V-Vol.
Explanation	
Recommended Action	Please provide valid V-Vol number.

E220102A

Error Message ID	E220102A
Error Message Text	Invalid RAID subsystem type.
Explanation	
Recommended Action	Please provide valid subsystem type.

E220102B

Error Message ID	E220102B
Error Message Text	Cannot refresh devices with Error Code: [0x%%08X], [%%0d] retries.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220102C

Error Message ID	E220102C
Error Message Text	Cannot find management information for subsystem: [%%08d].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220102D

Error Message ID	E220102D
Error Message Text	Cannot connect to subsystem: [%%08d] to refresh array data. Error Code: [0x%%08X].
Explanation	
Recommended Action	Verify the IP addresses are correct and that there is an Ethernet connection to the subsystem.

E220102E

Error Message ID	E220102E
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Error Message Text	Failed to retrieve controller data, Error Code: [0x%%08X].
Explanation	
Recommended Action	Verify the IP addresses are correct and that there is an Ethernet connection to the subsystem.

E220102F

Error Message ID	E220102F
Error Message Text	Failed to retrieve controller port data, Error Code: [0x%%08X].
Explanation	
Recommended Action	Verify the IP addresses are correct and that there is an Ethernet connection to the subsystem.

E2201030

Error Message ID	E2201030
Error Message Text	Controller %%d is detached.
Explanation	
Recommended Action	Please re-attach the controller.

E2201031

Error Message ID	E2201031
Error Message Text	Failed to retrieve drive data. Error Code: [0x%%08X].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201032

Error Message ID	E2201032
Error Message Text	Failed to refresh logical unit data for subsystem: [%%08d]. Error Code: [0x%%08X].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201033

Error Message ID	E2201033
Error Message Text	Failed to retrieve HDP Pool data. Error Code: [0x%%08X].

Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201034

Error Message ID	E2201034
Error Message Text	Failed to retrieve LUN performance data. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem. Confirm that the command device has been set in the target storage system.

E2201035

Error Message ID	E2201035
Error Message Text	Failed to retrieve RAID group performance data. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem.

E2201036

Error Message ID	E2201036
Error Message Text	Failed to retrieve storage pool information. Error Code: [0x%%08X].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201037

Error Message ID	E2201037
Error Message Text	Failed to retrieve storage pool performance data. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem.

E2201038

Error Message ID	E2201038
Error Message Text	Failed to retrieve controller port information. Error Code: [0x%%08X].
Explanation	Internet application error.

Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.
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E2201039

Error Message ID	E2201039
Error Message Text	Failed to retrieve controller port performance data. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem. Confirm that the command device has been set in the target storage system.

E220103A

Error Message ID	E220103A
Error Message Text	Failed to create LU. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem.

E220103B

Error Message ID	E220103B
Error Message Text	Cannot delete LU: [%%08d:%%04d:%%04d].
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem.

E220103C

Error Message ID	E220103C
Error Message Text	Failed to refresh the system data. LU: [%%08d:%%04d]. Error Code: [0x%%08X].
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220103D

Error Message ID	E220103D
Error Message Text	The login user may not have storage administrative rights.
Explanation	
Recommended Action	Please run the operation in the context of user with Administrative privilege.

E220103E

Error Message ID	E220103E
Error Message Text	Failed to discover storage device with IPs: %%ls.
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E220103F

Error Message ID	E220103F
Error Message Text	Failed to refresh host group objects for subsystem: [%%08d]. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm that the subsystem is equipped with fiber channel.

E2201040

Error Message ID	E2201040
Error Message Text	Failed to refresh target objects for subsystem: [%%08d]. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please confirm that the subsystem is equipped with iSCSI.

E2201041

Error Message ID	E2201041
Error Message Text	Failed to refresh drive objects for subsystem: [%%08d]. Error Code: [0x%%08X].
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201042

Error Message ID	E2201042
Error Message Text	Controller information is not found for subsystem: [%%08d].
Explanation	
Recommended Action	Please provide valid controller ID.

E2201043

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Error Message ID	E2201043
Error Message Text	Controller port (%0d:%0d) status: %0d is not online.
Explanation	
Recommended Action	Please confirm the controller port is online.

E2201044

Error Message ID	E2201044
Error Message Text	Drive information is not found for subsystem: [%%08d].
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201045

Error Message ID	E2201045
Error Message Text	
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201600

Error Message ID	E2201600
Error Message Text	Failed to check subsystem login type. %%ls
Explanation	
Recommended Action	Please confirm the subsystem IP addresses are correct.

E2201601

Error Message ID	E2201601
Error Message Text	Failed to check subsystem login type, Error Code: [0x%%08X] IP0: [%%ls]. IP1: [%%ls].
Explanation	
Recommended Action	Please confirm the subsystem IP addresses are correct.

E2201602

Error Message ID	E2201602
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Error Message Text	Required input parameters are missing.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201603

Error Message ID	E2201603
Error Message Text	Subsystem serial number is missing in the input parameter.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201604

Error Message ID	E2201604
Error Message Text	Device type is missing in the input parameter.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201605

Error Message ID	E2201605
Error Message Text	Log statement is missing.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201606

Error Message ID	E2201606
Error Message Text	Log configuration is missing.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201607

Error Message ID	E2201607
Error Message Text	Cannot get LU size in parameters to create LU.

Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201608

Error Message ID	E2201608
Error Message Text	Cannot get LUN in parameters to delete LU.

Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201609

Error Message ID	E2201609
Error Message Text	Cannot get RG number in parameters to delete LU.

Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220160A

Error Message ID	E220160A
Error Message Text	Cannot get LUN in parameters to present LU.

Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220160B

Error Message ID	E220160B
Error Message Text	Cannot get initiator list in parameters to present LU.

Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220160C

Error Message ID	E220160C
Error Message Text	Cannot get LUN in parameters to unpresent LU.

Explanation	Internet application error.
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E220160D

Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.
Error Message ID	E220160D
Error Message Text	Cannot get initiator list in parameters to unrepresent LU.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220160E

Error Message ID	E220160E
Error Message Text	Cannot get LUN in parameters to mount LU.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220160F

Error Message ID	E220160F
Error Message Text	Cannot get LUN in parameters to dismount LU.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201610

Error Message ID	E2201610
Error Message Text	Cannot create V-Vol without a LUN.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201611

Error Message ID	E2201611
Error Message Text	Cannot get the LUN in the parameters to delete the V-Vol.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201612

Error Message ID	E2201612
Error Message Text	Unknown action '%s' for controller.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201613

Error Message ID	E2201613
Error Message Text	Failed to retrieve controller information. %s
Explanation	
Recommended Action	Verify the IP addresses are correct and that there is an Ethernet connection to the subsystem.

E2201614

Error Message ID	E2201614
Error Message Text	Failed to retrieve subsystem controller information for subsystem: [%d], Error Code: [0x%X]. %s
Explanation	
Recommended Action	Verify the IP addresses are correct and that there is an Ethernet connection to the subsystem.

E2201615

Error Message ID	E2201615
Error Message Text	Unknown action '%s' for controller port.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201616

Error Message ID	E2201616
Error Message Text	Failed to retrieve controller port information. %s
Explanation	
Recommended Action	Verify the IP addresses are correct and that there is an Ethernet connection to the subsystem.

E2201617

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Error Message ID	E2201617
Error Message Text	Failed to retrieve subsystem controller port information for subsystem: [%%08d], Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Verify the IP addresses are correct and that there is an Ethernet connection to the subsystem.

E2201618

Error Message ID	E2201618
Error Message Text	Unknown action '%%ls' for device performance.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201619

Error Message ID	E2201619
Error Message Text	Unknown device type %%ls.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220161A

Error Message ID	E220161A
Error Message Text	Failed to retrieve performance information. %ls
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem.

E220161B

Error Message ID	E220161B
Error Message Text	Failed to retrieve performance information for subsystem: [%%08d], Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem. Confirm that the command device has been set in the target storage system.

E220161C

Error Message ID	E220161C
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Error Message Text	Failed to retrieve performance information for subsystem: [%%08d].
Explanation	
Recommended Action	Please confirm storage performance is enabled in the subsystem.

E220161D

Error Message ID	E220161D
Error Message Text	Unknown action '%%ls' for disk drive.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220161E

Error Message ID	E220161E
Error Message Text	Failed to retrieve drive information. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220161F

Error Message ID	E220161F
Error Message Text	Failed to retrieve drive information for subsystem: [%%08d], Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201620

Error Message ID	E2201620
Error Message Text	Unknown action '%%ls' for HDP Pool.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201621

Error Message ID	E2201621
Error Message Text	Failed to retrieve HDP Pool information. %%ls

Explanation	The subsystem may not have any HDP pool.
Recommended Action	

E2201622

Error Message ID	E2201622
Error Message Text	Failed to retrieve HDP Pool information for subsystem: [%%08d], Error Code: [0x%%08X]. %%ls
Explanation	The subsystem may not have any HDP pool.
Recommended Action	

E2201623

Error Message ID	E2201623
Error Message Text	Failed to create HDP Pool. %%ls
Explanation	There can be multiple reasons. The HDP pool may not exist, may be running out of capacity.
Recommended Action	See the error description for more information.

E2201624

Error Message ID	E2201624
Error Message Text	Failed to create HDP Pool in subsystem: [%%08d], Error Code: [0x%%08X]. %%ls
Explanation	There can be multiple reasons. The HDP pool may not exist, may be running out of capacity.
Recommended Action	See the error description for more information.

E2201625

Error Message ID	E2201625
Error Message Text	Failed to set the capacity alert depletion values and over-provisioning threshold values for HDP Pool: [%%d]. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201626

Error Message ID	E2201626
Error Message Text	Failed to set the capacity alert depletion values and over-provisioning threshold values for HDP Pool: [%%d] in subsystem.
Explanation	

Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.
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E2201627

Error Message ID	E2201627
Error Message Text	Unknown action '%s' for logging.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201628

Error Message ID	E2201628
Error Message Text	Failed to write a log entry.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201629

Error Message ID	E2201629
Error Message Text	Failed to update log configuration. %s
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220162A

Error Message ID	E220162A
Error Message Text	Failed to retrieve LUN information. %s
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220162B

Error Message ID	E220162B
Error Message Text	Failed to retrieve LUN information for subsystem: [%08d], Error Code: [0x%08X]. %s
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220162C

Error Message ID	E220162C
Error Message Text	Failed to create LUN. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220162D

Error Message ID	E220162D
Error Message Text	Failed to create LUN in subsystem: [%%08d], Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201632

Error Message ID	E2201632
Error Message Text	Failed to present LUN to the host groups. %%ls
Explanation	
Recommended Action	Please confirm host group does exist.

E2201633

Error Message ID	E2201633
Error Message Text	Failed to present LUN: [%%04d] to the host groups, Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please confirm host group does exist.

E2201634

Error Message ID	E2201634
Error Message Text	Failed to present LUN to the iSCSI targets. %%ls
Explanation	
Recommended Action	Please confirm that the subsystem is equipped with iSCSI.

E2201635

Error Message ID	E2201635
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Error Message ID	E2201635
Error Message Text	Failed to present LUN: [%%04d] to the iSCSI targets, Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please confirm that the subsystem is equipped with iSCSI.

E2201636

Error Message ID	E2201636
Error Message Text	Failed to unpresent LUN. %%ls
Explanation	
Recommended Action	Please confirm the LUN is valid.

E2201637

Error Message ID	E2201637
Error Message Text	Failed to unpresent LUN: [%%04d] from the host groups, Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please confirm the LUN is valid and the host group exists.

E2201638

Error Message ID	E2201638
Error Message Text	Failed to unpresent LUN: [%%04d] from the iSCSI targets, Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please confirm the LUN is valid and the host group exists.

E2201639

Error Message ID	E2201639
Error Message Text	Failed to mount LUN. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220163A

Error Message ID	E220163A
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Error Message Text	Failed to mount LUN: [%%04d], Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220163B

Error Message ID	E220163B
Error Message Text	Failed to dismount LUN %%04d of subsystem %%0d. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220163C

Error Message ID	E220163C
Error Message Text	Failed to dismount LUN: [%%04d], Error Code: [0x%%08X]. %%ls"
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220163D

Error Message ID	E220163D
Error Message Text	Failed to unpresent LUN: [%%04d] from all host groups and iSCSI targets. %%ls.
Explanation	
Recommended Action	Please confirm the LUN is valid.

E220163E

Error Message ID	E220163E
Error Message Text	Failed to unpresent LUN: [%%04d] from all host groups and iSCSI targets, Error Code: [0x%%08X]. %%ls.
Explanation	
Recommended Action	Please confirm the LUN is valid.

E2201640

Error Message ID	E2201640
Error Message Text	Failed to create V-Vol. %%ls

Explanation	
Recommended Action	Please provide valid V-Vol number.

E2201641

Error Message ID	E2201641
Error Message Text	Failed to create V-Vol for LU: [%%08d:%%04d], Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please provide valid V-Vol number.

E2201643

Error Message ID	E2201643
Error Message Text	Failed to delete V-Vol. %%ls
Explanation	
Recommended Action	Please provide valid V-Vol number.

E2201644

Error Message ID	E2201644
Error Message Text	Failed to delete V-Vol for LU: [%%08d:%%04d], Error Code: [0x%%08X].
Explanation	
Recommended Action	Please provide valid V-Vol number.

E2201645

Error Message ID	E2201645
Error Message Text	Unknown action '%%ls' for LUN.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201646

Error Message ID	E2201646
Error Message Text	Unknown action '%%ls' for virtual volume.
Explanation	Internet application error.

E2201647

Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.
Error Message ID	E2201647
Error Message Text	Successfully retrieved RAID group information of storage subsystem: [%%08d].
Explanation	
Recommended Action	

E2201648

Error Message ID	E2201648
Error Message Text	Failed to retrieve RAID group information. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E2201649

Error Message ID	E2201649
Error Message Text	Failed to retrieve RAID group information for subsystem: [%%08d]. Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220164A

Error Message ID	E220164A
Error Message Text	Unknown action '%%ls' for RAID group.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220164B

Error Message ID	E220164B
Error Message Text	subsystem: [%%08d] is added to the managed list. UserId=%%ls. LoginStatus=%%d.
Explanation	
Recommended Action	

E220164C

Error Message ID	E220164C
Error Message Text	Failed to add subsystem. %%ls
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E220164D

Error Message ID	E220164D
Error Message Text	Failed to add subsystem, Error Code: [0x%%08X]. LoginStatus: [%%0d]. %%ls
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E220164E

Error Message ID	E220164E
Error Message Text	Failed to remove subsystem. %%ls
Explanation	
Recommended Action	Please confirm the IP addresses are correct.

E220164F

Error Message ID	E220164F
Error Message Text	Failed to remove subsystem, Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please confirm the IP addresses are correct.

E2201650

Error Message ID	E2201650
Error Message Text	Failed to retrieve subsystem information for subsystem: [%%08d]. %%ls
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E2201651

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Error Message ID	E2201651
Error Message Text	Failed to retrieve subsystem information for subsystem: [%%08d], Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E2201652

Error Message ID	E2201652
Error Message Text	Failed to retrieve subsystem information. %%ls
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E2201653

Error Message ID	E2201653
Error Message Text	Failed to retrieve subsystem information, Error Code: [0x%%08X]. %%ls
Explanation	
Recommended Action	Please confirm the IP addresses are correct and the Ethernet connection to the subsystem exists.

E2201654

Error Message ID	E2201654
Error Message Text	Subsystem not found.
Explanation	
Recommended Action	Please provide valid subsystem serial number.

E2201655

Error Message ID	E2201655
Error Message Text	Subsystem not found. Error Code: [0x%%08X].
Explanation	
Recommended Action	Please provide valid Subsystem serial number.

E2201656

Error Message ID	E2201656
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Error Message Text	Unknown action '%s' for subsystem.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201657

Error Message ID	E2201657
Error Message Text	Bad allocation exception occurred while dispatching XML request. %s
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201658

Error Message ID	E2201658
Error Message Text	Exception occurred while dispatching XML request. %s
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2201659

Error Message ID	E2201659
Error Message Text	Unknown exception occurred while dispatching XML request.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220165A

Error Message ID	E220165A
Error Message Text	Invalid input value. %s
Explanation	
Recommended Action	Please provide valid input value for the operation.

E220165B

Error Message ID	E220165B
Error Message Text	Failed to retrieve storage replication information. %s

Explanation	
Recommended Action	Please confirm storage replication is enabled in the subsystem.

E220165C

Error Message ID	E220165C
Error Message Text	LUN value is missing in input parameters.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220165D

Error Message ID	E220165D
Error Message Text	LUN expansion size value is missing in input parameters.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220165E

Error Message ID	E220165E
Error Message Text	Failed to retrieve data pool information. %%ls
Explanation	
Recommended Action	Examine the error messages displayed onscreen and in the log files to determine the cause of the error.

E220165F

Error Message ID	E220165F
Error Message Text	Failed to expand the logical unit. %%ls
Explanation	
Recommended Action	Please confirm the HDP pool has enough space for expand LU operation.

E2202001

Error Message ID	E2202001
Error Message Text	Error occurred when storage performance for subsystem {0} was starting. {1}
Explanation	Internet application error.

Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.
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E2202002

Error Message ID	E2202002
Error Message Text	Error occurred when storage performance was stopping for subsystem {0}. {1}
Explanation	
Recommended Action	Please restart the Connector service to solve the issue. If the error persists, contact your system administrator for assistance.

E2202003

Error Message ID	E2202003
Error Message Text	An exception occurred. {0}
Explanation	
Recommended Action	Examine error message or errors in the log files to determine the cause of the error. Contact administrator for assistance.

E2202005

Error Message ID	E2202005
Error Message Text	Failed to calculate storage performance for {0} component {1} of controller (2) of subsystem {3}. {4}
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2202006

Error Message ID	E2202006
Error Message Text	Failed to calculate storage performance for subsystem {0}. {1}
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2202007

Error Message ID	E2202007
Error Message Text	Storage performance data collection for subsystem {0} has already started.
Explanation	
Recommended Action	Please perform the operation when storage performance is stop.

E2202008

Error Message ID	E2202008
Error Message Text	Storage performance data collection for subsystem {0} is not started.
Explanation	
Recommended Action	Please perform the operation when storage performance is running.

E2202009

Error Message ID	E2202009
Error Message Text	Failed to stop the storage performance collection for subsystem {0}. {1}
Explanation	
Recommended Action	Please restart the Connector service to solve the issue. If the error persists, contact your system administrator for assistance.

E220200B

Error Message ID	E220200B
Error Message Text	Failed to collect {0} storage performance data for subsystem {1}. {2}
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance. Confirm that the command device has been set in the target storage system.

E220200C

Error Message ID	E220200C
Error Message Text	Failed to add the subsystem object to the system. The file server does not belong to the physical storage of subsystem {0}. {1}
Explanation	The HNAS entered in File Information does not belong to the physical storage of the subsystem entered in Block Information.
Recommended Action	Enter the HNAS information on the subsystem entered in Block Information (on the chassis of the subsystem you entered when H-UVM support is on).

E220200E

Error Message ID	E220200E
Error Message Text	Failed to add the subsystem object to the system. The file server is not a Unified NAS module. {0}
Explanation	The HNAS you entered in File Information is not configured as Unified.

Recommended Action	Enter information for a Unified-configured HNAS in the File information column.
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E220200F

Error Message ID	E220200F
Error Message Text	Failed to add the subsystem object to the system. The file server is a Unified NAS module.
Explanation	The HNAS you entered is not configured as Gateway.
Recommended Action	Enter information for HNAS configured as HNAS.

E2202010

Error Message ID	E2202010
Error Message Text	Failed to add the subsystem object to the system. Please enter the file information. {0}
Explanation	No file information was entered .
Recommended Action	Please enter information for HNAS in the File Information fields.

E2202011

Error Message ID	E2202011
Error Message Text	Failed to generate xml request object. {0}
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2202012

Error Message ID	E2202012
Error Message Text	Failed to add the Subsystem object to the system. {0}
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, please contact your administrator for assistance.

E2202013

Error Message ID	E2202013
Error Message Text	The following Operations Manager SDK does not exist in the installation directory. {0} See the user's guide for more information.
Explanation	Operations Manager SDK not exist in installation directory.

Recommended Action	<ol style="list-style-type: none"> Copy the following .dll files for the Operations Manager SDK to the installation directory of storage adapter: <ul style="list-style-type: none"> Microsoft.EnterpriseManagement.OperationsManager.dll Microsoft.EnterpriseManagement.Core.dll Microsoft.EnterpriseManagement.Runtime.dll Restart the MMC. <p>For more information, see Post-installation Tasks.</p>
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E2202014

Error Message ID	E2202014
Error Message Text	Subsystem {0} not found.
Explanation	
Recommended Action	Please enter correct subsystem serial number.

E2202016

Error Message ID	E2202016
Error Message Text	Failed to start a new thread to collect performance data for subsystem {0}. {1}
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2202017

Error Message ID	E2202017
Error Message Text	Failed to query storage pool information of subsystem {0}.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220202C

Error Message ID	E220202C
Error Message Text	Failed to deserialize xml string back to data objects. {0}
Explanation	Please confirm the LUN for a new snapshot volume is available.
Recommended Action	Examine error message or errors in the log files to determine the cause of the error.

E220202F

Error Message ID	E220202F
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Error Message Text	Storage Performance is stopped.
Explanation	The operation is invalid as storage performance is already stopped.
Recommended Action	

E2202038

Error Message ID	E2202038
Error Message Text	Failed to create WMI namespace.
Explanation	Failed to create namespace "root\Hitachi" of WMI repository .
Recommended Action	Confirm the access authorization of namespace "root" from the WMI security setting, and if the permission for rewriting is not assigned to a user who performs MMC, assign the permission.

E2204000

Error Message ID	E2204000
Error Message Text	VDS Service for Disk Management is not loaded.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204001

Error Message ID	E2204001
Error Message Text	VDS Service for Disk Management is not ready.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204002

Error Message ID	E2204002
Error Message Text	VDS Provider for Disk Management is not available.
Explanation	
Recommended Action	Please confirm the operating system is Windows 2012 server or higher.

E2204003

Error Message ID	E2204003
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Error Message Text	VDS Service for Disk Management initialization failed.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204004

Error Message ID	E2204004
Error Message Text	Disk Management: Query Disk failed in Disk Management.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204005

Error Message ID	E2204005
Error Message Text	Disk Management: Enumerate Disk failed in Disk Management. No Disk.
Explanation	
Recommended Action	Please provide valid LUN or mount point.

E2204006

Error Message ID	E2204006
Error Message Text	Disk Management: Enumerate Disk failed in Disk Management.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204007

Error Message ID	E2204007
Error Message Text	Disk Management: Find Disk failed in Disk Management.
Explanation	
Recommended Action	Please provide valid LUN or mount point.

E2204008

Error Message ID	E2204008
Error Message Text	Disk Management: Find Disk failed in Disk Management. Command Device has problem.

Explanation	
Recommended Action	Please confirm the Command Device is functional.

E2204009

Error Message ID	E2204009
Error Message Text	VDS Provider for Disk Management is not loaded.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220400A

Error Message ID	E220400A
Error Message Text	Disk Management: Failed to get the disk property.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220400B

Error Message ID	E220400B
Error Message Text	Disk Management: Unallocated disk is not found.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220400C

Error Message ID	E220400C
Error Message Text	Disk Management: Initializing the disk failed.
Explanation	
Recommended Action	Please confirm the disk is not already initialized.

E220400D

Error Message ID	E220400D
Error Message Text	Disk Management: Creation of partition failed.
Explanation	Internet application error.

E220400E

Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.
Error Message ID	E220400E
Error Message Text	Disk Management: Invalid volume interface.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E220400F

Error Message ID	E220400F
Error Message Text	Disk Management: Formatting the disk failed.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204010

Error Message ID	E2204010
Error Message Text	Disk Management: Mount volume failed.
Explanation	
Recommended Action	Please provide valid mount point.

E2204011

Error Message ID	E2204011
Error Message Text	Disk Management: Dismount volume failed.
Explanation	
Recommended Action	Please provide valid mount point.

E2204012

Error Message ID	E2204012
Error Message Text	Disk Management: Find volume failed.
Explanation	
Recommended Action	Please confirm the LUN is valid.

E2204013

Error Message ID	E2204013
Error Message Text	Disk Management: Found disk is not matched.
Explanation	
Recommended Action	Please confirm the LUN is valid.

E2204014

Error Message ID	E2204014
Error Message Text	Disk Management: Problem in finding disk - Disk object is not initialized.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204015

Error Message ID	E2204015
Error Message Text	Disk Management: Creating Mount folder failed.
Explanation	
Recommended Action	Please confirm the current user has permission to create a directory in the current location.

E2204016

Error Message ID	E2204016
Error Message Text	Disk Management: Disk Not ready
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204017

Error Message ID	E2204017
Error Message Text	Disk Management: Failed to get free space.
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, contact your system administrator for assistance.

E2204018

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Error Message ID	E2204018
Error Message Text	Disk Management: The volume corresponding to parameter value for 'MountPoint' not found.
Explanation	
Recommended Action	Please confirm the LUN is valid.

E2204019

Error Message ID	E2204019
Error Message Text	Disk Management: The specified LU has multiple partitions.
Explanation	
Recommended Action	

E220401A

Error Message ID	E220401A
Error Message Text	Disk Management: The specified LU has more than one mount point.
Explanation	
Recommended Action	

E220401B

Error Message ID	E220401B
Error Message Text	Disk Management: The specified LU does not have a partition created on it.
Explanation	
Recommended Action	

E2205000

Error Message ID	E2205000
Error Message Text	Failed to init the library. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205001

Error Message ID	E2205001
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Error Message Text	Failed to init the library. The error catalog failed to load.
Explanation	The API error catalog (HiStorErrors.dll) fails to load.
Recommended Action	Verify HiStorErrors.dll exists in the SCOM adapter installation folder. If it does not, run the repair installation.

E2205002

Error Message ID	E2205002
Error Message Text	Failed to init the library. A supported CCI version could not be found on the system.
Explanation	If the working directory for HORCM instance automation for block RAID devices is not NULL or empty and Command Control Interface (CCI) is undetectable.
Recommended Action	Restart the MMC and the Connector service.

E2205003

Error Message ID	E2205003
Error Message Text	Failed to init the library. The library has not been initialized yet.
Explanation	If the directory that contains the catalog message files is NULL or empty, or if the directory that contains necessary specific binaries for successful program operation is non-NULL and empty.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205004

Error Message ID	E2205004
Error Message Text	Failed to init the library. The library has already been initialized.
Explanation	The library has already been successfully initialized.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205005

Error Message ID	E2205005
Error Message Text	Failed to init the library. There is a version mismatch between the main HiStor library and the common HiStor library.
Explanation	The version for the main HiStor Block library does not match the version of the Common HiStor library.
Recommended Action	Verify the HiStorCommon.dll and HiStorBlock.dll file versions. If they are different, run the repair installation.

E2205006

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Error Message ID	E2205006
Error Message Text	Failed to close the library. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205007

Error Message ID	E2205007
Error Message Text	Failed to set A HORCM instance. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205008

Error Message ID	E2205008
Error Message Text	Failed to set A HORCM instance. The library has not been initialized yet.
Explanation	Occurs if either given instance is outside of the allowed range, or if the maximum value is less than the minimum value.
Recommended Action	If error message E220500-E2205005 appears, follow the recommended action.

E2205009

Error Message ID	E2205009
Error Message Text	Failed to set A HORCM instance. One or more parameters is not valid.
Explanation	The library has not yet been initialized.
Recommended Action	If error message E220500-E2205005 appears, follow the recommended action.

E220500A

Error Message ID	E220500A
Error Message Text	Failed to add the Subsystem object to the system. The login failed. {0}
Explanation	The authentication for the storage device failed.
Recommended Action	Verify the username and password.

E220500B

Error Message ID	E220500B
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Error Message Text	Failed to add the Subsystem object to the system. Authentication is required and was not provided. {0}
Explanation	Failed to add the Subsystem object to the system. Authentication is required and was not provided.
Recommended Action	

E220500C

Error Message ID	E220500C
Error Message Text	Failed to configure array monitoring. A supported CCI version was not found. After installing CCI, it may be necessary to stop and re-start both the Connector service (if running) and this MMC snap-in before this product will function normally. {0}
Explanation	Failed to configure array monitoring. A supported CCI version was not found. After installing CCI, it may be necessary to stop and re-start both the Connector service (if running) and this MMC snap-in before this product will function normally.
Recommended Action	Restart the MMC. If the Connector service is starting up, restart it.

E220500D

Error Message ID	E220500D
Error Message Text	Failed to add the Subsystem object to the system. A command device could not be found for the device. {0}
Explanation	Failed to add the Subsystem object to the system. A command device could not be found for the device.
Recommended Action	Allow the command device for the storage system to be recognized. Verify the HORCM is installed.

E220500E

Error Message ID	E220500E
Error Message Text	Failed to add the Subsystem object to the system. A HORCM instance could not be started for the device. {0}
Explanation	Failed to add the Subsystem object to the system. A HORCM instance could not be started for the device.
Recommended Action	Verify horcmstart.exe exists in the HORCM installation folder. If it does not, reinstall the HORCM.

E220500F

Error Message ID	E220500F
Error Message Text	Failed to add the Subsystem object to the system. The device class is incorrect for the given descriptor type.
Explanation	Failed to add the Subsystem object to the system. The device class is incorrect for the given descriptor type. {0}

E2205010

Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.
Error Message ID	E2205010
Error Message Text	Failed to add the Subsystem object to the system. One or more parameters is not valid. {0}
Explanation	Occurs when: <ul style="list-style-type: none"> • Descriptor or pDevice is NULL. • The given Descriptor is not valid. • The given instance is outside the range 0-2047 and is not equal to any of the automated instance flags.
Recommended Action	Enter a username and password.

E2205011

Error Message ID	E2205011
Error Message Text	Failed to add the Subsystem object to the system. A supported Java version could not be found on the system.
Explanation	"A supported and required version of Java is not available in the system. In Windows, x64 HiStor requires x64 Java and x86 HiStor requires x86 Java. For information on supported Java versions, see Prerequisites." {0}
Recommended Action	Verify that the installed version of Java is supported. If it is not, install a version that is supported.

E2205012

Error Message ID	E2205012
Error Message Text	Failed to add the Subsystem object to the system. The login credentials do not have enough privileges to manage the storage array. {0}
Explanation	The account for an authenticated subsystem does not have the privileges to for use via the API.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205013

Error Message ID	E2205013
Error Message Text	Failed to add the Subsystem object to the system. A HORCM instance could not be started for the device because no free HORCM instances are available. {0}
Explanation	The HORCM instance was set to an automated instance flag, but there are no available instances where that can be used.
Recommended Action	Verify there is space on the disk where the SCOM adapter is installed.

E2205014

Error Message ID	E2205014
Error Message Text	Failed to add the Subsystem object to the system. A connection to the storage device could not be made. {0}
Explanation	The API was unable to connect to the storage device.
Recommended Action	Verify the subsystem IP address is correct.

E2205015

Error Message ID	E2205015
Error Message Text	Failed to add the Subsystem object to the system. This functionality or a requested feature of this functionality is not supported for this storage device. {0}
Explanation	The device is a DF device, this error occurs.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205016

Error Message ID	E2205016
Error Message Text	Failed to add the Subsystem object to the system. The Subsystem Model and Selected Model are different. {0}
Explanation	Confirm that model of the Subsystem matches the selected model.
Recommended Action	Verify that the selected model and the model of the entered subsystem are the same.

E2205017

Error Message ID	E2205017
Error Message Text	Failed to add the Subsystem object to the system. The Subsystem is not supported model.
Explanation	AMS is not supported device.
Recommended Action	Verify that the information for the entered subsystem is for a supported subsystem.

E2205018

Error Message ID	E2205018
Error Message Text	Failed to remove the Subsystem object from the system. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205019

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Error Message ID	E2205019
Error Message Text	Failed to discover Subsystem object. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance. If error message text {0} "An unknown error occurred" appears, verify the connection between the SCOM adapter and the monitoring target subsystem(s). Restart the connector service.

E220501A

Error Message ID	E220501A
Error Message Text	Failed to discover Subsystem object. Authentication is required and was not provided.
Explanation	Authentication is required for the storage device and was not provided.
Recommended Action	Enter a username and password.

E220501B

Error Message ID	E220501B
Error Message Text	Failed to discover Subsystem object. A supported CCI version could not be found on the system. After installing CCI, it's necessary to stop and re-start the Connector before monitoring will function normally.
Explanation	A supported version of the Command Control Interface (CCI) is needed in the system and could not be found.
Recommended Action	Restart the Connector service.

E220501C

Error Message ID	E220501C
Error Message Text	Failed to discover Subsystem object. A command device could not be found for the device.
Explanation	No local command device could be found for the device. Possibly a specific command device was designated and could not be found.
Recommended Action	Allow the command device for the storage system to be recognized.

E220501D

Error Message ID	E220501D
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Error Message Text	Failed to discover Subsystem object. A HORCM instance could not be started for the device.
Explanation	The HORCM instance was set to an automatic instance flag, but the instance could not be started.
Recommended Action	Verify horcmstart.exe exists in the HORCM installation folder. If it does not, reinstall the HORCM.

E220501E

Error Message ID	E220501E
Error Message Text	Failed to discover Subsystem object. The device class is incorrect for the given descriptor type.
Explanation	Occurs when one attempts to add a DF device using a command device and a RAID descriptor.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220501F

Error Message ID	E220501F
Error Message Text	Failed to discover Subsystem object. One or more parameters is not valid.
Explanation	Occurs when: <ul style="list-style-type: none"> • Descriptor or pDevice is NULL. • The given Descriptor is not valid. • The given instance is outside the range 0-2047 and is not equal to any of the automated instance flags.
Recommended Action	Enter a username and password.

E2205020

Error Message ID	E2205020
Error Message Text	Failed to discover Subsystem object. A supported Java version could not be found on the system.
Explanation	A supported and required version of Java is not available in the system. In Windows, x64 HiStor requires x64 Java and x86 HiStor requires x86 Java. For information on supported Java versions, see Prerequisites.
Recommended Action	Verify that the installed version of Java is supported. If it is not, install a version that is supported.

E2205021

Error Message ID	E2205021
Error Message Text	Failed to discover Subsystem object. The login credentials do not have enough privileges to manage the storage array.

Explanation	The account for an authenticated subsystem does not have the privileges to for use via the API.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205022

Error Message ID	E2205022
Error Message Text	Failed to discover Subsystem object. A HORCM instance could not be started for the device because no free HORCM instances are available.
Explanation	The HORCM instance was set to an automated instance flag, but there are no available instances where that can be used.
Recommended Action	Verify there is space on the disk where the SCOM adapter is installed.

E2205023

Error Message ID	E2205023
Error Message Text	Failed to discover Subsystem object. A connection to the storage device could not be made.
Explanation	The API was unable to connect to the storage device.
Recommended Action	Verify the subsystem IP address is correct.

E2205024

Error Message ID	E2205024
Error Message Text	Failed to discover Subsystem object. This functionality or a requested feature of this functionality is not supported for this storage device.
Explanation	The device is a DF device, this error occurs.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205025

Error Message ID	E2205025
Error Message Text	Failed to get controller info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205026

Error Message ID	E2205026
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Error Message Text	Failed to get controller port info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205027

Error Message ID	E2205027
Error Message Text	Failed to get drive info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205028

Error Message ID	E2205028
Error Message Text	Failed to get drive info. This functionality or a requested feature of this functionality is not supported for this storage device.
Explanation	The array location was not provided to the descriptor for a RAID device.
Recommended Action	Reinstall the SCOM adapter.

E2205029

Error Message ID	E2205029
Error Message Text	Failed to get EVS info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220502A

Error Message ID	E220502A
Error Message Text	Failed to get FC host port info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220502B

Error Message ID	E220502B
Error Message Text	Failed to get file server Node info. {0}

Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220502C

Error Message ID	E220502C
Error Message Text	Failed to get file system info. {0}

Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220502D

Error Message ID	E220502D
Error Message Text	Failed to get link aggregation info. {0}

Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220502E

Error Message ID	E220502E
Error Message Text	Failed to get link aggregation Port info. {0}

Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220502F

Error Message ID	E220502F
Error Message Text	Failed to get logical unit info. {0}

Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205030

Error Message ID	E2205030
Error Message Text	Failed to get quorum device info. {0}

Explanation	HiStor API error.
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Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.
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E2205031

Error Message ID	E2205031
Error Message Text	Failed to get storage pool info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205032

Error Message ID	E2205032
Error Message Text	Failed to get storage pool info. One or more parameters is not valid.
Explanation	Type of array group to be retrieved is invalid and the device is a DF device.
Recommended Action	Reinstall the SCOM adapter.

E2205033

Error Message ID	E2205033
Error Message Text	Failed to get subsystem info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205034

Error Message ID	E2205034
Error Message Text	Failed to get HNAS snapshot info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205035

Error Message ID	E2205035
Error Message Text	Failed to get remote storage replication info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205036

Error Message ID	E2205036
Error Message Text	Failed to get storage replication info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205037

Error Message ID	E2205037
Error Message Text	Failed to get controller port performance info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205038

Error Message ID	E2205038
Error Message Text	Failed to get VSP and HUS_VM controller port performance info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205039

Error Message ID	E2205039
Error Message Text	Failed to get HDP pool performance info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220503A

Error Message ID	E220503A
Error Message Text	Failed to get HDP pool performance info. This functionality or a requested feature of this functionality is not supported for this storage device.
Explanation	The device is not an HUS device.
Recommended Action	Reinstall the SCOM adapter.

E220503B

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Error Message ID	E220503B
Error Message Text	Failed to get logical unit performance info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220503C

Error Message ID	E220503C
Error Message Text	Failed to get RAID group performance info. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E220503D

Error Message ID	E220503D
Error Message Text	Failed to get RAID group performance info. This functionality or a requested feature of this functionality is not supported for this storage device.
Explanation	The device is not a HUS device.
Recommended Action	Re-register the subsystem.

E220503E

Error Message ID	E220503E
Error Message Text	Failed to get RAID group performance info. One or more parameters is not valid.
Explanation	eType is invalid and the device is an HUS device.
Recommended Action	Re-register the subsystem.

E220503F

Error Message ID	E220503F
Error Message Text	Failed to get alert info. {0}
Explanation	HiStor API error.

Recommended Action	<ul style="list-style-type: none"> Verify there are no issues with the network connecting the storage subsystem. Verify if the SVP is currently restarting. Alert collection will fail during a restart, thus causing this error. Verify that the account for the subsystem has not been deleted. If the account has been deleted, re-register the storage subsystem with the SCOM adapter. Verify Java has been installed. This error will appear if Java has been uninstalled.
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E2205040

Error Message ID	E2205040
Error Message Text	Failed to get alert info. One or more parameters is not valid.
Explanation	If the event flags do not include any event types.
Recommended Action	Reinstall the SCOM adapter.

E2205041

Error Message ID	E2205041
Error Message Text	Failed to get alert info. This functionality or a requested feature of this functionality is not supported for this storage device.
Explanation	Occurs when the device is a RAID device that was created without the "array location" parameter set.
Recommended Action	Reinstall the SCOM adapter.

E2205042

Error Message ID	E2205042
Error Message Text	Failed to set a HORCM instance. A supported CCI version could not be found on the system.
Explanation	This occurs for a Block API that requires automating HORCM instances, but HORCM instance automation is not enabled, because no HORCM working directory was set during Block::CHiStorLibrary::InitializeLibrary().
Recommended Action	Install the HORCM.

E2205043

Error Message ID	E2205043
Error Message Text	Failed to configure array monitoring. The detected array model (UNKNOWN) is not supported. {0}
Explanation	The device is not supported device.

Recommended Action	Verify that the information for the entered subsystem is for a supported subsystem.
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E2205044

Error Message ID	E2205044
Error Message Text	Failed to add the Subsystem object to the system. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

E2205045

Error Message ID	E220545
Error Message Text	In some environments, it's possible for the HORCM instance numbers used with command devices to overlap in ways which can cause command device I/O errors. Please review the MinHORCMInstance and MaxHORCMInstance parameters in HiScomConnectorService.exe.config, and see the User's Guide for more information. If command device I/O errors continue to appear despite the absence of HORCM instance number overlap issues, the same steps used to diagnose any other storage I/O error should be followed.
Explanation	Command device I/O error.
Recommended Action	Please review the MinHORCMInstance and MaxHORCMInstance parameters in HiScomConnectorService.exe.config, and see the User's Guide for more information. If command device I/O errors continue to appear despite the absence of HORCM instance number overlap issues, the same steps used to diagnose any other storage I/O error should be followed.

E2205046

Error Message ID	E220546
Error Message Text	Failed to discover Subsystem object. The Subsystem Model was changed. (Array Serial #: {0})
Explanation	The model for subsystem Array Serial #: {0} has changed. (The subsystem was upgraded during operation.)
Recommended Action	<ol style="list-style-type: none"> 1. Start the Hitachi Storage Connector Configuration tool. 2. Use the Remove Subsystem function to remove the subsystem that is shown as UNKNOWN. 3. Use the Add Storage function to add subsystem Array Serial #: {0}.

E220A000

Error Message ID	E220A000
Error Message Text	Connector service configuration file HiScomConnectorService.exe.config is not found.

Explanation	The HiScomConnectorService.exe.config file may be missing in the installation directory.
Recommended Action	Reinstall the Hitachi SCOM MP to recover the missing files.

E220A001

Error Message ID	E220A001
Error Message Text	Failed to open Connector service configuration file HiScomConnectorService.exe.config. {0}
Explanation	The HiScomConnectorService.exe.config file may be missing in the installation directory.
Recommended Action	Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A002

Error Message ID	E220A002
Error Message Text	Invalid storage performance data collection interval value '\{0}\'.
Explanation	Please enter valid interval value between {1} to {2} seconds.
Recommended Action	Input a valid value for the storage performance data collection interval.

E220A003

Error Message ID	E220A003
Error Message Text	ContinuousPerformanceDataCollectionDelayInSecond value is missing in HiScomConnectorService.exe.config file.
Explanation	ContinuousPerformanceDataCollectionDelayInSecond value is missing in HiScomConnectorService.exe.config file.
Recommended Action	Open the Hitachi MMC Snapin configuration application to verify the settings. Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A004

Error Message ID	E220A004
Error Message Text	Internal error.
Explanation	Internet application error.
Recommended Action	Restart the Hitachi MMC Snapin configuration application. If the error persists, contact your administrator for assistance.

E220A008

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Error Message ID	E220A008
Error Message Text	Failed to start service.\n{0}
Explanation	The error could be caused by the user account for the Hitachi Connector service has insufficient security privilege or the HiScomConnectorService.exe.config file is corrupted.
Recommended Action	Verify the user account and use the Hitachi MMC Snapin configuration application to verify the settings. If the error persists, contact the administrator for assistance.

E220A00A

Error Message ID	E220A00A
Error Message Text	Failed to query management pack {0} version from Operation Manager '\{1}\'. {2}
Explanation	The operation manager does not have the Hitachi MP installed.
Recommended Action	Open Hitachi MMC Snapin configuration application to verify the settings. Restart the Hitachi Connector Windows service. If the error persists, contact the administrator for assistance.

E220A00B

Error Message ID	E220A00B
Error Message Text	{0} Windows services could not be started. {1} {2}
Explanation	The Hitachi Connector may not be installed successfully or the login user does not have enough security permission to allow the Hitachi MMC Snapin to make connection to the Windows Service.
Recommended Action	Verify the Hitachi Connector installation using the Windows Service manager. Verify the login user has enough security privilege to start and stop a Windows service.

E220A00C

Error Message ID	E220A00C
Error Message Text	{0} Windows services could not be stopped. {1}
Explanation	The Hitachi Connector may not be installed successfully or the login user does not have enough security permission to allow the Hitachi MMC Snapin to make connection to the Windows Service.
Recommended Action	Verify the Hitachi Connector installation using the Windows Service manager. Verify the login user has enough security privilege to start and stop a Windows service.

E220A00D

Error Message ID	E220A00D
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Error Message Text	Invalid Operation Manager host name '{0}'.
Explanation	Please enter a valid IP address or a host name between 1 to 63 characters\n- Alphanumeric characters and special symbols '-', '_', '.', ''.
Recommended Action	Input a valid Operation Manager server name in the Hitachi MMC Snapin configuration application.

E220A00E

Error Message ID	E220A00E
Error Message Text	OperationManager value is missing in HiScomConnectorService.exe.config file.
Explanation	Some settings are missing in the HiScomConnectorService.exe.config file.
Recommended Action	Open the Hitachi MMC Snapin configuration application to verify the settings. Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A00F

Error Message ID	E220A00F
Error Message Text	Please enter valid refresh rate value between 1 to 1440 minutes.
Explanation	Invalid management pack refresh rate value '{0}'.
Recommended Action	Input a valid refresh rate for updating the management pack with the update monitoring component data.

E220A010

Error Message ID	E220A010
Error Message Text	ManagementPackRefreshRate value is missing in HiScomConnectorService.exe.config file.
Explanation	ManagementPackRefreshRate value is missing in HiScomConnectorService.exe.config file.
Recommended Action	Open the Hitachi MMC Snapin configuration application to verify the settings. Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A011

Error Message ID	E220A011
Error Message Text	Failed to read Connector service settings from HiScomConnectorService.exe.config file. {0}

Explanation	Some of settings are missing or invalid in the HiScomConnectorService.exe.config file.
Recommended Action	Open the Hitachi MMC Snapin configuration application to verify the settings. Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A012

Error Message ID	E220A012
Error Message Text	Please enter a valid value between 1 to 1440 minutes.
Explanation	Invalid refresh rate.
Recommended Action	Input a valid refresh rate for updating the management pack with the update monitoring component data.

E220A014

Error Message ID	E220A014
Error Message Text	Failed to save the Operation Manager name to the configuration file. {0}
Explanation	Close any applications that may have locked the configuration file. Open the Hitachi MMC Snapin configuration application to verify the settings. Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.
Recommended Action	Close the applications that may lock the configuration file. Open Hitachi MMC Snapin configuration application to verify the settings. Reinstall Hitachi SCOM MP if the error is not resolved. If the error persists, contact the administrator for assistance.

E220A015

Error Message ID	E220A015
Error Message Text	Invalid storage performance data collection interval value \'{0}\'. Please enter valid interval value between {1} to {2} seconds.
Explanation	
Recommended Action	Input a valid value for the storage performance data collection interval.

E220A016

Error Message ID	E220A016
Error Message Text	Failed to save the ContinuousPerformanceDataCollectionDelayInSeconds value to the configuration file {0}.

Explanation	The HiScmConnectorService.exe.config file may be exclusively locked by the other application, so some settings are missing or invalid in the HiScmConnectorService.exe.config file.
Recommended Action	Close any applications that may have locked the configuration file. Open the Hitachi MMC Snapin configuration application to verify the settings. Repair the installation using the SCOM Storage Installer to retrieve the HiScmConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A018

Error Message ID	E220A018
Error Message Text	Failed to test connection to Operation Manager. {0}
Explanation	The Operation Manager is not reachable or the login user does not have sufficient security privilege to allow the MMC snapin to make connection to the Operation Manager server.
Recommended Action	Verify the Ethernet connection and the user security privilege. If the MP version is not compatible, restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A019

Error Message ID	E220A019
Error Message Text	Fatal error occurred while uninstalling management pack and the connector settings. {0}
Explanation	The Operation Manager is not reachable or the login user does not have sufficient security privilege to allow the MMC snapin to make a connection to the Operation Manager server.
Recommended Action	Verify the Ethernet connection, the health status of the Operation Manager and your user security privileges. Verify the database capacity. If it is full, increase the capacity, then try uninstalling the management packs again. If the error persists, contact your system administrator for assistance.

E220A01B

Error Message ID	E220A01B
Error Message Text	Fatal error occurred when performing operation {0}. {1}
Explanation	Internet application error.
Recommended Action	Restart the Hitachi MMC Snapin configuration application. If the error persists, contact your administrator for assistance.

E220A01C

Error Message ID	E220A01C
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Error Message Text	Failed reading configuration file. {0}
Explanation	
Recommended Action	Verify if the login user has sufficient Windows security privileges to run the Hitachi MMC snapin application. Verify if the HiScomConnectorService.exe.config, HiSystemCenter.config and HiConfigurationSnapin.dll.config files exist in the installation directory. Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A01D

Error Message ID	E220A01D
Error Message Text	Failed to initialize snap-in. {0}
Explanation	Verify Windows MMC Snapin is in working condition.
Recommended Action	Restart the Hitachi MMC Snapin configuration application. If the error persists, contact your administrator for assistance.

E220A01E

Error Message ID	E220A01E
Error Message Text	Failed to discover the configured subsystems. {0}
Explanation	The error is caused by subsystem session timeout.
Recommended Action	The error will be resolved automatically. To minimize the recurrence of the error, increase the session timeout value in the subsystem. If the error persists, contact the administrator for assistance.

E220A020

Error Message ID	E220A020
Error Message Text	Invalid IP address. Please enter Controller 0 IP address in this format : xxx.xxx.xxx.xxx.
Explanation	Please enter Controller 0 IP address in this format : xxx.xxx.xxx.xxx.
Recommended Action	Input a valid IP address for the controller 0.

E220A021

Error Message ID	E220A021
Error Message Text	Invalid IP address. Enter Controller 1 IP address in this format: xxx.xxx.xxx.xxx.
Explanation	Enter Controller 1 IP address in this format: xxx.xxx.xxx.xxx.

E220A022

Recommended Action	Input a valid IP address for the controller 1.
Error Message ID	E220A022
Error Message Text	Invalid subsystem user id. Please enter valid user id between 1 to 256 characters including alphanumeric characters and special symbols. {0}
Explanation	Please enter valid user id between 1 to 256 characters - alphanumeric characters and special symbols !"#%&'()*+,-./:;<=>?@\[\]\^_`{ }~
Recommended Action	Input a valid user ID for the subsystem.

E220A023

Error Message ID	E220A023
Error Message Text	Invalid subsystem password. Please enter valid password between 1 to 256 characters including alphanumeric characters and special symbols. {0}
Explanation	Please enter valid password between 1 to 256 characters - alphanumeric characters and special symbols !"#%&'()*+,-./:;<=>?@\[\]\^_`{ }~
Recommended Action	Input a valid user password for the subsystem.

E220A024

Error Message ID	E220A024
Error Message Text	Invalid SVP IP address. Enter the IP address in this format: xxx.xxx.xxx.xxx.
Explanation	Enter IP address in this format: xxx.xxx.xxx.xxx.
Recommended Action	Input a valid IP address for SVP.

E220A025

Error Message ID	E220A025
Error Message Text	Invalid SVP User Name. Enter a value between 1 and 256 characters in length including alphanumerics and special symbols. {0}
Explanation	Enter valid user id between 1 to 256 characters - alphanumeric characters and special symbols !"#%&'()*+,-.=@\^_`{ }~
Recommended Action	Enter a valid user ID for the subsystem.

E220A026

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Error Message ID	E220A026
Error Message Text	Invalid SVP password. Enter a valid password between 1 to 256 characters including alphanumeric characters and special symbols. {0}
Explanation	Enter valid password between 1 to 256 characters - alphanumeric characters and special symbols !#\$%&'()*+-.=@\^_
Recommended Action	Enter a valid password for the subsystem.

E220A027

Error Message ID	E220A027
Error Message Text	Invalid VSP subsystem serial number. Enter serial number in this format : xxxxx.
Explanation	Invalid VSP subsystem serial number
Recommended Action	Input a valid serial number for the VSP subsystem.

E220A028

Error Message ID	E220A028
Error Message Text	Failed to refresh connector configuration settings due to SubsystemListFormViewControl is missing.
Explanation	Internet application error.
Recommended Action	Restart the Hitachi SCOM MMC Snapin configuration application. If the error persists, contact the administrator for assistance.

E220A029

Error Message ID	E220A029
Error Message Text	Error occurred when checking the Connector service status. {0}
Explanation	This is caused by internal application error. Restart the Hitachi MMC Snapin configuration application.
Recommended Action	If the error persists, contact the administrator for assistance.

E220A02A

Error Message ID	E220A02A
Error Message Text	Fatal error while stopping connector windows service. {0}
Explanation	The error could be caused by the insufficient permission of the user ID, the Hitachi Connector Windows service is removed, or Windows server issue.

Recommended Action	Verify the status of Hitachi Connector service using Windows Service manager. Re-install the Hitachi SCOM MP if the Hitachi Connector Windows service cannot be managed using the Windows Service manager.
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E220A02B

Error Message ID	E220A02B
Error Message Text	Failed to query the Hitachi Snapin installation directory. {0}
Explanation	The configuration of the Hitachi MMC Snapin is corrupted or missing.
Recommended Action	Reinstall the installation using the SCOM Storage Installer. If the error persists, contact your administrator for assistance.

E220A02C

Error Message ID	E220A02C
Error Message Text	Failed to read ConnectorServiceStatusMonitorInterval from the application configuration file.
Explanation	Configuration value for ConnectorServiceStatusMonitorInterval in the HiScomConnectorService.exe.config file.
Recommended Action	Open the Hitachi MMC Snapin configuration application to verify the settings. Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A02D

Error Message ID	E220A02D
Error Message Text	Hitachi Storage Management Pack {0} does not exist in the Operation Manager in '{1}'.
Explanation	The operation manager does not have the Hitachi MP installed.
Recommended Action	Open Hitachi MMC Snapin configuration application to verify the settings. Restart the Hitachi Connector Windows service. If the error persists, contact the administrator for assistance.

E220A02F

Error Message ID	E220A02F
Error Message Text	Failed to submit performance data to the Operation Manager. {0}
Explanation	Failed to submit performance data to the Operation Manager. {0}
Recommended Action	Check the Windows Application event log for more information.

E220A037

Error Message ID	E220A037
Error Message Text	Failed to query subsystem(s) and send data to the SCOM server. Error={0}. Type={1}.
Explanation	The subsystem or the Operation manager may be offline.
Recommended Action	Verify if both of the subsystem and the Operation Manager are online and reachable. Contact the administrator for assistance.

E220A038

Error Message ID	E220A038
Error Message Text	Failed to reconnect to operation manager (0). Error={1}.
Explanation	The connection to the Operation Manager is broken or the Hitachi MP is corrupted or missing.
Recommended Action	Verify the Operation Manager status is healthy and accessible via the network. Use the Hitachi MMC Snapin configuration application to stop the Hitachi Connector service and uninstall the MP. Restart the Connector service. If the error persists, contact the administrator for assistance.

E220A039

Error Message ID	E220A039
Error Message Text	Internet application error.
Explanation	Error occurred in GetDriveDisplayLocation. Location={0}. {1}
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A03A

Error Message ID	E220A03A
Error Message Text	Monitoring class {0} does not have the property {1} of the input object. {2}
Explanation	Internet application error.
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A03C

Error Message ID	E220A03C
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Error Message Text	Fatal error : {0} Type={1}.
Explanation	Internet application error.
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A03D

Error Message ID	E220A03D
Error Message Text	Failed to start the connector. {0}
Explanation	The Operation Manager is not reachable.
Recommended Action	Verify the Ethernet connection and the Operation Manager status.

E220A03E

Error Message ID	E220A03E
Error Message Text	Failed to create event log source for Hitachi Storage connector for Operation Manager. {0}
Explanation	Verify if the Windows Application event log has not reached the max size and is in operational condition.
Recommended Action	Restart Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A040

Error Message ID	E220A040
Error Message Text	Failed to write application event log. Event log ID: [{0}]. Event log message: [{1}]. {2}
Explanation	The error can be caused when the Windows Application event log is full and out of space and the user credential for the Hitachi Connector service does not have sufficient permission to write an Application event log.
Recommended Action	

E220A041

Error Message ID	E220A041
Error Message Text	There is no connection to the operation manager.
Explanation	The Operation Manager is not accessible.

Recommended Action	Verify the Ethernet connection. If the error persists, contact the administrator for assistance.
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E220A042

Error Message ID	E220A042
Error Message Text	Error occurred when checking whether the management pack is installed. {0}.
Explanation	The Operation Manager is not accessible.
Recommended Action	Verify the Ethernet connection. If the error persists, contact the administrator for assistance.

E220A043

Error Message ID	E220A043
Error Message Text	Error occurred when importing the management pack to the SCOM server. Error={0}.
Explanation	The Operation Manager is not accessible.
Recommended Action	Verify the Ethernet connection. If the error persists, contact the administrator for assistance.

E220A044

Error Message ID	E220A044
Error Message Text	Connector settings is not found in the Operation Manager. {0}
Explanation	
Recommended Action	

E220A045

Error Message ID	E220A045
Error Message Text	Error occurred when querying the management pack {0} version. {1}
Explanation	Internet application error.
Recommended Action	Uninstall the Hitachi SCOM MP using Hitachi SCOM MMC Snapin configuration application and restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A046

Error Message ID	E220A046
Error Message Text	Error occurred when uninstalling management pack from the SCOM server. {0}

Explanation	The Operation Manager is not reachable or the login user does not have sufficient security privilege to allow the MMC snapin to make connection to the Operation Manager server.
Recommended Action	Verify the Ethernet connection, the health status of the Operation Manager and the user security privilege. If the error persists, contact the administrator for assistance.

E220A047

Error Message ID	E220A047
Error Message Text	Failed to setup or initialize connector. {0}
Explanation	The error could be caused by the Operation Manager is not reachable, the Operation Manager does not have the Hitachi Connector settings or the Hitachi Connector service does not have enough security privilege to perform the operation.
Recommended Action	Verify and resolve the conditions. If the error persists, contact the administrator for assistance.

E220A04C

Error Message ID	E220A04C
Error Message Text	Error occurred when collecting performance data. {0}
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, please contact administrator for assistance.

E220A04D

Error Message ID	E220A04D
Error Message Text	Failed to add discovery data of subsystem {0} to the data collection. Error={1}.
Explanation	Internal application error.
Recommended Action	Restart the Hitachi Connector service. Contact the administrator for assistance.

E220A04E

Error Message ID	E220A04E
Error Message Text	No subsystem is discovered.
Explanation	
Recommended Action	Use the Hitachi MMC Snapin configuration application to add subsystems to the Hitachi Connector configuration.

E220A04F

Error Message ID	E220A04F
Error Message Text	Failed to query subsystem data. {0}.
Explanation	The subsystem may be offline.
Recommended Action	Verify that the subsystem is online and reachable. Contact the administrator for assistance.

E220A050

Error Message ID	E220A050
Error Message Text	Failed to submit discovery data to the Operation Manager. {0}
Explanation	The Operation Manager is not reachable or the Hitachi MP version is not compatible with the Hitachi Connector service.
Recommended Action	Verify the Ethernet connection, the Operation Manager status and the MP version. If the MP version is not compatible, restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A051

Error Message ID	E220A051
Error Message Text	Error occurred when GetSubsystemObject was creating a SubsystemObject. {0}
Explanation	Internet application error.
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A052

Error Message ID	E220A052
Error Message Text	Error occurred in GetMonitoringObjects. {0}
Explanation	Internet application error.
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A054

Error Message ID	E220A054
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Error Message Text	Failed to discover all subsystems. The subsystem session timeout. {0}
Explanation	The error is caused by subsystem session timeout. The error will be resolved automatically.
Recommended Action	To minimize the recurrence of the error, increase the session timeout value in the subsystem. If the error persists, contact the administrator for assistance.

E220A055

Error Message ID	E220A055
Error Message Text	Failed to send WMI events of the subsystem components. {0}
Explanation	The user account that runs the Hitachi Connector Windows service may not have sufficient security privilege, or there may be an internal application error.
Recommended Action	Check the Windows Application event log for more information.

E220A058

Error Message ID	E220A058
Error Message Text	Error occurred when host relationship between controller and controller port was being created. {0}
Explanation	Internet application error.
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A05B

Error Message ID	E220A05B
Error Message Text	The connector settings listed below do not exist on the SCOM server. Set the following: <ul style="list-style-type: none"> • Guide={0} • Name={1} • Display Name={2} • Description={3} • ErrorMessage={4}
Explanation	The Hitachi Connector settings are not registered with the System Center Operations Manager; the listed settings must be defined.

Recommended Action	Confirm that you can connect to SCOM using Test Connection. If the connection fails, check the IP address and account settings. When there are no problems with the account settings: if different versions of the SCOM adapter are mixed in the Dual Connector configuration, connection to one of the SCOM adapters will fail (mixed versions of the SCOM adapter is not supported). Align the SCOM adapter versions in the dual locations. (See Note in Chapter 3.)
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E220A05C

Error Message ID	E220A05C
Error Message Text	Connection to the SCOM server is disconnected. {0}
Explanation	
Recommended Action	

E220A05D

Error Message ID	E220A05D
Error Message Text	Error occurred when Storage Performance Service was requested to start. {0}
Explanation	Internet application error.
Recommended Action	Restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A05E

Error Message ID	E220A05E
Error Message Text	Error occurred when Storage Performance Service was requested to stop. {0}
Explanation	Internet application error.
Recommended Action	Restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A05F

Error Message ID	E220A05F
Error Message Text	Error occurred when Storage Performance Service was stopping. {0}
Explanation	Internet application error.
Recommended Action	Restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A063

Error Message ID	E220A063
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Error Message Text	XML element for SecondPollInterval could not be found.
Explanation	Internet application error.
Recommended Action	Uninstall the Hitachi SCOM MP using Hitachi SCOM MMC Snapin configuration application and restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A069

Error Message ID	E220A069
Error Message Text	The ConnectorThread thread has already started.
Explanation	Internet application error.
Recommended Action	Restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A06A

Error Message ID	E220A06A
Error Message Text	Connection to the SCOM server is not established.
Explanation	The connection to the Operation Manager is broken. Verify the Operation Manager status is healthy and accessible via the network.
Recommended Action	If the Operation Manager is accessible, contact the administrator for assistance.

E220A06B

Error Message ID	E220A06B
Error Message Text	Management Pack file name is required.
Explanation	Content of the HiScomConnectorService.exe.config file is invalid.
Recommended Action	Open the Hitachi MMC Snapin configuration application, then verify the settings. If the error is not resolved, reinstall using the SCOM Storage Installer. If the error persists, contact your administrator for assistance.

E220A06C

Error Message ID	E220A06C
Error Message Text	Subsystem value is null.
Explanation	Internet application error.
Recommended Action	Restart the Hitachi Connector service. If the error persists, contact the administrator for assistance.

E220A06D

Error Message ID	E220A06D
Error Message Text	Failed to query subsystem data for {0} {1}.
Explanation	The subsystem may be offline.
Recommended Action	Verify that the subsystem is online and reachable. Contact the administrator for assistance.

E220A06E

Error Message ID	E220A06E
Error Message Text	Failed to fire event with value {0} of monitoring object {1}.
Explanation	Internet application error.
Recommended Action	If the error persists, uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A06F

Error Message ID	E220A06F
Error Message Text	Invalid subsystem object.
Explanation	Internet application error.
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A070

Error Message ID	E220A070
Error Message Text	Management pack {0} version {1} is missing in Operation Manager {2}.
Explanation	The operation manager has incompatible version of the Hitachi MP installed.
Recommended Action	Open Hitachi MMC Snapin configuration application to verify the settings. Restart the Hitachi Connector Windows service. If the error persists, contact the administrator for assistance.

E220A073

Error Message ID	E220A073
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Error Message Text	Error occurred while sending WMI event of the {0} monitoring objects to Operations Manager. {1}
Explanation	Failed to sending WMI events of the monitoring objects. {0}
Recommended Action	Check the Windows Application event log for more information.

E220A075

Error Message ID	E220A075
Error Message Text	Error occurred when containrelationship between storage pool and logical unit was being created. {0}
Explanation	Failed to create containment relationship storagepool and lu.
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A078

Error Message ID	E220A078
Error Message Text	ShouldDisplaySubsystemReplication value is missing in HiScomConnectorService.exe.config file.
Explanation	ShouldDisplaySubsystemReplication value is missing in the HiScomConnectorService.exe.config file.
Recommended Action	Repair the installation using the SCOM Storage Installer to retrieve the HiScomConnectorService.exe.config file again. If the error persists, contact your administrator for assistance.

E220A07A

Error Message ID	E220A07A
Error Message Text	Invalid HUS VM subsystem serial number. Enter serial number in this format : xxxxxx.
Explanation	Invalid HUS VM subsystem serial number
Recommended Action	Input a valid serial number for the HUS VM subsystem.

E220A07C

Error Message ID	E220A07C
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Error Message Text	Failed to query file server. {0}
Explanation	
Recommended Action	

E220A07D

Error Message ID	E220A07D
Error Message Text	Failed to submit file server discovery data to the Operation Manager. {0}
Explanation	
Recommended Action	

E220A07E

Error Message ID	E220A07E
Error Message Text	Error occurred when file server object was failed to create. {0}
Explanation	
Recommended Action	

E220A07F

Error Message ID	E220A07F
Error Message Text	Error occurred when containment relationship between EVS and Link Aggregation was being created. {0}
Explanation	
Recommended Action	

E220A081

Error Message ID	E220A081
Error Message Text	Error occurred when containment relationship between EVS and File System was being created. {0}
Explanation	
Recommended Action	

E220A082

Error Message ID	E220A082
Error Message Text	Error occurred when containment relationship between storage pool and system drive was being created. {0}

Explanation	
Recommended Action	

E220A083

Error Message ID	E220A083
Error Message Text	Error occurred when containment relationship between storage pool and file system was being created. {0}
Explanation	
Recommended Action	

E220A084

Error Message ID	E220A084
Error Message Text	Failed to add discovery data of file system {0} to the data collection. Error={1}
Explanation	
Recommended Action	

E220A085

Error Message ID	E220A085
Error Message Text	Failed to query file server data for {0}. {1}
Explanation	
Recommended Action	

E220A086

Error Message ID	E220A086
Error Message Text	File server login information value is null.
Explanation	
Recommended Action	

E220A087

Error Message ID	E220A087
Error Message Text	Failed to initialize HNAS monitoring operations. {0}
Explanation	

Recommended Action	
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E220A088

Error Message ID	E220A088
Error Message Text	Failed to remove file server {0}.\n{1}
Explanation	
Recommended Action	

E220A08E

Error Message ID	E220A08E
Error Message Text	Invalid IP Address. Enter the File Server IP in this format: xxx.xxx.xxx.xxx. {0}
Explanation	Enter File Server IP Address in this format : xxx.xxx.xxx.xxx.
Recommended Action	Input a valid IP address for the File Server.

E220A089

Error Message ID	E220A089
Error Message Text	Failed to stop performance collection. Could not save storage performance setting to HiScomConnectorService.exe.config file. {0}
Explanation	Failed to write the setting information which resulted in a failure to boot or stop the performance service.
Recommended Action	Confirm that HiScomConnectorService.exe.config file is not read-only. If the file is read-only, change the setting to writable. Alternatively, execute Repair in SCOM-Storage-Installer to retrieve HiServerConnectorService.exe.config file again.

E220A091

Error Message ID	E220A091
Error Message Text	Unable to add subsystem: the User name field value is missing. {0}
Explanation	Add Subsystem cannot be executed as User name in the subsystem information entry items is blank.
Recommended Action	Input User name in the subsystem information entry items.

E220A092

Error Message ID	E220A092
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Error Message Text	Unable to add subsystem: the User password field value is missing. {0}
Explanation	Add Subsystem cannot be executed as Password in the subsystem information entry items is blank.
Recommended Action	Input Password in the subsystem information entry items.

E220A094

Error Message ID	E220A094
Error Message Text	This subsystem is already present. {0}
Explanation	The subsystem has already been added as the subsystem to be monitored.
Recommended Action	A subsystem having the same IP address cannot be added. Add the subsystem again after removing the registered subsystem.

E220A095

Error Message ID	E220A095
Error Message Text	Failed to start Hitachi Storage Connector Configuration due to insufficient credentials. Only accounts that are members of the administrators group may run this program. Please close this MMC window, and start it again using an account belonging to the administrators group.
Explanation	MMC snap-in activation, Authority error.
Recommended Action	The account used to start the MMC snap-in must be a member of the Administrators group on the computer(s) running SCOM and Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager.

E220A09B

Error Message ID	E220A09B
Error Message Text	Cannot open AlertFilterDF.config.
Explanation	Cannot open AlertFilterDF.config.
Recommended Action	Confirm the settings of AlertFilterDF.config file. Alternatively, execute Repair in SCOM-Storage-Installer to retrieve AlertFilter.config file again.

E220A09C

Error Message ID	E220A09C
Error Message Text	Failed to write the AlertFilterDF.config file.
Explanation	Failed to write the AlertFilterDF.config file or AlertFilterServer.config file.

Recommended Action	If the AlertFilter.config file or AlertFilterServerDF.config file is open by any other applications, close them. If they are read-only, cancel the status.
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E220A09E

Error Message ID	E220A09E
Error Message Text	Enter SIM code by 6-digit hexadecimal.
Explanation	Non 6-digit value or non-hexadecimal value is included in SIM code which was input by Alert Filter Setting.
Recommended Action	Enter SIM code by 6-digit hexadecimal or x, y.

E220A09F

Error Message ID	E220A09F
Error Message Text	Cannot open AlertFilter.config.
Explanation	Failed to read AlertFilter.config.file.
Recommended Action	Confirm the settings of AlertFilter.config file. Alternatively, execute Repair in SCOM-Storage-Installer to retrieve AlertFilter.config file again.

E220A0A0

Error Message ID	E220A0A0
Error Message Text	Failed to write the AlertFilter.config file.
Explanation	Failed to write the AlertFilter.config file or AlertFilterServer.config file.
Recommended Action	If the AlertFilter.config file or AlertFilterServer.config file is open by any other applications, close them. If they are read-only, cancel the status.

E220A0A1

Error Message ID	E220A0A1
Error Message Text	Cannot register when numbers exceed 1000.
Explanation	Exceeded the number of lines to be registered.
Recommended Action	Enter less than 1000 SIM codes.

E220A0A2

Error Message ID	E220A0A2
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Error Message Text	Failed in filtering alerts.
Explanation	Internal error occurred during the filtering registration process.
Recommended Action	Please run the operation again. If the error is continued, please contact administrator for assistance.

E220A0A3

Error Message ID	E220A0A3
Error Message Text	Invalid VSP G1000 subsystem serial number. Enter a valid serial number that is between 1 and 5 characters long.
Explanation	Serial number for VSP G1000 is incorrect.
Recommended Action	Enter a serial number between 1 and 5 digits.

E220A0A4

Error Message ID	E220A0A4
Error Message Text	Invalid VSP G1500 subsystem serial number. Enter a valid serial number that is between 1 and 5 characters long.
Explanation	Serial number for VSP G1500 is incorrect.
Recommended Action	Enter a serial number between 1 and 5 digits.

E220A0A5

Error Message ID	E220A0A5
Error Message Text	Invalid VSP F1500 subsystem serial number. Enter a valid serial number that is between 1 and 5 characters long.
Explanation	Serial number for VSP F1500 is incorrect.
Recommended Action	Enter a serial number between 1 and 5 digits.

E220A0AE

Error Message ID	E220A0AE
Error Message Text	Failed to read guidance file. {0}
Explanation	Failed to read a guidance file.
Recommended Action	Either the privilege for the guidance file has a problem or the file is corrupted. Repair the installation file. For the repair procedure of the installation file, see Repairing the Software > Repairing the Hitachi Storage Management Pack in this document.

E220A0B0

Error Message ID	E220A0B0
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Error Message Text	Invalid VSP Fx00 subsystem serial number. Enter serial number in this format: xxxxxx. {0}
Explanation	Invalid VSP Fx00 subsystem serial number.
Recommended Action	Input a valid serial number for the VSP Fx00 subsystem.

E220A0B1

Error Message ID	E220A0B1
Error Message Text	Invalid VSP Gx00 subsystem serial number. Enter serial number in this formatE220A03C: xxxxxx. {0}
Explanation	Invalid VSP Gx00 subsystem serial number.
Recommended Action	Input a valid serial number for the VSP Gx00 subsystem.

E220A0B3

Error Message ID	E220A0B3
Error Message Text	Error occurred when ConnectorNumber is queried from the configuration file. {ExceptionMessage}
Explanation	Failed to retrieve a value for the connector number from HiScomConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiScomConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Storage-Installer to retrieve HiScomConnectorService.exe.config file again.

E220A0B4

Error Message ID	E220A0B4
Error Message Text	Invalid Operation Manager Connector Number '{0}'.\n. Please select a connector number between 0 and 1.
Explanation	Input value for Select connector number is invalid.
Recommended Action	Set zero or one for Advanced Configuration Tab > Connector Number in HSCC.

E220A0B5

Error Message ID	E220A0B5
Error Message Text	ConnectorAccount value is missing in Registry.
Explanation	A value for ConnectorAccount has not been set in Registry.
Recommended Action	Set by Advanced Configuration Tab > Account for SCOM access in HSCC again.

E220A0B7

Error Message ID	E220A0B7
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Error Message Text	Failed to collect Hitachi management pack information from the SCOM instance on '{0}'. The System Center Data Access Service may not be running, or may not yet have fully initialized. See the event log for more information.
Explanation	Windows service System Center Data Access is not operated.
Recommended Action	Make sure that the Windows service of SCOM Server, System Center Data Access is operated. Confirm the network connection status between SCOM Server and HCCS. Alternatively, make sure that the server name entered to Entered server address is correct.

E220A0BA

Error Message ID	E220A0BA
Error Message Text	An exception occurred in GetAlertAll. {0}
Explanation	Internet application error.
Recommended Action	Please run the operation again. If the error persists, please contact administrator for assistance.

E220A0BB

Error Message ID	E220A0BB
Error Message Text	Invalid Alert Value. Alert Count:{0}.
Explanation	Alerts cannot be collected because the storage system was registered without an SVP IP for Virtual DKC #0.
Recommended Action	If Virtual DKC #0 was registered, the subsystem must be registered with an SVP IP. If not, alerts cannot be collected. Re-register the subsystem with an SVP IP. (Alerts are not supported for registered subsystems that do not include Virtual DKC #0.)

E220A0BC

Error Message ID	E220A0BC
Error Message Text	Error occurred when containment relationship between Group and Subsystem was being created. {0}
Explanation	Failed to create containment relationship group and subsystem.
Recommended Action	Uninstall the Hitachi SCOM Management Pack using the Hitachi SCOM MMC Snapin configuration application. In software versions 1.7.0 and later, if you want to keep old management packs, you can uninstall just the target management pack from the SCOM console. Restart the Hitachi Connector service. If the error persists, contact your administrator for assistance.

E220A200

Error Message ID	E220A200
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Error Message Text	An error occurred when reading the Operation Manager value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when OperationManager was queried from the configuration file. {0}
Recommended Action	Set the server address: Hitachi Storage Connector Configuration > Connector Configuration tab > Operations Manager Setup Information

E220A201

Error Message ID	E220A201
Error Message Text	An error occurred when reading the ManagementPackFileName value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ManagementPackFileName was queried from the configuration file. {0}
Recommended Action	Run repair from the Control Panel.

E220A202

Error Message ID	E220A202
Error Message Text	An error occurred when reading the VSPAlertManagementPackFileName value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when VSPAlertManagementPackFileName was queried from the configuration file. {0}
Recommended Action	Run repair from the Control Panel.

E220A203

Error Message ID	E220A203
Error Message Text	An error occurred when reading the AlertManagementPackFileName value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when AlertManagementPackFileName was queried from the configuration file. {0}
Recommended Action	Run repair from the Control Panel.

E220A204

Error Message ID	E220A204
Error Message Text	An error occurred when reading the ServiceMonitoringManagementPackFileName value from the HiServerConnectorService.exe.config file.

Explanation	Error occurred when ServiceMonitoringManagementPackFileName was queried from the configuration file. {0}
Recommended Action	Run repair from the Control Panel.

E220A220

Error Message ID	E220A220
Error Message Text	An error occurred when reading the UseOptimization value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when UseOptimization was queried from the configuration file. {0}
Recommended Action	Set UseOptimization value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection

E220A221

Error Message ID	E220A221
Error Message Text	An error occurred when reading the ControllerPortIORateTolerance value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ControllerPortIORateTolerance was queried from the configuration file. {0}
Recommended Action	Set Tolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port IO Rate > SetTolerance

E220A222

Error Message ID	E220A222
Error Message Text	An error occurred when reading the ControllerPortIORateAbsoluteNumber value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ControllerPortIORateAbsoluteNumber was queried from the configuration file. {0}
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port IO Rate > Absolute number

E220A223

Error Message ID	E220A223
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Error Message Text	An error occurred when reading the ControllerPortIORatePercentage value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ControllerPortIORatePercentage was queried from the configuration file. {0}
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port IO Rate > Percentage.

E220A224

Error Message ID	E220A224
Error Message Text	An error occurred when reading the ControllerPortIORateMaximumSampleSeparation value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ControllerPortIORateMaximumSampleSeparation was queried from the configuration file. {0}
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port IO Rate > Maximum Sample Separation

E220A225

Error Message ID	E220A225
Error Message Text	An error occurred when reading the ControllerPortTransferRateTolerance value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ControllerPortTransferRateTolerance was queried from the configuration file. {0}
Recommended Action	Set SetToleranceto value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port Transfer Rate > SetTolerance

E220A226

Error Message ID	E220A226
Error Message Text	An error occurred when reading the ControllerPortTransferRateAbsoluteNumber value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ControllerPortTransferRateAbsoluteNumber was queried from the configuration file. {0}

Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port Transfer Rate > Absolute number
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E220A227

Error Message ID	E220A227
Error Message Text	An error occurred when reading the ControllerPortTransferRatePercentage value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ControllerPortTransferRatePercentage was queried from the configuration file. {0}
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port Transfer Rate > Percentage

E220A228

Error Message ID	E220A228
Error Message Text	An error occurred when reading the ControllerPortTransferRateMaximumSampleSeparation value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when ControllerPortTransferRateMaximumSampleSeparation was queried from the configuration file. {0}
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port Transfer Rate > Maximum Sample Separation

E220A229

Error Message ID	E220A229
Error Message Text	An error occurred when reading the HDPPoolIORateTolerance value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when HDPPoolIORateTolerance was queried from the configuration file. {0}
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool IO Rate > SetTolerance

E220A22A

Error Message ID	E220A22A
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Error Message Text	An error occurred when reading the HDPPoolIORateAbsoluteNumber value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when HDPPoolIORateAbsoluteNumber was queried from the configuration file. {0}
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool IO Rate > Absolute number

E220A22B

Error Message ID	E220A22B
Error Message Text	An error occurred when reading the HDPPoolIORatePercentage value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when HDPPoolIORatePercentage was queried from the configuration file. {0}
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool IO Rate > Percentage

E220A22C

Error Message ID	E220A22C
Error Message Text	An error occurred when reading the HDPPoolIORateMaximumSampleSeparation value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when HDPPoolIORateMaximumSampleSeparation was queried from the configuration file. {0}
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool IO Rate > Maximum Sample Separation

E220A22D

Error Message ID	E220A22D
Error Message Text	An error occurred when reading the HDPPoolTransferRateTolerance value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when HDPPoolTransferRateTolerance was queried from the configuration file. {0}
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool Transfer Rate > SetTolerance

E220A22E

Error Message ID	E220A22E
Error Message Text	An error occurred when reading the HDPPoolTransferRateAbsoluteNumber value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when HDPPoolTransferRateAbsoluteNumber was queried from the configuration file. {0}
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool Transfer Rate > Absolute number

E220A22F

Error Message ID	E220A22F
Error Message Text	An error occurred when reading the HDPPoolTransferRatePercentage value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when HDPPoolTransferRatePercentage was queried from the configuration file. {0}
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool Transfer Rate > Percentage

E220A230

Error Message ID	E220A230
Error Message Text	An error occurred when reading the HDPPoolTransferRateMaximumSampleSeparation value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when HDPPoolTransferRateMaximumSampleSeparation was queried from the configuration file. {0}
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool Transfer Rate > Maximum Sample Separation

E220A231

Error Message ID	E220A231
Error Message Text	An error occurred when reading the LogicalUnitIORateTolerance value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when LogicalUnitIORateTolerance was queried from the configuration file. {0}

Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit IO Rate > SetTolerance
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E220A232

Error Message ID	E220A232
Error Message Text	An error occurred when reading the LogicalUnitIORateAbsoluteNumber value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when LogicalUnitIORateAbsoluteNumber was queried from the configuration file. {0}
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit IO Rate > Absolute number

E220A233

Error Message ID	E220A233
Error Message Text	An error occurred when reading the LogicalUnitIORatePercentage value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when LogicalUnitIORatePercentage was queried from the configuration file. {0}
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit IO Rate > Percentage

E220A234

Error Message ID	E220A234
Error Message Text	An error occurred when reading the LogicalUnitIORateMaximumSampleSeparation value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when LogicalUnitIORateMaximumSampleSeparation was queried from the configuration file. {0}
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit IO Rate > Maximum Sample Separation

E220A235

Error Message ID	E220A235
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Error Message Text	An error occurred when reading the LogicalUnitTransferRateTolerance value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when LogicalUnitTransferRateTolerance was queried from the configuration file. {0}
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit Transfer Rate > SetTolerance

E220A236

Error Message ID	E220A236
Error Message Text	An error occurred when reading the LogicalUnitTransferRateAbsoluteNumber value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when LogicalUnitTransferRateAbsoluteNumber was queried from the configuration file. {0}
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit Transfer Rate > Absolute number

E220A237

Error Message ID	E220A237
Error Message Text	An error occurred when reading the LogicalUnitTransferRatePercentage value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when LogicalUnitTransferRatePercentage was queried from the configuration file. {0}
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit Transfer Rate > Percentage

E220A238

Error Message ID	E220A238
Error Message Text	An error occurred when reading the LogicalUnitTransferRateMaximumSampleSeparation value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when LogicalUnitTransferRateMaximumSampleSeparation was queried from the configuration file. {0}
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit Transfer Rate > Maximum Sample Separation

E220A239

Error Message ID	E220A239
Error Message Text	An error occurred when reading the RAIDGroupIORateTolerance value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when RAIDGroupIORateTolerance was queried from the configuration file. {0}
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group IO Rate > SetTolerance

E220A23A

Error Message ID	E220A23A
Error Message Text	An error occurred when reading the RAIDGroupIORateAbsoluteNumber value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when RAIDGroupIORateAbsoluteNumber was queried from the configuration file. {0}
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group IO Rate > Absolute number

E220A23B

Error Message ID	E220A23B
Error Message Text	Error occurred when RAIDGroupIORatePercentage value was queried from the configuration file. {0}
Explanation	An error occurred when reading the RAIDGroupIORatePercentage value from the HiServerConnectorService.exe.config file.
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group IO Rate > Percentage

E220A23C

Error Message ID	E220A23C
Error Message Text	An error occurred when reading the RAIDGroupIORateMaximumSampleSeparation value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when RAIDGroupIORateMaximumSampleSeparation was queried from the configuration file. {0}

Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group IO Rate > Maximum Sample Separation
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E220A23D

Error Message ID	E220A23D
Error Message Text	An error occurred when reading the RAIDGroupTransferRateTolerance value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when RAIDGroupTransferRateTolerance was queried from the configuration file. {0}
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group Transfer Rate > SetTolerance

E220A23E

Error Message ID	E220A23E
Error Message Text	An error occurred when reading the RAIDGroupTransferRateAbsoluteNumber value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when RAIDGroupTransferRateAbsoluteNumber was queried from the configuration file. {0}
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group Transfer Rate > Absolute number.

E220A23F

Error Message ID	E220A23F
Error Message Text	An error occurred when reading the RAIDGroupTransferRatePercentage value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when RAIDGroupTransferRatePercentage was queried from the configuration file. {0}
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group Transfer Rate > Percentage

E220A240

Error Message ID	E220A240
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Error Message Text	An error occurred when reading the RAIDGroupTransferRateMaximumSampleSeparation value from the HiServerConnectorService.exe.config file.
Explanation	Error occurred when RAIDGroupTransferRateMaximumSampleSeparation was queried from the configuration file. {0}
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group Transfer Rate > Maximum Sample Separation

E220A300

Error Message ID	E220A300
Error Message Text	The value set for UseOptimization in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Use Optimization. Please select On or Off in Use Optimization setting. (Invalid Optimized Collection > Use Optimization)
Recommended Action	Set Use Optimization value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Use Optimization

E220A301

Error Message ID	E220A301
Error Message Text	The value set for ControllerPortIORateTolerance in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Set Tolerance. Please select Absolute Number or Percentage in Set Tolerance setting. (Optimized Collection > Controller Port IO Rate > Set Tolerance)
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port IO Rate > SetTolerance

E220A302

Error Message ID	E220A302
Error Message Text	The value set for ControllerPortIORateAbsoluteNumber in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Absolute Number. Enter a value between 0 to 65535 in Absolute Number. (Optimized Collection > Controller Port IO Rate > Absolute Number)
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port IO Rate > Absolute number

E220A303

Error Message ID	E220A303
Error Message Text	The value set for ControllerPortIORatePercentage in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Percentage. Enter a value between 0 to 100 in Percentage. (Optimized Collection > Controller Port IO Rate > Percentage)
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port IO Rate > Percentage

E220A304

Error Message ID	E220A304
Error Message Text	The value set for ControllerPortIORateMaximumSampleSeparation in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Maximum Sample Separation. Enter a value between 0 to 65535 in Maximum Sample Separation. (Optimized Collection > Controller Port IO Rate > Maximum Sample Separation)
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port IO Rate > Maximum Sample Separation

E220A305

Error Message ID	E220A305
Error Message Text	The value set for ControllerPortTransferRateTolerance in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Set Tolerance. Please select Absolute Number or Percentage in Set Tolerance setting. (Optimized Collection > Controller Port Transfer Rate > Set Tolerance)
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port Transfer Rate > SetTolerance

E220A306

Error Message ID	E220A306
Error Message Text	The value set for ControllerPortTransferRateAbsoluteNumber in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Absolute Number. Enter a value between 0 to 65535 in Absolute Number. (Optimized Collection > Controller Port Transfer Rate > Absolute Number)

Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port Transfer Rate > Absolute number
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E220A307

Error Message ID	E220A307
Error Message Text	The value set for ControllerPortTransferRatePercentage in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Percentage. Enter a value between 0 to 100 in Percentage. (Optimized Collection > Controller Port Transfer Rate > Percentage)
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port Transfer Rate > Percentage

E220A308

Error Message ID	E220A308
Error Message Text	The value set for ControllerPortTransferRateMaximumSampleSeparation in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Maximum Sample Separation. Enter a value between 0 to 65535 in Maximum Sample Separation. (Optimized Collection > Controller Port Transfer Rate > Maximum Sample Separation)
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Controller Port Transfer Rate > Maximum Sample Separation

E220A309

Error Message ID	E220A309
Error Message Text	The value set for HDPPoolIORateTolerance in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Set Tolerance. Please select Absolute Number or Percentage in Set Tolerance setting. (Optimized Collection > HDP Pool IO Rate > Set Tolerance)
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool IO Rate > SetTolerance

E220A30A

Error Message ID	E220A30A
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Error Message Text	The value set for HDPPoolIORateAbsoluteNumber in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Absolute Number. Enter a value between 0 to 65535 in Absolute Number. (Optimized Collection > HDP Pool IO Rate > Absolute Number)
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool IO Rate > Absolute number

E220A30B

Error Message ID	E220A30B
Error Message Text	The value set for HDPPoolIORatePercentage in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Percentage. Enter a value between 0 to 100 in Percentage. (Optimized Collection > HDP Pool IO Rate > Percentage)
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool IO Rate > Percentage

E220A30C

Error Message ID	E220A30C
Error Message Text	The value set for HDPPoolIORateMaximumSampleSeparation in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Maximum Sample Separation. Enter a value between 0 to 65535 in Maximum Sample Separation. (Optimized Collection > HDP Pool IO Rate > Maximum Sample Separation)
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool IO Rate > Maximum Sample Separation

E220A30D

Error Message ID	E220A30D
Error Message Text	The value set for HDPPoolTransferRateTolerance in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Set Tolerance. Please select Absolute Number or Percentage in Set Tolerance setting. (Optimized Collection > HDP Pool Transfer Rate > Set Tolerance)
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool Transfer Rate > SetTolerance.

E220A30E

Error Message ID	E220A30E
Error Message Text	The value set for HDPoolTransferRateAbsoluteNumber in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Absolute Number. Enter a value between 0 to 65535 in Absolute Number. (Optimized Collection > HDP Pool Transfer Rate > Absolute Number)
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool Transfer Rate > Absolute number

E220A30F

Error Message ID	E220A30F
Error Message Text	The value set for HDPoolTransferRatePercentage in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Percentage. Enter a value between 0 to 100 in Percentage. (Optimized Collection > HDP Pool Transfer Rate > Percentage)
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool Transfer Rate > Percentage

E220A310

Error Message ID	E220A310
Error Message Text	The value set for HDPoolTransferRateMaximumSampleSeparation in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Maximum Sample Separation. Enter a value between 0 to 65535 in Maximum Sample Separation. (Optimized Collection > HDP Pool Transfer Rate > Maximum Sample Separation)
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > HDP Pool Transfer Rate > Maximum Sample Separation

E220A311

Error Message ID	E220A311
Error Message Text	The value set for LogicalUnitIORateTolerance in the HiServerConnectorService.exe.config file is invalid.

Explanation	Invalid value '{0}' for Set Tolerance. Please select Absolute Number or Percentage in Set Tolerance setting. (Optimized Collection > HDP Pool IO Rate > Set Tolerance)
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit IO Rate > SetTolerance

E220A312

Error Message ID	E220A312
Error Message Text	The value set for LogicalUnitIORateAbsoluteNumber in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Absolute Number. Enter a value between 0 to 65535 in Absolute Number. (Optimized Collection > Logical Unit IO Rate > Absolute Number)
Recommended Action	Set Absolute number. Value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit IO Rate > Absolute number

E220A313

Error Message ID	E220A313
Error Message Text	The value set for LogicalUnitIORatePercentage in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Percentage. Enter a value between 0 to 100 in Percentage. (Optimized Collection > Logical Unit IO Rate > Percentage)
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit IO Rate > Percentage

E220A314

Error Message ID	E220A314
Error Message Text	The value set for LogicalUnitIORateMaximumSampleSeparation in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Maximum Sample Separation. Enter a value between 0 to 65535 in Maximum Sample Separation. (Optimized Collection > Logical Unit IO Rate > Maximum Sample Separation)
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit IO Rate > Maximum Sample Separation

E220A315

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Error Message ID	E220A315
Error Message Text	The value set for LogicalUnitTransferRateTolerance in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Set Tolerance. Please select Absolute Number or Percentage in Set Tolerance setting. (Optimized Collection > Logical Unit Transfer Rate > Set Tolerance)
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit Transfer Rate > SetTolerance

E220A316

Error Message ID	E220A316
Error Message Text	The value set for LogicalUnitTransferRateAbsoluteNumber in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Absolute Number. Enter a value between 0 to 65535 in Absolute Number. (Optimized Collection > Logical Unit Transfer Rate > Absolute Number)
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit Transfer Rate > Absolute number

E220A317

Error Message ID	E220A317
Error Message Text	The value set for LogicalUnitTransferRatePercentage in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Percentage. Enter a value between 0 to 100 in Percentage. (Optimized Collection > Logical Unit Transfer Rate > Percentage)
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit Transfer Rate > Percentage

E220A318

Error Message ID	E220A318
Error Message Text	The value set for LogicalUnitTransferRateMaximumSampleSeparation in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Maximum Sample Separation. Enter a value between 0 to 65535 in Maximum Sample Separation. (Optimized Collection > Logical Unit Transfer Rate > Maximum Sample Separation)

Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > Logical Unit Transfer Rate > Maximum Sample Separation
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E220A319

Error Message ID	E220A319
Error Message Text	The value set for RAIDGroupIORateTolerance in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Set Tolerance. Please select Absolute Number or Percentage in Set Tolerance setting. (Optimized Collection > RAID Group IO Rate > Set Tolerance)
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group IO Rate > SetTolerance

E220A31A

Error Message ID	E220A31A
Error Message Text	The value set for RAIDGroupIORateAbsoluteNumber in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Absolute Number. Enter a value between 0 to 65535 in Absolute Number. (Optimized Collection > RAID Group IO Rate > Absolute Number)
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group IO Rate > Absolute number

E220A31B

Error Message ID	E220A31B
Error Message Text	The value set for RAIDGroupIORatePercentage in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Percentage. Enter a value between 0 to 100 in Percentage. (Optimized Collection > RAID Group IO Rate > Percentage)
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group IO Rate > Percentage

E220A31C

Error Message ID	E220A31C
Error Message Text	The value set for RAIDGroupIORateMaximumSampleSeparation in the HiServerConnectorService.exe.config file is invalid.

Explanation	Invalid value '{0}' for Maximum Sample Separation. Enter a value between 0 to 65535 in Maximum Sample Separation. (Optimized Collection > RAID Group IO Rate > Maximum Sample Separation)
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group IO Rate > Maximum Sample Separation

E220A31D

Error Message ID	E220A31D
Error Message Text	The value set for RAIDGroupTransferRateTolerance in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Set Tolerance. Please select Absolute Number or Percentage in Set Tolerance setting. (Optimized Collection > RAID Group Transfer Rate > Set Tolerance)
Recommended Action	Set SetTolerance value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group Transfer Rate > SetTolerance

E220A31E

Error Message ID	E220A31E
Error Message Text	The value set for RAIDGroupTransferRateAbsoluteNumber in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Absolute Number. Enter a value between 0 to 65535 in Absolute Number. (Optimized Collection > RAID Group Transfer Rate > Absolute Number)
Recommended Action	Set Absolute number value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group Transfer Rate > Absolute number

E220A31F

Error Message ID	E220A31F
Error Message Text	The value set for RAIDGroupTransferRatePercentage in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Percentage. Enter a value between 0 to 100 in Percentage. (Optimized Collection > RAID Group Transfer Rate > Percentage)
Recommended Action	Set Percentage value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group Transfer Rate > Percentage

E220A320

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Error Message ID	E220A320
Error Message Text	The value set for RAIDGroupTransferRateMaximumSampleSeparation in the HiServerConnectorService.exe.config file is invalid.
Explanation	Invalid value '{0}' for Maximum Sample Separation. Enter a value between 0 to 65535 in Maximum Sample Separation. (Optimized Collection > RAID Group Transfer Rate > Maximum Sample Separation)
Recommended Action	Set Maximum Sample Separation value: Hitachi Storage Connector Configuration > Advanced Configuration tab > Optimized Collection > RAID Group Transfer Rate > Maximum Sample Separation

E220A321

Error Message ID	E220A321
Error Message Text	The value set for TargetLogicalUnit in the PerformanceManagement.config file is invalid.
Explanation	Invalid value '{0}' for Target Logical Unit. Please select All or Custom in Target Logical Unit setting. (Invalid Counter Settings > Logical Unit > Target Logical Unit)
Recommended Action	Set Target Logical Unit value: Hitachi Storage Connector Configuration > Performance tab > Counter Settings > Logical Unit > Target Logical Unit

E220A400

Error Message ID	E220A400
Error Message Text	PerformanceManagement.config failed to write.
Explanation	Failed to write PerformanceManagement.config. {0}
Recommended Action	Verify your Write permissions to the PerformanceManagement.config file. If this does not resolve the error, restart the Hitachi Storage Connector Configuration. If the above does not resolve the error, delete all registered subsystems, then re-register them.

E220A401

Error Message ID	E220A401
Error Message Text	Failed to read setting values from PerformanceManagement.config. The file may be corrupt.
Explanation	Counter Settings is missing in PerformanceManagement.config file.
Recommended Action	Close the Hitachi Storage Connector Configuration, then delete the PerformanceManagement.config file. Restart the Hitachi Storage Connector Configuration. The settings in Performance tab > CounterSettings will initialize.

E220A500

Error Message ID	E220A500
Error Message Text	Failed to save settings to PerformanceManagement.config
Explanation	Failed to save the Counter Settings to the configuration file {0}.
Recommended Action	Verify your Write permissions to the PerformanceManagement.config file. If this does not resolve the error, restart the Hitachi Storage Connector Configuration. If the above does not resolve the error, delete all registered subsystems, then re-register them.

E220A600

Error Message ID	E220A600
Error Message Text	Failed to add previously registered logical unit to target Logical Unit.
Explanation	This logical unit number is already present.
Recommended Action	The Logical Unit specified as target is already registered, thus adding it is unnecessary.

E220A601

Error Message ID	E220A601
Error Message Text	An error occurred because a logical unit was removed without selecting it in the target logical unit.
Explanation	No logical unit number is selected.
Recommended Action	Select the Logical Unit to be deleted.

E220A602

Error Message ID	E220A602
Error Message Text	An error occurred because the logical unit number entered for the target logical unit is not a 4-digit decimal.
Explanation	Enter logical unit number using a 4-digit decimal.
Recommended Action	Enter the Logical Unit number as a 4-digit decimal.

E220A603

Error Message ID	E220A603
Error Message Text	An error occurred because the logical unit number entered in the counter settings was not a 6-digit hexadecimal.
Explanation	Enter logical unit number using a 6-digit hexadecimal.
Recommended Action	Enter the Logical Unit number as a 6-digit hexadecimal.

E220A604

Error Message ID	E220A604
Error Message Text	Only 999 logical units can be registered to the target logical unit. No more logical units can be added.
Explanation	The number of logical units that can be registered is up to 999.
Recommended Action	Only 999 Logical Units can be designated for the Target Logical Unit. Delete some registered Logical Units, then add again.

E2200000

Error Message ID	E2200000
Error Message Text	{0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. Alternatively, Confirm the network connection status between the storage to be monitored and HSCC/HSCS. If the error persists, contact your administrator for assistance

E2200002

Error Message ID	E2200002
Error Message Text	Information cannot be retrieved because the target storage system is not recognized.
Explanation	The specified storage system was not found []
Recommended Action	Execute SCOM-Server-Installer to reinstall SCOM-Server-Installer. When registering a storage system in HSCC, verify the SVP IP address is the SVP IP address of the registered target storage system. This error message can be ignored if it appears when removing a subsystem in HSCC while HSCS is running.

EXX027CF

Error Message ID	EXX027CF
Error Message Text	Following Operations Manager SDK not exist in installation directory. {0} See the User's Guide for more information.
Explanation	Operations Manager SDK not exist in installation directory.

Recommended Action	<ol style="list-style-type: none"> Copy the following .dll files for the Operations Manager SDK to the installation directory of the server adapter: <ul style="list-style-type: none"> Microsoft.EnterpriseManagement.OperationsManager.dll Microsoft.EnterpriseManagement.Core.dll Microsoft.EnterpriseManagement.Runtime.dll Microsoft.EnterpriseManagement.Packaging.dll Restart the MMC. For more information, see Post-installation Tasks.
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EXX003E8

Error Message ID	EXX003E8
	There is no call stack level {2} of the current call.
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Reboot HCCS.

EXX003E9

Error Message ID	EXX003E9
Error Message Text	Failed to start a new thread to collect performance data for compute device. {ExceptionMessage}
Explanation	Failed to start retrieving the performance information.
Recommended Action	Reboot HCCS.

EXX003EA

Error Message ID	EXX003EA
Error Message Text	Failed to stop the server performance collection for compute device. {ExceptionMessage}
Explanation	Failed to stop retrieving the performance information.
Recommended Action	Reboot HCCS.

EXX003EB

Error Message ID	EXX003EB
Error Message Text	An exception occurred. {ExceptionMessage} {ExceptionType}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute Uninstall Management Pack from HCCC, and reboot HCCS after removing the management pack from SCOM.

EXX003EC

Error Message ID	EXX003EC
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Error Message Text	{ExceptionMessage}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute Uninstall Management Pack from HCCC, and reboot HCCS after removing the management pack from SCOM.

EXX003ED

Error Message ID	EXX003ED
Error Message Text	Server performance data collection for compute device has already started.
Explanation	Performance service has already been started.
Recommended Action	Check the operation status of the performance service. Start the service if the service stops.

EXX003EE

Error Message ID	EXX003EE
Error Message Text	Server performance data collection for compute device is not started. {Temperature}
Explanation	Failed to retrieve the performance information.
Recommended Action	Execute Uninstall Management Pack from HCCC, and reboot HCCS after removing the management pack from SCOM.

EXX003EF

Error Message ID	EXX003EF
Error Message Text	Failed to add discovery data of compute device {CB500_0123456789} to the data collection. Error={ExceptionMessage}.
Explanation	Failed to retrieve the configuration information.
Recommended Action	Execute Uninstall Management Pack from HCCC, and reboot HCCS after removing the management pack from SCOM.

EXX003F0

Error Message ID	EXX003F0
Error Message Text	Error occurred when checking the Connector service status. {ExceptionMessage}
Explanation	HCCS operation status was not confirmed.
Recommended Action	Reboot HCCC. Check the network connection status between SCOM Server and HCCS.

EXX003F1

Error Message ID	EXX003F1
Error Message Text	Connector service configuration file HiServerConnectorService.exe.config is not found.

Explanation	HiServerConnectorService.exe.config does not exist.
Recommended Action	Execute Repair function of SCOM-Server-Installer and retrieve the HiServerConnectorService.exe.config file again.

EXX003F2

Error Message ID	EXX003F2
Error Message Text	Connection to the SCOM server is not established.
Explanation	Connection to SCOM server was not established.
Recommended Action	Confirm the network connection status between SCOM Server and HCCS. Alternatively, make sure that the server name entered to Enter server address is correct.

EXX003F3

Error Message ID	EXX003F3
Error Message Text	The connector settings listed below do not exist on the SCOM server. Set the following: Guide={7F542D0F-79C9-40ba-9EE5-E002784BA218} Name={Hitachi.ComputeBlade.500 Connector for SCOM} Display Name={Hitachi.ComputeBlade.500 Connector for SCOM} Description={Hitachi.ComputeBlade.500 Connector sends Hitachi.ComputeBlade.500 component data and status into Operations Manager.} ErrorMessage={ExceptionMessage}
Explanation	The Hitachi Connector settings are not registered with the System Center Operations Manager; the listed settings must be defined.
Recommended Action	Use Test Connection to verify the connection with SCOM. If the connection test fails, verify the IP address and account settings. If the account settings are correct, one of the adapters may fail to connect if different versions of the SCOM adapter are used in a Dual Connector configuration. (The use of mixed versions of the SCOM adapter in a Dual Connector configuration is not supported.) For a Dual Connectors configuration, align the SCOM adapter versions. (See Note in Installing the Software).

EXX003F4

Error Message ID	EXX003F4
Error Message Text	The ConnectorThread thread has already started.
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Reboot HCCS.

EXX003F5

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Error Message ID	EXX003F5
Error Message Text	Failed to create event log source for Hitachi Server connector for Operation Manager. {ExceptionMessage}
Explanation	Failed to write event log.
Recommended Action	Make sure that the Windows Application event log does not reach to the maximum size. Alternatively, execute SCOM-Server-Installer and reinstall the server provider.

EXX003F6

Error Message ID	EXX003F6
Error Message Text	Failed to discover the configured compute device. {ExceptionMessage}
Explanation	Failed to retrieve the registration information of the server to be monitored.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider.

EXX003F7

Error Message ID	EXX003F7
Error Message Text	Fatal error : {ExceptionMessage} Type={ExceptionType}.
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX003F8

Error Message ID	EXX003F8
Error Message Text	Failed to fire event with value {2} of monitoring object {CB500_0123456789_Blade_1}.
Explanation	Failed to transmit the server monitoring information to SCOM.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX003F9

Error Message ID	EXX003F9
Error Message Text	Error occurred in GetMonitoringObjects. {ExceptionMessage}
Explanation	Failed to retrieve the information of monitoring items.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX003FA

Error Message ID	EXX003FA
Error Message Text	Error occurred when Get MonitoringObject was creating a monitoringObject. {ExceptionMessage}
Explanation	Failed to retrieve the information of monitoring items.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX003FB

Error Message ID	EXX003FB
Error Message Text	Failed to initialize snap-in. {ExceptionMessage}
Explanation	Failed to boot HCCS.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider. Alternatively, make sure that MMC has been installed.

EXX003FC

Error Message ID	EXX003FC
Error Message Text	Internal error.
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM. Alternatively, execute SCOM-Server-Installer to reinstall the server provider.

EXX003FD

Error Message ID	EXX003FD
Error Message Text	There is no connection to the operation manager.
Explanation	Not connected to SCOM Server.
Recommended Action	Confirm the network connection status between SCOM Server and HCCS. Alternatively, make sure that the server name entered to Enter server address is correct.

EXX003FE

Error Message ID	EXX003FE
Error Message Text	Monitoring class {Hitachi.ComputeBlade.500.Chassis} does not have the property {SerialNumber} of the input object. {ExceptionMessage}
Explanation	Failed to retrieve the information of monitoring items.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM. Alternatively, execute SCOM-Server-Installer to reinstall the server provider.

EXX003FF

Error Message ID	EXX003FF
Error Message Text	Management Pack file name is required.
Explanation	Failed to retrieve the management pack file name from HiServerConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00400

Error Message ID	EXX00400
Error Message Text	Management pack {Hitachi.ComputeBlade.500} version {3.0.0.0} is missing in Operation Manager {LOCALHOST}.
Explanation	Management pack of the compute device to be monitored has not been installed in SCOM.
Recommended Action	Confirm that the target management pack has been decompressed in the installation destination folder and reboot HCCS. If the error has not been solved yet, execute SCOM-Server-Installer again and make sure that the target management pack has been decompressed in the installation destination folder.

EXX00401

Error Message ID	EXX00401
Error Message Text	Fatal error occurred when performing operation {Add ComputeDevice }. {ExceptionMessage}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider. Alternatively, make sure the network connection status between SCOM Server and HCCS.

EXX00402

Error Message ID	EXX00402
Error Message Text	Failed to open Connector service configuration file HiServerConnectorService.exe.config. {ExceptionMessage}
Explanation	Failed to open HiServerConnectorService.exe.config.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00403

Error Message ID	EXX00403
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Error Message Text	Operation is aborted.
Explanation	HCCS has stopped while retrieving the configuration information and performance information.
Recommended Action	Reboot HCCS.

EXX00404

Error Message ID	EXX00404
Error Message Text	OperationManager value is missing in HiServerConnectorService.exe.config file.
Explanation	A value for OperationManager has not been set in HiServerConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00405

Error Message ID	EXX00405
Error Message Text	Error occurred when ManagementPackRefreshRate is queried from the configuration file. {ExceptionMessage}
Explanation	Failed to retrieve a value for the monitoring interval to the server, from HiServerConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00406

Error Message ID	EXX00406
Error Message Text	Failed to query management pack {Hitachi.ComputeBlade.500} version from Operation Manager '{LOCALHOST}'. {ExceptionMessage}
Explanation	Failed to retrieve the version information of the management pack which has been imported to SCOM Server.
Recommended Action	Confirm the network connection status between SCOM Server and HCCS.

EXX00407

Error Message ID	EXX00407
Error Message Text	Error occurred when querying the management pack {Hitachi.ComputeBlade.500} version. {ExceptionMessage}
Explanation	Failed to retrieve the management pack information which has been imported to SCOM Server.

EXX00408

Recommended Action	Confirm the network connection status between SCOM Server and HCCS.
Error Message ID	EXX00408
Error Message Text	Failed to query compute device data for {CB500_0123456789}. {ExceptionMessage}
Explanation	Failed to retrieve the configuration information.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX00409

Error Message ID	EXX00409
Error Message Text	Failed to query compute device data. {ExceptionMessage}
Explanation	Failed to retrieve the configuration information.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX0040A

Error Message ID	EXX0040A
Error Message Text	Failed to query compute device(s) and send data to the SCOM server. Error={ExceptionMessage}. Type={ExceptionType}.
Explanation	Failed to retrieve the configuration information.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX0040B

Error Message ID	EXX0040B
Error Message Text	Failed reading configuration file. {ShouldDisplayHealthyFileSystem}
Explanation	Failed to retrieve a value corresponding to key items from HiServerConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX0040C

Error Message ID	EXX0040C
Error Message Text	Failed to read Connector service settings from HiServerConnectorService.exe.config file. {ExceptionMessage}
Explanation	Some of settings are missing or invalid in the HiServerConnectorService.exe.config file.

Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider.
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EXX0040D

Error Message ID	EXX0040D
Error Message Text	Failed to reconnect to operation manager (LOCALHOST). Error={ExceptionMessage}.
Explanation	Failed to reconnect to SCOM Server.
Recommended Action	Confirm the network connection status between SCOM Server and HCCS. Alternatively, make sure that the server name entered to Enter server address is correct.

EXX0040E

Error Message ID	EXX0040E
Error Message Text	Failed to remove compute device {4609QZ0 00305}. {ExceptionMessage}
Explanation	Failed to execute Remove Compute Device.
Recommended Action	Confirm the network connection status between the server to be monitored and HCCS or settings of the server to be monitored. Alternatively, execute SCOM-Server-Installer to reinstall the server provider.

EXX0040F

Error Message ID	EXX0040F
Error Message Text	Failed to save the ContinuousPerformanceDataCollectionDelayInSeconds value to the configuration file {ExceptionMessage}.
Explanation	Failed to write the setting information.
Recommended Action	Confirm that HiServerConnectorService.exe.config file is not read-only. If the file is read-only, change the setting to writable. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00410

Error Message ID	EXX00410
Error Message Text	Failed to save the Operation Manager name to the configuration file. {ExceptionMessage}
Explanation	Failed to write the setting information.
Recommended Action	Confirm that HiServerConnectorService.exe.config file is not read-only. If the file is read-only, change the setting to writable. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00411

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Error Message ID	EXX00411
Error Message Text	Failed to {start} performance collection. Could not save server performance setting to HiServerConnectorService.exe.config file. {ExceptionMessage}
Explanation	Failed to write the setting information which resulted in a failure to boot or stop the performance service.
Recommended Action	Confirm that HiServerConnectorService.exe.config file is not read-only. If the file is read-only, change the setting to writable. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00412

Error Message ID	EXX00412
Error Message Text	Error occurred while sending WMI event of the {Hitachi.ComputeBlade.500.Memory} monitoring objects to Operations Manager. {ExceptionMessage}
Explanation	Error occurred when transmitting the server monitoring information.
Recommended Action	Execute Uninstall Management Pack in HCCC and reboot HCCS after removing the management pack from SCOM.

EXX00413

Error Message ID	EXX00413
Error Message Text	Failed to send WMI events of the compute device components to the Operation Manager. {ExceptionMessage}
Explanation	Error occurred when sending the configuration information.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX00414

Error Message ID	EXX00414
Error Message Text	Error occurred when Server Performance Service was requested to start. {ExceptionMessage}
Explanation	Failed to start the performance service.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX00415

Error Message ID	EXX00415
Error Message Text	Failed to start service. {ExceptionMessage}
Explanation	Failed to start HCCS.

Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.
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EXX00416

Error Message ID	EXX00416
Error Message Text	Fatal error while stopping connector windows service. {ExceptionMessage}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Reboot HCCS.

EXX00417

Error Message ID	EXX00417
Error Message Text	Error occurred when Server Performance Service was requested to stop. {ExceptionMessage}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Reboot HCCS.

EXX00418

Error Message ID	EXX00418
Error Message Text	Failed to submit discovery data to the Operation Manager. {ExceptionMessage}
Explanation	Failed to transmit the configuration information to SCOM Server.
Recommended Action	Execute Uninstall Management Pack from HCCC and reboot HCCS after removing the management pack from SCOM.

EXX00419

Error Message ID	EXX00419
Error Message Text	Compute Device value is null.
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Reboot HCCS.

EXX0041A

Error Message ID	EXX0041A
Error Message Text	Failed to test connection to Operation Manager. {ExceptionMessage}
Explanation	Failed to perform Test Connection with SCOM Server.
Recommended Action	Make sure that the server name entered to Enter server address is correct and execute again.

EXX0041B

Error Message ID	EXX0041B
Error Message Text	Fatal error occurred while uninstalling management pack and the connector settings. {ExceptionMessage}
Explanation	Failed to remove the management pack.
Recommended Action	Reboot HCCS. Alternatively, execute SCOM-Server-Installer to reinstall the server provider.

EXX0041C

Error Message ID	EXX0041C
Error Message Text	Error occurred when updating monitoring object health state. {ExceptionMessage}
Explanation	Failed to retrieve the monitoring information.
Recommended Action	Confirm the network connection status between the server to be monitored and HCCS or settings of the server to be monitored.

EXX0041D

Error Message ID	EXX0041D
Error Message Text	{HiServerScomConnector} Windows services could not be started. {ExceptionMessage} {InnerExceptionMessage}
Explanation	Failed to boot HCCS.
Recommended Action	Confirm the network connection status between SCOM Server and HCCS. Execute Uninstall Management Pack in HCCC and reboot HCCS after removing the management pack from SCOM. Verify the Hitachi Connector installation using the Windows Service manager. Verify the login user has enough security privilege to start and stop a Windows service.

EXX0041E

Error Message ID	EXX0041E
Error Message Text	{HiServerScomConnector} Windows services could not be stopped. {ExceptionMessage}
Explanation	Failed to stop HCCS.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider. Alternatively, reboot the server on which HCCS is installed.

EXX0041F

Error Message ID	EXX0041F
Error Message Text	Failed to write application event log. Event log ID: [{1015}]. Event log message: [{Eventlog ExceptionMessage}]. {ExceptionMessage}
Explanation	Failed to write event log.

Recommended Action	Make sure that the Windows Application event log does not reach to the maximum size. Alternatively, execute SCOM-Server-Installer and reinstall the server provider.
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EXX00420

Error Message ID	EXX00420
Error Message Text	ContinuousPerformanceDataCollectionDelayInSeconds value is missing in HiServerConnectorService.exe.config file.
Explanation	Value for ContinuousPerformanceDataCollectionDelayInSeconds has not been set in HiServerConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00421

Error Message ID	EXX00421
Error Message Text	ManagementPackRefreshRate value is missing in HiServerConnectorService.exe.config file.
Explanation	Value for ManagementPackRefreshRate has not been set in HiServerConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00422

Error Message ID	EXX00422
Error Message Text	Invalid management pack refresh rate value '{2000}'. Enter valid refresh rate value between 1 to 1440 minutes.
Explanation	Input value for Enter refresh rate in minute is invalid.
Recommended Action	Enter value between 1 and 1440 minutes in Enter refresh rate in minute (interval of transmitting configuration information).

EXX00423

Error Message ID	EXX00423
Error Message Text	Invalid server performance data collection interval value '{99999}'. Enter valid interval value between {1} to {86440} seconds.
Explanation	Input value for Collection Interval in second is invalid.
Recommended Action	Input value within the specified seconds in Collection Interval in second (interval of transmitting performance information).

EXX00424

Error Message ID	EXX00424
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Error Message Text	This compute device is already present.
Explanation	The compute device has already been added as the server to be monitored.
Recommended Action	Server having the same IP address cannot be added. Add the server again after removing the registered server.

EXX00425

Error Message ID	EXX00425
Error Message Text	The compute device addition task failed due to a network timeout. Please confirm that the compute device is Management Module IP address is accessible from this computer, and that the compute device has been configured to accept this computer as an SNMP manager.
Explanation	Failed to execute Add Compute Device as the compute device was not able to connect to the server to be monitored.
Recommended Action	Confirm the network connection status between the server to be monitored and HCCS. Make sure that the server to be monitored is the supported compute device. The SNMP manager registration information on the compute device may be incorrect. Confirm the following registration information. Port number IP address SNMP version must be set to v1/v2c Community name must be non-null.

EXX00426

Error Message ID	EXX00426
Error Message Text	The compute device is not supported
Explanation	The compute device is not supported.
Recommended Action	Register the supported compute device in Add Compute Device.

EXX00427

Error Message ID	EXX00427
Error Message Text	Failed to add compute device. Access denied. Config file is read-only
Explanation	Failed to execute Add Compute Device as the setting file is read-only.
Recommended Action	Confirm that HiSloNet.dll.config file is not read-only. If the file is read-only, change the setting to writable. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiSloNet.dll.config file again.

EXX00428

Error Message ID	EXX00428
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Error Message Text	Failed to remove compute device {0}.Failed to remove compute device. Compute Device IP Addresses are empty.
Explanation	Failed to execute Remove Compute Device.
Recommended Action	Execute SCOM-Server-Installer to reinstall SCOM-Server-Installer.

EXX00429

Error Message ID	EXX00429
Error Message Text	Unable to add compute device: the User Name field value is missing.
Explanation	Add Compute Device cannot be executed as User ID in the SMASH information entry items is blank.
Recommended Action	Input User ID in the SMASH information entry items.

EXX0042A

Error Message ID	EXX0042A
Error Message Text	Unable to add compute device: the User Password field value is missing.
Explanation	Add Compute Device cannot be executed as Password in the SMASH information entry items is blank.
Recommended Action	Input Password in the SMASH information entry items.

EXX0042B

Error Message ID	EXX0042B
Error Message Text	Invalid refresh rate. Enter a valid value between 1 to 1440 minutes.
Explanation	Input value in Enter refresh rate in minute is invalid.
Recommended Action	Enter value between 1 and 1440 minutes in Enter refresh rate in minute (interval of transmitting configuration information).

EXX0042C

Error Message ID	EXX0042C
Error Message Text	Unable to add compute device: the SMASH Port Number field value is missing.
Explanation	Add Compute Device cannot be executed as Port number in the SMASH information entry items is blank.
Recommended Action	Input Port number in the SMASH information entry items.

EXX0042D

Error Message ID	EXX0042D
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Error Message Text	HiLogger class is null. Need to call HiLogger.InitilizeLogger() Before using the HiLogger class
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider.

EXX0042E

Error Message ID	EXX0042E
Error Message Text	Fail to Initialize Logger class
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider.

EXX0042F

Error Message ID	EXX0042F
Error Message Text	Invalid product type : {Hccc}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider.

EXX00430

Error Message ID	EXX00430
Error Message Text	Operation manager host name is not available.
Explanation	Failed to retrieve the host name of SCOM Server.
Recommended Action	Input the host name or IP address of SCOM Server in Enter server address to execute Save Configuration. Alternatively, make sure the settings of HiServerConnectorService.exe.config file.

EXX00431

Error Message ID	EXX00431
Error Message Text	Invalid OperationManager configuration value. Hitachi Connector Windows service cannot start due to the invalid host name \\{LOCALHOST}\'.
Explanation	Failed to boot HCCS as the SCOM Server name is invalid.
Recommended Action	Input the host name or IP address of SCOM Server in Enter server address to execute Save Configuration. Then boot HCCS. Alternatively, execute SCOM-Server-Installer to reinstall the server provider.

EXX00432

Error Message ID	EXX00432
Error Message Text	Invalid ManagementPackFileName value. Hitachi Connector Windows service cannot start due to the invalid management pack file name '\{Hitachi.ComputeBlade.500.mpb}\'.
Explanation	Failed to boot HCCS as the management pack name is invalid.
Recommended Action	Verify the settings of the HiServerConnectorService.exe.config file. Alternatively, run Repair in the SCOM-Server-Installer to retrieve the HiServerConnectorService.exe.config file again. Launch the Hitachi Compute Connector Configuration, then start the service.

EXX00433

Error Message ID	EXX00433
Error Message Text	Fail to create output log file directory {C:\Program Files\HITACHI\Hitachi Server Management Pack for SCOM}. Exception message is {ExceptionMessage}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider.

EXX00434

Error Message ID	EXX00434
Error Message Text	Exception {ExceptionType} occurred. Message = {ExceptionMessage}.
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute Uninstall Management Pack in HCCC and reboot HCCS after removing the management pack from SCOM.

EXX00435

Error Message ID	EXX00435
Error Message Text	Invalid time interval value.
Explanation	Value for update interval is invalid.
Recommended Action	Input value between 1 and 86400 in Collection Interval in seconds (interval of transmitting performance information) to reboot the service.

EXX00436

Error Message ID	EXX00436
Error Message Text	Failed to collect performance data for compute device {ExceptionMessage}
Explanation	Failed to retrieve the performance information.

EXX00437

Recommended Action	Reboot HCCS.
Error Message ID	EXX00437
Error Message Text	Failed to query Operation Manager host name from HiServerConnectorService.exe.config. {ExceptionMessage}
Explanation	A value for OperationManager has not been set in HiServerConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX00438

Error Message ID	EXX00438
Error Message Text	Failed to Get Device Info.
Explanation	Failed to retrieve the device information.
Recommended Action	Confirm the network connection status between the server to be monitored and HCCS. Alternatively, confirm that the settings of the server to be monitored.

EXX00439

Error Message ID	EXX00439
Error Message Text	Failed to Add Config.
Explanation	Failed to register the compute device information.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider.

EXX0043A

Error Message ID	EXX0043A
Error Message Text	Failed to Add Registry.
Explanation	Failed to register the compute device information.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider. Alternatively, reboot the server on which HCCS has been installed.

EXX0043B

Error Message ID	EXX0043B
Error Message Text	Failed to Delete Config. Text
Explanation	Failed to remove the compute device information.

Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider.
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EXX0043C

Error Message ID	EXX0043C
Error Message Text	Failed to Delete Registry.
Explanation	Failed to remove the compute device information.
Recommended Action	Execute SCOM-Server-Installer to reinstall the server provider. Alternatively, reboot the server on which HCCS has been installed.

EXX0043D

Error Message ID	EXX0043D
Error Message Text	Failed to convert the data type. The data type is different.
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Reboot HCCS.

EXX0043E

Error Message ID	EXX0043E
Error Message Text	There are no monitored devices. Please examine your configuration.
Explanation	Failed to retrieve a compute device model to be monitored.
Recommended Action	Reboot HCCS after registering a compute device to be monitored in Add Compute Device.

EXX0043F

Error Message ID	EXX0043F
Error Message Text	OnAfterInstall has exception. {ExceptionMessage}
Explanation	Failed to install HCCC (MMC Snap-in).
Recommended Action	If HCCC (MMC Snap-in) is activated, close it. Then execute SCOM-Server-Installer to reinstall the server provider.

EXX00440

Error Message ID	EXX00440
Error Message Text	Rollback has exception. {ExceptionMessage}
Explanation	Failed to install HCCC (MMC Snap-in).

Recommended Action	If HCCC (MMC Snap-in) is activated, close it. Then execute SCOM-Server-Installer to reinstall the server provider. Alternatively, reboot the server on which you are trying to install the server provider.
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EXX00441

Error Message ID	EXX00441
Error Message Text	Uninstall has exception. {ExceptionMessage}
Explanation	Failed to uninstall HCCC (MMC Snap-in).
Recommended Action	If HCCC (MMC Snap-in) is activated, close it. Then execute SCOM-Server-Installer to reinstall the server provider.

EXX00442

Error Message ID	EXX00442
Error Message Text	Failed to connect to compute device {XXX.XXX.XXX.XXX}.Timeout occurred after {60} seconds.
Explanation	Failed to retrieve the information of server to be monitored.
Recommended Action	Confirm the network connection status between the server to be monitored and HCCS. Alternatively, confirm that the settings of the server to be monitored.

EXX00443

Error Message ID	EXX00443
Error Message Text	Fail to disagreement of the serial number.{ZZZZZZ 00001} {4609QZ0 00305}
Explanation	Failed to retrieve the information of server to be monitored.
Recommended Action	Confirm the network connection status between the server to be monitored and HCCS. Alternatively, confirm that the settings of the server to be monitored.

EXX00444

Error Message ID	EXX00444
Error Message Text	Server performance data collection for compute device is not started.
Explanation	Failed to retrieve the performance information.
Recommended Action	Reboot HCCS.

EXX00445

Error Message ID	EXX00445
Error Message Text	Failed to find monitoring relationship {HitachiHardwareGroup.Contains.500HWGroup}.

Explanation	Failed to retrieve the related information of the monitoring items.
Recommended Action	Execute Uninstall Management Pack from HCCC, reboot HCCS after removing the management pack from SCOM.

EXX00446

Error Message ID	EXX00446
Error Message Text	Cannot use this Guid for server monitoring.Guid = {7F542D0F-79C9-40ba-9EE5-EZZZZZZZZZZZ}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute Uninstall Management Pack from HCCC, reboot HCCS after removing the management pack from SCOM.

EXX00447

Error Message ID	EXX00447
Error Message Text	Connector settings is not found in the Operation Manager. {LOCALHOST}
Explanation	Error occurred in a HCCC/HCCS internal.
Recommended Action	Execute Uninstall Management Pack from HCCC, reboot HCCS after removing the management pack from SCOM.

EXX00448

Error Message ID	EXX00448
Error Message Text	Connection to the SCOM server is disconnected. {ExceptionMessage}
Explanation	Not connected to SCOM Server.
Recommended Action	Confirm the network connection status between SCOM Server and HCCS. Alternatively, make sure that the server name entered to Enter server address is correct.

EXX00449

Error Message ID	EXX00449
Error Message Text	Connector service configuration file HiSloNet.dll.config is not found.
Explanation	The HiSloNet.dll.config file may be missing in the installation directory.
Recommended Action	Execute Repair in SCOM-Server-Installer to retrieve HiSloNet.dll.config file again.

EXX0044A

Error Message ID	EXX0044A
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Error Message Text	Failed to collect Hitachi management pack information from the SCOM instance on '{0}'. The System Center Data Access Service may not be running, or may not yet have fully initialized. See the event log for more information.
Explanation	Windows service System Center Data Access is not operated.
Recommended Action	Make sure that the Windows service of SCOM Server, System Center Data Access is operated. Confirm the network connection status between SCOM Server and HCCS. Alternatively, make sure that the server name entered to Enter server address is correct.

EXX0044B

Error Message ID	EXX0044B
Error Message Text	Invalid Operation Manager host name '{0}'. Enter a valid IP Address or a host name between 1 to 63 characters Alphanumeric characters and special symbols '-', '_', '!'. .
Explanation	Value entered for server address is invalid.
Recommended Action	Enter a value between 1 and 63 characters including alphanumeric characters and special symbols ('-', '_', '!') in Enter server address (SCOM Server name).

EXX0044C

Error Message ID	EXX0044C
Error Message Text	Invalid compute device User Name. Enter valid User Name between 1 to 255 characters including alphanumeric characters and special symbols.
Explanation	User ID in the SMASH information entry items is invalid.
Recommended Action	Enter valid user ID between 1 and 255 characters including alphanumeric characters and special symbols in User ID of SMASH information entry items.

EXX0044D

Error Message ID	EXX0044D
Error Message Text	Invalid compute device Password. Enter valid Password between 6 to 255 characters including alphanumeric characters and special symbols.
Explanation	Password in the SMASH information entry items is invalid.
Recommended Action	Enter valid user password between 6 and 255 characters including alphanumeric characters and special symbols in Password of SMASH information entry items.

EXX0044E

Error Message ID	EXX0044E
Error Message Text	Invalid IP Address. Enter Management Module IP Address in this format: xxx.xxx.xxx.xxx

Explanation	Input value for Management LAN in the management LAN information entry items is invalid.
Recommended Action	Enter IP address in Management LAN of the management LAN information entry items in the form of xxx.xxx.xxx.xxx.

EXX0044F

Error Message ID	EXX0044F
Error Message Text	Invalid SNMP Community Name. Enter valid SNMP Community Name between 1 to 60 characters - ASCII characters.
Explanation	Input value for Community name in the SNMP information entry items is invalid.
Recommended Action	Input ASCII characters within 1 and 60 characters in Community name of SNMP information entry items.

EXX00450

Error Message ID	EXX00450
Error Message Text	Invalid SNMP Port Number. Enter valid SNMP Port Number between 1 to 65535
Explanation	Input value for Port number in the SNMP information entry items is invalid.
Recommended Action	Input valid SNMP port number between 1 and 65535 in Port number of SNMP information entry items.

EXX00451

Error Message ID	EXX00451
Error Message Text	Invalid IP Address. Enter Server Blade {0} Management LAN IP Address in this format: xxx.xxx.xxx.xxx
Explanation	Input value for Server Blade 0-7 in the Server Blade information entry items is invalid.
Recommended Action	Enter IP address in Server Blade 0-7 of the Server Blade information entry items in the form of xxx.xxx.xxx.xxx.

EXX00452

Error Message ID	EXX00452
Error Message Text	Invalid SMASH Port Number. Enter valid SMASH Port Number between 1 to 65535
Explanation	Port number in the SMASH information entry items is invalid.
Recommended Action	Input valid SMASH port number between 1 and 65535 in Port number of the SMASH information entry items.

EXX00453

Error Message ID	EXX00453
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Error Message Text	Timeout occurred by SMASH connection. {XXX.XXX.XXX.XXX}
Explanation	Failed to retrieve the SMASH information of server to be monitored.
Recommended Action	Confirm the network connection status between the server to be monitored and HCCS. Alternatively, confirm that the settings of the server to be monitored.

EXX00454

Error Message ID	EXX00454
Error Message Text	Failed to start Hitachi Compute Connector Configuration due to insufficient credentials. Only accounts that are members of the administrators group may run this program. Please close this MMC window, and start it again using an account belonging to the administrators group.
Explanation	MMC snap-in activation, Authority error.
Recommended Action	The account used to start the MMC snap-in must be a member of the Administrators group on the computer(s) running SCOM and Hitachi Infrastructure Adapter for Microsoft® System Center Operations Manager.

EXX00455

Error Message ID	EXX00455
Error Message Text	Failed to authenticate with blade {0} using SMASH. Please ensure that the supplied credentials match the blade's configuration and try again.
Explanation	Failed to connect SMASH communication.
Recommended Action	Confirm that entered SMASH User name and Password are correct.

EXX00456

Error Message ID	EXX00456
Error Message Text	Failed to access blade {0} using SMASH. Please ensure that this computer is able to connect to the blade's management IP address ({1}) using the configured SMASH port number ({2}), and try again.
Explanation	Failed to connect SMASH communication.

Recommended Action	<p>Confirm the SMASH settings of the target server blade.</p> <ul style="list-style-type: none"> ▪ SMASH(WS-Management)settings. ▪ Use should be enabled. ▪ Port number should be correct. ▪ The WinHTTP Proxy setting must be disabled. ▪ To verify the WinHTTP Proxy setting, use command: <pre>netsh winhttp show proxy</pre> ▪ To disable the WinHTTP Proxy setting, use command: <pre>netsh winhttp reset proxy</pre>
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EXX00457

Error Message ID	EXX00457
Error Message Text	Unable to add compute device: one or more User Name field values are missing.
Explanation	Add Compute Device cannot be executed as User ID in the SMASH information entry items is blank.
Recommended Action	Input User ID in the SMASH information entry items.

EXX00458

Error Message ID	EXX00458
Error Message Text	Unable to add compute device: one or more Password field values are missing.
Explanation	Add Compute Device cannot be executed as Password in the SMASH information entry items is blank.
Recommended Action	Input Password in the SMASH information entry items.

EXX00459

Error Message ID	EXX00459
Error Message Text	Unable to add compute device: one or more Port Number field values are missing.
Explanation	Add Compute Device cannot be executed as Port number in the SMASH information entry items is blank.
Recommended Action	Input Port number in the SMASH information entry items.

EXX0045B

Error Message ID	EXX0045B
Error Message Text	Failed to add compute device. Please verify the specified compute device model and management module IP address and try again.
Explanation	Add Compute Device cannot be executed because the selected model does not match the model of the specified device.

EXX0045C

Recommended Action	Confirm that the device specified by the management module IP address matches the selected model.
Error Message ID	EXX0045C
Error Message Text	Error occurred when ConnectorNumber is queried from the configuration file. {ExceptionMessage}
Explanation	Failed to retrieve a value for the connector number, from HiServerConnectorService.exe.config file.
Recommended Action	Make sure the settings of HiServerConnectorService.exe.config file. Alternatively, execute Repair in SCOM-Server-Installer to retrieve HiServerConnectorService.exe.config file again.

EXX0045D

Error Message ID	EXX0045D
Error Message Text	Invalid Operation Manager Connector Number '{0}'.\nPlease select a connector number between #0 to #1.
Explanation	Input value for Select connector number is invalid.
Recommended Action	For Advanced Configuration Tab > Connector Number in HCCC, set either zero or one.

EXX05000

Error Message ID	EXX05000
Error Message Text	Failed to init the library. {0}
Explanation	HiStor API error.
Recommended Action	Please run the operation again. If the error persists, contact your administrator for assistance.

EXX05001

Error Message ID	EXX05001
Error Message Text	Failed to init the library. The library has already been initialized.
Explanation	HiStor API error. Library has already been successfully initialized.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05002

Error Message ID	EXX05002
Error Message Text	Failed to init the library. The library has not been initialized yet.
Explanation	HiStor API error. Library is not initialized.

Recommended Action	<ul style="list-style-type: none"> • If the Hitachi Compute Connector Configuration (HCCC) failed, restart it. • If the Hitachi Compute Connector Service (HCCS) failed, restart it.
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EXX05003

Error Message ID	EXX05003
Error Message Text	Failed to init the Histor library. The error catalog failed to load.
Explanation	HiStor API error. API error catalog HiStorErrors.dll fails to load.
Recommended Action	Execute Repair in SCOM-Server-Installer to retrieve HiStorErrors.dll again.

EXX05004

Error Message ID	EXX05004
Error Message Text	Failed to init the library. The version for the main HiStor file library does not match the version of the Common HiStor library.
Explanation	HiStor API error. The version for the main HiStor Server library does not match the version of the Common HiStor library.
Recommended Action	Verify the HiStorCommon.dll and HiStorServer.dll file versions. If they are different, run the repair installation.

EXX05005

Error Message ID	EXX05005
Error Message Text	Failed to init the Histor library. One or more parameters is not valid.
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05006

Error Message ID	EXX05006
Error Message Text	Failed to close the library. {0}
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05007

Error Message ID	EXX05007
Error Message Text	Failed to add the server object to the system. The login failed due to invalid username or password.
Explanation	HiStor API error. Login credentials are wrong.

EXX05008

Recommended Action	Verify the username and password.
Error Message ID	EXX05008
Error Message Text	Failed to add the server object to the system. {0}
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05009

Error Message ID	EXX05009
Error Message Text	One or more parameters is not valid.
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05010

Error Message ID	EXX05010
Error Message Text	The compute device addition task failed due to a network timeout. Please confirm IP Address, User Name or Password.
Explanation	HiStor API error. Host name is invalid, or the host is unreachable.
Recommended Action	Verify the server address is correct and that connection to the server is possible.

EXX05011

Error Message ID	EXX05011
Error Message Text	Failed to add the compute device object to the system. The login credentials do not have enough privileges to manage the server.
Explanation	HiStor API error. The account for an authenticated subsystem does not have the privileges to for use through the API.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05012

Error Message ID	EXX05012
Error Message Text	Failed to collect server info. {0}
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05013

Error Message ID	EXX05013
Error Message Text	Failed to collect chassis info. {0}
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05014

Error Message ID	EXX50014
Error Message Text	Failed to collect node info. {0}
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05015

Error Message ID	EXX05015
Error Message Text	Failed to remove the server object from the system.
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05016

Error Message ID	EXX05016
Error Message Text	Failed to init the Histor library. An unknown internal error occurred.
Explanation	HiStor API error. An unknown internal error occurred.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

EXX05017

Error Message ID	EXX05017
Error Message Text	Failed to init the Histor library. Not enough memory is left in the system for this process.
Explanation	HiStor API error. There is not enough memory left in the system for this process.
Recommended Action	Reboot HCCS.

EXX05018

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Error Message ID	EXX05018
Error Message Text	Failed to add the compute device object to the system. The API was unable to connect to the server device.
Explanation	HiStor API error. The API was unable to connect to the server device.
Recommended Action	Verify the server address is correct and that connection to the server is possible.

EXX05019

Error Message ID	EXX05019
Error Message Text	Failed to add the compute device object to the system. One or more parameter is invalid.
Explanation	HiStor API error.
Recommended Action	Run the operation again. If the error persists, contact your administrator for assistance.

Information Messages

I220101E

Information Message ID	I220101E
Information Message Text	The logical unit is not presented to iSCSI initiator %%ls.
Explanation	
Recommended Action	

I2201020

Information Message ID	I2201020
Information Message Text	The logical unit is not presented to WWN: [%%ls].
Explanation	
Recommended Action	

I2201029

Information Message ID	I2201029
Information Message Text	V-Vol: [%%04d] LUN path: %%ls.

Explanation	Information only.
Recommended Action	No action required.

I220162E

Information Message ID	I220162E
Information Message Text	Successfully presented LUN: [%%08d:%%04d].
Explanation	Information only.
Recommended Action	No action required.

I220163F

Information Message ID	I220163F
Information Message Text	Successfully created V-Vol for LU: [%%08d:%%04d].
Explanation	Information only.
Recommended Action	No action required.

I2201642

Information Message ID	I2201642
Information Message Text	Successfully deleted CoW pair for LU: [%%08d:%%04d].
Explanation	Information only.
Recommended Action	No action required.

I220A005

Information Message ID	I220A005
Information Message Text	Would you like to remove {0}?
Explanation	
Recommended Action	

I220A006

Information Message ID	I220A006
Information Message Text	No subsystem is selected.
Explanation	

Recommended Action	Select the subsystem to remove by clicking on the subsystem item in the MMC Snapin window.
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I220A009

Information Message ID	I220A009
Information Message Text	Starting the Connector service will cause the following Management Pack version change(s) in SCOM:\n\n{0}\n\nDo you want to continue?
Explanation	
Recommended Action	

I220A013

Information Message ID	I220A013
Information Message Text	Configuration is saved.
Explanation	The configuration has been successfully saved.
Recommended Action	None

I220A017

Information Message ID	I220A017
Information Message Text	Operation manager {0} is connected.
Explanation	
Recommended Action	

I220A071

Information Message ID	I220A071
Information Message Text	Storage Performance Data Collection Service is started.
Explanation	
Recommended Action	

I220A01A

Information Message ID	I220A01A
Information Message Text	Are you sure you'd like to uninstall the Hitachi Storage Systems and Hitachi Storage Systems Alerts and Hitachi Storage Service Monitoring Management Packs from the Operations Manager running on {0}?
Explanation	Uninstallation confirmation message of Management Pack.

Recommended Action	Not required.
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I220A01F

Information Message ID	I220A01F
Information Message Text	There is no subsystem configuration.
Explanation	Uninstallation confirmation message of Management Pack.
Recommended Action	Use the Hitachi MMC Snapin configuration application to add subsystems to the Hitachi Connector configuration.

I220A02E

Information Message ID	I220A02E
Information Message Text	The Hitachi Storage Systems and Hitachi Storage Systems Alerts and Hitachi Storage Service Monitoring Management Packs were successfully uninstalled from the Operations Manager running on {0}.
Explanation	Uninstallation of Management Pack has completed.
Recommended Action	Not required.

I220A072

Information Message ID	I220A072
Information Message Text	Storage Performance Data Collection Service is stopped.
Explanation	
Recommended Action	

Warning Messages

W2200006

Warning Message ID	W2200006
Warning Message Text	Failed to get storage replication info. Permission for this operation was denied. PairType:[TI] PVol:[%ls] SVol:[%ls]
Explanation	Unauthorized attempt to retrieve TI pair snapshot group name and TI type from resource group.
Recommended Action	This subsystem must be registered by a user with permission to access all resource groups.

WXX01388

Warning Message ID	WXX01388
Warning Message Text	Since ManagementPackRefreshRate value '\{99999}\' is invalid, management pack refresh rate is default to {15} minutes.
Explanation	Since the configuration information transmission interval value is invalid, a default minute interval value is assumed as the configuration information transmission interval.
Recommended Action	Input a valid value in Enter refresh rate in minute (configuration information transmission interval) from HCCC and execute Save Configuration.

WXX01389

Warning Message ID	WXX01389
Warning Message Text	Since MonitoringEventDelayInSeconds value '\{99999}\' is invalid, the monitoring event delay value is default to {90} seconds.
Explanation	Since the monitoring interval value to the server is invalid, a default second interval is assumed as the monitoring interval to the server.
Recommended Action	Confirm that a value for MonitoringEventDelayInSeconds has been set between 60 and 3600 in HiServerConnectorService.exe.config file.

WXX0138A

Warning Message ID	WXX0138A
Warning Message Text	Fail to access a config file {C:\Program Files\HITACHI\Hitachi Server Management Pack for SCOM}.
Explanation	Failed to access to the log output setting file. Output a log using the default log level.
Recommended Action	Make sure that HiSystemCenter.config file exists in the displayed message path.

WXX0138B

Warning Message ID	WXX0138B
Warning Message Text	Unknown value = {4609QZ0 00305}.
Explanation	Failed to retrieve the information of the server to be monitored.
Recommended Action	Make sure that the server to be monitored is the compute device to be supported. Alternatively, make sure that the network connection status between the server to be monitored and HCCS.

WXX0138C

Warning Message ID	WXX0138C
Warning Message Text	The {CB500} monitoring thread to get configuration info is running, but the other {CB500} monitoring thread to get performance info is not running now.
Explanation	Configuration information retrieval process of the target compute device is operated though, the performance information retrieval process is not operated.
Recommended Action	Reboot HCCS.

WXX0138D

Warning Message ID	WXX0138D
Warning Message Text	The {CB500} with Chassis ID [{1234567890}] is not yet being monitored. To begin monitoring it, please reboot {LOCALHOST}.
Explanation	Information is not transmitted as the target compute device is not the server to be monitored.
Recommended Action	Reboot HCCS.



Glossary

A

Administrator Role

Using the configuration GUI with administrative access to the array.

ASSIST

Advanced Service Support Information System Technology

B

BMC

Baseboard Management Controller

C

CB

Compute Blade

CR

Compute Rack

CIFS

Common Interface File System protocol

CM

Command device

CAW

Copy After Write snapshot

COW

Copy On Write Snapshot

CR200

Compute Rack 200 Series (210H/220H/220S)

CB500

Compute Blade 500 Series (520A/520HB2/520HA2/540A/
520HB4/520XB4)

CB2000

Compute Blade 2000 Series (X55A2/X55S3/X55R3/X57A1/X57A2)

CR2500

Compute Blade 2500 Series (520XB1/520XB2/520HB3)

CCI

Command control interface

CIFS

Common Internet File System

Class

The main element of a SCOM service model. It represents an object being managed.

CLPR

Cache logical partition

CM

Command device

CPU

Central Processing unit

CTL

Subsystem controller

CTL0

Controller 0

CTL1

Controller 1

CU

Control unit

CV

Custom-sized volume

Cyl

Cylinder

Controller

The component in a storage system that manages all storage functions. It is analogous to a computer and contains a processors, I/O devices, RAM, power supplies, cooling fans, and other sub-components as needed to support the operation of the storage system.

Controller IP Address (HUS series, VSP Gx00 only)

An Internet Protocol (IP) address is a numerical label that is uniquely assigned to a Hitachi subsystem controller.

Controller Port**COW**

Copy-on-write

copy-on-write

Point-in-time snapshot copy of any data volume within a storage system. Copy-on-write snapshots only store changed data blocks, therefore the amount of storage capacity required for each copy is substantially smaller than the source volume.

D**Data Services**

Data services consist of data moving, data replication, data archiving and any other functions where data is involved.

Discovery

The discovery process lets the user locate instances of classes and relationships that are defined in the management pack and create them in the Operations Manager database.

DKS

Disk controller

DMLU

Differential management logical unit

DNS

Domain name service

Device Manager

By providing a single console for managing complex storage environments, Hitachi Device Manager software unifies and simplifies storage management and gives you full control of your storage. Featuring both an intuitive graphical user interface (GUI) and a complete command line interface (CLI), Device Manager allows you to centrally manage single or multiple Hitachi storage systems.

DP Pool

Consists of one or more dedicated RAID groups. Up to 50 DP pools in the HUS110, and 64 DP pools in the HUS130/150 are allowed. Each pool requires a unique pool ID.

DP Pool Capacity

Amount of total capacity assigned to a given DP pool.

DP Pool Capacity Threshold

Initial warning levels of high pool utilizations upon early (default 40%) and depletion (50%) conditions.

DP Pool Consumed Capacity

Amount of pool capacity already consumed.

DP Optimization

A DP pool can be optimized by rebalancing each DP-VOL's allocated pool capacity evenly across each of the DP RAID groups. This is particularly effective after adding a DP RAID group to the DP pool.

DP RAID Group

One or more physical RAID Groups that belong to the same HDP pool.

DP-VOL

A virtual LU that consumes and maps storage space for areas of the LU in which data was written. With an HDP, it is required to associate the DP-VOL with a DP pool. The DP-VOL needs to specify a DP pool ID, DP-VOL logical capacity, and DP-VOL number. Many DP-VOLs can be defined on a DP pool. DP-VOLs cannot be defined to multiple DP pools.

E

ESX Host

A computer running VMware ESX Server

EMT64T

Extended Memory 64 Technology

EVS

Enterprise Virtual Server

F

FC

Fibre Channel

FQDN

Fully Qualified Domain Name

FS

File service

FTP

File Transfer Protocol

G

GAD

Global-Active Device

H

HCCC

Hitachi Compute Connector Configuration

HCCS

Hitachi Compute Connector Service. The Windows service belonging to Hitachi Compute Systems Management Packs that collects and provides Hitachi Server information to Microsoft Operations Manager.

HDP

Hitachi Dynamic Provisioning Pool

Hi-Star

Hierarchical Star Network

Hitachi Content Platform (HCP)

An open, highly scalable, intelligent archive that preserves and protects data.

Hitachi Dynamic Provisioning (HDP)

Advanced thin-provisioning software that provides "Virtual Storage Capacity" to simplify administration and addition of storage, eliminate application service interruptions, and reduce costs.

HDP

Hitachi dynamic provisioning pool

HDP Pool

Consists of one or more dedicated RAID groups. Up to 50 DP pools in the AMS 2100, and 64 DP pools in the AMS 2300/2500 are allowed. Each pool requires a unique pool ID.

HDP Optimization

An HDP pool can be optimized by rebalancing each HDP-VOL's allocated pool capacity evenly across each of the RAID groups. This is particularly effective after adding a RAID group to the HDP pool.

HDP Pool Capacity

Amount of total capacity assigned to a given HDP pool.

HDP Pool Capacity Threshold

Initial warning levels of high pool utilizations upon early (default 40%) and depletion (50%) conditions.

HDP Pool Consumed Capacity

Amount of pool capacity already consumed.

HDP RAID Group

One or more physical RAID Groups that belong to the same HDP pool.

HDP-VOL

A virtual LU that consumes and maps storage space for areas of the LU that have had data written to them. In HDP, it is required to associate the HDP-VOL with a HDP pool. The HDP-VOL needs to specify a HDP pool ID, HDP-VOL logical capacity, and HDP-VOL number. Many HDP-VOLs can be defined for on HDP pool. A given HDP-VOL cannot be defined to multiple DP pools.

Hitachi Tiered Provisioning

New to VSP arrays, allows automated provisioning of HDP pools and volumes based on device performance characteristics.

HM800

HM800 stands for VSP Gx00 and Fx00

HNAS

Hitachi Network Attached Storage system

Host Group (HG)

A group of hosts of the same operating system platform.

HCCC

Hitachi Compute Connector Configuration

HCCS

Hitachi Compute Connector Service

HCMP

Hitachi Compute Management Pack

HSCC

Hitachi Storage Connector Configuration

HSCS

Hitachi Storage Connector Service

HSMP

Hitachi Storage Management Pack

HTTP

HyperText Transfer Protocol

HUR

Hitachi Universal Replicator

HUS

Hitachi Unified Storage

HUS VM

Hitachi Unified Storage VM

H-UVM

Hitachi Universal Volume Manager

I

IBM

International Business Machines Corporation

IP

Internet Protocol

IP Address

An Internet Protocol (IP) address is a numerical label that is uniquely assigned to a device.

IETF

Internet Engineering Task Force

IPMI

Intelligent Platform Management Interface

J

JRE

Java Runtime Environment

JVM

Java Virtual Machine

L

LAN

Local Area Network

LDEV

Logical device

LU

Logical unit (LU): a logical volume that is configured for use by open systems hosts (for example, OPEN-V).

LUN

Logical unit number

LU Path

Logical unit (LU) path: the path between an open-systems host and a logical unit.

LU Size

Logical unit (LU) size: the size of a logical unit.

LV

Logical volume

LVI

Logical volume image

M**Management**

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

MMC

Microsoft Management Console

MP

Management pack

N**NFS**

Network File System protocol

O**Operations Console**

When term "Operations Console" is used alone, it means main console of Microsoft System Center Operations Manager.

OS

Operating system

Over Provisioning Threshold

Threshold value for DP pool over-provision warning (default 100%) and limit (default 130%).

P**Parity Group**

A parity group, also called an array group, is a group of hard disk drives (HDDs) that form the basic unit of storage for Enterprise

subsystems. All HDDs in a parity group must have the same physical capacity.

PG

Parity group

Physical DKC

This is synonymous with physical storage.

Plug-in

A plug-in is a software application that acts and an interface between two other applications.

P-Vol

Primary volume

Q

Quick Resync (QR)

A resynchronizing operation wherein the pair status becomes Paired Internally Synchronizing.

Quick Split (QS)

Splitting a pair whose status is Synchronizing or Paired Internally Synchronizing.

R

RAID

Redundant array of independent disks

RAID Group

A redundant array of inexpensive drives (RAID) that have the same capacity and are treated as one group for data storage and recovery. A RAID group contains both user data and parity information, which allows the user data to be accessed in the event that one or more of the drives within the RAID group are not available. The RAID level of a RAID group determines the number of data drives and parity drives and how the data is "striped" across the drives. For RAID1, user data is duplicated within the RAID group, so there is no parity data for RAID1 RAID groups.

A RAID group can also be called an array group or a parity group.

RAM

Random access memory

RCU

Remote control unit

RG

RAID group

RFC

Request for comment

Rijndel

A cryptography algorithm that comprises the advanced encryption standard that consists of three block cipher AES-128, AES-192 and AES-256.

RMI

Remote Method Invocation

RMS

Root Management Server

S**SAN**

Storage area network

SAS

Serial-attached SCSI

SATA

Serial Advanced Technology Attachment

SCOM

System Center Operations Manager (Microsoft)

SCOM Management Pack

Microsoft Systems Center Operations Manager 2012. Management Pack is a scalable monitoring system which collects, organizes, and distributes critical alerts, key information, providing a unified view of complex infrastructures from anywhere on the network.

SCSI

Small computer system interface

SI

ShadowImage in-system replication

SIM

Service information message

SMASH

System Management Architecture for Server Hardware: an interface for server hardware management.

SMS

Hitachi Simple Modular Storage

SNMP

Simple Network Management Protocol

SNMP Trap

Notifications/alerts generated by network components.

SN

Serial number

SNM2

Storage Navigator Modular 2 (for HUS arrays only)

SPARC

Scalable processor architecture

SSL

Secure socket layer

Storage array or device

Storage includes both block and file storage in a form factor that scales from a single node appliance to large scalable multi-node configurations.

Storage Serial No.

A storage array is a serial number.

S-VOL

Secondary volume

SVP

Service processor

T

TCP/IP

Transmission Control Protocol / Internet Protocol

Total Capacity

The aggregate amount of storage space in a data storage system.

TransID

U

UDP

User Datagram Protocol

URL

Uniform resource locator

User Account

Uniquely identify a user for authentication and authorization to the subsystem or compute device. A user uses his user account to authenticate to the subsystem or compute device. The subsystem or compute device uses the user account to determine the access rights for the login user.

V

View

Views provide access to data that is collected in the Operations Manager database.

Virtual DKC

This is synonymous with virtual storage.

Vshadow (Windows 2003)

A command-line tool that you can use to create and manage volume shadow copies.

VSP

Virtual Storage Platform

VSP Fx00

Virtual Storage Platform F400/F600/F800

VSP Gx00

Virtual Storage Platform G200/G400/G600/G800

VSS Hardware Provider

A hardware-based provider service that intercepts and processes requests for creating point-in-time copies of data through the Microsoft Volume Shadow Copy Service (VSS).

VSS

Volume Shadow Copy Service

V-VOL

Virtual volume

VOL

Volume

Volume Group**W****WMI**

Windows Management Instrumentation

WMS

Hitachi Workgroup Modular Storage

WWN

A World Wide Name (WWN) is a unique identifier which identifies a particular Fibre Channel, Advanced Technology Attachment (ATA) or Serial Attached SCSI (SAS) target or initiator. Each WWN is an 8 byte number derived from an IEEE OUI and vendor-supplied information.



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Boost

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libdes

libdes, Version 3.00 93/10/07

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This kit builds a DES encryption library and a DES encryption program. It supports ecb, cbc, ofb, cfb, triple ecb, triple cbc and MIT's pcbc encryption modes and also has a fast implementation of crypt(3). It contains support routines to read keys from a terminal, generate a random key, generate a key from an arbitrary length string, read/write encrypted data from/to a file descriptor.

The implementation was written so as to conform with the manual entry for the des_crypt(3) library routines from MIT's project Athena.

destest should be run after compilation to test the des routines. rpw should be run after compilation to test the read password routines. The des program is a replacement for the sun des command. I believe it conforms to the sun version.

The Imakefile is setup for use in the kerberos distribution.

These routines are best compiled with gcc or any other good

optimising compiler. Just turn you optimiser up to the highest settings and run destest after the build to make sure everything works.

I believe these routines are close to the fastest and most portable DES routines that use small lookup tables (4.5k) that are publicly available. The fcrypt routine is faster than ufc's fcrypt (when compiling with gcc2 -O2) on the sparc 2 (1410 vs 1270) but is not so good on other machines (on a sun3/260 168 vs 336).

Eric Young (eay@psych.psy.uq.oz.au)

SNMP++

```
_## SNMP++ v3.3
_## -----
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```

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libssh2

```
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