# Fujitsu ETERNUS Storage Systems Monitoring Pack 16.3 User's Guide



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# Preface

This manual describes Fujitsu ETERNUS Storage Systems Monitoring Pack that monitors ETERNUS DX storage systems with the use of Microsoft® System Center Operations Manager.

This manual is designed for system administrators with a knowledge of the Microsoft® System Center Operations Manager.

First Edition January 2016

## Organization

This manual consists of the following six chapters and three appendices.

Chapter 1 Overview

This chapter provides an overview of the Fujitsu ETERNUS Storage Systems Monitoring Pack.

#### Chapter 2 Operating Environment

This chapter describes the conditions required to use the Fujitsu ETERNUS Storage Systems Monitoring Pack.

#### Chapter 3 Installation

This chapter describes the procedures for installing and configuring the Fujitsu ETERNUS Storage Systems Monitoring Pack.

Chapter 4 Operation Procedure

This chapter describes how to operate the Fujitsu ETERNUS Storage Systems Monitoring Pack.

Chapter 5 Uninstallation

This chapter describes the procedures for uninstalling the Fujitsu ETERNUS Storage Systems Monitoring Pack.

Chapter 6 Required Information for Failure Investigation

This chapter describes the information to be obtained if trouble occurs with the Fujitsu ETERNUS Storage Systems Monitoring Pack.

Appendix A Messages

This appendix describes the messages displayed by the Fujitsu ETERNUS Storage Systems Monitoring Pack.

#### Appendix B Property Information

This appendix contains the property information for the Fujitsu ETERNUS Storage Systems Monitoring Pack.

Appendix C Customization

This appendix describes how to change the object detection time and monitoring interval for monitored objects included in the Fujitsu ETERNUS Storage Systems Monitoring Pack.

## **Related Manuals**

Related manuals for this manual are listed below.

- ETERNUS DX related manuals
- FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Installation and Setup Guide
- FUJITSU Storage ETERNUS SF Storage Cruiser Operation Guide
- FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Web Console Guide
- FUJITSU Storage ETERNUS SF Storage Cruiser Event Guide

## Naming Conventions

Naming conventions for this manual are listed below.

- "Windows Server 2008 R2" refers to Microsoft® Windows Server® 2008 R2 Standard, Microsoft® Windows Server® 2008 R2 Enterprise, and Microsoft® Windows Server® 2008 R2 Datacenter.
- "Windows Server 2012" refers to Microsoft<sup>®</sup> Windows Server<sup>®</sup> 2012 Standard and Microsoft<sup>®</sup> Windows Server<sup>®</sup> 2012 Datacenter.
- "Windows Server 2012 R2" refers to Microsoft® Windows Server® 2012 R2 Standard and Microsoft® Windows Server® 2012 R2 Datacenter.
- "SCOM" refers to Microsoft® System Center Operations Manager.
- "SCVMM" refers to Microsoft® System Center Virtual Machine Manager.
- "ETERNUS DX" refers to the disk storage systems and All Flash Arrays that are supported by the Fujitsu ETERNUS Storage Systems Monitoring Pack.
- "GUI" refers to the ETERNUS Web GUI.
- "ETERNUS SF Storage Cruiser" or "Storage Cruiser" refers to the FUJITSU Storage ETERNUS SF Storage Cruiser.
- "ETERNUS SF Installation Guide" refers to "FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Installation and Setup Guide".
- "ETERNUS SF Operation Guide" refers to "FUJITSU Storage ETERNUS SF Storage Cruiser Operation Guide".
- "ETERNUS SF Web Console Guide" refers to "FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Web Console Guide".
- "ETERNUS SF Storage Cruiser Event Guide" refers to "FUJITSU Storage ETERNUS SF Storage Cruiser Event Guide".
- Trademark symbols such as <sup>™</sup> and <sup>®</sup> are omitted in this manual.

## **Reference Information**

- ETERNUS DX support information for the Fujitsu ETERNUS Storage Systems Monitoring Pack http://www.fujitsu.com/global/support/products/computing/storage/download/monitoring-pack.html
- ETERNUS DX product information http://www.fujitsu.com/global/support/products/computing/storage/disk/ http://www.fujitsu.com/global/support/products/computing/storage/all-flash-array/

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# **Release Information**

## Fujitsu ETERNUS Storage Systems Monitoring Pack Updates

The following table shows the modifications for each Fujitsu ETERNUS Storage Systems Monitoring Pack version:

Version	Modifications
15.1 (April 2013)	First edition
16.0 (December 2013)	Added support for the FUJITSU Storage ETERNUS SF Storage Cruiser 16.
16.3 (January 2016)	Added support for the configuration display and performance display.

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# Chapter 1 Overview

This chapter provides an overview of Fujitsu ETERNUS Storage Systems Monitoring Pack and ETERNUS DX API Service.

## 1.1 Fujitsu ETERNUS Storage Systems Monitoring Pack

Fujitsu ETERNUS Storage Systems Monitoring Pack is a management pack that allows monitoring of ETERNUS DX with SCOM.

By setting the operation management server for ETERNUS SF Storage Cruiser (\*1) as the server to be monitored by SCOM, the following types of monitoring are possible:

- Display configuration information, display performance information, and monitor events for the ETERNUS DX managed by the Windows version of ETERNUS SF Storage Cruiser manager.
- Alive monitoring of Windows version ETERNUS SF Storage Cruiser manager services
  - \*1: ETERNUS SF Storage Cruiser is commercial software available from Fujitsu.

#### ┝ Caution

Fujitsu ETERNUS Storage Systems Monitoring Pack 16.3 can be used if the version of ETERNUS SF Storage Cruiser is 16.3.

If the version of ETERNUS SF Storage Cruiser is 16.0, 16.1, or 16.2, use Fujitsu ETERNUS Storage Systems Monitoring Pack 16.0.

Further, when using Fujitsu ETERNUS Storage Systems Monitoring Pack for PRO with ETERNUS SF Storage Cruiser 16.3, use Fujitsu ETERNUS Storage Systems Monitoring Pack for PRO 16.0 (for Fujitsu ETERNUS Storage Systems Monitoring Pack 16.3).

If ETERNUS SF Storage Cruiser is 15.3 or earlier, use Fujitsu ETERNUS Storage Systems Monitoring Pack 15.1.

## 1.2 System Configuration

Fujitsu ETERNUS Storage Systems Monitoring Pack obtains and monitors information from the ETERNUS DX by using functions of ETERNUS SF Storage Cruiser.

An example configuration for using Fujitsu ETERNUS Storage Systems Monitoring Pack to monitor ETERNUS DX is shown in the following figure.



Figure 1.1 System Configuration Example

**12** Fujitsu ETERNUS Storage Systems Monitoring Pack 16.3 User's Guide Copyright 2016 FUJITSU LIMITED

# Chapter 2 Operating Environment

This chapter describes the conditions required to use Fujitsu ETERNUS Storage Systems Monitoring Pack.

## 2.1 Hardware Conditions

The following hardware is required to use Fujitsu ETERNUS Storage Systems Monitoring Pack.

Conditions for SCOM management server

Install Fujitsu ETERNUS Storage Systems Monitoring Pack on SCOM management server. For details about the hardware conditions for SCOM management server, refer to the SCOM documentation.

#### Conditions for servers monitored by SCOM

Set the operation management server for ETERNUS SF Storage Cruiser as the server to be monitored by the SCOM agent.

ETERNUS DX API Service must be installed on the operation management server for ETERNUS SF Storage Cruiser. ETERNUS DX API Service is software that provides system information for the ETERNUS DX when a request is received from the management pack.

The hardware conditions required to use ETERNUS DX API Service are shown in the following table.

Table 2.1	Hardware Conditions for the ETERNUS DX API Service

Operation server	Requirements
Operation management server	Memory: 2GB or more
	Available disk space: 100MB or more

- For details about the required conditions for the server in which the SCOM agent is to be installed, refer to the SCOM documentation.
- For details about the hardware conditions required for the ETERNUS SF Storage Cruiser operation management server, refer to the "ETERNUS SF Installation and Setup Guide".
- Conditions for Storage Devices

For details about ETERNUS DX and firmware versions that are supported by Fujitsu ETERNUS Storage Systems Monitoring Pack, refer to the following website. http://www.fujitsu.com/global/support/products/computing/storage/download/monitoring-pack.html

## 2.2 Software Conditions

The software conditions required to use Fujitsu ETERNUS Storage Systems Monitoring Pack are shown below.

Conditions for SCOM management server

Install Fujitsu ETERNUS Storage Systems Monitoring Pack on SCOM management server. For details about the software conditions for SCOM management server, refer to the SCOM documentation.

Conditions for servers monitored by SCOM

Set the operation management server for ETERNUS SF Storage Cruiser as the server to be monitored by the SCOM agent.

ETERNUS DX API Service must be installed in the operation management server for ETERNUS SF Storage Cruiser.

Microsoft .NET Framework 4.5 is required to install ETERNUS DX API Service. For details about other software conditions required to run ETERNUS DX API Service, refer to the following website.

http://www.fujitsu.com/global/support/products/computing/storage/download/monitoring-pack.html

- For details about the conditions required for the SCOM agent, refer to the SCOM documentation.
- For details about the software conditions required for the ETERNUS SF Storage Cruiser operation management server, refer to the "ETERNUS SF Installation and Setup Guide".

# Chapter 3 Installation

This chapter describes the procedures for installing ETERNUS DX API Service and Fujitsu ETERNUS Storage Systems Monitoring Pack.

## 3.1 Installing ETERNUS DX API Service

Install ETERNUS DX API Service on the operation management server on which ETERNUS SF Storage Cruiser was installed.

The procedure for installing ETERNUS DX API Service is shown below.

#### Procedure

- Run the ETERNUS DX API Service installer.
   The [Welcome to the InstallShield Wizard for ETERNUS DX API Service] screen appears.
- **2** On the [Welcome to the InstallShield Wizard for ETERNUS DX API Service] screen, click the [Next] button.



**3** The [License Agreement] screen appears. Read the details of the agreement. To continue, click the [Yes] button.

ETERNUS DX API Service - InstallShield Wizard
License Agreement Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
This program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Do you accept all the terms of the preceding License Agreement? If you select No, the setup will close. To install ETERNUS DX API Service, you must accept this agreement. InstallShield
< <u>B</u> ack <u>Y</u> es <u>N</u> o

**4** On the [Setup Type] screen, select the setup type and then click the [Next] button.

I	ETERNUS DX API Servi	ce - InstallS	hield Wizarc	x
Setup Type Select the setu	p type to install.			Z
Please select a	setup type.			
• Typical	Install in a typical setting.			
O Cu <u>s</u> tom ∎	Install customize setting			
InstallShield ———		< <u>B</u> ack	<u>N</u> ext >	Cancel

5 If [Typical] on the [Setup Type] screen is selected, proceed to <u>Step 7</u>. If [Custom] is selected, the [Choose the Destination Location] screen appears. To change the installation folder, click the [Browse] button. Select the installation folder, and then click the [Next] button.

ETERNUS DX API Service - InstallShield Wizard	x
Choose the Destination Location Select folder where setup will install files.	
Setup will install ETERNUS DX API Service in the following folder.	
To install to this folder, click Next. To install to a different folder, click [Browse] button and select another folder.	
Destination Folder	
C: \Program Files \ETERNUS_DX_API Browse	
InstallShield	_
< Back Next > Cancel	

**6** On the [Registration of port number] screen, the port number that is used for each service can be changed. Set the port numbers, and then click the [Next] button.

	ETERNUS DX API Service - InstallShield Wizard		
Re F	Registration of port number Port number is necessary for the communication.		
	Please input the numbers used to communicate with Agent and Client.		
	Port number 1 on which ETERNUS DX API Service is used internally		
	Port Number 26443 Service Name : edasport1		
	Port number 2 on which ETERNUS DX API Service is used internally		
	Port Number 26009 Service Name : edasport2		
Insta	IShield Cancel		

7 On the [Start Copying Files] screen, check the setup details. To make changes, click the [Back] button. Otherwise, click the [Install] button to start the installation.

ETERNUS DX API Service - InstallShield Wizard
Start Copying Files Review settings before copying files.
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Install to begin copying files.
Current Settings:
ETERNUS DX API Service <ul> <li>Destination Folder:</li> <li>C:\Program Files\ETERNUS_DX_API</li> </ul> <li>Port number edasport1         <ul> <li>26443</li> <li>Port number edasport2             <ul></ul></li></ul></li>
InstallShield < <u>B</u> ack Install Cancel Cancel

When installation is complete, the [InstallShield Wizard Complete] screen is displayed.

**8** Click the [Finish] button to exit installation.

ETERNUS I	DX API Service - InstallShield Wizard				
Ł	InstallShield Wizard Complete Installation operation completed successfully.				
	Click Finish to complete setup.				
	< Back Finish Cancel				

## 3.2 Setting Up Fujitsu ETERNUS Storage Systems Monitoring Pack

Set up Fujitsu ETERNUS Storage Systems Monitoring Pack on SCOM.

### 3.2.1 Pre-Setup

Save the Fujitsu ETERNUS Storage Systems Monitoring Pack file (Fujitsu.Storage.Systems.ETERNUS.mp) in a directory where it can be referred to from the operation console. In this manual, the following directory is used as an example.

C:\temp\Fujitsu.Storage.Systems.ETERNUS.mp

Delete any installations of previous versions of Fujitsu ETERNUS Storage Systems Monitoring Pack.

### 3.2.2 Installation Procedure

The procedure for installing Fujitsu ETERNUS Storage Systems Monitoring Pack is described below.

### Procedure

- **1** Start the operation console.
- **1-1** Start the SCOM Operations Console and display the [Administration] pane.
- **1-2** Select [Management Packs] in the navigation window.

**1-3** Run [Import Management Packs...] under [Actions]. The [Import Management Packs] dialog box appears.

Die Edit Minu Ge Teste Teste H					and service of the
rie gait view go lasss loois r					
Search * _ I April 10	- [Pri Find] [La Tasks] 🖬 :				
Administration	<ul> <li>Management Packs (179)</li> </ul>				Tasks
a 🥨 Administration	A Q Look for: Ein	d Now Gear			0 0
B Connected Management Groups	Name	- Version	Sealed	Date Impor ^	Antimus
Device Management	T 360 Application Monitoring Dashboards	7.0.9538.0	Yes	10/7/2015 1	Actions
Agent Managed	Baselining Tasks Library	7.0.8432.0	Yes	10/7/2015 1	Properties
Agentless Managed	Client Monitoring Internal Library	7.0.9538.0	Yes	10/7/2015 1	Export Management Pack
Management servers	Client Monitoring Library	7.0.9538.0	Yes	10/7/2015 1	7 Devete
	K Client Monitoring Overrides Management Pack	7.0.9538.0		10/7/2015 1	Create Management Pack
Management Packs 2	The Client Monitoring Views Library	7.0.9538.0	Ves	10/7/2015 1	🚟 Download Management P
A De Network Management	E Data Warehouse Internal Library	7.0.9538.0	Yes	10/7/2015 1	import Management Packs
Discovery Rules	Tata Warehouse Library	7.0.8432.0	Yes	10/7/2015 1	
🔀 Network Devices	😹 Default Management Pack	7.0.9538.0		10/22/2015	
2 Network Devices Pending Managem	Distributed Application Designer Library	7.0.8432.0	Yes	10/7/2015 1	
Notifications	Itealth Internal Library	7.0.8432.0	Ves	10/7/2015 1	
15 Channels	Health Library	7.0.8432.0	Yes	10/7/2015 1	
Subscribers	🚎 Image Library (System Center)	7.0.9538.0	Yes	10/7/2015 1	
Bradiet Connectory	mage Library (System)	7.5.8501.0	Ves	10/7/2015 1	
00 Internal Connectors	mage Library (UNIX/Linux)	7.4.3507.0	Ves	10/7/2015 1	
All Resource Pools	Timage Library (Windows)	7.5.8501.0	Yes	10/7/2015 1	
# W Run As Configuration	Instance Group Library	7.5.8501.0	Ves	10/7/2015 1	
Accounts	J Microsoft Audit Collection Services	7.0.9538.0	Yes	10/7/2015 1	
111 >	Microsoft Data Warehouse Reports	7.0.9538.0	Ves	10/7/2015 1	
liscovery Wizard	m Microsoft Generic Report Library	7.0.9538.0	Ves	10/7/2015 1	
	Kicrosoft ODR Report Library	7.0.9538.0	Yes	10/7/2015 1	
Monitoring	Microsoft Service Level Report Library	7.0.9538.0	Yes	10/7/2015 1	
Authoriza	microsoft SQL Server Core Library	6.6.0.0	Yes	10/8/2015 2	
2 monoring	Kicrosoft SQL Server Generic Presentation	6.6.0.0	Ves	10/8/2015 2	
Reporting 1	Sources of the second state of the second stat	Library 7.0.9538.0	Yes	10/7/2015 1	
Administration	📲 Microsoft System Center Operations Manager Library	7.0.9538.0	Yes	10/7/2015 1	
	🕘 🚟 Microsoft System Center Visualization Network Library	7.0.9538.0	Yes	10/7/2015 1	
My Workspace	nicrosoft SystemCenter OperationsManager Summary Dashbo	ard 7.0.9538.0	Yes	10/7/2015 1	
	🖕 🗮 Microsoft SustemCenter Visualization Configuration Library	7.0.9538.0	Vec	10/2/2015 1	

**2** Select a management pack.

In the [Import Management Packs] dialog box, click the [Add] menu and then select [Add from disk ...].

-	Import Ma	anagement Packs	×
Select Managemen	nt Packs		
Select Management Packs	Import list :		Help Add → Properties × Remove
	Name	Version R	Add from catalog Add from disk
	Status details :		
			Instal Cancel

If the following dialog box appears, click the [No] button.

	Online Catalog Connection
?	Some of the management packs you select may have dependencies that cannot be located locally. Would you like to search the online catalog for these dependencies?
	<u>Y</u> es <u>N</u> o

The [Select Management Packs to import] dialog box appears.

- **2-1** Select the Fujitsu ETERNUS Storage Systems Monitoring Pack file (Fujitsu.Storage.Systems.ETERNUS.mp).
- **2-2** Click the [Open] button.

	Select Management I	Packs to import			l
🕣 💮 👻 🕆 길 🕨 This PC	C ► Local Disk (C:) ► temp	~ ¢	Search temp		3
Organize 👻 New folder		_		# • 🔟	
🔛 Recent places 🗠 N	ame 1	Date modified	Туре	Size	I
🎘 This PC	Fujitsu.Storage.Systems.ETERNUS.mp	11/13/2015 2:32 AM	MP File	140 KB	
Desktop					
Documents					
Downloads					
Music					
E Pictures					
Videos					
ETERMINE SE					
Perflogs					
Program Files					
Program Files (					
🗼 temp					
🍶 Users					
3 Windows					
VC_RED.cab					
📬 Network 🖂			Г	_	
File name:	Fujitsu.Storage.Systems.ETERNUS.mp		V All Manageme	2 (*.mp; *	
			Onen	Cancel	-
			<u>v</u> pen	Cancer	-

**3** Import the Fujitsu ETERNUS Storage Systems Monitoring Pack. When the following dialog box is displayed, click the [Install] button.

-	Import Management Packs				x	
Select Managemen	t Packs					
Select Management Packs						😧 Help
	Import list		- <u>≜</u> dd - "	Propert	ies 🗙 <u>R</u> e	emove
	Name	Version	Release Date	Status	License Tems	
	🖌 Fujtau ETERNUS Storage Systema	16.3.0.0		1		
	Status details					
	This management pack is ready to import					_
	1					_
				Ing	al	Cancel

Importing of the selected management pack starts. Wait a few moments for the importing process to complete.

-	Import Manage	ment Packs			x
Import Manager	nent Packs				
Select Management Packs	Downloading and importing the sele	cted management	t packs.		🕜 Help
	Name	Version	Status	1	
	Fujteu ETERNUS Storage Syste	ama 16.3.0.0	Importing		
	Import Status Details : Importing				
				Stop	] Close

When the importing process is complete, the following dialog box is displayed.

**4** Confirm the state of the import. Confirm that the status is [Imported], and then click the [Close] button.

-	Import Managem	ent Packs		x
Import Managem	ent Packs			
Select Management Packs	Downloading and importing the selecte	ed management	packs.	🧭 Help
	Name	Version	Status	
	🖌 Fujtsu ETERNUS Storage Systems	16.3.0.0	Imported	
	Import Stat <u>u</u> s Details :			
			[	Stop Close

5 Confirm that the selected management pack has been imported. Confirm that "Fujitsu ETERNUS Storage Systems" appears in the list of management packs in the [Administration] pane.

2	Management Packs - fjg	p - Operations Manager			_ O X
Eile Edit View Go Tasks Iools He	PFigd CTasks 🕑 :				
Administration	Management Packs (180)				≥ Tasks
🔺 🧐 Administration	Look for:	Find Now Clear			0 0
Connected Management Groups	Name	- Version	Sealed	Date Impor ^	Actions
# 🛅 Device Management	1 360 Application Monitoring Dashboards	7.0.9538.0	Yes.	10/7/2015 1	PROPERTY AND A STATE OF A STATE O
Agent Managed	📆 Baselining Tasks Library	7.0.8432.0	Yes	10/7/2015 1	Properties
Agentiess Managed	K Client Monitoring Internal Library	7.0.9538.0	Yes	10/7/2015 1	Export Management Pack
Panding Management	K Client Monitoring Library	7.0.9538.0	Yes	10/7/2015 1	7 Deute
UNIX linux Computers	K Client Monitoring Overrides Management Pack	7.0.9538.0		10/7/2015 1	📕 Create Management Pack
Management Packs	The Client Monitoring Views Library	7.0.9538.0	Ves	10/7/2015 1	🗮 Download Management Packs
A Die Network Management	📕 🧱 Data Warehouse Internal Library	7.0.9538.0	Yes	10/7/2015 1	🐞 Import Management Packs
Discovery Rules	Tata Warehouse Library	7.0.8432.0	Yes	10/7/2015 1	
🕺 Network Devices	K Default Management Pack	7.0.9538.0		10/22/2015	
2 Network Devices Pending Managem	To Distributed Application Designer Library	7.0.8432.0	Yes	10/7/2015 1	
# 🛁 Notifications	Fujitsu ETERNUS Storage Systems	16.3.0,0	Ves	11/15/2015	
E Channels	Health Internal Library	7.0.8432.0	Yes	10/7/2015 1	
Subscribers	📻 Health Library	7.0.8432.0	Yes	10/7/2015 1	
Subscriptions	mage Library (System Center)	7.0.9538.0	Ves	10/7/2015 1	
QQ Internal Connectors	mage Library (System)	7.5.8501.0	Ves	10/7/2015 1	
Resource Pools	Timage Library (UNIX/Linux)	7.4.3507.0	Yes	10/7/2015 1	
# We Run As Configuration	🛒 Image Library (Windows)	7.5.8501.0	Ves	10/7/2015 1	
Accounts	🖉 📷 Instance Group Library	7.5.8501.0	Yes	10/7/2015 1	
¢ 111 >	Kicrosoft Audit Collection Services	7.0.9538.0	Ves	10/7/2015 1	
Discovery Wizerd	Microsoft Data Warehouse Reports	7.0.9538.0	Ves	10/7/2015 1	
	Kicrosoft Generic Report Library	7.0.9538.0	Yes	10/7/2015 1	
Monitoring	Microsoft ODR Report Library	7.0.9538.0	Yes	10/7/2015 1	
Automatica	Kicrosoft Service Level Report Library	7.0.9538.0	Yes	10/7/2015 1	
Muthoneg	Kicrosoft SQL Server Core Library	6.6.0.0	Yes	10/8/2015 2	
Reporting	Microsoft SQL Server Generic Presentation	6.6.0.0	Yes	10/8/2015 2	
Administration	Microsoft System Center Application Monitoring 360 Te	mplate Library 7.0.9538.0	Ves	10/7/2015 1	
	Kicrosoft System Center Operations Manager Library	7.0.9538.0	Yes	10/7/2015 1	
My Workspace	Kicrosoft System Center Visualization Network Library	7.0.9538.0	Yes	10/7/2015 1	
	Microsoft SustemCenter OnerationsMananer Summanu	Dashboard 7.0 9538.0	Vec	10/7/2015 1 ~	

#### ┝ Caution

- When importing is complete, the management pack file (Fujitsu.Storage.Systems.ETERNUS.mp) is no longer required. It is safe to delete this file.
- After closing the [Import Management Packs] dialog box, wait a few moments for "Fujitsu ETERNUS Storage Systems" to appear in the list in the [Administration] pane. Select [View] [Refresh] in the menu, and confirm that it has appeared.

#### Setting Up in ETERNUS SF Manager 3.3

The following settings in ETERNUS SF Manager are required to use Fujitsu ETERNUS Storage Systems Monitoring Pack.

### Procedure

1

Create and configure a Properties file.

Create a Properties file in ETERNUS SF Manager as shown below. Turn ON the settings in the Properties file.

Table 3.1	Settings for the Pro	perties File in	<b>ETERNUS SF</b>	Manager

ltem	Explanation
Directory path	$<\!\!Configuration directory \!$
File name	deviceevent_mspack.properties (*1)
Settings	[Item Name] com.fujitsu.storagesoft.opt.deviceevent.mspack [Value] ON when monitoring. Otherwise, OFF. Default value: OFF Example: com.fujitsu.storagesoft.opt.deviceevent.mspack=ON

\*1: This is a text file with the format "item name=value" on each line.

2 Apply the Properties file.

> On the GUI operation screen in ETERNUS SF Manager, select [System], [System Settings], and then [Refresh Config File]. The configuration file is applied to ETERNUS SF Manager.

# Chapter 4 Operation Procedure

This chapter describes how to operate Fujitsu ETERNUS Storage Systems Monitoring Pack.

## 4.1 Detection of the Server to Be Monitored

If the operation management server for ETERNUS SF Storage Cruiser is set as the server to be monitored by SCOM, Fujitsu ETERNUS Storage Systems Monitoring Pack obtains information and monitors events for the ETERNUS DX that is registered in ETERNUS SF Storage Cruiser.

If the server to be monitored has already been detected by SCOM, it will be monitored automatically when Fujitsu ETERNUS Storage Systems Monitoring Pack is imported.

If the server has not yet been detected, SCOM agent must be used to detect it as a new server to be monitored. For details about the detection procedure, refer to the SCOM documentation.

Caution

Detection of the server to be monitored might take a few moments.

## 4.2 Screen Configuration

The screen configuration after Fujitsu ETERNUS Storage Systems Monitoring Pack has been imported is described below.

### 4.2.1 Monitoring Pane

ETERNUS DX information is displayed in the [Monitoring] pane.

Information that can be added to the [Monitoring] pane by importing the management pack is described below.

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Data Warehouse	Required: Enable Notification Cha Required: Enable Notification Cha	nnels	View Management Group Health
Active Alerts  Content of the second			Key Concepts: The Monitoring Workspace
Generation Services     Microsoft Audit Collection Services     Microsoft SQL Server     Microsoft SQL Server     Microsoft Windows Client	State and Alerts:	Go to Computers	Health Explorer Properties of Alerts, Rules, and Monitors Monitoring Scenerios
Microsoft Windows Internet Informatic Microsoft Windows Server	Warning:     Weating:     Healthy:     Maintenance Mode:     Unknown Status:	0 2 0	Learn About: Finding Data and Objects in the Operations Console
ow or Hide Views	🗢 Distributed Applications:	Go to Distributed Applications	Using Views Managing Alerts Using Maintenance Mode
Authoring	Warning:     Healthy:     Knaintenance Mode:     Unknown Status:	0 1 0 0	Running Tasks Tuning Monitoring by Using Targeting and Overrides
Administration			Online Resources: Microsoft System Center Online Microsoft System Center Community
my workspace			Report an issue or Suggestion to Microsoft

The following folder is added to the tree in the navigation window:

• Fujitsu ETERNUS Storage Systems

The following items are added to the folder:

- Active Alerts Active alerts are displayed. For details, refer to <u>"4.2.2 Active Alerts" (page 28)</u>.
- Storage Systems Diagram Diagrams are displayed. For details, refer to "4.2.3 Storage Systems Diagram" (page 30).
- State View The status is displayed. For details, refer to <u>"4.2.4 State View" (page 33)</u>.
- Fujitsu ETERNUS Storage Information ETERNUS DX configuration information is displayed. For details, refer to <u>"4.2.5 Fujitsu ETERNUS Storage</u> Information" (page 34).

### • Fujitsu ETERNUS Storage Performance

ETERNUS DX performance information is displayed. For details, refer to <u>"4.2.6 Fujitsu ETERNUS Storage</u> Performance" (page 35).

In order to display the performance information, ETERNUS DX performance monitoring must be started in ETERNUS SF Storage Cruiser. For details about how to configure these settings, refer to the "ETERNUS SF Web Console Manual".

### 4.2.2 Active Alerts

When [Fujitsu ETERNUS Storage Systems] - [Active Alerts] is selected in the navigation window of the [Monitoring] pane, a detected alert is displayed.

For details about alerts that are detected by the management pack, refer to <u>"Appendix A Messages" (page 42)</u>.

8	Active Alerts - fjgp - (	Operations Manager		X
jle <u>E</u> dit <u>V</u> jew Go Tasks Iools <u>H</u> et Search * _ I Overrides <sup>™</sup>	, I Scope Pind CTasks ₽ .			
fonitoring 4	Active Alerts (1)	End Now		> Tasks
Agentitess Exception Monitoring     Application Monitoring     Data Warehouse     Active Alerts	Path Source Name     Sevenity: Critical (1)     SCOM-ESF-201 Fujitsu ETERNU 40001 The ex	Resolution State	Created 11/19/2015 6:00	Alert Actions  View or edit the settings of this is Start Maintenance Mode. Edit Maintenance Mode Settings
State View Storage Systems Diagram FullssueTERNUS Storage Information CA CA CA				No         Node           Stop Maintenance Mode         Node           No         Overrides >           Personalize view_         Node
Cm     Port     Storage System     Disks     SI TRP Disk				Subscription • Create Modify
RiG Disk     TFP Disk     Unassigned Disk     LUNis	Alert Details     40001 The event trap was detected.	Alert Description	~	Tasks ^ Avert Properties Close Avert
RG LUN	Source: Transition Storage Systems SCOM-ESF-2012- Full Path Name: SCOM-ESF-2012- Storage Systems Alert Rule: Fullsu TERNUS Storage Systems	"ETD0600", "2015/11/20 10:58:22", "SNMP Trap Test"		Set Resolution State +
er Vice +	Created 11/19/2015 6:00:52 PM			Alert View     Diagram View
Authoring     Reporting     Administration	Nnownedge: Summary The event trap was detected. The following are described in 'Device name', 'Generation date', 'Event message'	INNI view additional knowledge		Event View     Performance View     State View     Network Vicinity Dashboard
🔏 My Workspace 🔹	Resolutions Please confirm the device status referring to ETERNUS SF W	eb Console.		Report Tasks

When an alert is detected, check the details in [Alert Description] and [Knowledge], and then take the appropriate action.

After taking the appropriate action, select [Tasks] - [Close Alert] if necessary to close the alert.

In some cases, depending on the type of alert, the general status will not automatically change to [Healthy] when the alert is closed. In such cases, use the following procedure to manually set the status to [Healthy].

### Procedure

- **1** After taking the appropriate action for detected alerts, close all alerts.
- **2** Select [Fujitsu ETERNUS Storage Systems] [State View] in the navigation window in the [Monitoring] pane.
- **3** In the list of general information for the ETERNUS DX, select the line that shows an error state.

- **4** Open [Tasks] [Health Explorer].
- **5** In [Health Explorer for Fujitsu ETERNUS Storage Systems], select the item to set to [Healthy].
- **6** Select [Reset Health] or [Recalculate Health] in the menu.
- 7 Close Health Explorer.



End of procedure

#### **Caution**

In the management pack, only alerts with a resolution state of [New] are displayed by default. Other items that are displayed, and their display order, are not defined in the management pack. Configure the settings in [Personalize view] as necessary. For details about [Personalize view], refer to the SCOM documentation.

### 4.2.3 Storage Systems Diagram

If [Fujitsu ETERNUS Storage Systems] - [Storage Systems Diagram] is selected in the navigation window in the [Monitoring] pane, ETERNUS DX is displayed as an icon.

After importing the management pack, only the "Fujitsu ETERNUS Storage Systems Group" icon is displayed until a server to be monitored is detected.



When a server to be monitored is detected, the "Fujitsu ETERNUS Storage Systems" icon, which shows general information for the ETERNUS DX disk storage system, is displayed below "Fujitsu ETERNUS Storage Systems Group". Further, the "Fujitsu ETERNUS Storage" icon, which shows ETERNUS DX, is displayed below "Fujitsu ETERNUS Storage Systems". In addition, the icons for the CM, CA, Disk, and Logical Volume that configure the applicable storage are displayed below the ETERNUS DX icon.

#### **Caution**

If the state of the ETERNUS DX is "Unknown" in ETERNUS SF Storage Cruiser, only the "Fujitsu ETERNUS Storage" icon is displayed. The other icons for components (such as CMs, CAs, Disks, and Logical Volumes) that configure the relevant storage system are not displayed.



This icons that are displayed in the diagram are shown in the following table.

lcon	Name
	Fujitsu ETERNUS Storage Systems Group/ Fujitsu ETERNUS Storage Systems
	Fujitsu ETERNUS Storage
CM	CMs/CM
	CA
	Port
9	Unassigned Disk(s)/TPP Disk/FTRP Disk/RG Disk(s)
	Thin Provisioning Pool/Flexible Tier Pool
SUB	Flexible Tier Sub Pool

Table 4.1 Icons Displayed in the Diagram

lcon	Name
	RAID Group/FTRP RAID Group/TPP RAID Group
	FTRP LUN(s)/TPP LUN(s)/RG LUN(s)

For details about the status for each icon, refer to <u>"4.2.4 State View" (page 33)</u>.

If an error occurs in the general information for the ETERNUS DX, that state is reflected in the "Fujitsu ETERNUS Storage Systems" icon and the "Fujitsu ETERNUS Storage Systems Group" icon.



### 4.2.4 State View

If [Fujitsu ETERNUS Storage Systems] - [State View] is selected in the navigation window in the [Monitoring] pane, a list of general information for the ETERNUS DX is displayed.

		State View - fjgp - O	perations Ma	nager		- 0 X
Eile Edit View Go Tasks Iools He	P Figd 🖸 Tasks 😧 :					
Monitoring    Monitoring    Monitoring   Actue Alerts  Dissoved Inventory  Dissoved Inventory  Task Status    UNRXUINax Computes    Aperites Desption Monitoring   Aperites Desption   Applied Parity Desptie   Story or Hide Views.    Take View      Applied Parity    Applied Parity    Applied Parity    Applied Parity    Applied Parity    Applied Parity     Applied Parity     Applied Parity     Applied Parity      Applied Parity     Applied Parity      Applied Parity       Applied Parity        Applied Parity	State View (1) Look for: State & Critical Fujitu ETEF	NUS Storage Systems	Eind Now	Clear Fujčov Storage Critical		
Monitoring	Detail View	stems properties of Fujits	u ETERNUS Storag	e Systems	~	Alerts Availability Configuration Changes
Keporung     Administration     My Workspace	Display Name Full Path Name Internal Information Internal Information Version of management software Internal Information Principal Name	Fujitsu ETERNUS Storage : SCOM-ESF-2012-2-exampl CLETERNUS_SPLESC/Mana -1 16.3 CLETERNUS_SPLESC/Mana SCOM-ESF-2012-2-exampl	Systems e. loca//Fujitsu ETE iger/var/opt///ISV: iger/var e. local	RNUS Storage Systems smgricurrentideviceevent	v	Data Volume by Management Pack     Data Volume by Workflow and Insta     Event Analysis     Health

The following settings are configured as information specific to Fujitsu ETERNUS Storage Systems Monitoring Pack 16.3.

Table 4.2 Inf	formation Specific	to Fujitsu	ETERNUS Storage	Systems Mo	onitoring Pac	x 16.3
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Item Name	Explanation	Remarks
State	<ul> <li>General information that reflects the following state information:</li> <li>Information about the operating state of services required on the server that is monitored</li> <li>Information about event trap state for the ETERNUS DX</li> <li>State information for configuration objects (CM.</li> </ul>	If the state is not [Healthy], refer to <u>"4.2.2 Active Alerts" (page 28)</u> and take the required action.
	CA, Disk, Logical Volume, etc.) of the ETERNUS DX	
Name	"Fujitsu ETERNUS Storage Systems"	-
Version of management software	Version information for ETERNUS SF Storage Cruiser manager	-

## 4.2.5 Fujitsu ETERNUS Storage Information

If a monitored object below [Fujitsu ETERNUS Storage Systems] - [Fujitsu ETERNUS Storage Information] is selected in the navigation window in the [Monitoring] pane, a list of configuration information for the monitored object that is selected is displayed.

For details about the items that are displayed, refer to "B.1 Configuration Information Properties" (page 47).

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11 Storage System	() Healthy	475	(ETD/600) Vana	FTV	600000E00D2A0		Edit Maintenance Mode Settings.
🖌 🍓 Disks	Healthy	5	[ETDX600] VVO	FTV	600000E00D2A0		Bri Sim Mantenance Mote
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RG Disk	() Healthu	26	IETOV6001VVO	CTV/	60000000000000		(in reprint tex-
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🕖 🙀 Fujitsu ETERNUS Storage Performanc	Heatthy	90	[ETDJ0000] VVO 1	FIV	600000E00D2A0		State View
Microsoft Audit Collection Services	Heathy	100	[ETDX600] VVO	FIV	60000E00D2AD		Network Vicinity Dashboard
C III >	@ Healthy	94	[ETDX600] VVO 1	FIV	600000E00DZA0		Report Tasks
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Monitoring	Detail View					*	Alerts
Authoring							Availability
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Reporting	Display Na	me	[ETDX600] \$VVOL_META				Data Volume by Management Pac
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	Object Nat	ne.	[ETDX600] \$VVOL_META	2	NS 53		Event Analysis
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Read	- acar cape	and in such					

#### ┝ Caution

If an ETERNUS DX with a large-scale configuration is used and many instances of monitored objects are selected, the view for configuration information might be blank. This occurs when the maximum number of display items for the SCOM Operations Console is exceeded, and cannot be avoided.

## 4.2.6 Fujitsu ETERNUS Storage Performance

If a monitored object below [Fujitsu ETERNUS Storage Systems] - [Fujitsu ETERNUS Storage Performance] is selected in the navigation window in the [Monitoring] pane, a graph of the performance information for the monitored object that is selected is displayed.

For details about the items that are displayed, refer to "B.2 Performance Information Properties" (page 50).



#### 🕨 Caution

- If the performance monitoring has never been started in ETERNUS SF Storage Cruiser, a graph with zero data is displayed. If the started performance monitoring is stopped, information that was obtained just before the stoppage is displayed.
- To display the performance information correctly, the clock for the SCOM Operations Console's server must be set correctly.
- If an attempt is made to display performance information when there are many instances of the monitored objects shown below, the SCOM Operations Console might stop running and further operation might not be possible.
  - RG LUN
  - TPP LUN
  - FTRP LUN

If this occurs, use the following procedure to display performance information separately for each instance.

The procedure for displaying TPP LUN is shown below as an example.

1 In the [Monitoring] pane, select [Fujitsu ETERNUS Storage Systems] - [Fujitsu ETERNUS Storage Information] - [LUNs] - [TPP LUN].

**2** In the TPP LUN list, right-click the TPP LUN, and then select [Open] - [Performance View] from the context menu to display the performance information.

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The performance information for the selected TPP LUN appears in the Performance View.



• If there are many instances of monitored objects, it might be necessary to change the SCOM monitoring interval. For details about how to change the monitoring interval, refer to <u>"C.2 Changing the Monitoring Interval" (page 53)</u>.

# Chapter 5 Uninstallation

This chapter describes the procedures for uninstalling ETERNUS DX API Service and Fujitsu ETERNUS Storage Systems Monitoring Pack.

## 5.1 Deleting Fujitsu ETERNUS Storage Systems Monitoring Pack

Delete the Fujitsu ETERNUS Storage Systems Monitoring Pack from SCOM. The procedure for deleting Fujitsu ETERNUS Storage Systems Monitoring Pack is shown below.

#### Procedure

- **1** Start the operation console.
- **1-1** Start the SCOM Operations Console and display the [Administration] pane.
- **1-2** Select [Management Packs] in the navigation window.
- **1-3** Select "Fujitsu ETERNUS Storage Systems" from the list of management packs.
- **1-4** Select [Delete] under [Actions].

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Notifications       Microsoft Data Warehouse Reports       7.09538.0         Schemists       Microsoft Data Warehouse Report Library       7.09538.0         Subscribers       Microsoft Geneic Report Library       7.09538.0         Product Correctors       Microsoft Service Level Report Library       7.09538.0         Product Correctors       Microsoft Scill Server Core Library       6.0.0         Resource Pools       Microsoft SQL Server Core Library       6.0.0         Microsoft SQL Server Core Library       7.09538.0       7.09538.0         Microsoft System Center Operations Manager Library       7.09538.0       7.09538.0         Microsoft System Center Operations Manager Library       7.09538.0       7.09538.0         Microsoft System Center Operations Manager Summary Dashboard       7.09538.0       7.09538.0         Monitoring       Microsoft System Center Operations Manager Summary Dashboard       7.09538.0         Authoring       Microsoft System Center Visualization Network Dashboard       7.09538.0         Microsoft System Center Visualization Network Dashboard       7.09538.0         Microsoft System Center Visualization Network Dashboard       7.09538.0         Microsoft System Center Application Network Dashboard       7.09538.0         Microsoft System Center Application Network Dashboard       7.09538.0         M	538.0 Yes	10/7/2015 1	
Instruments       7,09538.0         Subscriptions       Microsoft Generic Report Library       7,09538.0         Descriptions       Microsoft ODR Report Library       7,09538.0         Product Connectors       Microsoft SQL Server Cere Library       6,6,0,0         Product Connectors       Microsoft SQL Server Genetic Pretentation       6,6,0,0         Product Connectors       Microsoft SQL Server Genetic Pretentation       6,6,0,0         Product Connectors       Microsoft SQL Server Genetic Pretentation       6,0,0         Microsoft SQL Server Genetic Pretentation       6,0,0       6,0,0         Microsoft SQL Server Genetic Pretentation       6,0,0       6,0,0         Microsoft SQL Server Genetic Pretentation       6,0,0       6,0,0         Microsoft SQL Server Genetic Pretentation       7,0,9538.0       7,0,9538.0         Microsoft System Center Operations Manager Library       7,0,9538.0       7,0,9538.0         Microsoft SystemCenter Visualization Network Dishboard       7,0,9538.0       7,0,9538.0         Monitoring       Microsoft SystemCenter Visualization Network Dishboard       7,0,9538.0         Microsoft SystemCenter Accil Sitem Activity JPN       7,0,9538.0       7,0,9538.0         Authoring       Microsoft SystemCenter Activity JPN       7,0,9538.0         Microsoft SystemCenter Activi	538.0 Yes	10/7/2015 1	
Microsoft ODR Report Library     7.0953a0       Subscriptions     Microsoft ODR Report Library     7.0953a0       Product Connectors     Microsoft SQL Server Genetic Presentation     6.0.0       Microsoft SQL Server Genetic Presentation     6.0.0     6.0.0       Microsoft SQL Server Genetic Presentation     6.0.0     6.0.0       Microsoft SQL Server Genetic Presentation     6.0.0     6.0.0       Microsoft System Center Operations Manager Library     7.0953a.0     7.0953a.0       Microsoft SystemCenter Application Configuration Library     7.0953a.0     7.0953a.0       Microsoft SystemCentere	538.0 Yes	10/7/2015 1	
Product Convertors     Product Convertor	538.0 Yes	10/7/2015 1	
International Connectors     Microsoft SQL Server Cere Likrary     6.6.0       Resource Pools     Microsoft SQL Server Generic Presentation     6.0.0       Resource Pool     Microsoft SQL Server Generic Presentation     6.0.0       Pinn Accompation     Microsoft SQL Server Generic Presentation     6.0.0       Microsoft SQL Server Generic Presentation     6.0.0       Microsoft SQL Server Generic Presentation     6.0.0       Microsoft System Center Operations Manager Library     7.09538.0       Convert Wiserd.     Microsoft System Center Presentation Manage Summery Databased     7.09538.0       Monitoring     Microsoft SystemCenter Presentation Configuration Library     7.09538.0       Authoring     Microsoft SystemCenter Visualization Network Diabased     7.09538.0       Microsoft SystemCenter AccolstemaLIPN     7.09538.0       Microsoft SystemCenterAccolstemaLIPN     7.09538.0	538.0 Ves	10/7/2015 1	
Resource Pool:     Microsoft SQL Server Generic Presentation     66.0.0       Win Run & Configuration     Microsoft SQL Server Generic Presentation     70.9338.0       Discourts     Microsoft System Center Operation Manager Library     70.9338.0       Montoring     Microsoft System Center Operation Manager Summary Dishboard     70.9338.0       Montoring     Microsoft System Center Visualization Configuration Library     70.9338.0       Montoring     Microsoft System Center Visualization Configuration Library     70.9338.0       Mutrosoft System Center Visualization Methods Databoard     70.9338.0       Microsoft System Center Visualization Configuration Library     70.9338.0       Microsoft System Center Visualization Configuration Library     70.9338.0       Microsoft System Center Visualization Configuration Library     70.9338.0       Microsoft System Center Application Library     70.9338.0       Microsoft System Center Application Configuration Library     70.9338.0       Microsoft System Center Application Microsoft System Cen	0 Yes	10/8/2015 2	
Autorising     A	0 Yes	10/8/2015 2	
Accessing     Accessing	538.0 Yes	10/7/2015 1	
H     S     Microsoft System Center Visualization Network Library     T.0.958.0     Microsoft System Center Operations/Merager Summary Destboard     T.0.958.0     Microsoft SystemCenter Visualization Configuration Library     Microsoft SystemCenter Visualization Configuration Library     Microsoft SystemCenter Visualization Configuration Library     Microsoft SystemCenter Visualization Network Dashboard     Microsoft SystemCenter Agn Infrastructure.IPN 70.9583.0     Microsoft SystemCenter Agn Infrastructure.IPN 70.9583.0	538.0 Yes	10/7/2015 1	
Kicrosoft SystemCenter OperationsManager Summary Deshboard         7.0,9538.0           Monitoring         Microsoft SystemCenter Visualization Configuration Library         7.0,9538.0           Authoring         Microsoft SystemCenter Visualization Network Dashboard         7.0,9538.0           Authoring         Microsoft SystemCenter Visualization Network Dashboard         7.0,9538.0           Reporting         Microsoft SystemCenter Z00.2PM         7.0,9538.0           Microsoft SystemCenter Configuration Network Dashboard         7.0,9538.0           Microsoft SystemCenter Configuration Network Dashboard         7.0,9538.0           Microsoft SystemCenter Action Network Dashboard         7.0,9538.0           Microsoft SystemCenter.Action Network Dashboard         7.0,9538.0	538.0 Ves	10/7/2015 1	
Microsoft SystemCenter Visualization Configuration Library         7.0.9538.0           Monitoring         Microsoft SystemCenter Visualization Network Dashboard         7.0.9538.0           Authoring         Microsoft SystemCenter Visualization Network Dashboard         7.0.9538.0           Muthoring         Microsoft SystemCenter Visualization Network Dashboard         7.0.9538.0           Reporting         Microsoft SystemCenter.ACS.Internal.JPN         7.0.9538.0           Microsoft SystemCenter.April/Networkure.NPN         7.0.9538.0           Microsoft SystemCenter.April/Networkure.Networkure.Nonitoring.JPN         7.0.9538.0	538.0 Ves	10/7/2015 1	
Monitoring         Microsoft System/Center Visualization Network Dashboard         7.0,9538.0           Authoring         Microsoft System/Center,2007JPN         7.0,9538.0           Reporting         Microsoft System/Center,2007JPN         7.0,9538.0           Microsoft System/Center,2007JPN         7.0,9538.0           Microsoft System/Center,ACS.Internal.JPN         7.0,9538.0           Microsoft System/Center,Apm.Infrastructure,IPN         7.0,9538.0           Microsoft System/Center,Apm.Infrastructure,IPN         7.0,9538.0	538.0 Yes	10/7/2015 1	
Authoring T Microsoft System Center 2007 JPN 70,9538.0 Reporting 1 Microsoft System Center ACS Internal JPN 70,9538.0 Microsoft System Center April Andreastructures JPN 70,9538.0 Microsoft System Center April Andreastructures JPN 70,9538.0 Microsoft System Center April Andreastructures JPN 70,9538.0	538.0 Yes	10/7/2015 1	
Reporting         1         Microsoft.SystemCenter.ACS.Internal.JPN         7.0.938.0           Reporting         1         Microsoft.SystemCenter.Apmin/statuture.JPN         7.0.938.0           Autorisidestation         5         Microsoft.SystemCenter.Apmin/statuture.JPN         7.0.938.0	538.0 Yes	10/7/2015 1	
Reporting L Microsoft-SystemCenter.Apm.Infrastructure.PN 7.0.9538.0 Administration Microsoft.SystemCenter.Apm.Infrastructure.Monitoring.JPN 7.0.9538.0	538.0 Yes	10/7/2015 1	
Administration Microsoft SystemCenter Aprn Infrastructure Monitoring JPN 7.0.9538.0	538.0 Yes	10/7/2015 1	
	538.0 Yes	10/7/2015 1	
Microsoft.SystemCenter.ApmLibrary.JPN 7.0.9538.0	538.0 Yes	10/7/2015 1	
My Workspace Microsoft SystemCenter Aprn NTServices JPN 7.0.9538.0	538.0 Yes	10/7/2015 1	

**37** Fujitsu ETERNUS Storage Systems Monitoring Pack 16.3 User's Guide Copyright 2016 FUJITSU LIMITED **2** Delete a management pack.

The following dialog box appears.

Select the [Yes] button to delete the management pack. To cancel deletion, select [No].



**3** Confirm that the selected management pack has been deleted. Confirm that "Fujitsu ETERNUS Storage Systems" was deleted from the list of management packs.

	Management Packs - fjgp - Operatio	ns Manager			- 0 X
Eile Edit View Go Tasks Iools He	P				
Search * _ 1 The Search	Prind Tasks 🔮 :				
Administration 4	Management Packs (179)				<ul> <li>Tasks</li> </ul>
a 🥨 Administration	Look for: Eind Now	Ωlear			0 0
Connected Management Groups	Name	Version	Sealed	Date Impor ^	Actions
<ul> <li>Device Management</li> </ul>	Tata Warehouse Library	7.0.8432.0	Yes	10/7/2015 1	
Agent Managed	The Default Management Pack	7.0.9538.0		10/22/2015	Properties
Maranamart Sanar	n Distributed Application Designer Library	7.0.8432.0	Yes	10/7/2015 1	15 Export Management Pack-
Pending Management	I Health Internal Library	7.0.8432.0	Yes	10/7/2015 1	7 Devele
UNIX/Linux Computers	Health Library	7.0.8432.0	Yes	10/7/2015 1	Create Management Pack
Management Packs	🧱 Image Library (System Center)	7.0.9538.0	Ves	10/7/2015 1	🗮 Download Management Packs
🔺 📑 Network Management 📑	🚟 Image Library (System)	7.5.8501.0	Yes	10/7/2015 1	ቘ Import Management Packs
Discovery Rules	📆 Image Library (UNIX/Linux)	7.4.3507.0	Yes	10/7/2015 1	
😪 Network Devices	image Library (Windows)	7.5.8501.0	Ves	10/7/2015 1	
2 Network Devices Pending Managem	instance Group Library	7.5.8501.0	Yes	10/7/2015 1	
A 🔄 Notifications	Microsoft Audit Collection Services	7.0.9538.0	Yes	10/7/2015 1	
the Channels	I Microsoft Data Warehouse Reports	7.0.9538.0	Yes	10/7/2015 1	
Subscriptions	S Microsoft Generic Report Library	7.0.9538.0	Yes	10/7/2015 1	
Product Connectors	The Microsoft ODR Report Library	7.0.9538.0	Ves	10/7/2015 1	
QQ Internal Connectors	Microsoft Service Level Report Library	7.0.9538.0	Yes	10/7/2015 1	
All Resource Pools	In Microsoft SQL Server Core Library	6.6.0.0	Yes	10/8/2015 2	
# 🌼 Run As Configuration	nicrosoft SQL Server Generic Presentation	6.6.0.0	Ves	10/8/2015 2	
Accounts	nicrosoft System Center Application Monitoring 360 Template Library	7.0.9538.0	Yes	10/7/2015 1	
C III >	Signal Microsoft System Center Operations Manager Library	7.0.9538.0	Yes	10/7/2015 1	
Discovery Wizerd	3 Microsoft System Center Visualization Network Library	7.0.9538.0	Ves	10/7/2015 1	
Page 1	nicrosoft SystemCenter OperationsManager Summary Dashboard	7.0.9538.0	Yes	10/7/2015 1	
Monitoring	Microsoft SystemCenter Visualization Configuration Library	7.0.9538.0	Yes	10/7/2015 1	
Authoring	3 Microsoft SystemCenter Visualization Network Dashboard	7.0.9538.0	Yes	10/7/2015 1	
	Microsoft.SystemCenter.2007.JPN	7.0.9538.0	Yes	10/7/2015 1	
Reporting	Time Microsoft.SystemCenter.ACS.Internel.JPN	7.0.9538.0	Yes	10/7/2015 1	
Administration	microsoft.SystemCenter.Apm.Infrastructure.JPN	7.0.9538.0	Ves	10/7/2015 1	
17	Microsoft.SystemCenter.Apm.Infrastructure.Monitoring.JPN	7.0.9538.0	Yes	10/7/2015 1	
My Workspace	microsoft.SystemCenter.Apm.Library.JPN	7.0.9538.0	Yes	10/7/2015 1	
	Microsoft SustemCenter Ann MTSensices JPN	7,0.9538.0	Yes	10/7/2015 1	
Ready					

#### End of procedure

#### Caution

After the deletion procedure is completed, it might take a few moments for "Fujitsu ETERNUS Storage Systems" to actually be deleted from the list in the [Administration] pane. Select [View] - [Refresh] in the menu, and confirm that it has been deleted.

## 5.2 Uninstalling ETERNUS DX API Service

Uninstall ETERNUS DX API Service from the operation management server on which ETERNUS SF Storage Cruiser is installed.

The procedure for uninstalling ETERNUS DX API Service is shown below.

### Procedure

**1** On the control panel, open the [Uninstall a program] screen, select [ETERNUS DX API Service], and then click the [Uninstall] button.

5	Programs and F	eatures				×
🐑 💮 + 🕈 🚮 + Control F	Panel + Programs + Programs and Features		~ C	Search Programs	and Features	P
Control Panel Home View installed updates	Uninstall or change a program To uninstall a program, select it from the list and then	click Uninstall, Change, or Repair.				
Turn Windows features on or off	Description of Proceeding				100 L	-
	organize • Uninstall					
	Name	Publisher	Installed Or	1 Size	Version	_
	I ETERNUS DX API Service	FUJITSU LIMITED	11/19/2015	35.5 MB	016.003.000	_
	19/ETERNUS SP Manager	FOULD DIMITED	11/18/2015	96.6 MB	10.3	
	Microsoft Report Viewer 2012 Runtime	Microsoft Corporation	11/18/2015	28.6 MB	11.1.3452.0	
	Microsoft System CLK Types for SQL Server 2012 (xo4)	Microsoft Corporation	11/18/2013	3.14 MB	0.0.2100.80	
	<ul> <li>Microsoft Visual C++ 2008 Redistributable - x84 93/21</li> </ul>	Microsoft Corporation	11/10/2013	13.3 MB	9.0.21022	
	Microsoft Visual C++ 2008 Redistributable - 804 90,50	Microsoft Corporation	11/18/2013	13.2 MB	10.0.40210	
	Microsoft Visual C++ 2010 104 Redistributable - 10.0	Microsoft Corporation	11/18/2015	20.5 MB	11.0.61020.0	
	Sistem Center 2012 P2 Constitions Manager	Microsoft Corporation	11/10/2015	ES J MD	7.1.10226.0	
	Indate Advises (middleware) VI // / /	Evilter	11/10/2015		1.00.74.0000	
	¢	ш				È
	FUJITSU LIMITED Product version: 016.003 Help link: http://v	1.000 Support lin www.fujitsu.com Update informatio	nic http://ww ne http://ww	w.fujitsu.com w.fujitsu.com		

**2** In the [Confirm Uninstall] dialog box, click the [OK] button.



**3** On the [InstallShield Wizard Complete] screen, click the [Finish] button to complete the uninstallation procedure.

ETERNUS I	DX API Service - InstallShield Wizard
3	InstallShield Wizard Complete InstallShield Wizard finished maintenance for ETERNUS DX API Service.
	Click Finish to complete setup.
	< Back Finish Cancel

# Chapter 6

# Required Information for Failure Investigation

This chapter describes the information to be obtained if trouble occurs with the Fujitsu ETERNUS Storage Systems Monitoring Pack.

If an error occurs, prepare the following information and data required to perform an investigation before contacting a Fujitsu engineer for assistance.

- Symptom
- Time error occurred
- Reproducibility
- ETERNUS DX API Service maintenance information

Prepare the following data.

<Installation directory>\tomcat\logs\edms.log, edms.log.\* <Installation directory>\var\<file under this directory>

• ETERNUS SF Storage Cruiser maintenance information Prepare the required information for investigation for the operation management server.



For details about the required information for investigation for the operation management server, refer to "Troubleshooting" in the "ETERNUS SF Operation Guide".

# Appendix A Messages

This appendix describes the messages displayed by the Fujitsu ETERNUS Storage Systems Monitoring Pack. Messages are displayed as the [Name] of an alert.

# A.1 Configuration Information Message

{0} state is abnormal.

#### Meaning of this message

An error has occurred in the monitored object {0} in ETERNUS DX. See <u>Table A.1</u> for monitored object {0}.

[Alert Description] details

The state of {1} is {2}. Or The state of {1} is {2} and the used capacity of {1} reaches {3}.

{1} is the name of the object. Example: [ETDX600] CM#0
Device status {2} is one of the character strings shown in <u>Table A.1</u> according to the monitored object {0} to which the object name {1} belongs.
{3} is either Normal, Warning, or Caution.

Monitored object {0}	Device status {2}	SCOM health status
Storage	Warning	Warning
	Error	Critical
	Unknown	Critical
	Fatal	Critical
СМ	Warning	Warning
	Degrade	Critical
	Firmware Version Mismatch	Critical
	Firmware Type Mismatch	Critical
	Hardware Type Mismatch	Critical
	Version Error and Normal	Critical
СА	Warning	Warning
	Error	Critical
Port	Warning	Warning
	Error	Critical
	Degrade	Critical
	Firmware Version Mismatch	Critical
	Firmware Type Mismatch	Critical
	Hardware Type Mismatch	Critical
	Version Error and Normal	Critical
RG LUN/	Exposed	Warning
TPP LUN/ FTRP LUN	Partially Exposed	Warning
	Not Ready	Critical
	Broken	Critical
	Data Lost	Critical
RAID Group/ TPP RAID Group/ FTRP RAID Group	Exposed	Warning
	Exposed (Fast)	Warning
	Partially Exposed (Fast)	Warning
	Partially Exposed	Critical
	No Disk Path	Critical
	Broken	Critical
	Broken (Fast)	Critical
	SED Locked	Critical
TPP/FTRP	Exposed	Warning
	Blockade	Critical
	Broken	Critical
	Data Lost	Critical
	No Disk Path	Critical
	Caution (Pool Alarm)	Warning
	Warning (Pool Alarm)	Critical

 Table A.1
 Messages and Alert Character Strings (Configuration Information)

Monitored object {0}	Device status {2}	SCOM health status
FTSP	Exposed	Warning
	Blockade	Critical
	Broken	Critical
	Data Lost	Critical
	No Disk Path	Critical
RG Disk/ TPP Disk/ FTRP Disk/ Unassigned Disk	Redundant Copy	Warning
	Broken	Critical
	Not Supported	Critical
	Failed Usable	Critical
	Not Exist	Critical

#### System process

Based on the device status, the status of the monitored object will be either "Warning" or "Critical".

#### Action taken by system administrator

Refer to the GUI to confirm the status of the monitored object.

## A.2 Service Status Message

11001 Necessary service is not running.

#### Meaning of this message

The service required to monitor ETERNUS DX is not running on the server to be monitored.

#### [Alert Description] details

This is the name of the service that is not running.

#### System process

The status of the server that is monitored is set to "Critical".

#### Action taken by system administrator

Check if the service shown in [Alert Description] is running on the server that is monitored. If the service is not running, start the service.

#### Additional information

This alert will close automatically when the issue is resolved. Further, the "Critical" status caused by this alert for the server that is monitored will be cleared automatically.

## A.3 Event Trap Message

40001 The event trap was detected.

#### Meaning of this message

An event trap has been detected.

#### [Alert Description] details

"%1", "%2", "%3"

%1: Name of device where the event trap occurred

- %2: Date/time when ETERNUS SF Storage Cruiser manager detected the event trap
- %3: Event trap message obtained from the device

#### System process

The status of the server that is monitored is changed based on the type of trap.

#### Action taken by system administrator

View the ETERNUS SF Storage Cruiser client to check the status of the device where the event trap occurred.

#### Additional information

- If an event trap message includes commas, the commas are separating multiple messages and only a portion of the [Alert Description] might actually be displayed. To check the entire content of the message, refer to [Alert Context] [Field 7] and more in the alert properties. The character strings for the areas separated by commas are shown there.
- Event trap information for failure level Warning and Error statuses generated by an ETERNUS DX that is registered in ETERNUS SF Storage Cruiser manager is targeted for detection. For details, refer to the "ETERNUS SF Storage Cruiser Event Guide".
- After this issue is resolved, close this alert manually. For details about how to close an alert, refer to <u>"4.2.2</u> Active Alerts" (page 28).
- After the cause of an alert is resolved, refer to <u>"4.2.2 Active Alerts" (page 28)</u> for the procedure to return the status to "Healthy".
- If the number of event traps occurring at the same time exceeds 50, alerts are generated for only the latest 50 occurrences. Occurrences in excess of the latest 50 are ignored.

# Appendix B Property Information

This appendix contains the property information for the Fujitsu ETERNUS Storage Systems Monitoring Pack.

## B.1 Configuration Information Properties

The configuration information properties are shown in the following table.

Туре	Property Name	Explanation
Storage System	Storage Name	Device Name
	IP Address	IP Address
	Product ID	Model
	Serial Number	Serial Number
	ID (*1)	BOX-ID
	State	Device State (Healthy, Warning, Error)
	Firmware Version	Device Firmware Version
	Control URL (*1)	Device Web GUI URL
	Management State (*1)	Management Status
	Disks	Total Number of Disks
	Operation Disks	Number of Operation Disks
	Performance Information Update Counter (*1)	Final Update Counter for Performance Information
	CMS	CM Number
	LUNS	LUN Number
СМ	Object Name	Device Name and CM Number Example: "ETDX200S3_1" CM#0
	State	CM State (Healthy, Warning, Error)
CA	Object Name	Device Name and CM Number Example: "ETDX200S3_1" CM#0 CA#0
	State	CA State (Healthy, Warning, Error)
	Туре	СА Туре
Port	Object Name	Device Name, CM Number, CA Number, Port Number Example: "ETDX200S3_1" CM#0 CA#0 Port#0
	State	Port State (Healthy, Warning, Error)
	Туре	Port Type
	Mode	Port Mode

Table B.1 Configuration Information Properties

Туре	Property Name	Explanation
RAID Group/ TPP RAID Group/ FTRP RAID Group	Object Name	Device Name and RAID Group Name Example: "ETDX200S3_1" rg#0
	Number	RAID Group Number
	State	RAID Group State (Healthy, Warning, Error)
	Level	RAID Level
	Total Capacity (GB)	Total Capacity (GB)
	Total Free Capacity(GB)	Total Free Capacity (GB)
RG LUN/ TPP LUN/	Object Name	Device Name and Volume Name Example: "ETDX200S3_1" vol#0
FTRP LUN	Number	Volume Number
	State	Volume State (Healthy, Warning, Error)
	Туре	Volume type
	Extreme Cache (Read) (*1)	Extreme Cache (Read) (Enable/Disable)
	UID	Identifier (Device Name) for specifying a volume from an open-system server
	Total Capacity (GB) (*1)	Total Capacity (GB)
	Used Capacity (GB) (*1)	Used Capacity (GB) (For RG LUN, this field is blank.)
	Used Rate (%) (*1)	Used Rate (%) (For RG LUN, this field is blank.)
Thin Provisioning Pool/ Flexible Tier Pool	Object Name	Device Name and Storage Pool Name Example: "ETDX200S3_1" pool#0
	Number	Storage Pool Number
	State	Storage Pool State (Healthy, Warning, Error)
	Туре (*1)	Storage Pool Type (Thin Provisioning Pool or Flexible Tier Pool)
	Total Capacity (GB)	Total Capacity (GB)
	Used Capacity (GB)	Used Capacity (GB)
	Used Rate (%)	Used Rate (%)
Flexible Tier Sub Pool	Object Name	Device Name, Storage Pool Name, Storage Sub Pool Name Example: "ETDX200S3_1" ftrp#0 sub_ftrp#0
	Pool Number	Storage Pool Number
	Sub Pool Number	Storage Sub Pool Number
	State	Storage Sub Pool State (Healthy, Warning, Error)
	Total Capacity (GB)	Total Capacity (GB)
	Used Capacity (GB)	Used Capacity (GB)
	Used Rate (%)	Used Rate (%)

Туре	Property Name	Explanation
RG Disk/ TPP Disk/ FTRP Disk/ Unassigned Disk	Object Name	Device Name, Enclosure Number, Slot Number Example: "ETDX200S3_1" Enclosure#00 slot#0
	Disk Size (GB)	Disk Size (GB)
	State	Disk State (Healthy, Warning, Error)
	Speed (rpm)	Disk Speed (rpm)
	Туре	Disk Type

\*1: This field is hidden in the default settings for the State View. It is shown in the Detail View.

## B.2 Performance Information Properties

The performance information properties are shown in the following table.

|--|

Туре	Property Name	Explanation
Storage System	Read IOPS (IO/s)	Read IOPS (IO/s)
	Write IOPS (IO/s)	Write IOPS (IO/s)
	Total IOPS (IO/s)	Total IOPS (IO/s)
	Other IOPS (IO/s)	IOPS other than Read/Write (IO/s)
	Read Throughput (MB/s)	Read Throughput (MB/s)
	Write Throughput (MB/s)	Write Throughput (MB/s)
	Total Throughput (MB/s)	Total Throughput (MB/s)
	Read Cache Hit Response Time (ms)	Read Cache Hit Response Time (ms)
	Write Cache Hit Response Time (ms)	Write Cache Hit Response Time (ms)
	Read Response Time (ms)	Read Response Time (ms)
	Write Response Time (ms)	Write Response Time (ms)
	Total Response Time (ms)	Total Response Time (ms)
	Read Cache Hit Ratio (%)	Read Cache Hit Ratio (%)
	Write Cache Hit Ratio (%)	Write Cache Hit Ratio (%)
	Power Consumption (W)	Power Consumption (W)
	Temperature (°C)	Temperature (°C)
	CPU Used Ratio (%)	CPU Used Ratio (%)
СМ	Read IOPS (IO/s)	Read IOPS (IO/s)
	Write IOPS (IO/s)	Write IOPS (IO/s)
	Total IOPS (IO/s)	Total IOPS (IO/s)
	Other IOPS (IO/s)	IOPS other than Read/Write (IO/s)
	Read Throughput (MB/s)	Read Throughput (MB/s)
	Write Throughput (MB/s)	Write Throughput (MB/s)
	Total Throughput (MB/s)	Total Throughput (MB/s)
	Read Cache Hit Response Time (ms)	Read Cache Hit Response Time (ms)
	Write Cache Hit Response Time (ms)	Write Cache Hit Response Time (ms)
	Read Response Time (ms)	Read Response Time (ms)
	Write Response Time (ms)	Write Response Time (ms)
	Total Response Time (ms)	Total Response Time (ms)
	Read Cache Hit Ratio (%)	Read Cache Hit Ratio (%)
	Write Cache Hit Ratio (%)	Write Cache Hit Ratio (%)
	CPU Used Ratio (%)	CPU Used Ratio (%)
	Copy Residual Quantity (MB)	Copy Residual Quantity (MB)

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Туре	Property Name	Explanation
Port	Read IOPS (IO/s)	Read IOPS (IO/s)
	Write IOPS (IO/s)	Write IOPS (IO/s)
	Total IOPS (IO/s)	Total IOPS (IO/s)
	Other IOPS (IO/s)	IOPS other than Read/Write (IO/s)
	Read Throughput (MB/s)	Read Throughput (MB/s)
	Write Throughput (MB/s)	Write Throughput (MB/s)
	Total Throughput (MB/s)	Total Throughput (MB/s)
	Read Cache Hit Response Time (ms)	Read Cache Hit Response Time (ms)
	Write Cache Hit Response Time (ms)	Write Cache Hit Response Time (ms)
	Read Response Time (ms)	Read Response Time (ms)
	Write Response Time (ms)	Write Response Time (ms)
	Total Response Time (ms)	Total Response Time (ms)
	Read Cache Hit Ratio (%)	Read Cache Hit Ratio (%)
	Write Cache Hit Ratio (%)	Write Cache Hit Ratio (%)
RG LUN/ TPP LUN/ FTRP LUN	Read IOPS (IO/s)	Read IOPS (IO/s)
	Write IOPS (IO/s)	Write IOPS (IO/s)
	Total IOPS (IO/s)	Total IOPS (IO/s)
	Other IOPS (IO/s)	IOPS other than Read/Write (IO/s)
	Read Throughput (MB/s)	Read Throughput (MB/s)
	Write Throughput (MB/s)	Write Throughput (MB/s)
	Total Throughput (MB/s)	Total Throughput (MB/s)
	Read Cache Hit Response Time (ms)	Read Cache Hit Response Time (ms)
	Write Cache Hit Response Time (ms)	Write Cache Hit Response Time (ms)
	Read Response Time (ms)	Read Response Time (ms)
	Write Response Time (ms)	Write Response Time (ms)
	Total Response Time (ms)	Total Response Time (ms)
	Read Cache Hit Ratio (%)	Read Cache Hit Ratio (%)
	Write Cache Hit Ratio (%)	Write Cache Hit Ratio (%)
RG Disk/TPP Disk/FTRP Disk	Used Ratio (%)	Used Ratio (%)

# Appendix C Customization

This appendix describes how to change the object detection time and monitoring interval for monitored objects included in the Fujitsu ETERNUS Storage Systems Monitoring Pack.

## C.1 Changing Detection Time

Use the following procedure to change the detection time for an object that is monitored.

#### Procedure

- Start the SCOM Operations Console, and then select [Management Pack Objects] [Object Discoveries] in the navigation window on the [Authoring] pane.
   All detection rules defined by SCOM appear in the window on the right side.
- 2 Right-click the object detection to change, and then select [Overrides] [Override the Object Discovery] [For all objects of class: Fujitsu ETERNUS *nnn*] or [For a specific object of class: Fujitsu ETERNUS *nnn*] in the context menu. (*nnn* is the object to be changed, such as CM or CA.)
  - If [For all objects of class: Fujitsu ETERNUS *nnn*] is selected Proceed to Step 3.
  - If [For a specific object of class: Fujitsu ETERNUS *nnn*] is selected

Only the specified object is overwritten. A list of detected objects is shown. Select an object, and then click the [OK] button. Proceed to  $\underline{\text{Step 3}}$ .

- **3** In the [Override Properties] dialog box, select the check box in the [Override] column for the parameters that is to be overwritten, and then enter a new detection time (in seconds) for [Override Value].
- 4 In addition, select check box in the [Enforced] column.
- **5** Overwriting requires the data to be saved to a management pack that can be written to. Microsoft recommends against using the "Standard Management Pack". Therefore, for [Select destination management pack] click [New] to create a new management pack.
- **6** Click the [OK] button. The changes are saved to the selected management pack.

## C.2 Changing the Monitoring Interval

Use the following procedure to change the monitoring interval for an object that is monitored.

### Procedure

- Start the SCOM Operations Console, and then select [Management Pack Objects] -[Monitors] in the navigation window on the [Authoring] pane.
   All monitor groups defined by SCOM appear in the window on the right side.
- 2 Right-click the monitor group to change, and then select [Overrides] [Override the Object Discovery] [For all objects of class: Fujitsu ETERNUS *nnn*] or [For a specific object of class: Fujitsu ETERNUS *nnn*] in the context menu. (*nnn* is the object to be changed, such as CM or CA.)
  - If [For all objects of class: Fujitsu ETERNUS *nnn*] is selected Proceed to Step 3.
    - Proceed to <u>step s</u>.
  - If [For a specific object of class: Fujitsu ETERNUS *nnn*] is selected

Only the specified object is overwritten. A list of detected objects is shown. Select an object, and then click the [OK] button. Proceed to  $\underline{\text{Step 3}}$ .

- **3** In the [Override Properties] dialog box, select the check box in the [Override] column for the parameters that is to be overwritten, and then enter a new monitor interval time (in seconds) for [Override Value].
- 4 In addition, select check box in the [Enforced] column.
- **5** Overwriting requires the data to be saved to a management pack that can be written to. Microsoft recommends against using the "Standard Management Pack". Therefore, for [Select destination management pack] click [New] to create a new management pack.
- **6** Click the [OK] button. The changes are saved to the selected management pack.

## C.3 Changing Rules

Use the following procedure to change the rules for an object that is monitored.

### Procedure

- Start the SCOM Operations Console, and then select [Management Pack Objects] [Rules] in the navigation window on the [Authoring] pane.
   All Rules defined by SCOM appear in the window on the right side.
- **2** Right-click the rule group to change, and then select [Override] [Override the Rule] [For all objects of class: Fujitsu ETERNUS *nnn*] or [For a specific object of class: Fujitsu ETERNUS *nnn*] in the context menu. (*nnn* is the object to be changed, such as CM or CA.)
  - If [For all objects of class: Fujitsu ETERNUS *nnn*] is selected Proceed to <u>Step 3</u>.
  - If [For a specific object of class: Fujitsu ETERNUS *nnn*] is selected

Only the specified object is overwritten. A list of detected objects is shown. Select an object, and then click the [OK] button. Proceed to  $\underline{\text{Step 3}}$ .

- **3** In the [Override Properties] dialog box, select the check box in the [Override] column for the parameters that is to be overwritten, and then change the value in the [Override] column.
- 4 In addition, select check box in the [Enforced] column.
- **5** Overwriting requires the data to be saved to a management pack that can be written to. Microsoft recommends against using the "Standard Management Pack". Therefore, for [Select destination management pack] click [New] to create a new management pack.
- **6** Click the [OK] button. The changes are saved to the selected management pack.

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