ETERNUS SF

FUJITSU

ETERNUS SF
Express V15.2/
Storage Cruiser V15.2/
AdvancedCopy Manager V15.2

Migration Guide

B1FW-5958-04ENZ0(01)
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Preface

Purpose

This manual describes how to upgrade to this version from the previous version for the following Storage Management Software ETERNUS SF products (hereafter referred to as "ETERNUS SF series"):

- ETERNUS SF Express (hereafter referred to as "Express")
- ETERNUS SF Storage Cruiser (hereafter referred to as "Storage Cruiser")
- ETERNUS SF AdvancedCopy Manager (hereafter referred to as "AdvancedCopy Manager")

Intended Readers

This manual is intended for persons who upgrade to this version from a previous version of these software products, or who perform the upgrade process (mainly for system administrators).

For migration procedures described in this manual, it is assumed that the reader understands the installation environment of the previous version and knows the backup and the restoration methods for the operational environment of the previous version.

If you newly install the software, refer to the *ETERNUS SF Installation and Setup Guide*.

Organization

This manual is composed as follows:

Chapter 1 Overview

This chapter provides an overview of upgrade.

Chapter 2 Changes from Previous Version

This chapter describes the contents changed from the previous version of products.

Chapter 3 Upgrading Express Version 14.x

This chapter describes the upgrade procedure for Express Version 14.x.

Chapter 4 Upgrading Express Version 15.x

This chapter describes the upgrade procedure for Express Version 15.x.

Chapter 5 Upgrading Storage Cruiser Version 13.x/14.x

This chapter describes the upgrade procedure for Storage Cruiser Version 13.x and 14.x.

Chapter 6 Upgrading Storage Cruiser Version 15.x

This chapter describes the upgrade procedure for Storage Cruiser Version 15.x.

Chapter 7 Upgrading AdvancedCopy Manager Version 13.x/14.x

This chapter describes the upgrade procedure for AdvancedCopy Manager Version 13.x and 14.x.

Chapter 8 Upgrading AdvancedCopy Manager Version 15.x

This chapter describes the upgrade procedure for AdvancedCopy Manager Version 15.x.

Chapter 9 Troubleshooting

This chapter describes the method for troubleshooting if a problem occurs during the Upgrade Installation process.

Chapter 10 Configuration import

This chapter describes the command used during the configuration information update during the upgrade process.

Appendix A Operation for Previous Version Environment

This appendix describes the operations performed in the environment of the previous version.

Appendix B Install parameter

This appendix describes the install parameter file and the details of each install parameter.

Notation

The names, abbreviations, and symbols shown below are used in this manual.

Operating systems

Formal name	Abbreviation	
Microsoft(R) Windows Server(R) 2003, Standard Edition Microsoft(R) Windows Server(R) 2003, Standard x64 Edition Microsoft(R) Windows Server(R) 2003, Enterprise Edition Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Standard Edition Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition	Windows Server 2003	Windows
Microsoft(R) Windows Server(R) 2008 Standard (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(TM) (32-bit) (64-bit) Microsoft(R) Windows Server(R) 2008 Enterprise (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(TM) (32-bit) (64-bit) Microsoft(R) Windows Server(R) 2008 Datacenter (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(TM) (32-bit) (64-bit)	Windows Server 2008	
Microsoft(R) Windows Server(R) 2008 R2 Foundation Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Datacenter	Windows Server 2008 R2	
Microsoft(R) Windows Server(R) 2012 Standard Microsoft(R) Windows Server(R) 2012 Datacenter	Windows Server 2012	
Microsoft(R) Windows(R) XP Professional Edition Microsoft(R) Windows(R) XP Home Edition	Windows XP	
Windows Vista(R) Home Basic Windows Vista(R) Home Premium Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate	Windows Vista	
Windows(R) 7 Home Basic Windows(R) 7 Home Premium Windows(R) 7 Professional Windows(R) 7 Enterprise Windows(R) 7 Ultimate	Windows 7	
Windows(R) 8 Windows(R) 8 Pro	Windows 8	
Solaris(TM) 9 Operating System	Solaris 9	Solaris or Solaris OS
Oracle Solaris 10	Solaris 10	
Oracle Solaris 11	Solaris 11	
Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T)	RHEL-AS4	Linux

Formal name	Abbreviation	
Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T)	RHEL-ES4	
Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64)	RHEL5	
Red Hat(R) Enterprise Linux(R) 6 (for x86) Red Hat(R) Enterprise Linux(R) 6 (for Intel64)	RHEL6	
SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T	SUSE Linux Enterprise Server 11	
HP-UX 11.0 HP-UX 11i v1 HP-UX 11i v2 HP-UX 11i v3	HP-UX	
AIX 5L(TM) V5.1 AIX 5L(TM) V5.2 AIX 5L(TM) V5.3 AIX(R) V6.1 AIX(R) V7.1	AIX	
VMware(R) Infrastructure 3 Foundation VMware(R) Infrastructure 3 Standard VMware(R) Infrastructure 3 Enterprise	VMware Infrastructure 3	VMware
VMware vSphere(R) 4 Essentials Kit VMware vSphere(R) 4 Essentials Plus Kit VMware vSphere(R) 4 Standard Edition(TM) VMware vSphere(R) 4 Standard Plus Data Recovery VMware vSphere(R) 4 Advanced Edition(TM) VMware vSphere(R) 4 Enterprise Edition(TM) VMware vSphere(R) 4 Enterprise Plus Edition(TM)	VMware vSphere 4	
VMware vSphere(R) 5 Essentials Kit VMware vSphere(R) 5 Essentials Plus Kit VMware vSphere(R) 5 Standard Edition(TM) VMware vSphere(R) 5 Standard Plus Data Recovery VMware vSphere(R) 5 Enterprise Edition(TM) VMware vSphere(R) 5 Enterprise Plus Edition(TM)	VMware vSphere 5	

Oracle Solaris might be described as Solaris, Solaris Operating System, or Solaris OS.

Related products with Fujitsu Storage System ETERNUS and Storage Management Software ETERNUS SF

Formal name	Abbreviation			
ETERNUS DX60/DX60 S2 ETERNUS DX80/DX80 S2 ETERNUS DX90/DX90 S2	-		ETERNUS DX series	ETERNUS Disk storage system
ETERNUS DX410 ETERNUS DX440	ETERNUS DX400 series	ETERNUS DX400/DX400 S2 series		
ETERNUS DX410 S2 ETERNUS DX440 S2	ETERNUS DX400 S2 series			
ETERNUS DX8100 ETERNUS DX8400 ETERNUS DX8700	ETERNUS DX8000 series	ETERNUS DX8000/DX8000 S2 series		
ETERNUS DX8100 S2 ETERNUS DX8700 S2	ETERNUS DX8000 S2 series			

Formal name	Abbreviation
ETERNUS2000 ETERNUS4000 ETERNUS8000	-
Web GUI of ETERNUS DX series	ETERNUS Web GUI
ETERNUSmgr	

Software products

Formal name	Abbreviation
Microsoft(R) Internet Explorer(R)	Internet Explorer
Mozilla(R) Firefox(R)	Firefox
Microsoft(R) Cluster Service	MSCS
Microsoft(R) Windows Server(R) Failover Clustering	WSFC
Microsoft(R) Exchange Server	Exchange Server
Microsoft(R) SQL Server(TM)	SQL Server
PRIMECLUSTER Global Disk Services	GDS
PRIMECLUSTER Global File Services	GFS
Symfoware Server Enterprise Extended Edition Symfoware Server Enterprise Edition	Symfoware
VMware(R) ESX(R)	VMware ESX
VMware(R) ESXi(TM)	VMware ESXi
VMware(R) vCenter(TM) Server	VMware vCenter Server or vCenter Server

Manuals

Formal name	Abbreviation
ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Installation and Setup Guide	ETERNUS SF Installation and Setup Guide
ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Migration Guide	ETERNUS SF Migration Guide
ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Web Console Guide	ETERNUS SF Web Console Guide
ETERNUS SF Express / ETERNUS SF AdvancedCopy Manager Operation Guide for Copy Control Module	ETERNUS SF Operation Guide for Copy Control Module
ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Cluster Environment Setup Guide	ETERNUS SF Cluster Environment Setup Guide
ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Messages	ETERNUS SF Messages
ETERNUS SF Express / ETERNUS SF Storage Cruiser Event Guide	ETERNUS SF Event Guide
ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Glossary	ETERNUS SF Glossary

Others

- In this manual, "ETERNUS4000" does not include ETERNUS4000 models 80 and 100.
- In this manual, the following products are collectively described as "Windows Server 2008 or later".
  - Windows Server 2008

- Windows Server 2008 R2
- Windows Server 2012

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Notes on descriptions

This manual corrects and improves deficient descriptions as well as describes the functions and processing operations to be enabled when applying the following urgent patches:

Platform	Fix number
Windows	T007787WP-01, T007792WP-01, T007793WP-01, T007800XP-01, T007816WP-01, T007819XP-01, T007820WP-01
Linux	T007789LP-01, T007795LP-01, T007796LP-01, T007798LP-01, T007802LP-01, T007804LP-01, T007805LP-01, T007806LP-01, T007821LP-01, T007825LP-01, T007826LP-01, T007843LP-01, T007844LP-01
Solaris	T007788SP-01, T007794SP-01, T007822SP-01, T007824SP-01

Refer to their respective patch information files for the contents of urgent patches.

If you do not apply urgent patches, refer to the manual included in the product DVD-ROM excluding corrected and improved deficient descriptions.

Refer to "Update history" for the corrected content in this manual.

Update history

Content of update	Updated section	Revision
Modified and added the explanation for the install parameter file.	4.1.3, 5.1.3, 5.3.3, Appendix B	2.1
Added Oracle Solaris 11, AIX V6.1 and AIX V7.1 in the operating systems.	Notation in Preface	3
Added the explanation of changes for Version 15.1.	2.1.1, 2.2.1, 2.3.1	
Added the explanation of upgrade procedure in a cluster environment.	8.3.2, 8.3.3, A.6, A.14	
Added the explanation of upgrade procedure from Express Version 15.x to Version 15.1.	Chapter 4	
Added the explanation of upgrade procedure from Storage Cruiser Version 15.x to Version 15.1.	Chapter 6	
Added the explanation of upgrade procedure from AdvancedCopy Manager Version 15.x to Version 15.1.	Chapter 8	
Added Windows Server 2012 and Windows 8 in the operating systems.	Notation in Preface	4
Added the explanation of changes for Version 15.2.	2.1.1, 2.2.1, 2.3.1	
Added the firmware version notation of ETERNUS Disk storage system.	2.2.1	
Modified the explanation of the license agreement, which is displayed during the Upgrade Installation.	Chapter 3 - Chapter 8	
Modified the explanation of upgrade procedure for Express for Linux.	4.2	
Added the explanation to stop and start the ETERNUS Information Provider service to the Upgrade Installation procedure for Windows.	6.1.1.1, 6.1.1.3, 6.1.2.1, 6.1.2.6	
Modified the explanation of upgrade procedure for Storage Cruiser for Linux and Solaris.	6.2, 6.4, 6.5	

Content of update	Updated section	Revision
Modified the explanation of upgrade procedure for AdvancedCopy Manager's manager for Linux and Solaris.	8.2	
Modified the explanation of upgrade procedure for AdvancedCopy Manager's agent for Solaris and RHEL5/RHEL6.	8.4	
Modified the explanation of upgrade procedure for AdvancedCopy Manager Copy Control Module for Linux and Solaris.	8.7	
Added the explanation that is unnecessary to save and restore the volume locking specification files, in the environment where they do not exist.	A.3, A.11	
Added the explanation of changes for Version 15.2, that are the design of Help button in the menu area and the procedures to display the online help (only when the patches are applied).	2.1.1, 2.2.1, 2.3.1	4.1

Manual organization and reading suggestions

Manual organization

The following table describes the Manual organization of Express, Storage Cruiser and AdvancedCopy Manager.

When to read	Related manuals (abbreviated)	Related products (**NOTE**)			Explanation
		EXP	SC	ACM	
Before installation	Quick Reference	Yes	Yes	Yes	This manual is unique for each product. The following manuals are available: - Express Quick Reference - Storage Cruiser Quick Reference - AdvancedCopy Manager Quick Reference
	Overview	No	No	Yes	This manual is unique for each product.
During installation	Installation and Setup Guide	Yes			This manual is common for all products.
	Cluster Environment Setup Guide	No	Yes		This manual is common for Storage Cruiser and AdvancedCopy Manager.
	Migration Guide	Yes			This manual is common for all products.
During operation	Operation Guide	Yes	Yes	Yes	This manual is unique for each product. The following manuals are available: - Express Operation Guide - Storage Cruiser Operation Guide - Storage Cruiser Operation Guide for Optimization Option - AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) - AdvancedCopy Manager Operation Guide (for Linux) - AdvancedCopy Manager Operation Guide (for HP-UX)

When to read	Related manuals (abbreviated)	Related products (**NOTE**)			Explanation
		EXP	SC	ACM	
					- AdvancedCopy Manager Operation Guide (for AIX)
	Operation Guide for Copy Control Module	Yes	No	Yes	This manual is common for Express and AdvancedCopy Manager.
	Web Console Guide	Yes			This manual is common for all products.
Anytime	Event Guide	Yes		No	This manual is common for Express and Storage Cruiser.
	Messages	Yes			This manual is common for all products.
	Glossary	Yes			This manual is common for all products.

NOTE: "EXP" indicates Express, "SC" indicates Storage Cruiser and "ACM" indicates AdvancedCopy Manager.

How to read manuals

Please use the following table to find the most useful information in the Express, Storage Cruiser and AdvancedCopy Manager manuals to answer your inquiry.

Purpose	Related products (**NOTE**)	Manual	Main contents	How to read
Acquiring a product overview and basic operation knowledge	EXP	- Express Quick Reference	- Product overview - Installation decision - Overview of the necessary tasks from installation to first use	Please read if you want to acquire a fundamental knowledge of the product and its operation in order to decide to install it or not.
	SC	- Storage Cruiser Quick Reference		
	ACM	- AdvancedCopy Manager Quick Reference		
		- AdvancedCopy Manager Overview	- Main functions - Linkable applications - Procedure overview for Advanced Copy of ETERNUS Disk storage system	
Deciding if a version upgrade is required	common	- ETERNUS SF Migration Guide	- Incompatibilities with previous version - Notes and cautions about version upgrade - Version upgrade procedure	Please read if you want to upgrade from a previous version.
Installing and correctly operating the product Setting up operating environment depending on purpose	common	- ETERNUS SF Installation and Setup Guide	- Operating environment - Installation procedure - Setup procedure - Uninstallation procedure	Please read if you want to install and setup the product.
	SC, ACM	- ETERNUS SF Cluster Environment Setup Guide	- Supported cluster software - Installation procedure for a clustered system - Setup procedure for a clustered system	Please read if you want to install and setup the product on a clustered system.

Purpose	Related products (**NOTE**)	Manual	Main contents	How to read
			- Uninstallation procedure for a clustered system	
Administration and operation of the installed system	EXP	- Express Operation Guide	- Starting and stopping the software - Device monitoring - Data copy inside the storage system - Necessary tasks after an architectural modification of the system as well as product maintenance	Please read if you want to start or shutdown the system, monitor the operation status, do backup/restore operations, etc.
	SC	- Storage Cruiser Operation Guide	- Starting and stopping the software - Device monitoring - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference	
		- Storage Cruiser Operation Guide for Optimization Option	- Operating environment construction - Operating status monitoring - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference	
	EXP, ACM	- ETERNUS SF Operation Guide for Copy Control Module	- Starting and stopping the software - Data backup/restore inside the storage system - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference	
	ACM	- AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) - AdvancedCopy Manager Operation Guide (for Linux) - AdvancedCopy Manager Operation Guide (for HP-UX) - AdvancedCopy Manager Operation Guide (for AIX)		
	common	- ETERNUS SF Web Console Guide	- Operating environment - Screen layout description	Please read if you want to understand the

Purpose	Related products (**NOTE**)	Manual	Main contents	How to read
				ETERNUS SF Web Console.
Dealing with messages issued by the software	common	- ETERNUS SF Messages	- Messages and their explanations - Parameter (variable information) description - System action - Countermeasures	Please read if you want a practical way of investigating and dealing with messages issued by the software.
Dealing with events issued by the software	EXP, SC	- ETERNUS SF Event Guide	- Phenomenon of event - Countermeasures	Please read if you need to find a practical way of investigating and dealing with events.
Researching the meaning of specific terms related to the products and other important terms	common	- ETERNUS SF Glossary	- Product specific terminology explanation - Explanation of important terminology appearing in the manual - Synonyms and related terms - Proper form of abbreviated terms	Please read if you want to learn the meaning of important terms, product specific terms or abbreviations used in the manuals.

NOTE: "EXP" indicates Express, "SC" indicates Storage Cruiser and "ACM" indicates AdvancedCopy Manager.

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Chapter 1 Overview

This chapter is an overview of the upgrade process from a previous version to this version for Express, Storage Cruiser, and AdvancedCopy Manager.

1.1 Upgrade patterns

This section explains the system configuration before upgrade and after upgrade.

Point

This version product combinations obey to the following rules:

- Express cannot be combined with Storage Cruiser or AdvancedCopy Manager in a same system environment.
- Storage Cruiser can be combined with AdvancedCopy Manager in a same system environment.

  With ETERNUS SF Version 15, the manager functions for the three products (Express, Storage Cruiser and AdvancedCopy Manager) are integrated in the same component. Moreover, the GUI for the three products is unified.

Refer to the followings according to the combination of the installed products.

Combination of products				Reference
Express	Storage Cruiser	AdvancedCopy Manager	AdvancedCopy Manager Copy Control Module	
Y	-	-	-	- When upgrading from Express Version 14.x: "Chapter 3 Upgrading Express Version 14.x"
Y	-	Y	-	
Y	-	-	Y	
Y	-	Y	Y	- When upgrading from Express Version 15.x: "Chapter 4 Upgrading Express Version 15.x"
-	Y	-	-	- When upgrading from Storage Cruiser Version 13.x/14.x: "Chapter 5 Upgrading Storage Cruiser Version 13.x/14.x"
-	Y	Y	-	
-	Y	-	Y	
-	Y	Y	Y	- When upgrading from Storage Cruiser Version 15.x: "Chapter 6 Upgrading Storage Cruiser Version 15.x"
-	-	Y	-	- When upgrading from AdvancedCopy Manager Version 13.x/14.x: "Chapter 7 Upgrading AdvancedCopy Manager Version 13.x/14.x"
-	-	Y	Y	- When upgrading from AdvancedCopy Manager Version 15.x: "Chapter 8 Upgrading AdvancedCopy Manager Version 15.x"

Combination of products				Reference
Express	Storage Cruiser	AdvancedCopy Manager	AdvancedCopy Manager Copy Control Module	

-	-	-	Y	- When upgrading from AdvancedCopy Manager Version 13.x/14.x: "7.3 Upgrading the AdvancedCopy Manager Copy Control Module"
				- When upgrading from AdvancedCopy Manager Version 15.x:
				  - "8.6 Upgrading the AdvancedCopy Manager Copy Control Module (for Windows)"
				  - "8.7 Upgrading the AdvancedCopy Manager Copy Control Module (for Solaris, Linux)"

Y: Product installed
-: Product not installed

1.2 What is the Upgrade Installation

This version allows installation without uninstalling the previous version first. It is described as "Upgrade Installation" in this manual.

Information

For the uninstallation of the previous version:

You may be asked if you uninstall the previous version while upgrading. If the user chooses to uninstall the previous version, the uninstallation process is done automatically.

1.3 Products which can be upgraded with the Upgrade Installation

The products which can be upgraded with the Upgrade Installation are as follows.

For Windows

Products which can use Upgrade Installation	Product after the upgrade
ETERNUS SF Express Version 14.x ETERNUS SF Express Version 15.x (*1)	ETERNUS SF Express Version 15.2
ETERNUS SF Storage Cruiser Version 13.x (*2) ETERNUS SF Storage Cruiser Version 14.x (*2) ETERNUS SF Storage Cruiser Version 15.x (*3)	ETERNUS SF Storage Cruiser Version 15.2
ETERNUS SF AdvancedCopy Manager Version 13.x (*4) ETERNUS SF AdvancedCopy Manager Version 14.x (*4) ETERNUS SF AdvancedCopy Manager Version 15.x (*5)	ETERNUS SF AdvancedCopy Manager Version 15.2

*1: For Windows Server 2008, the Upgrade Installation can be used. For Windows Server 2003, the Upgrade Installation cannot be used.

*2: The Upgrade Installation can be used for the Storage Cruiser's manager only.
*3: For Windows Server 2008, the Upgrade Installation can be used for Storage Cruiser's manager and Storage Cruiser's agent. For Windows Server 2003, the Upgrade Installation cannot be used for Storage Cruiser's manager and Storage Cruiser's agent.
*4: The Upgrade Installation can be used for AdvancedCopy Manager's manager and AdvancedCopy Manager Copy Control Module.
*5: For Windows Server 2008, the Upgrade Installation can be used for AdvancedCopy Manager's manager, AdvancedCopy Manager's agent, and AdvancedCopy Manager Copy Control Module. For Windows Server 2003, the Upgrade Installation cannot be used for AdvancedCopy Manager's manager, AdvancedCopy Manager's agent and AdvancedCopy Manager Copy Control Module.

For Solaris

Products which can use Upgrade Installation	Product after the upgrade
ETERNUS SF Storage Cruiser Version 13.x (*1) ETERNUS SF Storage Cruiser Version 14.x (*1) ETERNUS SF Storage Cruiser Version 15.x (*2)	ETERNUS SF Storage Cruiser Version 15.2
ETERNUS SF AdvancedCopy Manager Version 13.x (*3) ETERNUS SF AdvancedCopy Manager Version 14.x (*3) ETERNUS SF AdvancedCopy Manager Version 15.x (*4)	ETERNUS SF AdvancedCopy Manager Version 15.2

*1: The Upgrade Installation can be used for the Storage Cruiser's manager only.
*2: The Upgrade Installation can be used for Storage Cruiser's manager and Storage Cruiser's agent.
*3: The Upgrade Installation can be used for AdvancedCopy Manager's manager and AdvancedCopy Manager Copy Control Module.
*4: The Upgrade Installation can be used for AdvancedCopy Manager's manager, AdvancedCopy Manager's agent, and AdvancedCopy Manager Copy Control Module.

For Linux

Products which can use Upgrade Installation	Product after the upgrade
ETERNUS SF Express Version 15.x	ETERNUS SF Express Version 15.2
ETERNUS SF Storage Cruiser Version 13.x (*1) ETERNUS SF Storage Cruiser Version 14.x (*1) ETERNUS SF Storage Cruiser Version 15.x (*2)	ETERNUS SF Storage Cruiser Version 15.2
ETERNUS SF AdvancedCopy Manager Version 13.x (*3) ETERNUS SF AdvancedCopy Manager Version 14.x (*3) ETERNUS SF AdvancedCopy Manager Version 15.x (*4)	ETERNUS SF AdvancedCopy Manager Version 15.2

*1: The Upgrade Installation can be used for the Storage Cruiser's manager only.
*2: The Upgrade Installation can be used for Storage Cruiser's manager and Storage Cruiser's agent.
*3: The Upgrade Installation can be used for AdvancedCopy Manager's manager and AdvancedCopy Manager Copy Control Module.
*4: The Upgrade Installation can be used for AdvancedCopy Manager's manager, AdvancedCopy Manager's agent, and AdvancedCopy Manager Copy Control Module.

Note

For upgrading from the previous version products that are not listed in the table above and that installed in HP-UX and AIX environment:

It is not possible to use the Upgrade Installation provided in this manual.
Please uninstall the previous version product and install this version product. Afterwards, perform as new all necessary setup and customization operations for this version.

1.4 Notes on upgrade

The following important points must be acknowledged before starting the upgrade process.

1.4.1 Common notes for all products

Operating systems

The operating system version on the server where the upgrade will be performed must be supported by the version of the product that will be installed.

For information on the operating system versions supported by the product, refer to "Operating Environment" in the *ETERNUS SF Installation and Setup Guide*.

Default locale for the operating system (for Solaris and Linux)

ETERNUS SF Manager supports only "C" as a default locale for the operating system.
The upgrade of ETERNUS SF Manager cannot be performed when the default locale for the operating system is other than "C".
Change the value to "C" before performing the upgrade.

1.4.2 Notes for Express

Configuration information for Version 14.x

The following configuration information of Express Version 14.x cannot be carried over to this version.

- Various Express configuration and history information
  - Events
  - Login/Logout History
  - Configuration Change History
  - User account of Express Web GUI

For information on the configuration information, refer to the *ETERNUS SF Express User's Guide* for the previous version.

Advanced Copy sessions existing in ETERNUS Disk storage system

It is possible to perform an Upgrade Installation during existing Advanced Copy and Remote Advanced Copy sessions.

The upgrade process is similar and has no influence on the existing Advanced Copy sessions.

1.4.3 Notes for Storage Cruiser

Upgrade from Softek Storage Cruiser Version 1.2.2

If you would like to upgrade from Softek Storage Cruiser Version 1.2.2 to this version, contact a Fujitsu system engineer.

Configuration information for Version 13.x and 14.x

The following configuration information of Storage Cruiser Version 13.x and 14.x cannot be carried over to this version.

- User account for GUI client

When setting up the information listed above to this version, the following work is required.

1. It is necessary to confirm and record the information configured for the previous version before performing the Upgrade Installation.

   You can confirm the user account for the previous version in the "Login account registration" window that is displayed by selecting [Tool] > [Authentication] in the GUI client resource management screen.

2. After performing Upgrade Installation, configure the information recorded in step 1, manually.

   See

   For information on setting up of a user account for this version, refer to "Setting up user account" in the *ETERNUS SF Installation and Setup Guide*.

1.4.4 Notes for AdvancedCopy Manager

Advanced Copy sessions existing in ETERNUS Disk storage system

It is possible to perform an Upgrade Installation with existing Advanced Copy and Remote Advanced Copy sessions.
Regardless of whether there are Advanced Copy sessions or not, the version upgrade procedure is the same.

Configuration information for Version 13.x and 14.x

The following configuration information of AdvancedCopy Manager Version 13.x and 14.x cannot be carried over to this version.

- User account for GUI client

When setting up the information listed above to this version, the following work is required.

1. It is necessary to confirm and record the information configured for the previous version before performing the Upgrade Installation.

   You can confirm the user account for the previous version on the screen on which is displayed by the following procedure:

   - In the case of AdvancedCopy Manager Version 13.2 or earlier:

     Select [View] from [Security] menu on the initial window of AdvancedCopy Manager by the root user in Solaris and Linux environments, or by the startup account specified at the time of the installation of the AdvancedCopy Manager's manager in Windows environments.

   - In the case of AdvancedCopy Manager Version 13.3 - Version 14.2A:

     Select [User Accounts] from [File] menu of the main menu bar by the root user in Solaris and Linux environments, or by the startup account specified at the time of the installation of the AdvancedCopy Manager's manager in Windows environments.

2. After performing Upgrade Installation, configure the information recorded in step 1, manually.

   See

   For information on setting up of a user account for this version, refer to "Setting up user account" in the *ETERNUS SF Installation and Setup Guide*.

Chapter 2 Changes from Previous Version

This chapter describes the contents changed from the previous version of products.

2.1 Changes for Express

This section describes the changes from the previous version of Express.

2.1.1 Changes for Version 15.2

Changed screen refresh interval of the Web Console and its display/input unit

The screen refresh interval of the Web Console and its display/input unit have been changed.

Version	Details
15.1 or earlier	- The shortest screen refresh interval is 1 minute. - Display/input unit of the screen refresh interval is "minutes".
15.2	- The shortest screen refresh interval is 30 seconds. - Display/input unit of the screen refresh interval is "seconds".

Changed the design of Help button in the menu area and the procedures to display the online help

The design of Help button in the menu area and the procedures to display the online help have been changed.

Version	Details
15.1 or earlier	- The "Help" link to display the online help exists in the menu area. - To display the online help, click "?" icon or the "Help" link in the menu area.
15.2	- The "Help" link to display the online help does not exists in the menu area. - To display the online help, click "?" icon in the menu area, and click "Help" displayed in drop-down list.

2.1.2 Changes for Version 15.1

Changes for counting method in Extended Copy sessions and for default filter on session list screen

On the AdvancedCopy Overview screen (*1), the counting method for the number of copy sessions in the "Session" and "Local Copy Session Count" columns is changed.
Also, on the session list screen (*2), the filter item for Copy Type that is selected by default when opening the screen is changed.

Version	Details
15.0	- "Extended Copy Sessions" is included in "Sessions" and "Local Copy Session Count". - On the session list screen, "All" is selected as the filter item for Copy Type by default when opening the screen.
15.1	- "Extended Copy Sessions" is not included in "Sessions" and "Local Copy Session Count". - On the session list screen, "All Local or REC" is selected as the filter item for Copy Type by default when opening the screen.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].

*2: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Category pane, click [Copy Sessions].

Changed setting method for Copy Table Size

On the Advanced Copy Configuration Wizard screen (*1), the method for specifying the custom Copy Table Size is changed.

Version	Details
15.0	The custom Copy Table Size can be specified by a pull-down list.
15.1	The custom Copy Table Size can be specified by a spin button or direct input.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Advanced Copy pane, click [Configuration].
5. On the Action pane, click [Advanced Copy] under [Wizard].

Changed minimum setting value for Copy Table Size

On the Advanced Copy Configuration Wizard screen (*1), the minimum value to be set in the custom Copy Table Size is changed.

Likewise, in the Remote Copy Configuration wizard (*2), the minimum value to be set in the Copy Table Size is changed.

Version	Details
15.0	The minimum value that can be set is 0.
15.1	The minimum value that can be set is 8.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Advanced Copy pane, click [Configuration].
5. On the Action pane, click [Advanced Copy] under [Wizard].

*2: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.

3. On the Category pane, click [Advanced Copy].
4. On the Advanced Copy pane, click [REC Path] or [REC Buffer].
5. On the Action pane, click [Remote Copy Conf.] under [Wizard].

2.1.3 Changes for Version 15.0

Changes for supported operating systems

The following operating systems are no longer supported.

Version	Details
14.2 or earlier	-
15.0	Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Standard x64 Edition SP2 Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition SP2 Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition SP2 Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition SP2

For the operating systems supported by this version of Express, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide*.

Changes for supported functions

The function to send troubleshooting information by e-mail is no longer supported.

Version	Details
14.2 or earlier	It is possible to send the troubleshooting information to the address specified by e-mail.
15.0	The function is no longer supported.

The express_diag command is no longer supported

Version	Details
14.2 or earlier	It is possible to use express_diag command (Diagnosis of Express's manager environment).
15.0	The express_diag command is no longer supported. If a problem occurs with the Express's manager, collect the required troubleshooting information, and then contact a Fujitsu system engineer.

The export/import function of the copy group definition is no longer supported

Version	Details
14.2 or earlier	It is possible to use the export/import copy group definition function, and move the local site's copy group definition to the remote site. When performing a forced cancel or forced suspend operation to the remote copy session at the remote site, it is necessary to first export the copy group definition at the local site.
15.0	The export/import copy group definition function is no longer supported. Instead, perform a forced cancel or forced suspend of the remote copy session without moving the copy group definition to the remote site.

See

For details about forced cancel or forced suspend of remote copy sessions on the Version 15.0, refer to the following manuals.

- "Forcible cancel the copy session" and "Forcible suspend the copy session" in the *ETERNUS SF Web Console Guide*.
- "Forcibly stopping copy sessions" and "Forcibly Suspending REC Sessions" in the *ETERNUS SF Operation Guide for Copy Control Module*.

The automatic creation function of RAID group is no longer supported

The automatic creation function of RAID group for some models is no longer supported.

Version	Details
14.2 or earlier	It is possible to be selected required disks automatically and created RAID groups with the automatic creation function of RAID group.
15.0	The automatic creation function of RAID group is not supported for the following models. - ETERNUS DX60/DX80/DX90 - ETERNUS DX60 S2

The function to set different names from names on the devices is no longer supported

Version	Details
14.2 or earlier	It is possible to set different names (alias names) from names on the devices for servers, storage devices or volumes.
15.0	It is no longer supported to set different names (alias names) from names on the devices for servers, storage devices or volumes.

Change for the connection address to the ETERNUS SF Web Console

The address to connect to the Management Server is changed as follows.

Version	Details
14.2 or earlier	https://<*IP-address*>:<*port_number*>/express/
15.0	https://<*IP-address*>:<*port_number*>/

See

For details, refer to "How to start Web Console" in the *ETERNUS SF Web Console Guide*.

Changes to the license process

The license management process is changed as follows.

Version	Details
14.2 or earlier	- The Advanced Copy license is selected in install options. - For product upgrades to Storage Cruiser and AdvancedCopy Manager, it is necessary to uninstall/install each product.
15.0	- The Advanced Copy license is set from the Web Console and command. - Product upgrades to Storage Cruiser and AdvancedCopy Manager are possible only through software license registration of the relevant products.

See

For details, refer to "License Management" in the *ETERNUS SF Installation and Setup Guide*.

Changes to the messages and event logs

The messages and event logs are changed as follows.

Version	Details
14.2 or earlier	Output the Express unique messages and event logs.
15.0	Output the messages and event logs the same as Storage Cruiser.

Changes to the path name of storageadm perfdata command (Windows)

The path name of the storageadm perfdata command is changed as follows.

Version	Details
14.2 or earlier	$INS_DIR\Express\Manager\bin (*1)
15.0	$INS_DIR\ESC\Manager\opt\FJSVssmgr\sbin (*2)

*1: $INS_DIR means "Program Directory" specified at the Express installation.
*2: $INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

Changes to the install directory and name of troubleshooting information collection command (Windows)

The troubleshooting information collection command name and path are changed as follows.

Version	Details	
	Command name	Path name
14.2 or earlier	express_managersnap	$INS_DIR\Express\Manager\bin (*1)
15.0	esfsnap	$INS_DIR\Common\bin (*2)

*1: $INS_DIR means "Program Directory" specified at the Express installation.
*2: $INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

2.2 Changes for Storage Cruiser

This section describes the changes from the previous version of Storage Cruiser.

2.2.1 Changes for Version 15.2

Changed screen refresh interval of the Web Console and its display/input unit

The screen refresh interval of the Web Console and its display/input unit have been changed.

Version	Details
15.1 or earlier	- The shortest screen refresh interval is 1 minute. - Display/input unit of the screen refresh interval is "minutes".
15.2	- The shortest screen refresh interval is 30 seconds. - Display/input unit of the screen refresh interval is "seconds".

Changed the firmware version notation of ETERNUS Disk storage system

The firmware version notation of ETERNUS Disk storage system is changed.

Version	Details
15.1 or earlier	VxxLyyPzzzz (xx : Version, yy : Level, zzzz : Release)
15.2	VxxLyy-zzzz (xx : Version, yy : Level, zzzz : Release)

Changed the design of Help button in the menu area and the procedures to display the online help

The design of Help button in the menu area and the procedures to display the online help have been changed.

Version	Details
15.1 or earlier	- The "Help" link to display the online help exists in the menu area. - To display the online help, click "?" icon or the "Help" link in the menu area.
15.2	- The "Help" link to display the online help does not exists in the menu area. - To display the online help, click "?" icon in the menu area, and click "Help" displayed in drop-down list.

2.2.2 Changes for Version 15.1

Connectivity management display is no longer supported

The connectivity management display has been discontinued.
In Version 15.1, mount points and MultiPath driver devices are displayed in the End to End view.
For details, refer to "Changes for displayed contents of End to End view".

Changes for displayed contents of End to End view

In the displayed contents of the End to End view, the mount points and MultiPath driver devices fetched from Storage Cruiser's agent are added. The same applies for CSV output.

Version	Details

15.0 or earlier	The following items are displayed:
	- Server
	  - Name
	  - Type
	  - Interface Type
	  - HBA WWPN
	  - HBA iSCSI Name / IP Address
	- Switch (Connected to Server)
	  - Name
	  - Port
	- Switch (Connected to Storage)
	  - Name
	  - Port
	- Storage
	  - Name
	  - Port
	  - AG
	  - LUN
	  - Volume
	  - TPP
	  - RG
	  - RG (Concatenated)

15.1	The following items are displayed:
	- Server
	  - Name
	  - Type
	  - Mount Point
	  - Multipath Driver Device
	  - Interface Type
	  - HBA WWPN
	  - HBA iSCSI Name / IP Address
	- Switch (Connected to Server)
	  - Name

Version	Details

	- Port
	- Switch (Connected to Storage)
	  - Name
	  - Port
	- Storage
	  - Name
	  - Port
	  - AG
	  - LUN
	  - Volume
	  - TPP
	  - RG
	  - RG (Concatenated)

Note

The items [Mount Point] and [Multipath Driver Device] display a hyphen ("-") when:

- The OS of the Managed Server is Windows, and the version of Storage Cruiser's agent is Version 15.0.

Change the map view function

The map view function has been changed as follows:

Version	Details
14.2 or earlier	A map (icon) display and a list display are available. The map display can display connecting lines between icons, statuses of access paths, and physical lines that are forming access paths, and allows for drag-and-drop setting of access paths.
15.0	Only a list display, but no map display is available. Settings for the map display (display of connecting lines between icons, statuses of access paths, and physical lines that are forming access paths, as well as drag-and-drop setting of access paths) are not available.
15.1	A map display and a list display are available. The map display allows for display of connecting lines between icons, statuses of access paths, and physical lines that are forming access paths. Drag-and-drop setting of access paths is not available.

Changes for counting method in Extended Copy sessions and for default filter on session list screen

On the AdvancedCopy Overview screen (*1), the counting method for the number of copy sessions in the "Session" and "Local Copy Session Count" columns is changed.
Also, on the session list screen (*2), the filter item for Copy Type that is selected by default when opening the screen is changed.

Version	Details
15.0	- "Extended Copy Sessions" is included in "Sessions" and "Local Copy Session Count".

Version	Details
	- On the session list screen, "All" is selected as the filter item for Copy Type by default when opening the screen.
15.1	- "Extended Copy Sessions" is not included in "Sessions" and "Local Copy Session Count". - On the session list screen, "All Local or REC" is selected as the filter item for Copy Type by default when opening the screen.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].

*2: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Category pane, click [Copy Sessions].

Changed setting method for Copy Table Size

On the Advanced Copy Configuration Wizard screen (*1), the method for specifying the custom Copy Table Size is changed.

Version	Details
15.0	The custom Copy Table Size can be specified by a pull-down list.
15.1	The custom Copy Table Size can be specified by a spin button or direct input.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Advanced Copy pane, click [Configuration].
5. On the Action pane, click [Advanced Copy] under [Wizard].

Changed minimum setting value for Copy Table Size

On the Advanced Copy Configuration Wizard screen (*1), the minimum value to be set in the custom Copy Table Size is changed.

Likewise, in the Remote Copy Configuration wizard (*2), the minimum value to be set in the Copy Table Size is changed.

Version	Details
15.0	The minimum value that can be set is 0.
15.1	The minimum value that can be set is 8.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].

4. On the Advanced Copy pane, click [Configuration].
5. On the Action pane, click [Advanced Copy] under [Wizard].

*2: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Advanced Copy pane, click [REC Path] or [REC Buffer].
5. On the Action pane, click [Remote Copy Conf.] under [Wizard].

Changes for output information of port commands (storageadm port)

The output information of port and device commands (storageadm port) has been changed as follows.

DEVICE NAME	Number of CMs per Device	Number of Ports per CM
ETERNUS2000	1	2
ETERNUS DX60	1	2
	2	1
ETERNUS DX60 S2	1	2
	2	1
ETERNUS DX80	1	2
	2	1
ETERNUS DX90	1	4

The output information has been changed as follows.

Version	Details

15.0 or earlier	Absent port information is displayed.
	[Command Execution Example]
	`# /opt/FJSVssmgr/sbin/storageadm port info -ipaddr 1.2.3.4 -csv`
	`PORT ID,PORT NAME,STATUS,TYPE,AFFINITY,PORT ADDRESS,SUPPLEMENT INFORMATION`
	`00,CM0Port0,Online,FC-CA,On,1234567890ABCDEE,-`
	`01,CM0Port1,Undefined,FC-CA,Off,0000000000000000,-`
	`10,CM1Port0,Online,FC-CA,On,1234567890ABCDEF,-`
	`11,CM1Port1,Undefined,FC-CA,Off,0000000000000000,-`

15.1	Absent port information is not displayed.
	[Command Execution Example]
	`# /opt/FJSVssmgr/sbin/storageadm port info -ipaddr 1.2.3.4 -csv`
	`PORT ID,PORT NAME,STATUS,TYPE,AFFINITY,PORT ADDRESS,SUPPLEMENT INFORMATION`
	`00,CM0Port0,Online,FC-CA,On,1234567890ABCDEE,-`
	`10,CM1Port0,Online,FC-CA,On,1234567890ABCDEF,-`

Changes for output information of iSCSI port commands (storageadm iscsiport)

The output information of iSCSI port and device commands (storageadm iscsiport) has been changed as follows.

DEVICE NAME	Number of CMs per Device	Number of Ports per CM
ETERNUS2000	1	2
ETERNUS DX60	1	2
	2	1
ETERNUS DX60 S2	1	2
	2	1
ETERNUS DX80	1	2
	2	1

The output information has been changed as follows.

Version	Details

15.0 or earlier	Absent iSCSI port information is displayed.
	[Command Execution Example]
	`# /opt/FJSVssmgr/sbin/storageadm iscsiport info -ipaddr 1.2.3.4 -csv`
	`PORT ID,NAME,STATUS,TYPE,AFFINITY,ISCSI NAME,IP ADDRESS`
	`00,CM0Port0,Online,iSCSI-CA,On,iqn.2000-09.com.fujitsu:storage-system.e2000:0000000029,172.16.4.40`
	`01,CM0Port1,Undefined,iSCSI-CA,Off, ,-`
	`10,CM1Port0,Online,iSCSI-CA,On,iqn.2000-09.com.fujitsu:storage-system.e2000:0000000029,172.16.4.41`
	`11,CM1Port1,Undefined,iSCSI-CA,Off, ,-`

15.1	Absent iSCSI port information is not displayed.
	[Command Execution Example]
	`# /opt/FJSVssmgr/sbin/storageadm iscsiport info -ipaddr 1.2.3.4 -csv`
	`PORT ID,NAME,STATUS,TYPE,AFFINITY,ISCSI NAME,IP ADDRESS`
	`00,CM0Port0,Online,iSCSI-CA,On,iqn.2000-09.com.fujitsu:storage-system.e2000:0000000029,172.16.4.40`
	`10,CM1Port0,Online,iSCSI-CA,On,iqn.2000-09.com.fujitsu:storage-system.e2000:0000000029,172.16.4.41`

2.2.3 Changes for Version 15.0

Changes to the GUI

The GUI client has been replaced with the Web Console.
Uninstall the installed GUI client.

Version	Details
14.2 or earlier	When operating the Storage Cruiser function with a GUI, the operation is performed from the Storage Cruiser GUI client installed on the PC.
15.0	When operating the Storage Cruiser function with a GUI, the operation is performed from a web browser.

See

For details on the usable web browser and how to use the Web Console, refer to the *ETERNUS SF Web Console Guide*.

Changes for supported devices

The following devices are no longer supported.

Version	Details
14.2 or earlier	-
15.0	ETERNUS4000 models 80 and 100 ETERNUS3000 (all models) ETERNUS6000 (all models) ETERNUS GR series ETERNUS SX300, SX300S ETERNUS VS900 ETERNUS LT120/LT130/LT160 FibreCAT SX series EMC Symmetrix DMX, Clarix HITACHI HDS (HITACHI DATA SYSTEM) Disk array

See

For the devices that can be managed by this version of Storage Cruiser, refer to "Supported devices" in the *ETERNUS SF Installation and Setup Guide*.

Changes for supported operating systems

The following operating systems are no longer supported.

Version	Details
14.2 or earlier	-
15.0	- Storage Cruiser's manager Microsoft(R) Windows Server(R) 2008 R2 Foundation (non-SP) Microsoft(R) Windows Server(R) 2008 R2 Foundation SP2 Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition SP2 Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition SP2 - Storage Cruiser's agent Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems (non-SP) Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems SP2 Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems SP2 Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP)

Version	Details
	Solaris(TM) 8 Operating System Red Hat(R) Enterprise Linux(R) 5 (for Intel Itanium) Red Hat(R) Enterprise Linux(R) AS (v.4 for Itanium) Red Hat(R) Enterprise Linux(R) AS (v.3 for x86) Red Hat(R) Enterprise Linux(R) ES (v.3 for x86) SUSE(R) Linux Enterprise Server 9 for EM64T

See

For the operating systems supported by this version of Storage Cruiser, refer to "Operating environment of ETERNUS SF Manager" and "Operating environment of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide*.

Changes for supported functions

Storage Volume Configuration Navigator is no longer supported.

Version	Details
14.2 or earlier	It is possible to use the Storage Volume Configuration Navigator.
15.0	Storage Volume Configuration Navigator is no longer supported.

The map view function is no longer supported

Displaying map is no longer supported.

Version	Details
14.2 or earlier	Display is possible in both Map (icon) and List formats. In the Map format display, each icon connectivity and access path status is displayed, and physical access paths can be set by drag and drop.
15.0	Display is possible in List format only. Map format display is not available. Icon connectivity, access path status display as well as access path connectivity setup by drag and drop is not possible.

Information

- Use the List display for device status information.
- The access path setup with drag and drop is replaced by selection in the list.

Memo information table is no longer supported

The memo information table has been discontinued.

Version	Details
14.2 or earlier	Display and edition of memo information is possible,
15.0	Display and edition of memo information is not possible. The memo information created with former versions cannot be restored in the new version.

The Correlation window is no longer supported

The Correlation window below is no longer supported.

Version	Details
14.2 or earlier	It is possible to display the detailed relational management configuration within the device as a separate window element.
15.0	List view is possible but not as a separate window element.

Connectivity management display is no longer supported

The connectivity management display has been discontinued.

Version	Details
14.2 or earlier	-
15.0	The following items relative to connectivity management cannot be displayed: - Business components (application) display - DBMS display - File system (mount point) display - Mirror drive display - Multipath drive display - Raw Device display - IOB display - Router display - DE display - Battery display - Element integrated display - Connection display - Configuration information saving

Revolving light icon is no longer supported

The revolving light icon is no longer supported.

Version	Details
14.2 or earlier	The revolving light icon is displayed on the Resource view.
15.0	The revolving light icon is not displayed.

Displaying condition report is no longer supported

The processing for threshold monitoring of performance management function has changed as follows.

Version	Details
14.2 or earlier	The condition report is displayed.
15.0	The condition report is not displayed.

SNMP Trap setup after a Fibre Channel Switch has been registered is no longer supported

Support for SNMP Trap setup after a Fibre Channel Switch has been registered has changed as follows.

Version	Details
14.2 or earlier	SNMP trap setup can be enabled after a Fibre Channel Switch has been registered.
15.0	If SNMP Trap settings are changed after a Fibre Channel Switch has been registered, the device must be re-registered.

Beacon function for Solaris server node is no longer supported

The beacon function for Solaris server node has been changed as follows.

Version	Details
14.2 or earlier	The beacon function is available.
15.0	The beacon function is not available.

File output function for performance management graph is no longer supported

The file output function in the display of performance management graph has been changed as follows.

Version	Details
14.2 or earlier	The content displaying in the performance management graph is available to output as a JPEG file.
15.0	The content displaying in the performance management graph is not available to output as a JPEG file.

Changes to the default install path for programs that include manager functions

This change is for Windows environment only.

Version	Details
14.2 or earlier	C:\Program Files\ETERNUS-SSC\Manager
15.0	C:\ETERNUS_SF\ESC\Manager

Example

When having installed a program to the default installation location, the full path for the shell script used with a shell linkage function is as follows:

- For Version 14.2 or earlier:

  C:\Program Files\ETERNUS-SSC\Manager\opt\FJSVssmgr\lib\sample\trapop.bat

- For Version 15.0:

  C:\ETERNUS_SF\ESC\Manager\opt\FJSVssmgr\lib\sample\trapop.bat

Changes for the device registration for ETERNUS Disk storage system

The information necessary for device registration of ETERNUS Disk storage system is as follows.

Version	Details
14.2 or earlier	It is not necessary to specify an account of ETERNUS Disk storage system.
15.0	For the following models, it is necessary to specify an account holding ETERNUS Disk storage system Software Role privileges. - ETERNUS DX80 S2/DX90 S2 - ETERNUS DX400 S2 series - ETERNUS DX8000 S2 series For models besides those listed above, it is necessary to specify an account holding ETERNUS Disk storage system Administrator privileges.

Change default value of registered a device

The setup function checking of SNMP trap for registering ETERNUS Disk storage system and Fibre Channel Switch has been changed as follows.

Version	Details
14.2 or earlier	When registering ETERNUS Disk storage system and Fibre Channel Switch, the automatic setting function for SNMP trap destination address is checked by default.
15.0	When registering ETERNUS Disk storage system and Fibre Channel Switch, the automatic setting function for SNMP trap destination address is not checked by default.

Changes for the login account

The login account has been changed as follows.

Version	Details
14.2 or earlier	In order to connect to the Management Server from the Storage Cruiser client, a dedicated Storage Cruiser account is necessary.
15.0	In order to connect to the Management Server from the Web Console, a dedicated Storage Cruiser account is not necessary. The Management Server's OS account is used.

Change the icon displaying threshold monitoring of Thin Provisioning Pool

The icon displayed when the usage of Thin Provisioning Pool exceed "alarm threshold" has been changed as follows.

Version	Details
14.2 or earlier	Displays " "
15.0	Displays " "

Change the display method for Capacity Chart of Thin Provisioning Pool

The display method for Capacity Chart of Thin Provisioning Pool has been changed as follows.

Version	Details
14.2 or earlier	- The following items that can be selected as the content to be displayed. - Used capacity

Version	Details
	- Remain capacity - The following items that can be selected as the unit. - TB - % - The following items that can be selected as the Time Axis. - Past 1 month - Past N year (N : 1 - 10) - Two or more graph windows of Thin Provisioning Pool can be displayed with one direction.
15.0	- The content to be displayed is only "Used Capacity". - The unit is only TB. - The following items that can be selected as the Duration. - 1 Month - 1 Year - 10 Years - One graph window of Thin Provisioning Pool can be displayed with one direction.

Changes to the process of deleting the Management Server

The process for deleting a Management Server with a set access path has changed as follows.

Version	Details
14.2 or earlier	In the case of the access path being set when deleting the Management Server, the access path is deleted at the same time.
15.0	In the case of the access path being set when deleting the Management Server, it is not possible to delete the access path at the same time.

Changes to the process of deleting a VM Host if VM Guests exist under the VM Host

The process for deleting a VM Host if VM Guests exist under this VM Host has changed as follows.

Version	Details
14.2 or earlier	When a VM Host is deleted, all the VM Guests under that VM Host are deleted as well from ETERNUS SF.
15.0	If a VM Host with existing VM Guests is deleted, all the VM Guests must be first deleted from ETERNUS SF. The VM Guests cannot be deleted as the same time as the VM Host.

Changes to the install directory and name of troubleshooting information collection command (Storage Cruiser's manager)

The troubleshooting information collection command name and path are changed as follows.

Version	Details	
	Command name	Path name
14.2 or earlier	managersnap	- For Windows (*1): $INS_DIR\Manager\opt\FJSVssmgr\sbin - For Solaris or Linux: /opt/FJSVssmgr/sbin
15.0	esfsnap	- For Windows (*2): $INS_DIR\Common\bin - For Solaris or Linux: /opt/FJSVesfcm/bin

*1: $INS_DIR means "Program Directory" specified at the Storage Cruiser installation.
*2: $INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

Change for the events related to operation of this product notification

To output the operation log onto the Web Console, the event notification associated with behaviors of this product was stopped.

Version	Details
14.2 or earlier	Events described in "Events Related to Operation of This Product" in the *ETERNUS SF Storage Cruiser Event Guide* are notified.
15.0	Events described in "Events Related to Operation of This Product" in the *ETERNUS SF Storage Cruiser Event Guide* in Version 14.2 or earlier are not notified. For behaviors of this product, check the operation log on the Web Console.

2.2.4 Changes for Version 14.2 or earlier

Change to the error message output by storage management commands

The message output by storage management commands is changed as follows.

Message ID	V14.1 or earlier	V14.2
ssmgr3228	The specified RAID group number is used in the Thin Provisioning Pool.	The specified RAID group cannot operate.

Changes for the SNMP trap reception program

- For Windows:

Version	Detail
14.1 or earlier	- SystemWalker MpWksttr is used as the SNMP trap monitoring service. - If in use with the ServerView AlarmService, the mpmsts ON command must be executed. - If in use with Systemwalker Centric Manager, no special settings are required.
14.2	- The OS standard SNMP trap monitoring service is used. Windows Server 2003: SNMP Trap Service Windows Server 2008: SNMP Trap - If in use with the ServerView AlarmService, the mpmsts ON command need not be executed.

Version	Detail
	- If in use with Systemwalker Centric Manager, the settings indicating coexistence with the ServerView AlarmService are required at the Systemwalker Centric Manager side.

- For Linux:

Version	Detail
14.1 or earlier	- FJSVswstt is used as the SNMP trap monitoring daemon. - No special settings are required to use FJSVswstt. - If in use with the ServerView AlarmService, the ServerView trap transfer program is required. - If in use with any of the Systemwalker Centric Manager versions or with ServerView Resource Coordinator VE V2.1.1 to V2.1.3, no special settings are required.
14.2	- The snmptrapd in the OS standard net-snmp package is used as the SNMP trap monitoring daemon. - The snmptrapd settings must be changed in order to use snmptrad. - If in use with the ServerView AlarmService, the ServerView trap distributor program (SMAWtrpsv) is not required. - If in use with any of the Systemwalker Centric Manager versions or with ServerView Resource Coordinator VE V2.1.1 to V2.1.3, the settings indicating use with the ServerView AlarmService are required at the Systemwalker Centric Manager or ServerView Resource Coordinator VE side.

Changes for communication recovery event messages

In the device polling function, incompatible target devices are the Managed devices using the "Communication status check" polling method.

Version	Details
13.4 or earlier	Unit status changed: OK Unit status changed: Warning Unit status changed: Error
14.0	Connection OK

See

For details on the polling methods, refer to "Device Polling" in the *ETERNUS SF Storage Cruiser Operation Guide*.

Change the management method for VMware Infrastructure 3 Version 3.5

Version	Details
13.3 or earlier	Manages VMware infrastructure by installing a Storage Cruiser's agent on the host operating system. To register VMware Infrastructure with this software, the IP address of host operating system is required. On the Correlation Windows, ext2 and ext3 filesystem are displayed.
13.4	Manages VMware infrastructure without installing a Storage Cruiser's agent on the host operating system. To register VMware Infrastructure with this software, the IP address of VM host, user name and password to login to VM host are required. On the Correlation Windows, ext2 and ext3 filesystem are not displayed.

If the agents from Version 13.3 or earlier are still used even after migrating the Manager to Version 13.4, then the management method does not change. To manage the VMware infrastructure using the new management method, first migrate the Manager to Version 13.4, then delete the settings for the servers where the agent has been installed from this software and register the servers again using the new management method.

See

For details about the new management method and registration procedure, refer to "VMware Infrastructure 3 Version 3.5 (or later), VMware vSphere 4 (or later) or VMware ESXi 3.5 (or later)" and "Registering device" in the *ETERNUS SF Storage Cruiser Operation Guide*.

Changes for the integration icon name and basic information for LVM logical/physical volume

This change is for HP-UX environment only.

Item	Version	Details
Integration icon name for logical volume	13.3 or earlier	PVLink Logical Volumes(xxxx)
	13.4	LVM Logical Volumes(xxxx)
Basic information of integration icon for logical volume	13.3 or earlier	PVLink Logical Volumes(xxxx)
	13.4	LVM Logical Volumes(xxxx)
Basic information of integration icon for physical volume	13.3 or earlier	PVLink Physical Volumes(xxxx)
	13.4	LVM Physical Volumes(xxxx)

Basic information of integration icon is displayed by selecting **Basic information** tab in property window for the integration icon.

Example

- In the case of Version 13.3 or earlier:

  Integration icon name for logical volume: PVLink Logical Volumes(vg01)
  Integration icon for logical volume - **Basic information** tab: PVLink Logical Volumes(vg01)
  Integration icon for physical volume - **Basic information** tab: PVLink Physical Volumes(c2t0d0-7)

- In the case of Version 13.4 or later:

  Integration icon name for logical volume: LVM Logical Volumes(vg01)
  Integration icon for logical volume - **Basic information** tab: LVM Logical Volumes(vg01)
  Integration icon for physical volume - **Basic information** tab: LVM Physical Volumes(c2t0d0-7)

Changes for the Argument-1 value to be handed over to the event linked functionality

Version	Details
13.1 or earlier	"SilkWorm xxxx".
13.2	"xxxx."

Example

- In the case of Version 13.1 or earlier:

  "AP:SSC: INFO: swsag4203:FC Port No.0 Online in M540(SilkWorm 48000[192.168.0.1])"

- In the case of Version 13.2 or later:

  "AP:SSC: INFO: swsag4203:FC Port No.0 Online in M540(48000[192.168.0.1])"

Changes for the install directory and name of command using the Management Server (for Solaris)

This change is for Solaris environment only.

Command	Version	Details
Start and stop daemon command	13.1 or earlier	/opt/FJSVrcxmr/sbin/rcxmgrctl
	13.2	/opt/FJSVssmgr/sbin/managerctl
Investigation data collection command	13.1 or earlier	/opt/FJSVrcxmr/sbin/rcxmgrsnap
	13.2	/opt/FJSVssmgr/sbin/managersnap

Changes for the command line resource path for cluster environment (for Solaris)

This change is for Solaris environment only.

Type of script	Version	Details
Start script	13.1 or earlier	/opt/FJSVrcxmr/cluster/cmd/rcxclstartcmd
	13.2	/opt/FJSVssmgr/cluster/cmd/rcxclstartcmd
Stop script	13.1 or earlier	/opt/FJSVrcxmr/cluster/cmd/rcxclstopcmd
	13.2	/opt/FJSVssmgr/cluster/cmd/rcxclstopcmd
Check script	13.1 or earlier	/opt/FJSVrcxmr/cluster/cmd/rcxclcheckcmd
	13.2	/opt/FJSVssmgr/cluster/cmd/rcxclcheckcmd

Changes for the message in relation to the SN200 MDS (Cisco MDS) events

Version	Details
13.0 or earlier	The status of the port has changed to %STATE%/%STATUS%
13.1	The status of the port has changed to %STATE%/%STATUS% fc%SLOT NUMBER%/%PORT NUMBER IN THE SLOT%(%PORT NUMBER%)

For the details of the new message formats, refer to "SN200 MDS (Cisco MDS) Events" in the *ETERNUS SF Event Guide*.

2.3 Changes for AdvancedCopy Manager

This section describes the changes from the previous version of AdvancedCopy Manager.

2.3.1 Changes for Version 15.2

Changed information to be displayed if a hardware error, etc. occurs

In the following commands, the information to be displayed if a hardware error, etc. occurs is changed.

- "Status" column of the swstbackstat (Backup execution status display command)
- "Status" column of the swstreststat (Restore execution status display command)
- "Status" column of the swsthistdisp (History information display command)
- "Status" column of the swstsyncstat (Backup synchronous processing progress display command)
- "Execute" column of the swstexecstat (Execution status display command)
- "Status" column of the swsttrkstat (Tracking status display command)

Version	Details
15.1	If a hardware error, etc. occurs, an error message is displayed.
15.2	If a hardware error, etc. occurs, "?????" is displayed.

For details, refer to "Troubleshooting: Hardware error during backup" in the *ETERNUS SF AdvancedCopy Manager Operation Guide*.

Changed screen refresh interval of the Web Console and its display/input unit

The screen refresh interval of the Web Console and its display/input unit have been changed.

Version	Details
15.1 or earlier	- The shortest screen refresh interval is 1 minute. - Display/input unit of the screen refresh interval is "minutes".
15.2	- The shortest screen refresh interval is 30 seconds. - Display/input unit of the screen refresh interval is "seconds".

Changed the design of Help button in the menu area and the procedures to display the online help

The design of Help button in the menu area and the procedures to display the online help have been changed.

Version	Details
15.1 or earlier	- The "Help" link to display the online help exists in the menu area. - To display the online help, click "?" icon or the "Help" link in the menu area.
15.2	- The "Help" link to display the online help does not exists in the menu area. - To display the online help, click "?" icon in the menu area, and click "Help" displayed in drop-down list.

2.3.2 Changes for Version 15.1

Changed operation of swsrpmake (Replication create command)

Operation of swsrpmake (Replication creation command) is changed if the following conditions are fulfilled:

- A volume used by cascade copy has been specified as a copy source, and, at the same time,

- the -Xconcur-opc option has been specified, and, at the same time,
- the file for setting preservation of the sequence of data updates by Concurrent OPC does not include the parameter "ConcurOPCCascade", or
  the file for setting preservation of the sequence of data updates by Concurrent OPC was not created.

Version	Details
15.0	The sequence of data updates will not be preserved across multiple volumes.
15.1	The sequence of data updates will be preserved across multiple volumes.

For details, refer to "Notes on combining cascade copy and Concurrent OPC in operation" under "Notes on snapshot high-speed backup" in the *ETERNUS SF AdvancedCopy Manager Operation Guide*.

Changed operation of acopc start (OPC/QuickOPC copy start command) and acsnap start (SnapOPC+ copy start command)

Operation of the acopc start and acsnap start commands is changed if the following conditions are fulfilled:

- A volume used by cascade copy has been specified as a copy source, and, at the same time,
- the -concur option has been specified, and, at the same time,
- the file for setting preservation of the sequence of data updates by Concurrent OPC does not include the parameter "concurOPC.cascade", or
  the file for setting preservation of the sequence of data updates by Concurrent OPC was not created.

Version	Details
15.0	The sequence of data updates will not be preserved across multiple volumes.
15.1	The sequence of data updates will be preserved across multiple volumes.

For details, refer to "Notes on combining cascade copy and Concurrent OPC in operation" in the *ETERNUS SF Operation Guide for Copy Control Module*.

Changed methods for setting and deleting environments for clustered systems in the Solaris and HP-UX versions

The methods for setting and deleting environments for the following clustered systems are changed:

- Solaris version SynfinityCLUSTER/PRIMECLUSTER
- Solaris version VERITAS Cluster Server
- Solaris version Sun Cluster
- HP-UX version MC/ServiceGuard (A.11.17 or earlier)
- HP-UX version VERITAS Cluster Server

Version	Details
15.0 or earlier	The following commands serve to set and delete environments for clustered systems:

Version	Details
	- stgclset_safe (Solaris version SynfinityCLUSTER/PRIMECLUSTER environment setup command) - stgclset_vcs (Solaris version VERITAS Cluster Server environment setup command) - stgclset_sun (Solaris version Sun Cluster environment setup command) - stgclset_mcsg (HP-UX version MC/ServiceGuard environment setup command) - stgclset_hpvcs (HP-UX version VERITAS Cluster Server environment setup command) - stgclunset_safe (Solaris version SynfinityCLUSTER/PRIMECLUSTER environment cancel command) - stgclunset_vcs (Solaris version VERITAS Cluster Server environment cancel command) - stgclunset_sun (Solaris version Sun Cluster environment cancel command) - stgclunset_mcsg (HP-UX version MC/ServiceGuard environment cancel command) - stgclunset_hpvcs (HP-UX version VERITAS Cluster Server environment cancel command)
15.1	Above commands are not supported. Refer to "Applying Clusters for Solaris/Linux/HP-UX Version" in the *ETERNUS SF Cluster Environment Setup Guide* to set and delete environments for clustered systems.

Changes for counting method in Extended Copy sessions and for default filter on session list screen

On the AdvancedCopy Overview screen (*1), the counting method for the number of copy sessions in the "Session" and "Local Copy Session Count" columns is changed.
Also, on the session list screen (*2), the filter item for Copy Type that is selected by default when opening the screen is changed.

Version	Details
15.0	- "Extended Copy Sessions" is included in "Sessions" and "Local Copy Session Count". - On the session list screen, "All" is selected as the filter item for Copy Type by default when opening the screen.
15.1	- "Extended Copy Sessions" is not included in "Sessions" and "Local Copy Session Count". - On the session list screen, "All Local or REC" is selected as the filter item for Copy Type by default when opening the screen.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].

*2: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Category pane, click [Copy Sessions].

Changed setting method for Copy Table Size

On the Advanced Copy Configuration Wizard screen (*1), the method for specifying the custom Copy Table Size is changed.

Version	Details
15.0	The custom Copy Table Size can be specified by a pull-down list.
15.1	The custom Copy Table Size can be specified by a spin button or direct input.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Advanced Copy pane, click [Configuration].
5. On the Action pane, click [Advanced Copy] under [Wizard].

Changed minimum setting value for Copy Table Size

On the Advanced Copy Configuration Wizard screen (*1), the minimum value to be set in the custom Copy Table Size is changed.

Likewise, in the Remote Copy Configuration wizard (*2), the minimum value to be set in the Copy Table Size is changed.

Version	Details
15.0	The minimum value that can be set is 0.
15.1	The minimum value that can be set is 8.

*1: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Advanced Copy pane, click [Configuration].
5. On the Action pane, click [Advanced Copy] under [Wizard].

*2: The screen that is opened by the following procedure:

1. On the global navigation tab, click [Storage].
2. On the Main pane, click the "name" of target ETERNUS Disk storage system.
3. On the Category pane, click [Advanced Copy].
4. On the Advanced Copy pane, click [REC Path] or [REC Buffer].
5. On the Action pane, click [Remote Copy Conf.] under [Wizard].

Changed customization procedure for AdvancedCopy Manager CCM

The procedure of "Customization for AdvancedCopy Manager CCM" in the *ETERNUS SF Cluster Environment Setup Guide* is changed as follows.

Version	Details
15.0	In the file ".install.sys", modification of the value for "stxs_etcdir=" is required.
15.1	In the file ".install.sys", modification of the value for "stxs_etcdir=" is not required.

Changed information on copying progress rate of QuickOPC

The information on the copying progress rate of QuickOPC, which is displayed when executing below commands, is changed.

- AdvancedCopy Manager commands
  - OS common commands
    - "Execute" column of swstbackstat (Backup execution status display command).
    - "Execute" column of swsthistdisp (History information display command).
    - "Execute" column of swstexecstat (Execution status display command).
    - "Execute" column of swsttrkstat (Tracking status display command).
    - "Execute" column of swsrpstat (Operation status display command).
  - For Windows
    - "Execute" column of swsrpshadowadm_exchange (Exchange VSS shadow copy management command).
    - "Execute" column of swsrpvrq advcopy query (Advanced Copy status display command).
- AdvancedCopy Manager Copy Control Module's Command
  - "Progress" column of acopc query (OPC/QuickOPC copy status display command).

Version	Details
15.0	If you write data onto a copy source volume while physical copying of QuickOPC is in progress, the displayed progress rate will not reach 100% after completing physical copying.
15.1	In the following ETERNUS Disk storage systems, if you write data onto a copy source volume while physical copying of QuickOPC is in progress, a progress rate of 100% will be displayed after completing physical copying. - ETERNUS DX80 S2/DX90 S2 (Firmware version is V10L30 or later) - ETERNUS DX400 S2 series (Firmware version is V10L30 or later) - ETERNUS DX8000 S2 series (Firmware version is V10L30 or later)

Incompatibility with other products that include Symfoware Server V8.X or earlier (only for Windows Server 2003)

The AdvancedCopy Manager of ETERNUS SF Manager uses Symfoware Server as a repository.
In Windows Server 2003, use of Symfoware Server V8.X or earlier as a repository is no longer supported.

Version	Details
15.0 or earlier	AdvancedCopy Manager is compatible with versions V6 to V8 or earlier of Symfoware Server as a repository. It is not compatible with V9 or later versions of Symfoware Server.
15.1	AdvancedCopy Manager is not compatible with versions V6 to V8 or earlier of Symfoware Server as a repository. It is compatible with V9 or later versions of Symfoware Server.

2.3.3 Changes for Version 15.0

Changes to terminology used with AdvancedCopy Manager Copy Control Module

The name of the logical volume used to access the ETERNUS Disk storage system has been changed as follows.

Version	Details
14.2 or earlier	Access Path

Version	Details
15.0	Access Volume

Changes to the GUI

The GUI client has been replaced with the Web Console.
Uninstall the installed GUI client.

Version	Details
14.2 or earlier	When operating the AdvancedCopy Manager function with a GUI, the operation is performed from the AdvancedCopy Manager GUI client installed on the PC.
15.0	When operating the AdvancedCopy Manager function with a GUI, the operation is performed from a web browser.

For details on supported web browsers and how to use the Web Console, refer to the *ETERNUS SF Web Console Guide*.

Changes for Tape Backup function

The AdvancedCopy Manager Tape Server Option is no longer supported.

Version	Details
14.2 or earlier	It is possible to back up the data to tape using AdvancedCopy Manager Tape Server Option.
15.0	The function is no longer supported.

Changes for supported devices

The following devices are no longer supported.

Version	Details
14.2 or earlier	-
15.0	ETERNUS4000 models 80 and 100 ETERNUS3000 (all models) ETERNUS6000 (all models) ETERNUS GR series

For the devices that can be managed by this version of AdvancedCopy Manager, refer to "Supported devices" in the *ETERNUS SF Installation and Setup Guide*.

Changes for supported operating systems

The following operating systems are no longer supported.

Version	Details
14.2 or earlier	-
15.0	- AdvancedCopy Manager's manager Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) - AdvancedCopy Manager's agent Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems (non-SP) Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems SP2 Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems SP2 Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP) Solaris(TM) 8 Operating System Red Hat(R) Enterprise Linux(R) 5 (for Intel Itanium) Red Hat(R) Enterprise Linux(R) AS (v.4 for Itanium) - AdvancedCopy Manager Copy Control Module Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems (non-SP) Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems SP2 Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems SP2 Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP)

For the operating systems supported by this version of AdvancedCopy Manager, refer to the following sections in the *ETERNUS SF Installation and Setup Guide*.

- "Operating environment of ETERNUS SF Manager"
- "Operating environment of AdvancedCopy Manager's agent"
- "Operating environment of AdvancedCopy Manager CCM"

Changes to the default install path for programs that include manager functions

This change is for Windows environment only.

Version	Details
14.2 or earlier	C:\Win32app\AdvancedCopyManager

Version	Details
15.0	C:\ETERNUS_SF\ACM

Example

When having installed a program to the default installation location, the full path of the stgcmmodnode command is as follows:

- In the case of Version 14.2 or earlier:

  C:\Win32app\AdvancedCopyManager\bin\stgcmmodnode

- In the case of Version 15.0:

  C:\ETERNUS_SF\ACM\bin\stgcmmodnode

Changes to command preview

Command preview is no longer supported.

Version	Details
14.2 or earlier	The command preview allows checking the available task operations (command options) prior to execution.
15.0	There is no command preview.

See

Refer to "Commands" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for details on the commands.

Changes to the processing when specifying the -t option in the stgmgrinfobkup (Management information package backup command)

The following changes have been made when the AuthData is specified to the -t option argument.

Version	Details
14.2 or earlier	The command backs up the authentication management file.
15.0	The command terminates abnormally because of the syntax error.

Information

After the change, when using the policy file settings and executing the stgmgrinfobkup command, even if the key name [AuthData] is at "Yes", the Authentication management list will not be backed up.

Changes to the information displayed by the stgenvdisp (Environment information display command)

The information displayed in the case of the Management Server has changed as follows.

Version	Details
14.2 or earlier	Display "Authentication feature" and "IP address for GUI".
15.0	Not display "Authentication feature" and "IP address for GUI".

Changes to the processing of the swstbackup (Backup execution command)

For the Windows version of the swstbackup command, the processing under the following conditions has changed.

- The -Xflush option is not specified, and
- The BufferFlushOnly parameter is not described in the transaction volume locking specification file for backups, or when the transaction volume locking specification file for backups does not exist.

Version	Details
14.2 or earlier	Lock the transaction volume.
15.0	Flush the file system buffer for the transaction volume.

Information

In the Windows version of the swstbackup command, the relation for the -Xflush option and the transaction volume locking specification file for backups are as follows.

Version	-Xflush option	If the BufferFlushOnly value is on	If the BufferFlushOnly value is off	If the BufferFlushOnly parameter is not described	If the transaction volume locking specification file for backups does not exist
14.2 or earlier	Not specify	Flush	Lock	Lock	Lock
	Specify	Flush	Flush	Flush	Flush
15.0	Not specify	Flush	Lock	Flush	Flush
	Specify	Flush	Flush	Flush	Flush

Lock: Lock the transaction volume.
Flush: Flush the file system buffer for the transaction volume.

Changes to the processing of the swsrpmake (Replication creation command) and swsrpcancel (Replication cancellation command)

For the Windows version of the swsrpmake command and swsrpcancel command, the processing under the following conditions has changed.

- The -Xflush option is not specified, and
- The BufferFlushOnly parameter is not described in the copy source volume locking specification file, or when the copy source volume locking specification file does not exist.

Version	Details
14.2 or earlier	Lock the copy source volume.
15.0	Flush the file system buffer for the copy source volume.

Information

In the Windows version of the swsrpmake command and swsrpcancel command, the relation for the -Xflush option and the copy source volume locking specification file are as follows.

Version	-Xflush option	If the BufferFlushOnly value is on	If the BufferFlushOnly value is off	If the BufferFlushOnly parameter is not described	If the copy source volume locking specification file does not exist
14.2 or earlier	Not specify	Flush	Lock	Lock	Lock
	Specify	Flush	Flush	Flush	Flush
15.0	Not specify	Flush	Lock	Flush	Flush
	Specify	Flush	Flush	Flush	Flush

Lock: Lock the copy source volume.
Flush: Flush the file system buffer for the copy source volume.

Note

When using the server-to-server replication and AdvancedCopy Manager installed in the Management Server (where the replication source volume exists) is Version 14.2 or earlier, the processing will revert to those of Version 14.2 or earlier.

Changes the methods for environment setup/cancel to the Linux version PRIMECLUSTER

The methods for environment setup/cancel to the Linux version PRIMECLUSTER have changed as follows.

Version	Details
14.2 or earlier	Environment setup and cancel are performed with the following commands. - stgclset_lxprm (Linux version PRIMECLUSTER environment setup command) - stgclunset_lxprm (Linux version PRIMECLUSTER environment cancel command)
15.0	The above two commands are not supported. Instead, environment setup and cancel are performed by the Linux/HP-UX version cluster setup and un-setup procedures.

Changes to the install directory and name of troubleshooting information collection command (AdvancedCopy Manager)

The troubleshooting information collection command name and path are changed as follows.

Version	Details	
	Command name	Path name
14.2 or earlier	acmcapture	- For Windows: <*AdvancedCopy Manager Program Directory*>\bin - For Solaris or Linux: /opt/FJSVswstf/bin
15.0	esfsnap	- For Windows (*1): $INS_DIR\Common\bin - For Solaris or Linux: /opt/FJSVesfcm/bin

*1: $INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

Changes to the install directory and name of troubleshooting information collection command (AdvancedCopy Manager Copy Control Module)

The troubleshooting information collection command name and path are changed as follows.

Version	Details	
	Command name	Path name
14.2 or earlier	acmcapture	- For Windows: <*AdvancedCopy Manager Program Directory*>\bin - For Solaris or Linux: /opt/FJSVswstf/bin
15.0	esfsnap	- For Windows (*1): $INS_DIR\Common\bin - For Solaris or Linux: /opt/FJSVesfcm/bin

*1: $INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

2.3.4 Changes for Version 14.2 or earlier

Changes the messages output by AdvancedCopy Manager Copy Control Module

The messages output by AdvancedCopy Manager Copy Control Module are changed as follows.

Message ID	V14.1 or earlier	V14.2
ccm1001	Input parameter is illegal.	An invalid argument was specified.
ccm1002	An invalid option is specified. option=[*OPTION*]	An invalid option was specified. option=[*OPTION*]
ccm1003	An invalid parameter is specified. option=[*OPTION*], parameter=[*PARAMETER*]	An invalid parameter was specified. option=[*OPTION*], parameter=[*PARAMETER*]
ccm1004	An invalid option is specified. copy group=[*COPYGROUP*], copy type=[*COPYTYPE*], option=[*OPTION*]	An invalid option was specified for the copy type. copy group=[*COPYGROUP*], copy type=[*COPYTYPE*], option=[*OPTION*]
ccm2001	This program requires administrative privileges of the operation system.	This command requires operating system's administrative privileges.
ccm3001	The disk array already exists. disk array=[*DISKARRAY*]	The specified disk array is already registered. disk array=[*DISKARRAY*]
ccm3002	The copy group already exists. copy group=[*COPYGROUP*]	The specified copy group is already registered. Copy group=[*COPYGROUP*]
ccm3003	The pair already exists. copy group=[*COPYGROUP*], pair=[PAIR]	The specified copy pair is already registered. copy group=[*COPYGROUP*], pair=[PAIR]
ccm3004	An invalid pair is specified. pair=[*PAIR*], detail=[*DETAIL*]	An invalid copy pair was specified. pair=[*PAIR*], detail=[*DETAIL*]
ccm4001	The disk array does not exist. disk array=[*DISKARRAY*]	The specified disk array does not exist. disk array=[*DISKARRAY*]
ccm4002	The disk array does not exist. disk array=[*BOX-ID*]	The specified disk array does not exist. disk array=[*BOX-ID*]
ccm4003	The copy group is not found. copy group=[*COPYGROUP*]	The specified copy group was not found. copy group=[*COPYGROUP*]

Message ID	V14.1 or earlier	V14.2
ccm4004	The pair is not found. copy group=[*COPYGROUP*]	No copy pair was found for the specified copy group. copy group=[*COPYGROUP*]
ccm4005	The pair is not found. copy group=[*COPYGROUP*], pair=[*PAIR*]	The specified copy pair was not found. copy group=[*COPYGROUP*], pair=[*PAIR*]
ccm4006	The logical volume is not found. logical volume=[*LOGICAL-VOLUME*]	The specified logical volume was not found. logical volume=[*LOGICAL-VOLUME*]
ccm4007	An invalid copy group is specified. copy group=[*COPYGROUP*], copy type=[*COPYTYPE*]	An invalid copy group was specified. copy group=[*COPYGROUP*], copy type=[*COPYTYPE*]
ccm5005	An invalid mount point is specified. mount point=[*MOUNTPOINT*]	An invalid mount point was specified. mount point=[*MOUNTPOINT*]
ccm5006	An invalid device is specified. device=[*DEVICE*]	An invalid device was specified. device=[*DEVICE*]

Changes the name of the host affinity group list display command

Version	Details
14.1 or earlier	acinq hag
14.2	acinq hostag

Changes the method for adding remote ETERNUS Disk storage system

- For Windows:

Version	Details
14.0 or earlier	Register by specifying a nonexistent drive letter as an access path (*1)
14.1	Register by specifying the Box ID of ETERNUS Disk storage system

*1: The "access path" is changed to the "access volume" starting from Version 15.0.

- For Solaris or Linux:

Version	Details
14.1 or earlier	Register by specifying a nonexistent device as an access path (*1)
14.2	Register by specifying the Box ID of ETERNUS Disk storage system

*1: The "access path" is changed to the "access volume" starting from Version 15.0.

Chapter 3 Upgrading Express Version 14.x

This chapter describes the upgrade procedure for Express Version 14.x.

To upgrade Express Version 14.x to this version, install the ETERNUS SF Manager.

Point

- The Upgrade Installation is available for Express.
- If upgrading Express, the following information cannot be imported from the previous version.
  - Event log history
  - Login/Logout history
  - Configuration modification history
  - User account for the Express Web GUI

3.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading Express, as described below.

3.1.1 Backing up the operational environment of the previous version

Back up the Express operational environment.

Note

The information listed below cannot be backed up. Save the current setting information into an appropriate file.

- Contact information for troubleshooting
- Servers registered in Express

See

For information on performing a backup, refer to the *ETERNUS SF Express User's Guide* for the relevant version.

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, backup the AdvancedCopy Manager operational environment.

Note

The following information cannot continue to be used.

- User account for the GUI client

See

Back up the operational environment by referring to the following table.

Server type	Reference
Storage Management Server	A.1 Backing up the repository data (for Windows)
Storage Management Server which also serves as a Storage Server	Perform the steps in the following order: 1. A.1 Backing up the repository data (for Windows) 2. A.3 Backing up the management information (for Windows)

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, backup the AdvancedCopy Manager Copy Control Module operational environment.

See

For information on performing a backup, refer to "A.6 Backing up the the environment setting files".

3.1.2 Checking for available disk space

Ensure that there is enough available disk space on the server where the upgrade will be performed.
The required disk space for the upgrade is calculated as the "Required disk space for the new version to be installed" minus the "Required disk space for the previous version".

Required disk space for the new version

The space required to install this version of the ETERNUS SF Manager.
For information on the required disk space, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

Required disk space for the previous version

The space required to install the previous version of Express.
For information on the required disk space, refer to the *ETERNUS SF Express User's Guide* for the relevant previous version.

3.1.3 Uninstalling incompatible software

Check if any incompatible software for this version of the ETERNUS SF Manager is installed on the server where the upgrade will be performed.
If incompatible software is found, refer to the relevant software manual and uninstall it before starting the upgrade.

See

For information on the incompatible software, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

3.1.4 Checking Symfoware

The Symfoware product is bundled with this product. If Symfoware is already installed on the server where the upgrade will be performed, check the Symfoware environment before starting the upgrade.

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

3.1.5 Estimating the database size

A database is necessary for this version of Express.
The database size must be estimated before starting the upgrade.

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

3.1.6 Preparing for uninstallation

If AdvancedCopy Manager is installed, before starting the upgrade, the following preparation is necessary before uninstalling the previous version.

1. Cancel the configuration information for the Web Server (for using AdvancedCopy Manager Version 13.x on Windows Server 2003 only).

   Cancel the Web Server configuration information as follows:

   1. Log on to the system using Administrator privileges to uninstall AdvancedCopy Manager.
   2. If you configured the Web Server during the previous installation, cancel the Web Server configuration information.

      Execute the following command.

      ```
      C:\> <Program directory>\bin\alias -u
      ```

      For information on the command, refer to "Web server setting and setting cancellation command (alias)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide* for the relevant previous version.

2. Execute the DB unsetup.

   Refer to the following section to perform the repository database unsetup of the previous version:

   - "A.7 Unsetting up the database"

3. Uninstall Symfoware.

   Uninstall Symfoware if the Symfoware Server that was bundled with the previous version of AdvancedCopy Manager for Windows Server 2003 is being used.

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware. If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.

3.2 Performing the upgrade

There are two methods of performing the upgrade, as follows.

- Default installation

  The following configuration is used without the need to input any values.

  - Installation destination

    The "<*System Drive*>:\ETERNUS_SF" directory is used as the root location for the Program Directory, Environment Directory, and Work Directory.

  - Port numbers for the various communication services

    11 port numbers are used, as follows:

Service	[Port Registration] display name	Port number
Web Console service	ETERNUS SF Manager Apache service	9855
communication service 1	Communications service 1	1226
communication service 2	Communications service 2	4917
Repository service 1	Repository service 1	2004
Repository service 2	Repository service 2	15432
Remote access service	Remote access service	9851
Exclusive control service	Exclusive control service	9852
Internal use	Internal Port 1 Internal Port 2 Internal Port 3 Internal Port 4	28005 28009 28443 24916

- Custom installation

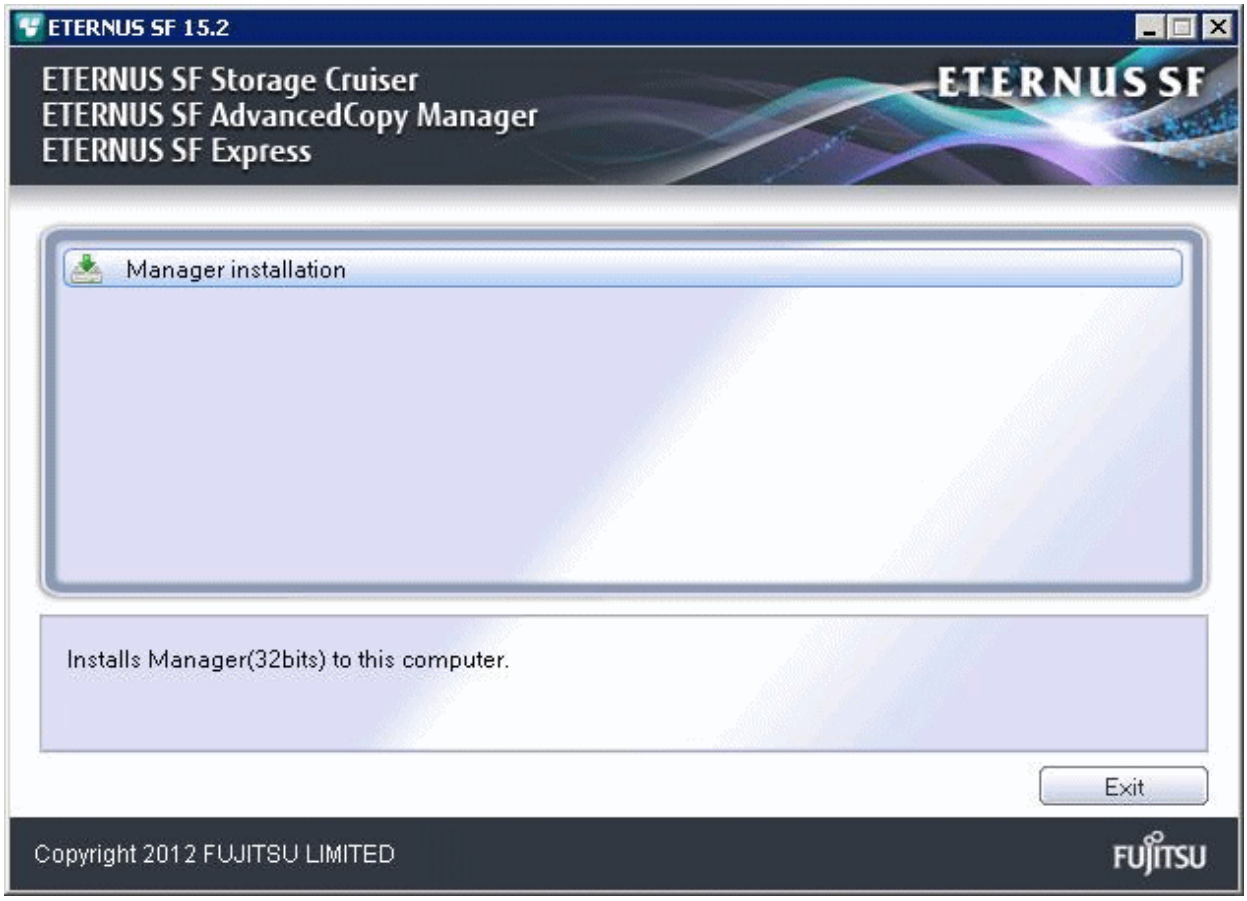
  The upgrade is performed by manually entering the configuration information into the interface (installation destination and communication service port numbers).

The upgrade is performed as follows:

1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

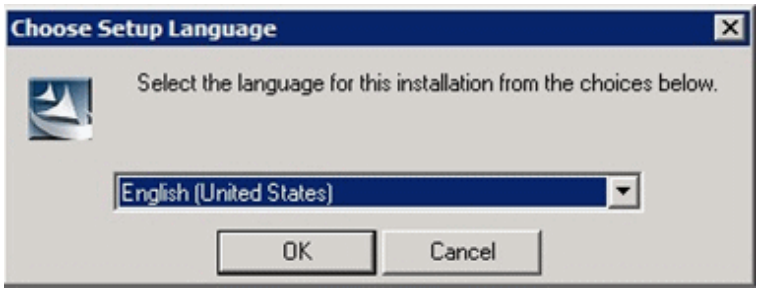
   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.

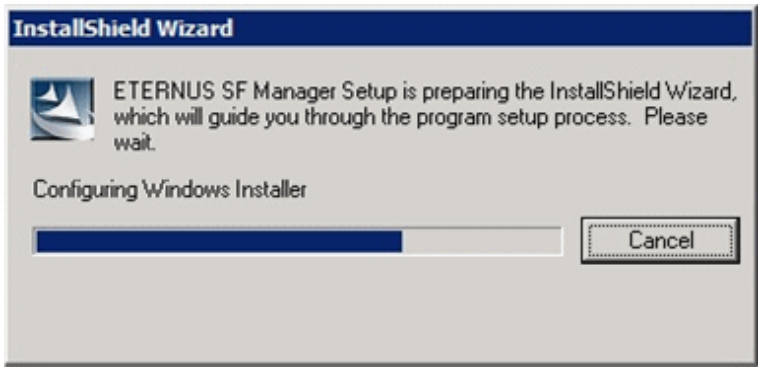


4. The [Choose Setup Language] dialog box will be displayed. Select the appropriate language and click the [OK] button.

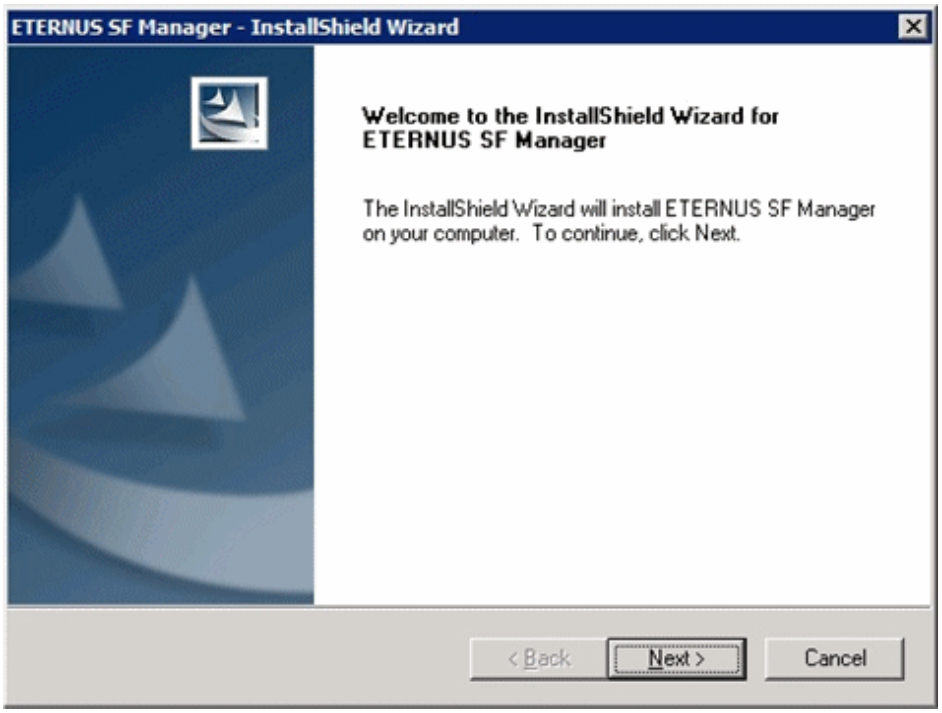
   The language selected in this dialog box will be used during installation and uninstallation.



5. The following progress bar will be displayed. To cancel the upgrade, click the [Cancel] button.

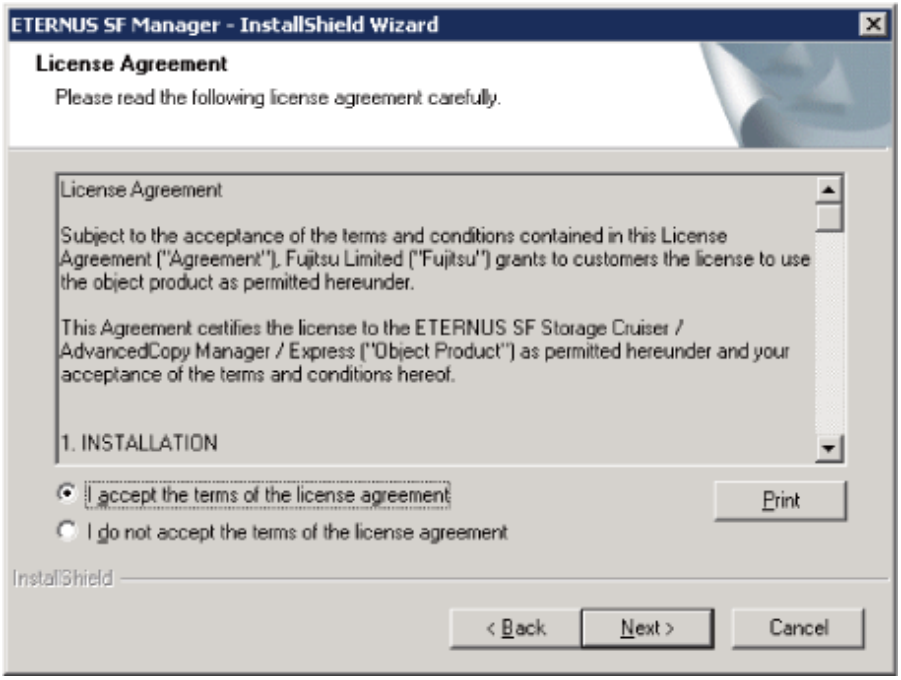


6. The installation wizard page will be displayed. Click the [Next] button.

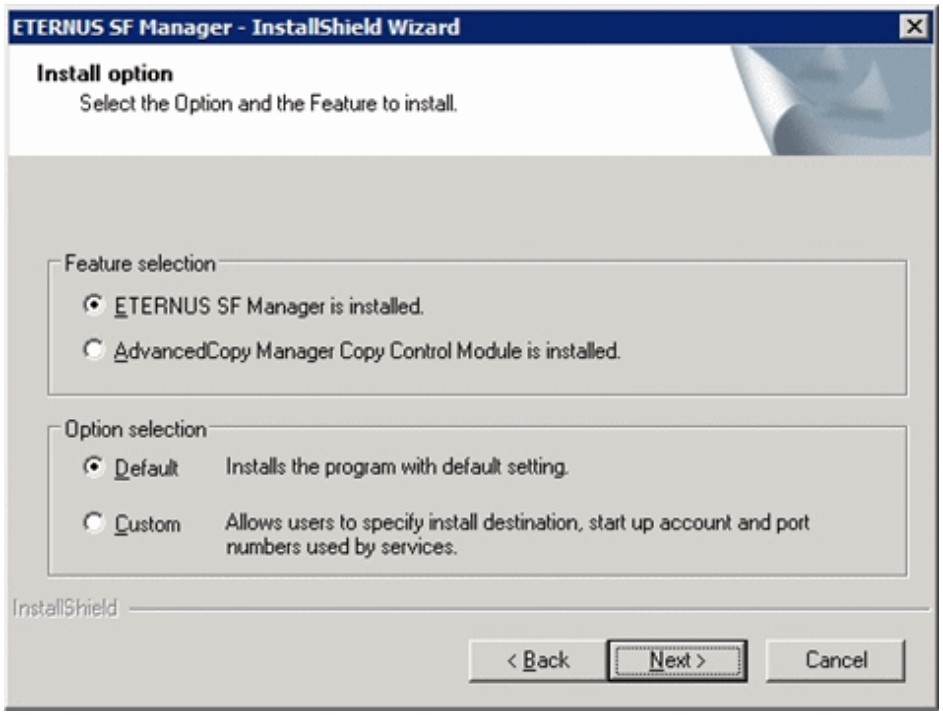


7. Read the terms and conditions of the [License Agreement] page.

   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.



8. Select the features and options to install from the [Install option] page.



Feature selection

Select [ETERNUS SF Manager is installed.].

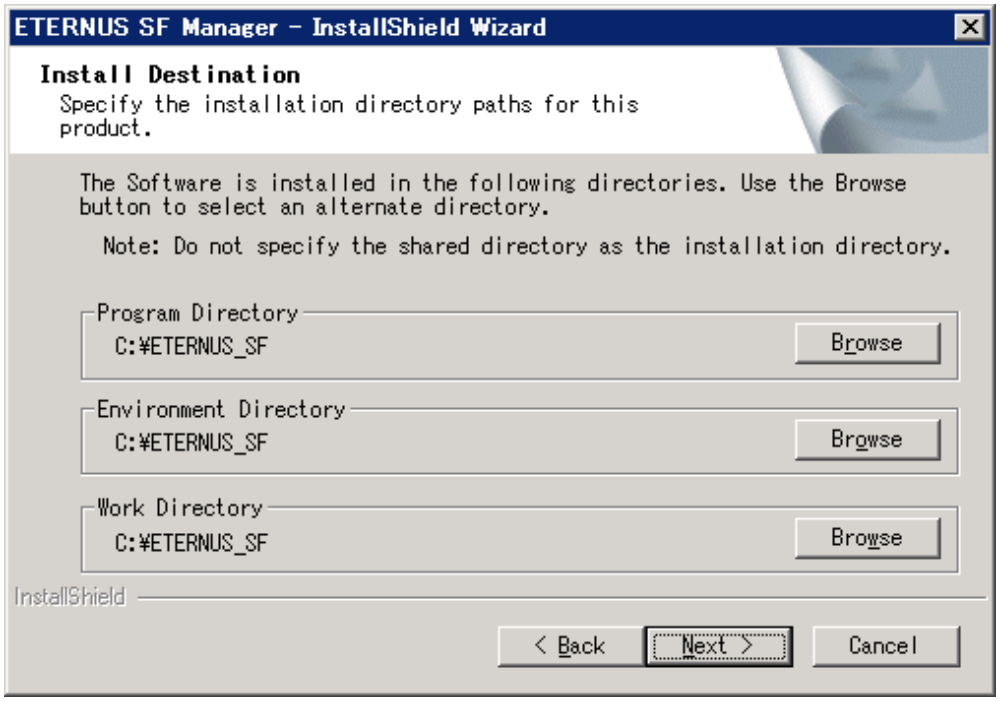
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	Changing values in the [Installation Destination] page and [Port Registration] page is optional. In this case, steps 9 and 10 can be skipped. For this installation method, the following checks are automatically performed relating to the information provided by default: - Is there enough disk space for the installation in the default directory? - Are the default port numbers available? If an error is detected at this stage, a warning dialog box will be displayed. If no error is detected, the [Start Copying Files] page will be displayed.
Custom	The installation information must be manually entered in the pages for step 9 and later.

9. Specify the installation directory in the [Installation Destination] page.

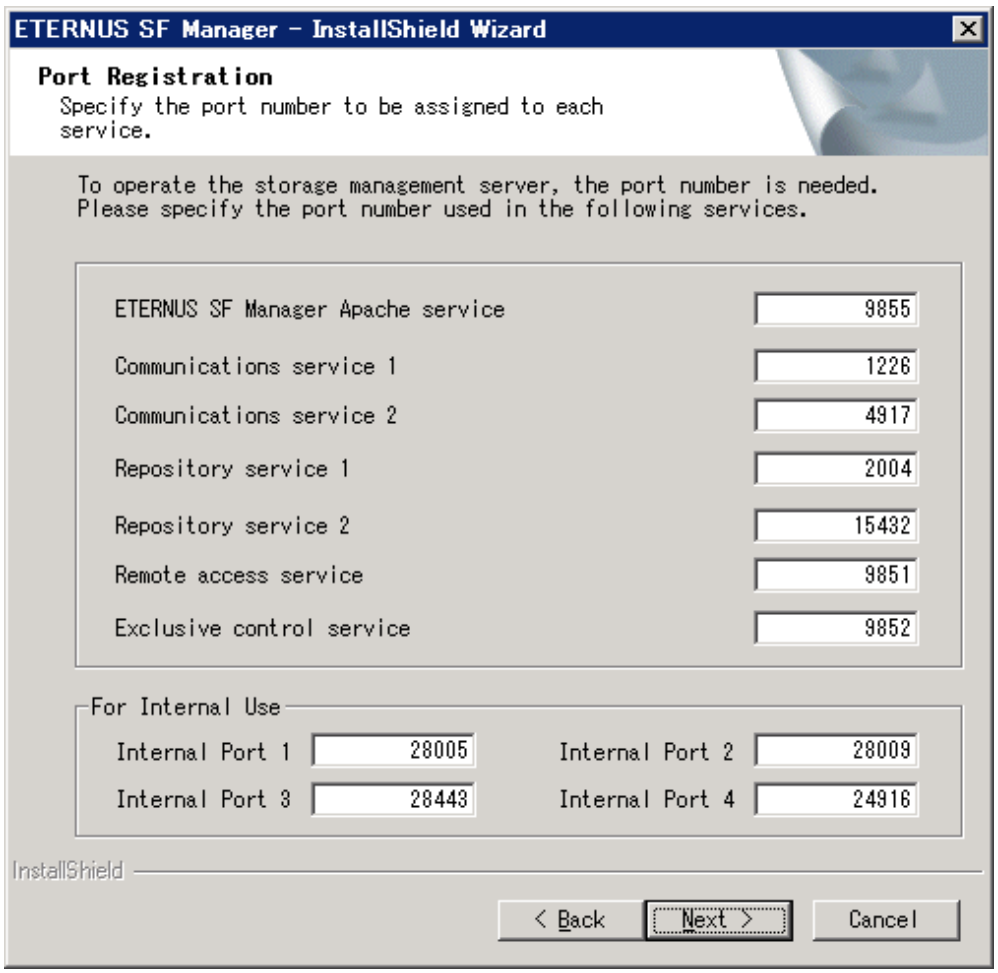
   If installing to a directory other than the default directory, click the [Browse] button and change the install destination. After designating all of the directories, click the [Next] button.



Note

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; are not supported for file names.
- The number of characters in a directory name must be between 4 and 70.

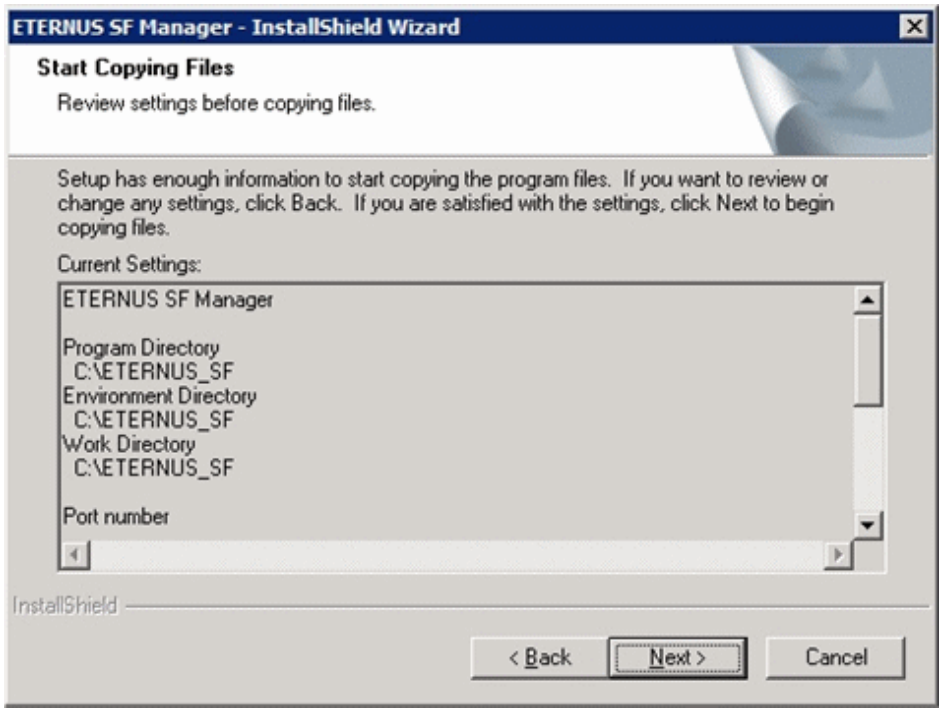
10. Specify the port number for the services in the [Port Registration] page.



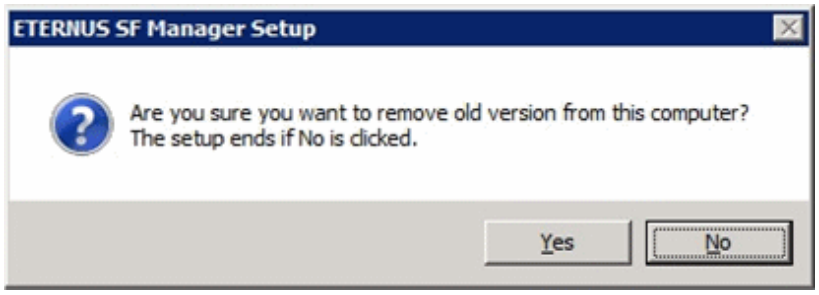
The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 5001 and 32767 are valid.
Then, click the [Next] button. If an entered value is already being used, the page will be displayed again.

11. Check the settings information in the [Start Copying Files] page.

    If the settings are correct, click the [Next] button.
    To change a setting, click the [Back] button.



12. The following dialog box will be displayed. To proceed with the uninstallation, click the [Yes] button.



13. The uninstallation is started.

    The uninstallation is executed.
    Answer any questions to proceed as the uninstallation executes.

Point

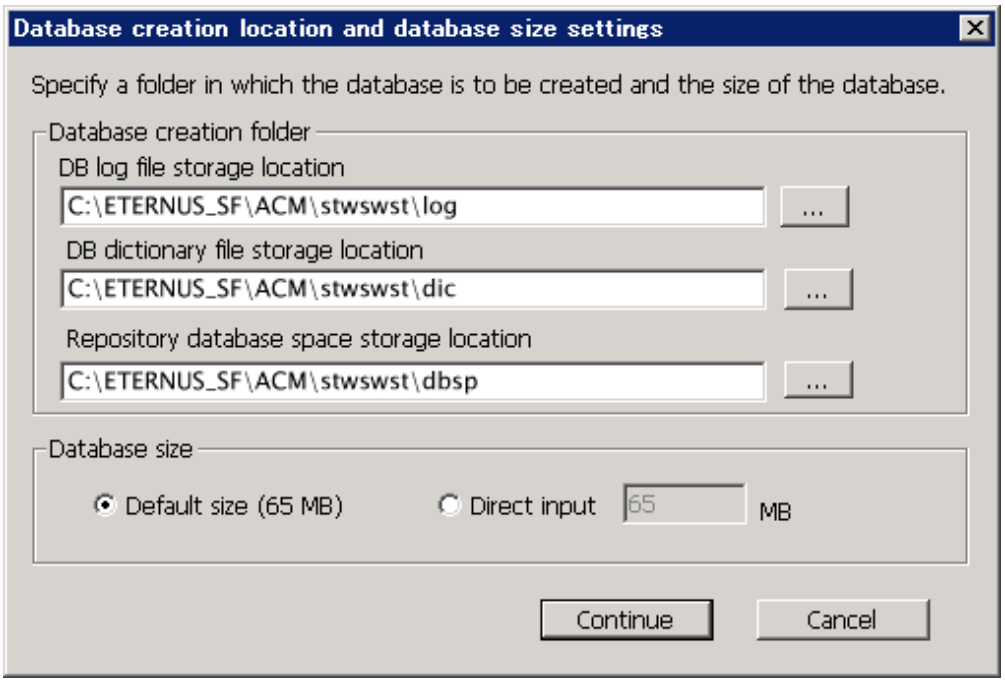
- When requested to restart the computer, click the [No] button.
  If the [Yes] button is clicked, the upgrade will be interrupted. When re-executing the installation after a restart of the computer, the installation will be treated as new one.
- When the uninstallation completes successfully, the [Uninstallation was completed successfully] page may be displayed. Although the instruction on the page indicates the deletion of files and folders, do not delete files and folders when performing the upgrade.

14. When the uninstallation is completed, the copying of the files for the new version will be started.

    During this process, the file copy completion status will be displayed in the [Setup Status] page.

15. When the copying process is completed, the system configuration will be updated. Wait for the configuration update process to complete.

16. Enter the requested information for the repository database creation in the following page.
Then, click the [Continue] button.



Database creation folder

This is the folder where the database will be created.
Enter the full path for each of the database directories shown below. The specified folders must be new NTFS folders. Only specify NTFS folders using unique folder names.

The default repository database will be displayed in each field. Change as necessary.

- DB log file storage location
  Specify the folder for storing the RDB log file.
- DB dictionary file storage location
  Specify the folder for storing the RDB dictionary file.
- Repository database space storage location
  Specify the folder for storing the repository database space.

Note

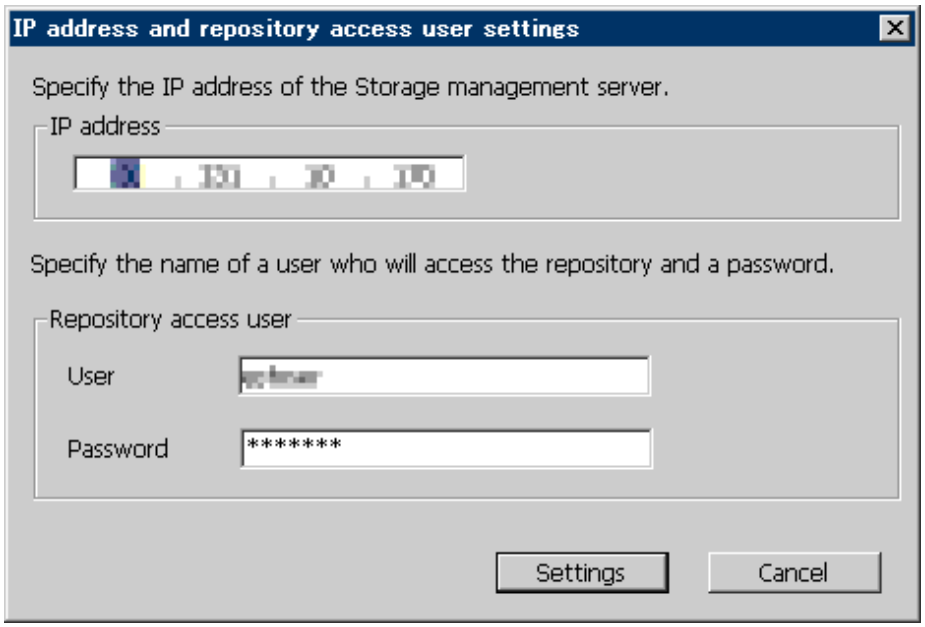
- Do not specify a shared folder in which to create the database.
- The number of characters in a folder name must be between 4 and 80. Spaces and the characters " | : * ? / . < > , % & ^ = ! ; # ' @ are not supported for file names.
- Do not select the option [Compress drive to save disk space] in the **General** tab for any of these drives.
  Overhead is greater to a compressed drive than a non compressed drive. Depending on the amount of I/O, access errors may occur in low OS resource conditions.

- Do not check the [Compress or Encrypt Attributes] in the [Advanced Attributes] section of the [Properties] or [Advanced] part of the **General** tab.
  Load is increased for a compressed and/or encrypted drive. Access errors may occur in an OS with insufficient resources. If the encryption property is selected, access errors may occur when decryption cannot be performed.

Database size

The database size is entered in megabyte units. To calculate the size, performed before installation, refer to "3.1.5 Estimating the database size" for details. To use the default value, select the [Default size (65 MB)] checkbox.

17. The following page will be displayed. The default values will be displayed in the page. Change as necessary.
Enter the IP address and the database user settings. Then, click the [Settings] button.



IP address

Enter the IP address of the Management Server (local system).
If the previous version of AdvancedCopy Manager has been installed, specify the IP address of the Management Server used with the previous version.

Note

When the Management Server has multiple IP addresses, specify an IP address that can communicate with the Management Server from all of the AdvancedCopy Manager's agents.

Repository access user

Enter user name and password for the repository access user.
The user name entered here must have local login or domain login permissions at the OS level.
For the default user name and password, refer to "Installation procedure" in the *Software Release Guide*.
However, to avoid security issues, it is recommended to replace the default value.

The following conditions apply for the usernames and passwords:

- The user name and password must be compatible with the base operating system.
- The user name and password can be up to 18 characters (bytes).

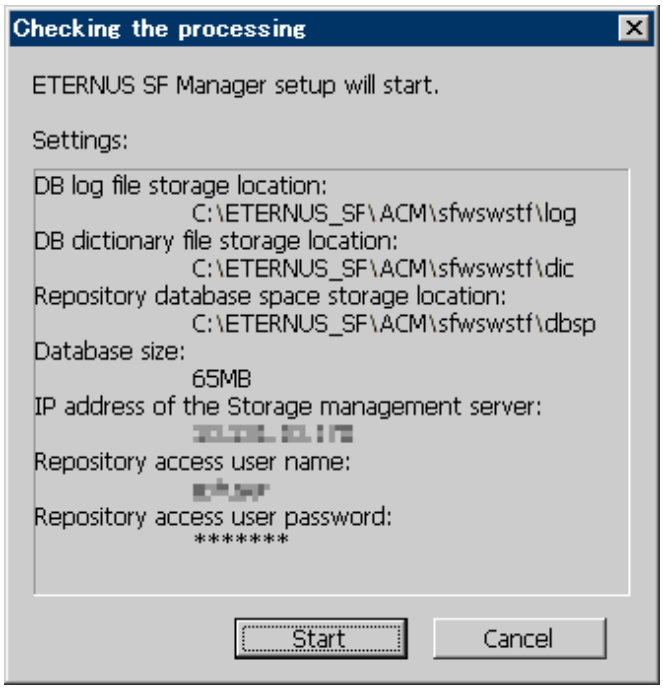
See

- If the user name specified here has not been registered to the system, perform the registration, and add either local login or domain login permissions. Refer to the table below and specify a user that corresponds to the server type being used.

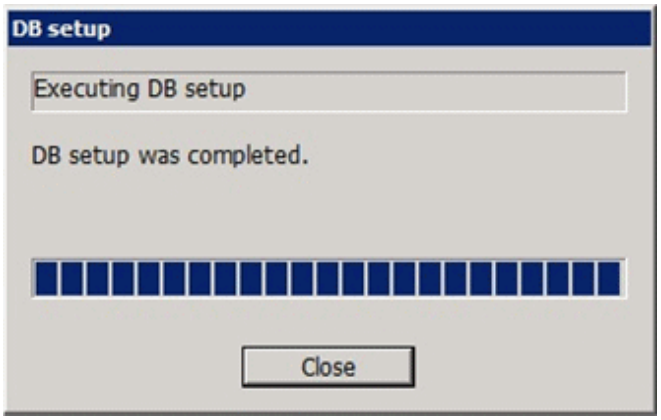
Server type	User type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- When specifying a user name that has been registered to the system, use the identical characters (e.g. uppercase and lowercase letters) that were used for the registered user name.

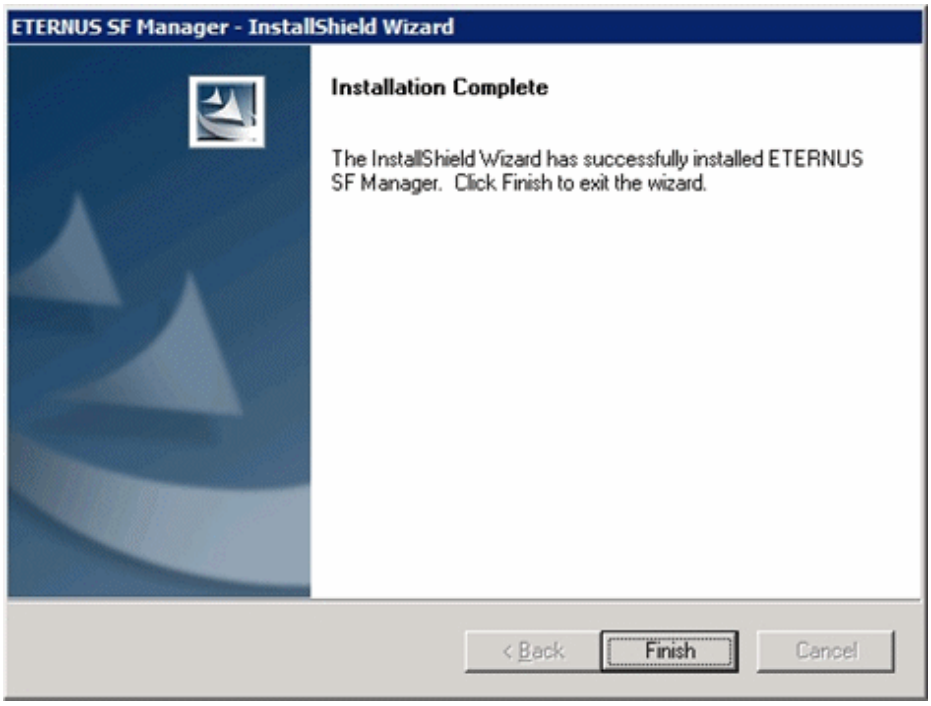
18. The following page will be displayed. Check the contents and click the [Start] button.



19. The database setup process starts. The following progress bar will be displayed, when the process is completed, click the [Close] button.



20. The following installation wizard page will be displayed. The upgrade process is completed. Click the [Finish] button.



21. Eject the DVD-ROM.

3.3 Tasks to be performed after the upgrade

When the Express upgrade has been completed, the tasks below need to be performed.

3.3.1 Restoring the environment from the previous version

Restore the operational environment of Express that was backed up in "3.1.1 Backing up the operational environment of the previous version".

Refer to "Restoring Express's manager environment (Windows)" in the *ETERNUS SF Express Operation Guide* for this version, step 4 onward.

Note

For the restore procedure, the directory name of the copy source may differ to the previous version. In this case, refer to the previous version directory name, as follows:

Target for restore	Directory name of this version	Directory name of previous version
Management information for disk storage system	$BAK_DIR\ESC\	$BAK_DIR\Storage Cruiser\
Essential files	$BAK_DIR\ESC\	$BAK_DIR\Storage Cruiser\
Files related to the performance management function	$BAK_DIR\ESC\	$BAK_DIR\Storage Cruiser\
Customizable files	$BAK_DIR\ESC\	$BAK_DIR\Storage Cruiser\
Files associated with definition of copy group and copy pair	$BAK_DIR\CCM\	$BAK_DIR\AdvancedCopy Manager Copy Control Module\

$BAK_DIR refers to the backup destination directory.

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, restore the operational environment that was backed up in "3.1.1 Backing up the operational environment of the previous version".

Note

For the operational environment restore, start a new window for command execution, and then perform the procedure on the window.

See

Restore the operational environment by referring to the following table.

Server type	Reference
Management Server	A.9 Restoring the repository data (for Windows)
Management Server which also serves as a Managed Server	Perform in the following order: 1. A.9 Restoring the repository data (for Windows) 2. A.11 Restoring the management information (for Windows)

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, restore the operational environment backed up in "3.1.1 Backing up the operational environment of the previous version".

See

For information on performing a restore, refer to "A.14 Restoring the environment setting files".

3.3.2 Importing the configuration information

Import the configuration information from the previous version by executing esfimportdevconf (configuration information import command) using Administrator permissions.

Check that the targeted devices can be accessed before executing esfimportdevconf.

```
<Program directory>\Common\bin\esfimportdevconf
```

After executing esfimportdevconf, confirm that "Complete" is displayed in the **IMPORT STATUS** column in esfimportdisplay (configuration import status display command) of the configuration information import.

See

Refer to "10.2 Command references" for information on each import command.

3.3.3 Setting up a user account

Set up a user account in order to use the ETERNUS SF Manager functions.

See

For information on setup, refer to "Setting up user account" in the *ETERNUS SF Installation and Setup Guide* for this version.

3.3.4 Setting up the Web Console

If firewalls are used between the PC on which the Web Console is launched and the Management Server, perform firewall settings to allow transmission.

See

For information on firewall setup, refer to "Setting up for using Web Console" in the *ETERNUS SF Installation and Setup Guide* for this version.

Note

When upgrading Express Version 14.2, if operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

3.3.5 Setting the account information for access to ETERNUS Disk storage system

Set the account information, user name and password to access the ETERNUS Disk storage system.

See

For information on setup, refer to "Set and change the information of the account that can access ETERNUS Disk storage system" in the *ETERNUS SF Web Console Guide* for this version.

3.3.6 Registering the license

Register the appropriate licenses.

See

Refer to "License Management" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the license settings.

3.3.7 Redefining missing information

- Administrator information

  Enter the Administrator information.

  See

  Refer to "Display and change the contact information" in the *ETERNUS SF Web Console Guide* for this version for information on server registration.

- Server information

  Enter the server information.

  See

  Refer to "Register the server" in the *ETERNUS SF Web Console Guide* for this version for information on server registration.

- Connection type

  To use the Advanced Copy function of Express, set the connection type using the ETERNUS Disk storage system.

  See

  Refer to "Connection type settings" in the *ETERNUS SF Express Operation Guide* for this version for information on connection type settings.

- AdvancedCopy Manage Copy Control Module configuration information

  To use the AdvancedCopy Manager Copy Control Module, set the device information again in accordance with the following procedure:

  See

  For information on the commands, refer to "Commands" in the *ETERNUS SF Operation Guide for Copy Control Module* for this version.

1. Confirm the registered ETERNUS Disk storage system by executing "acarray list" (ETERNUS Disk storage system information display command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray list
Name BOX-ID IP Address
----- ---------------------------------------- ------------
DX90 00ETERNUSDXL##ET09E24B####LH4311015511## 10.124.6.251
```

2. Confirm the detailed information of the registered ETERNUS Disk storage system by executing "acarray detail" (ETERNUS Disk storage system detail information display command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray detail -a DX90
Disk Array Name : DX90
BOX-ID : 00ETERNUSDXL##ET09E24B####LH4311015511##
```

```
IP Address : 10.124.6.251
Admin User : ****
Access Volume : X:
```

3. Remove all of the registered ETERNUS Disk storage system by executing "acarray remove" (ETERNUS Disk storage system registration information deletion command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray remove -a DX90
Successful completion.
```

4. Re-register all of the ETERNUS Disk storage systems that were removed in step 3 by executing "acarray add" (ETERNUS Disk storage system registration command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray add -a DX90 -ip 10.124.6.251 -user **** -password **** -
path X:
Successful completion.
```

Point

When the ETERNUS Disk storage system was registered by specifying a nonexistent drive letter or device name to the access volume (previously called "access path") in the previous version, re-register its ETERNUS Disk storage system as a remote device.

5. Reload the configuration information.

See

For information on reloading the configuration information, refer to "Reload ETERNUS Disk storage system configuration information" in the *ETERNUS SF Web Console Guide* for this version.

3.3.8 Changing the access user password for the repository database

Do not use the access user default password for the repository database in order to avoid security issues.

Change the user information of the operating system and reconfigure the repository access user information by executing stguserset (Repository access user change command).

See

For information on the procedure to change the password, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the corresponding operating system.

3.3.9 Resuming operation

When the tasks described above have been performed, the upgrade of Express is complete. Restart the Express operation.

Chapter 4 Upgrading Express Version 15.x

This chapter describes the upgrade procedure for Express Version 15.x.

To upgrade Express Version 15.x to this version, install the ETERNUS SF Manager.

4.1 Upgrading Express (for Windows)

This section describes the upgrade of Express for Windows.

Note

For the Windows Server 2003, the procedure below cannot be used for the upgrade procedure.
When performing an upgrade for a Windows Server 2003, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware.
   If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.
3. Install this product version.

4.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading Express, as described below.

1. Checking the Symfoware

   The Symfoware product is bundled with this product. If Symfoware is already installed on the server where the upgrade will be performed, check the Symfoware environment before starting the upgrade.

   See

   For details, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.
2. Stopping the service of ETERNUS SF Manager

   Execute the following batch file:

   ```
   $INS_DIR\Common\bin\Stop_ESFservice.bat
   ```

   $INS_DIR is the program directory specified at the ETERNUS SF Manager installation.
3. Backing up the Windows system

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the Windows system before performing the upgrade.
   If a failure occurs during the upgrade, restore the system from the backup.

Note

If the Windows system cannot be backed up, the upgrade procedure described in the section below cannot be performed.
In this case, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server included in AdvancedCopy Manager is being used, take the following step:

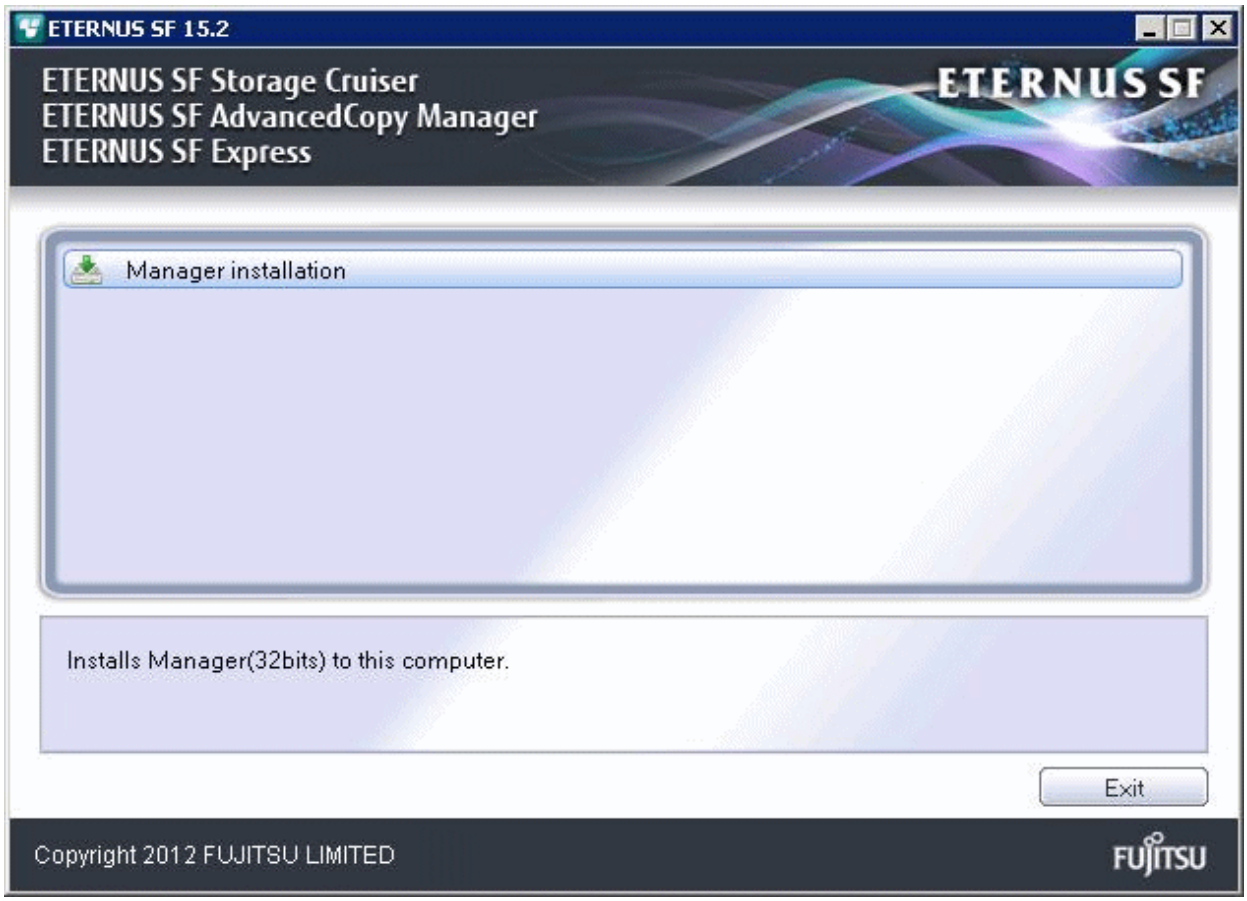
   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware.
   If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.
3. Install this product version.

4.1.2 Performing the upgrade

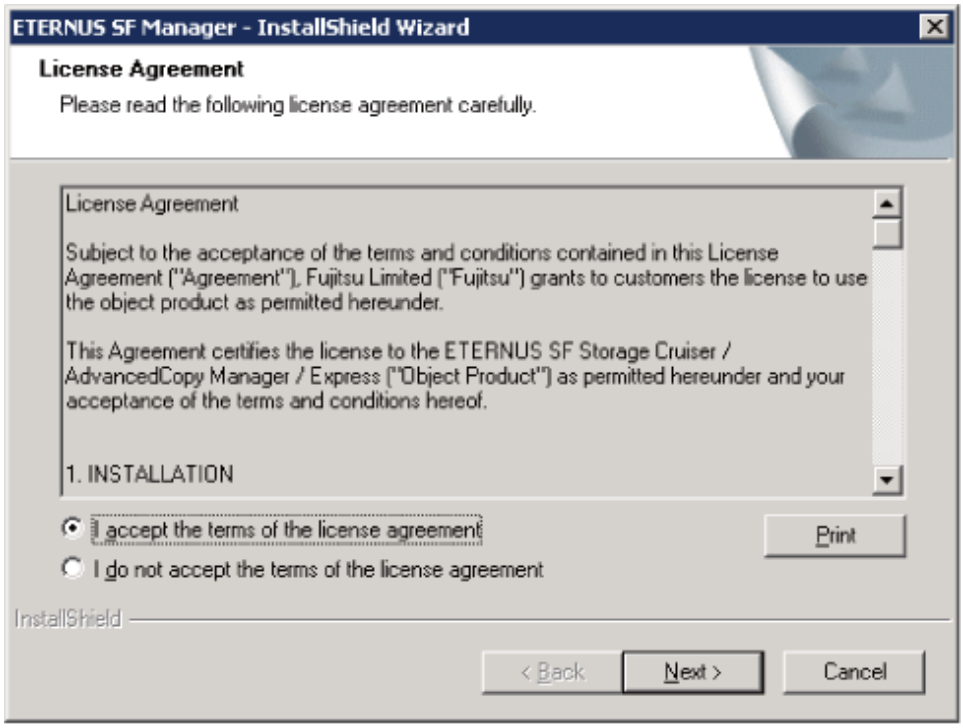
The upgrade is performed as follows:

1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

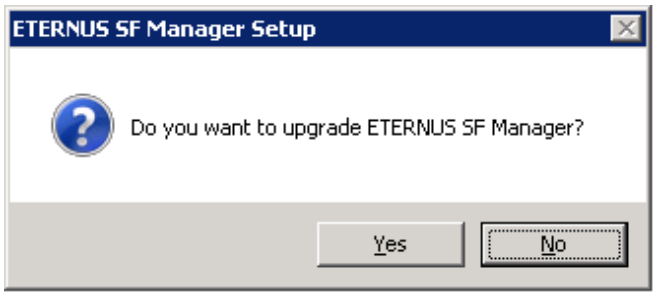
   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.
3. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.



4. Read the terms and conditions of the [License Agreement] page.
   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.

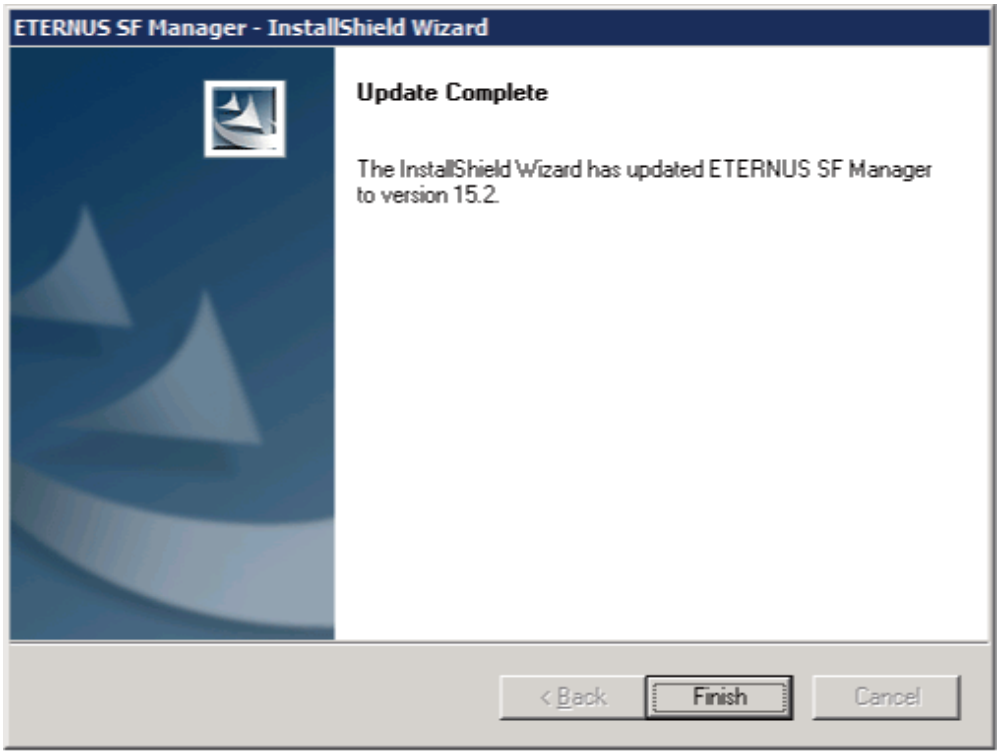


5. The following dialog box will be displayed. Click the [Yes] button.
   To cancel the upgrade, click the [No] button.



6. The system configuration will be updated. Wait for the configuration update process to complete.

7. The following installation wizard page will be displayed. The upgrade is completed. Click the [Finish] button.



8. Eject the DVD-ROM.

4.1.3 Tasks to be performed after the upgrade

When the upgrade has been completed, the tasks below need to be performed:

1. Starting the service of ETERNUS SF Manager

   Execute the following batch file:

   ```
   $INS_DIR\Common\bin\Start_ESFservice.bat
   ```

   $INS_DIR is the program directory specified at the ETERNUS SF Manager installation.

2. Resetting the password for the repository access user

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

   Point

   Even if the password has not changed, ensure that you reset the password.

   See

   For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

3. Changing the server information

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

Note

If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

4.2 Upgrading Express (for Linux)

This section describes the upgrade of Express for Linux.

4.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading Express, as described below.

1. Install of essential package.
   According to the environment in which Upgrade Installation is executed, the packages required should be installed.

   The environment and the package are as follows. The version number of the installed package shall be later than the described versions.

   When the Upgrade Installation is executed excluding the following environments, this procedure is not needed.

   - For Red Hat Enterprise Linux 5 (for Intel64), 32-bit AdvancedCopy Manager is installed of the previous version:

     ```
     libXrender-0.9.1-3.1.i386.rpm
     ```

   - For Red Hat Enterprise Linux 6 (for Intel64):

     ```
     libXrender-0.9.5-1.el6.i686.rpm
     ```

   Note

   When libXrender is installed, other packages might be demanded. Install the package (the end of the package name is i386.rpm or i686.rpm) of 32-bit when OS is 64-bit environment.

   The required packages for the installation are included in the OS installation media.

2. Execute the following command to stop the daemon of ETERNUS SF Manager.

   ```
   # /opt/FJSVesfcm/bin/stopesf.sh
   ```

3. Back up the operating system.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the operating system before performing the upgrade.
   If a failure occurs during the upgrade, restore the system from the backup.

Note

If cannot be backed up the operating system, using the procedure mentioned below cannot perform the Upgrade Installation process. If cannot be backed up the operating system, uninstall the before version product manually, and then install this version of product.

4.2.2 Performing the upgrade

This section describes the upgrade procedure for Express.

Note

When Symfoware has already been installed, perform the following procedure:

1. Stop the processes of Symfoware/RDB, WebDBtools, and RDA-SV temporarily.
2. Perform the upgrade.
3. Restart the processes of Symfoware/RDB, WebDBtools, and RDA-SV.

The upgrade is performed as follows:

1. Log in to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.
3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script.

```
# ./esfinstall.sh
```

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
+-------------------------------------------------------------+
|                       ETERNUS SF V15.2                      |
|                                                             |
|    All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012  |
+-------------------------------------------------------------+


License Agreement

Subject to the acceptance of the terms and conditions contained in this License Agreement
("Agreement"), Fujitsu Limited ("Fujitsu") grants to customers the license to use the obje
ct product as permitted hereunder.

This Agreement certifies the license to the ETERNUS SF Storage Cruiser / AdvancedCopy Mana
```

ger / Express ("Object Product") as permitted hereunder and your acceptance of the terms a
nd conditions hereof.

1. INSTALLATION
You are allowed to install and use manager module and agent module of the Object Product o
n any computer connected to the Storage Device directly or through network and you are als
o allowed to install and use client module of the Object Product on any computer.

2. ARCHIVAL COPY
You may make one (1) archival copy of the Object Product.

3. EMBEDDING
If the Object Product is expected to be used as embedded in another program, you may embed
the Object Product, in whole or in part, in such other program, in accordance with the pr
ocedure described in the applicable documentation.

4. NO ASSIGNMENT
You may not rent, lease, sublicense, assign, transfer or create lien against the Object Pr
oduct.

5. MODIFICATION
You may not modify or, except to the extent expressly permitted by applicable law, reverse
engineer (including, without limitation, decompile and disassemble) the Object Product, a
nd you may not permit others to do so.

6. LIMITED WARRANTY
(a) You acknowledge that Fujitsu cannot guarantee that your use of the Object Product will
be uninterrupted, that the Object Product will be error free or that all Product errors w
ill be corrected. However, if within ninety (90) days following your acquisition of the Ob
ject Product you notify the reseller from which you have acquired the Object Product of ph
ysical defects of the media containing the Object Product, Fujitsu will, at its sole discr
etion, correct the non-conformance or provide you with information necessary to correct th
e non-conformance, or replace the defective media with a new media. Only if you inform suc
h reseller of your problem with the Object Product during the above mentioned warranty per
iod and provide satisfactory evidence of the date you acquired the Object Product will Fuj
itsu be obligated to honor this warranty.

(b) THIS IS A LIMITED WARRANTY AND IT IS THE ONLY WARRANTY MADE BY FUJITSU. FUJITSU MAKES
NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTY OF MER
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. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO LIMITATION MAY N
OT APPLY TO YOU. NO FUJITSU RESELLER, AGENT, EMPLOYEE IS AUTHORIZED TO MAKE ANY MODIFICATI
ONS, EXTENSIONS, OR ADDITIONS TO THIS WARRANTY. IF ANY MODIFICATIONS ARE MADE TO THE OBJEC
T PRODUCT BY YOU DURING THE WARRANTY PERIOD, IF THE MEDIA IS SUBJECTED TO ACCIDENT, ABUSE,
OR IMPROPER USE, OR IF YOU VIOLATE THE TERMS AND CONDITIONS HEREOF, THEN THIS WARRANTY SH
ALL IMMEDIATELY BE TERMINATED.

(c) LIMITATION OF LIABILITY. UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, TORT, CONTR
ACT, OR OTHERWISE, SHALL FUJITSU BE LIABLE TO YOU OR ANY OTHER PERSON FOR ANY INDIRECT, SP
ECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER, INCLUDING, WITHOUT LIMITATIO
N, DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, OR LOSS OF DATA, OR FOR ANY DAMAGES IN EXC
ESS OF THE LIST PRICE TO THE PRODUCT, EVEN IF FUJITSU SHALL HAVE BEEN INFORMED OF THE POSS
IBILITY OF SUCH DAMAGES, OR FOR ANY CLAIM BY ANY OTHER PARTY. THIS LIMITATION OF LIABILITY
SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONNEL INJURY TO THE EXTENT APPLICABLE LAW P
ROHIBITS SUCH LIMITATION. FURTHERMORE, SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LI
MITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS LIMITATION AND EXCLUSION MAY NOT
APPLY TO YOU.

(d) The above states the entire liability of Fujitsu in connection with the use, performan
ce or non-performance of the Object Product.

(e) Even if a part of the Object Product has been developed by a third party, the warranty

```
and remedy for that part of the Object Product are limited to those provided for in this
Section, and the third party developer shall have no liability in connection with the use,
performance or non-conformance of the Object Product.

7. MISCELLANEOUS
(a) The terms and conditions hereof represent the complete agreement concerning this licen
se between the parties and supersede all prior or contemporaneous oral and written communi
cations between them. In the event that any additional terms or conditions are provided in
 the accompanied documentation, you must also comply with such terms and conditions.

(b) You agree to comply with all applicable export laws and regulations.

(c) Use, duplication or disclosure of the Object Product by the U.S. Government is subject
to restrictions set forth in subparagraph (a) through (b) of the Commercial Computer-Rest
ricted Rights clause at FAR 52.227 - 19 when applicable, or in subparagraphs (c)(1) and (2
) of the Rights in Technical Data and Computer Software clause at DFAR 252.227 - 7013, and
in similar clauses in the NASA FAR Supplement. Contractor/manufacturer is Fujitsu Limited
, 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa-ken 211-8588, Japan.


Do you accept the terms of the above License Agreement? (default: n) [y,n]:
```

7. The following upgrade message will be is displayed.
   To continue the upgrade, enter "y". To discontinue, enter "q".

```
Do you want to upgrade? [y,q]:
```

8. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

9. Change to a directory other than the DVD-ROM.
   Example:

```
# cd
```

10. Unmount the DVD-ROM.
    Example:

```
# umount /mnt/dvd
```

11. Eject the DVD-ROM.

The upgrade for Express is complete.

4.2.3 Tasks to be performed after the upgrade

When the upgrade has been completed, the tasks below need to be performed:

1. Execute the following command to start the daemon of ETERNUS SF Manager.

   ```
   # /opt/FJSVesfcm/bin/startesf.sh
   ```

2. Reset the password for the repository access user.

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

   Point

   Even if the password has not changed, ensure that you reset the password.

See

For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)* for this version.

3. Change the server information.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)* for this version.

4.2.4 Resuming operation

When the tasks described above have been performed, the upgrade of Express is complete. Restart the Express operation.

However, when you change the SELinux setting to "enforcing" mode during the upgrade, refer to the following manual and restart the operation after the installation of the SELinux policy module for snmptrapd.

- "SNMP Trap setting (for Linux)" in the *ETERNUS SF Installation and Setup Guide* for this version

Note

If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

Chapter 5 Upgrading Storage Cruiser Version 13.x/14.x

This chapter describes the upgrade procedure for Storage Cruiser Version 13.x and 14.x.

Point

- For Storage Cruiser programs, the Upgrade Installation can be performed for the Storage Cruiser's manager only.

  For upgrading the Storage Cruiser's agent, perform uninstallation and then perform a new installation of this version. For details, refer to "5.2 Upgrading the Storage Cruiser's agent".

- If upgrading Storage Cruiser, ensure that the Storage Cruiser's manager version is the same or higher than the Storage Cruiser's agent version.

- If upgrading Storage Cruiser, the following information cannot be imported from the previous version:

  - Event log history

  - User account for the GUI client

- If AdvancedCopy Manager and AdvancedCopy Manager Copy Control Module are both installed on the same server, when upgrading, both AdvancedCopy Manager and AdvancedCopy Manager Copy Control Module will be upgraded at the same time. Therefore, perform backups of the previous versions before starting the upgrade.

Note

The GUI client has been replaced with the Web Console.
If the GUI client is installed, uninstall it.

5.1 Upgrading the Storage Cruiser's manager

This section describes the upgrade procedure for the Storage Cruiser's manager.
To upgrade the Storage Cruiser's manager to this version, install the ETERNUS SF Manager.

5.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the Storage Cruiser's manager, as described below.

5.1.1.1 Backing up the operational environment of the previous version

Back up the Storage Cruiser's manager operational environment using the following procedure:

Note

The iSCSI HBA information cannot be backed up. Save the current settings information into an appropriate file.

Refer to the iSCSI port property information in the resource view of the previous version of Storage Cruiser.

1. Stop the Storage Cruiser's manager.

   - For Windows:

     From Windows [Services], stop the *ETERNUS SF Storage Cruiser Manager*.

- For Solaris or Linux:

  Execute the following command:

  ```
  # /opt/FJSVssmgr/sbin/managerctl stop
  ```

See

For information on stopping the Storage Cruiser's manager, refer to the *ETERNUS SF Storage Cruiser User's Guide* for the relevant previous version.

2. Back up the operational environment for the previous version of Storage Cruiser's manager, referring to the following locations in the *ETERNUS SF Storage Cruiser Operation Guide* for this version.

   - For Windows:

     Perform steps 4 to 10 of "Backup of Windows Manager". In step 4, perform "Upgrade from a previous version".

     Note

     The file or directory names of the copy source that are described in steps 5 to 10 of "Backup of Windows Manager" differ to those of the previous version.
     The following table shows the relationship between the previous and current file and directory names.

Description in "Backup of Windows Manager"	Path names of the previous version
$TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\...	$TMP_DIR\Manager\var\opt\FJSVssmgr\...
$ENV_DIR\ESC\Manager\etc\opt\FJSVssmgr\...	$ENV_DIR\Manager\etc\opt\FJSVssmgr\...
$INS_DIR\ESC\Manager\opt\FJSVssmgr\...	$INS_DIR\Manager\opt\FJSVssmgr\...

   - For Solaris or Linux:

     Perform steps 4 to 10 in "Backup of Solaris OS Manager". In step 4, perform "Upgrade from a previous version".

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, backup the AdvancedCopy Manager operational environment.

Note

The following information cannot continue to be used.

- User account for the GUI client

See

Back up the operational environment by referring to the following table.

Server type	OS	Reference
Storage Management Server	Windows	A.1 Backing up the repository data (for Windows)
	Solaris, Linux	A.2 Backing up the repository data (for Solaris, Linux)

Server type	OS	Reference
Storage Management Server which also serves as a Storage Server	Windows	Perform the steps in the following order: 1. A.1 Backing up the repository data (for Windows) 2. A.3 Backing up the management information (for Windows)
	Solaris, Linux	Perform the steps in the following order: 1. A.2 Backing up the repository data (for Solaris, Linux) 2. A.4 Backing up the management information (for Solaris, Linux)

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, backup the AdvancedCopy Manager Copy Control Module operational environment.

See

For information on performing a backup, refer to "A.6 Backing up the the environment setting files".

License information

When AdvancedCopy Manager and/or AdvancedCopy Manager Copy Control Module are installed, backup the definition of the license information.

Back up the license management database of ETERNUS SF License Manager by executing "esflm backup" command. For information on the command, refer to the *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide* for the previous version.

Example of executing the command is shown below. The file specified for <*file_name*> will be created as a backup file.

```
> esflm backup <file_name>
Backup of license database was performed successfully
```

5.1.1.2 Checking for available disk space

Ensure that there is enough available disk space on the server where the upgrade will be performed.
The required disk space for the upgrade is calculated as the "Required disk space for the new version to be installed" minus the "Required disk space for the previous version".

Required disk space for the new version

The space required to install this version of the ETERNUS SF Manager.
For information on the required disk space, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

Required disk space for the previous version

The space required to install the previous version of the Storage Cruiser's manager.
For information on the required disk space, refer to the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version.

5.1.1.3 Uninstalling incompatible software

Check if any incompatible software for this version of the ETERNUS SF Manager is installed on the server where the upgrade will be performed.
If incompatible software is found, refer to the relevant software manual and uninstall it before starting the upgrade.

See

For information on the incompatible software, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

5.1.1.4 Checking Symfoware

The Symfoware product is bundled with this product. If Symfoware is already installed on the server where the upgrade will be performed, check the Symfoware environment before starting the upgrade.

See

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

5.1.1.5 Estimating the database size

A database is necessary for this version of Storage Cruiser.
The database size must be estimated before starting the upgrade.

See

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

5.1.1.6 Registering the repository access user (for Solaris, Linux)

This version of the Storage Cruiser's manager requires registration of the repository access user.
Therefore, register the repository access user before starting the upgrade.

See

For information on registering a user name and password, refer to "Installation procedure" in the *Software Release Guide*.

5.1.1.7 Tuning kernel parameters (for Solaris, Linux)

Kernel parameter tuning must be performed in order to use this version of the Storage Cruiser's manager. Therefore, perform the necessary kernel parameter tuning before starting the upgrade.

See

For information on tuning, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

5.1.1.8 Confirming the port number for the communication service (for Solaris, Linux)

This version of the AdvancedCopy Manager's manager uses additional ports.
Therefore, ensure the new ports are available before starting the upgrade.

See

For information on port numbers, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

5.1.1.9 Preparing for uninstallation

If AdvancedCopy Manager is installed, before starting the upgrade, the following preparation is necessary before uninstalling the previous version.

1. Cancel the configuration information for the Web Server (for using AdvancedCopy Manager Version 13.x on Windows Server 2003 only).

   Cancel the Web Server configuration information as follows:

   1. Log on to the system using Administrator privileges to uninstall AdvancedCopy Manager.
   2. If you configured the Web Server during the previous installation, cancel the Web Server configuration information.
      Execute the following command.

      ```
      C:\> <Program directory>\bin\alias -u
      ```

      For information on the command, refer to "Web server setting and setting cancellation command (alias)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide* for the relevant previous version.

2. Stop the daemon (for Solaris or Linux).

   Execute the following command to stop the daemon of AdvancedCopy Manager on the Management Server (Storage Management Server).

   ```
   # /opt/swstorage/bin/stopacm
   ```

3. Execute the DB unsetup.

   Refer to the following sections to perform the repository database unsetup of the previous version:

   - For Windows:

     "A.7 Unsetting up the database"

   - For Solaris or Linux:

     "A.8 Cancelling the repository settings"

4. Uninstall Symfoware.

   Uninstall Symfoware if the Symfoware Server that was bundled with the previous version of AdvancedCopy Manager for Windows Server 2003 is being used.

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware.
   If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.

For clustered systems

For clustered systems, execute cluster unsetup before uninstallation.

For information on the cluster unsetup procedure, refer to "Cluster environment deletion" in the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version.

5.1.2 Performing the upgrade (for Windows)

There are two methods of performing the upgrade, as follows.

- Default installation

  The following configuration is used without the need to input any values.

  - Installation destination

    The "<*System Drive*>:\ETERNUS_SF" directory is used as the root location for the Program Directory, Environment Directory and Work Directory.

  - Port numbers for the various communication services

    11 port numbers are used, as follows:

Service	[Port Registration] display name	Port number
Web Console service	ETERNUS SF Manager Apache service	9855
communication service 1	Communications service 1	1226
communication service 2	Communications service 2	4917
Repository service 1	Repository service 1	2004
Repository service 2	Repository service 2	15432
Remote access service	Remote access service	9851
Exclusive control service	Exclusive control service	9852
Internal use	Internal Port 1 Internal Port 2 Internal Port 3 Internal Port 4	28005 28009 28443 24916

- Custom installation

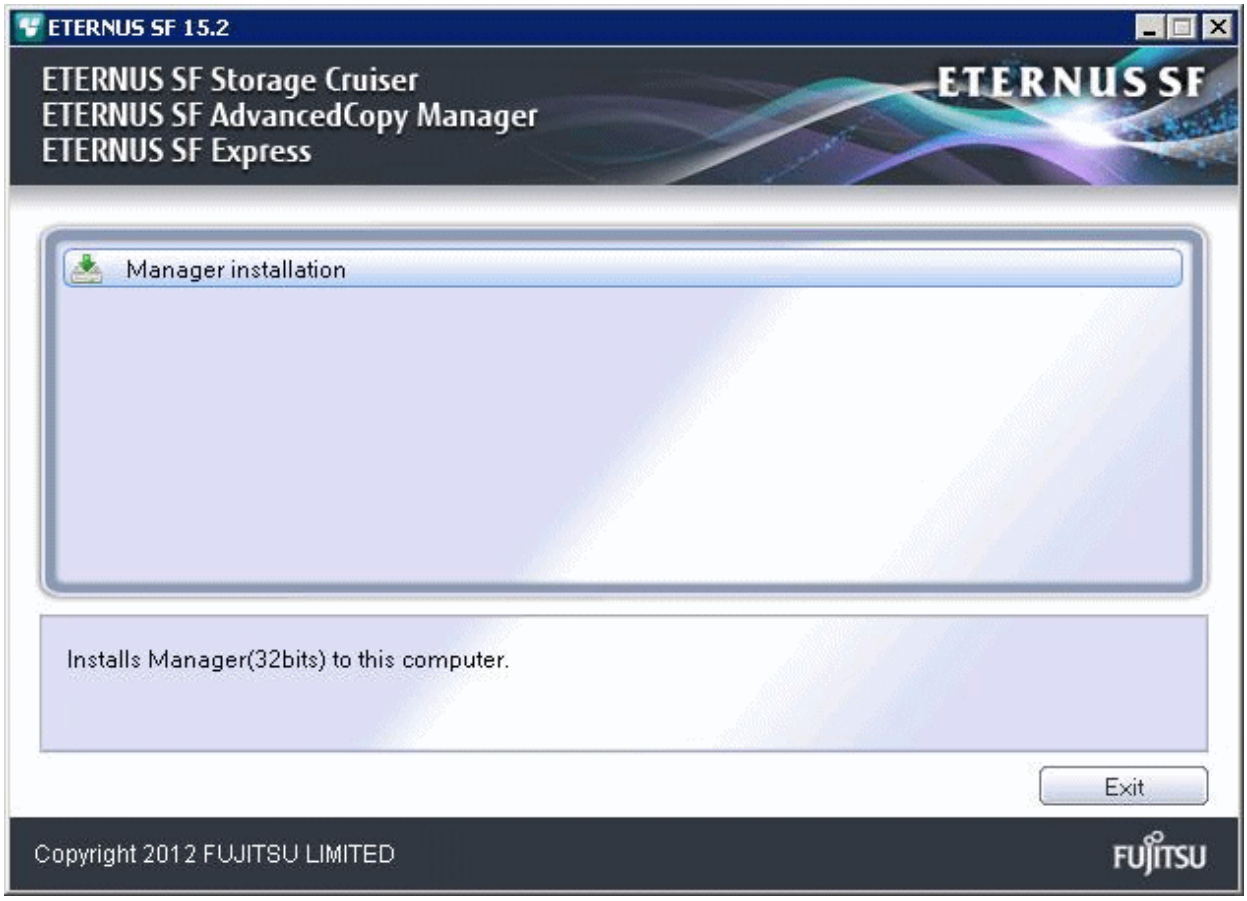
  The upgrade is performed by manually entering the configuration information into the interface (installation destination and communication service port numbers).

The upgrade is performed as follows:

1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

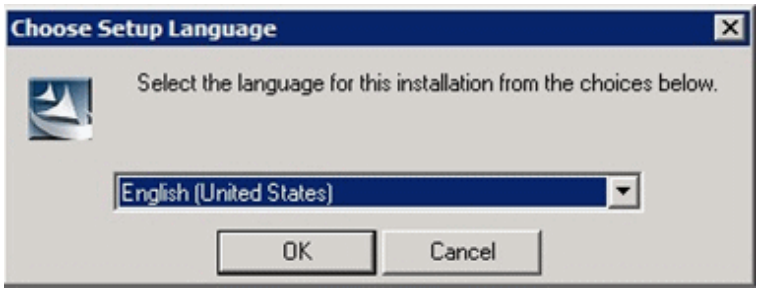
   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.

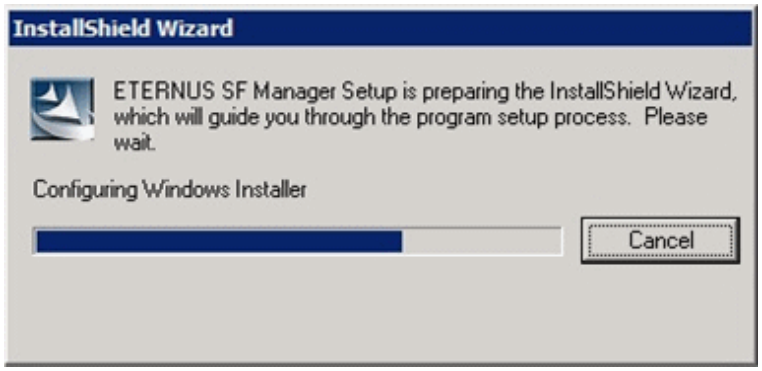


4. The [Choose Setup Language] dialog box will be displayed. Select the appropriate language and click the [OK] button.

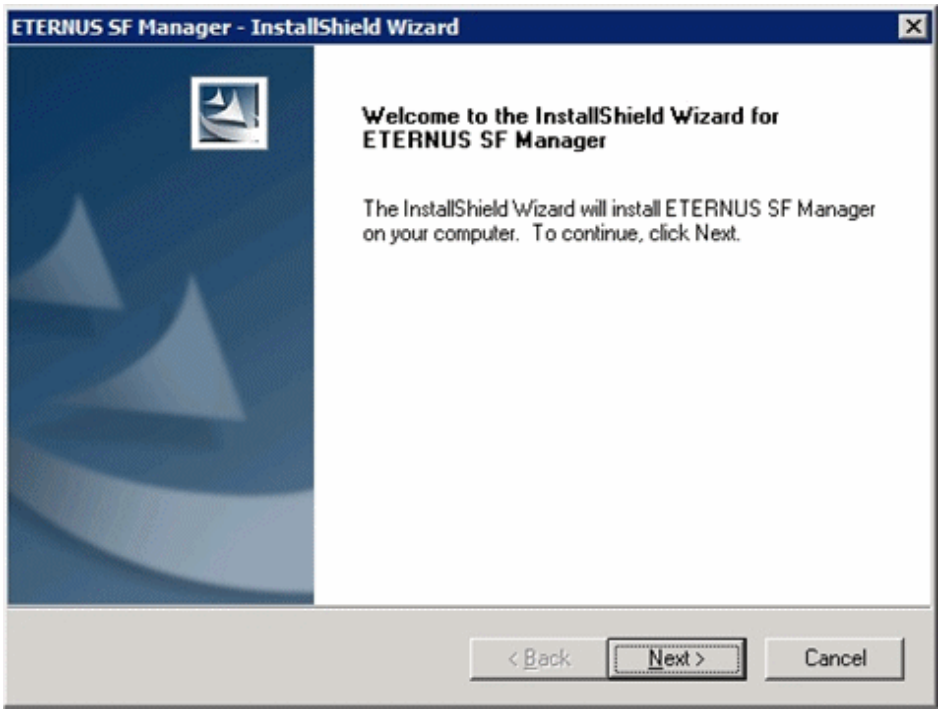
   The language selected in this dialog box will be used during installation and uninstallation.



5. The following progress bar will be displayed. To cancel the upgrade, click the [Cancel] button.

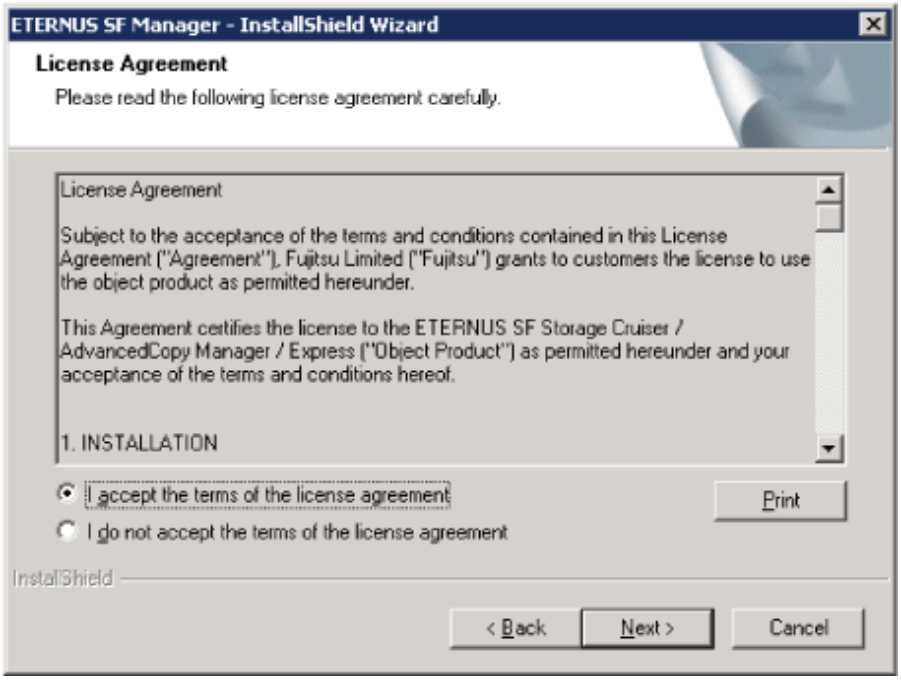


6. The installation wizard page will be displayed. Click the [Next] button.

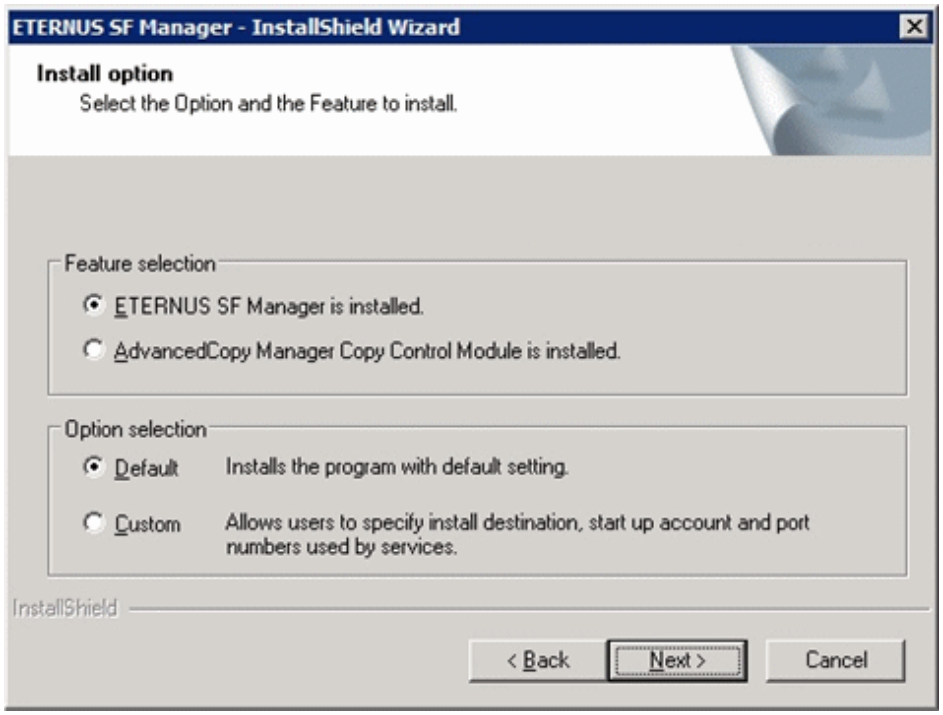


7. Read the terms and conditions of the [License Agreement] page.

   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.



8. Select the features and options to install from the [Install option] page.



Feature selection

Select [ETERNUS SF Manager is installed.].

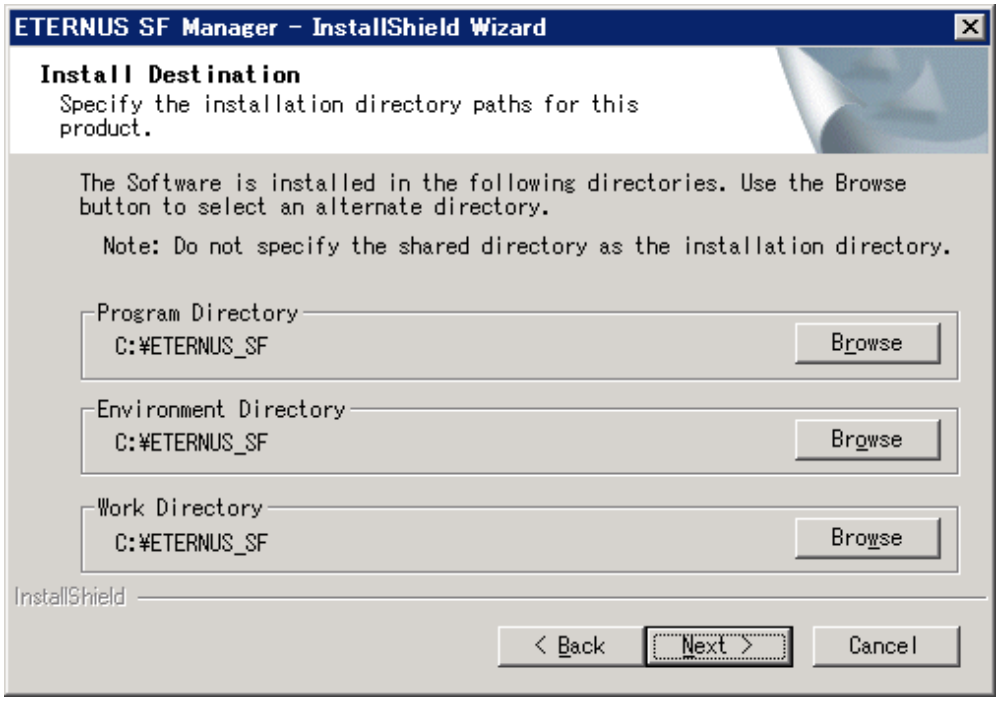
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	Changing values in the [Installation Destination] page and [Port Registration] page is optional. In this case, steps 9 and 10 can be skipped. For this installation method, the following checks are automatically performed relating to the information provided by default: - Is there enough disk space for the installation in the default directory? - Are the default port numbers available? If an error is detected at this stage, a warning dialog box will be displayed. If no error is detected, the [Start Copying Files] page will be displayed.
Custom	The installation information must be manually entered in the pages for step 9 and later.

9. Specify the installation directory in the [Installation Destination] page.

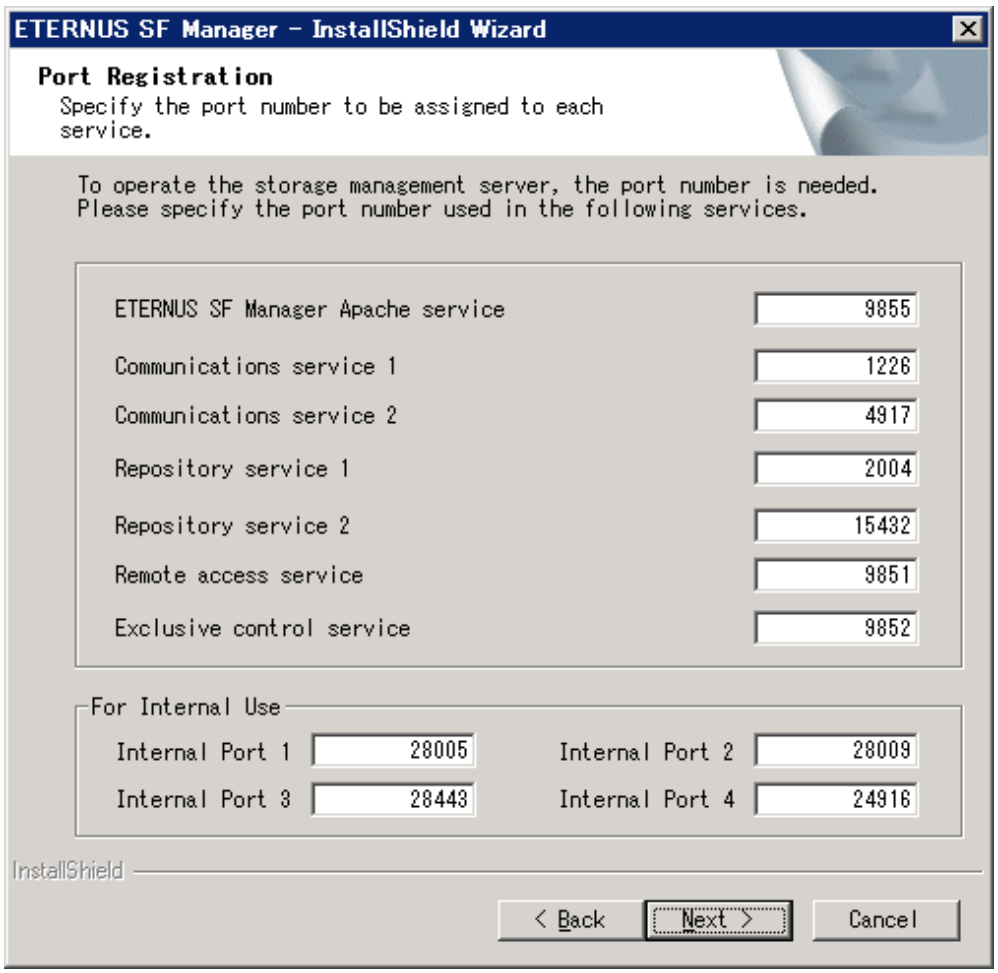
   If installing to a directory other than the default directory, click the [Browse] button and change the install destination. After designating all of the directories, click the [Next] button.



Note

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; are not supported for file names.
- The number of characters in a directory name must be between 4 and 70.

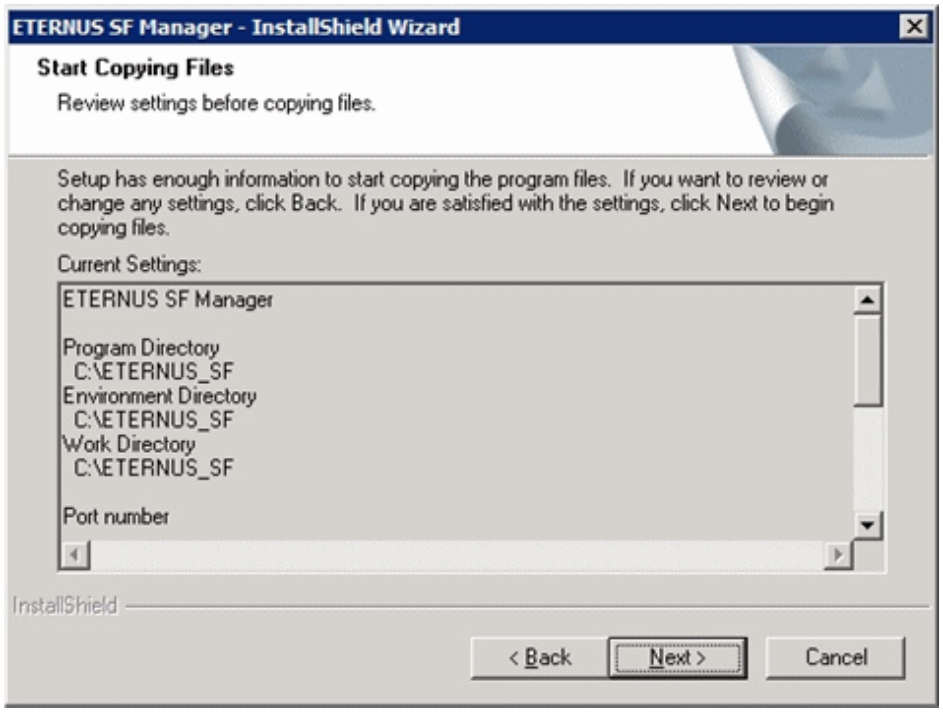
10. Specify the port number for the services in the [Port Registration] page.



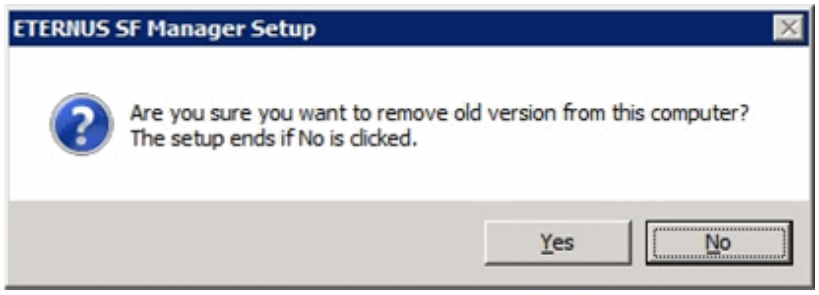
The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 5001 and 32767 are valid.
Then, click the [Next] button. If an entered value is already being used, the page will be displayed again.

11. Check the settings information in the [Start Copying Files] page.

    If the settings are correct, click the [Next] button.
    To change a setting, click the [Back] button.



12. The following dialog box will be displayed. To proceed with the uninstallation, click the [Yes] button.



13. The uninstallation is started.

    The uninstallation is executed.
    Answer any questions to proceed as the uninstallation executes.

Point

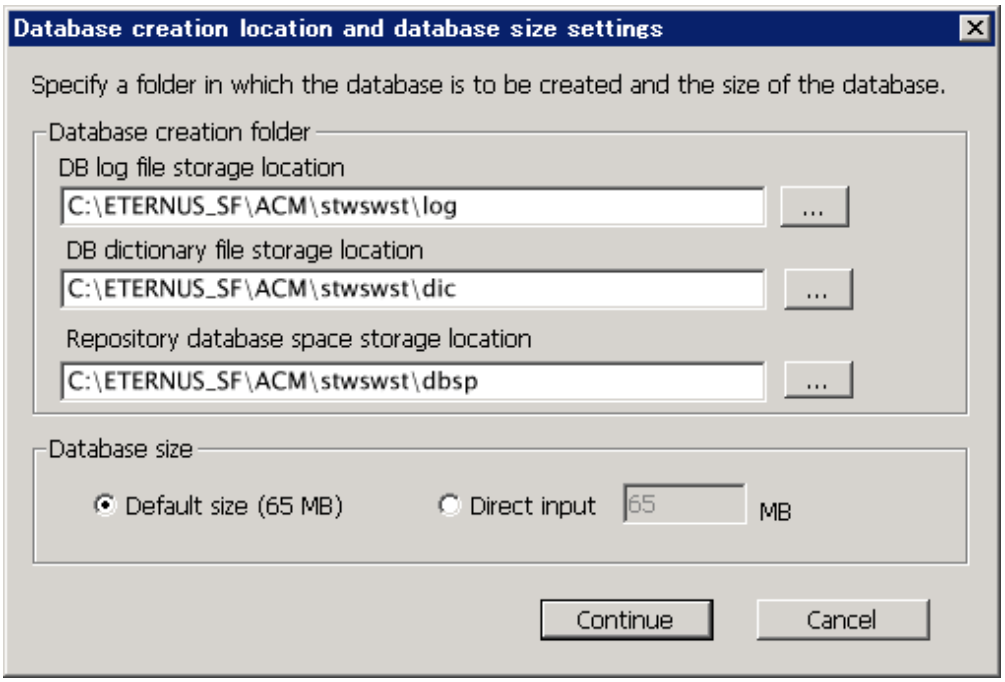
- When requested to restart the computer, click the [No] button.
  If the [Yes] button is clicked, the upgrade will be interrupted. When re-executing the installation after a restart of the computer, the installation will be treated as new one.
- When the uninstallation completes successfully, the [Uninstallation was completed successfully] page may be displayed. Although the instruction on the page indicates the deletion of files and folders, do not delete files and folders when performing the upgrade.

14. When the uninstallation is completed, the copying of the files for the new version will be started.

    During this process, the file copy completion status will be displayed in the [Setup Status] page.

15. When the copying process is completed, the system configuration will be updated. Wait for the configuration update process to complete.

16. Enter the requested information for the repository database creation in the following page.
Then, click the [Continue] button.



Database creation folder

This is the folder where the database will be created.
Enter the full path for each of the database directories shown below. The specified folders must be new NTFS folders. Only specify NTFS folders using unique folder names.

The default repository database will be displayed in each field. Change as necessary.

- DB log file storage location
  Specify the folder for storing the RDB log file.
- DB dictionary file storage location
  Specify the folder for storing the RDB dictionary file.
- Repository database space storage location
  Specify the folder for storing the repository database space.

Note

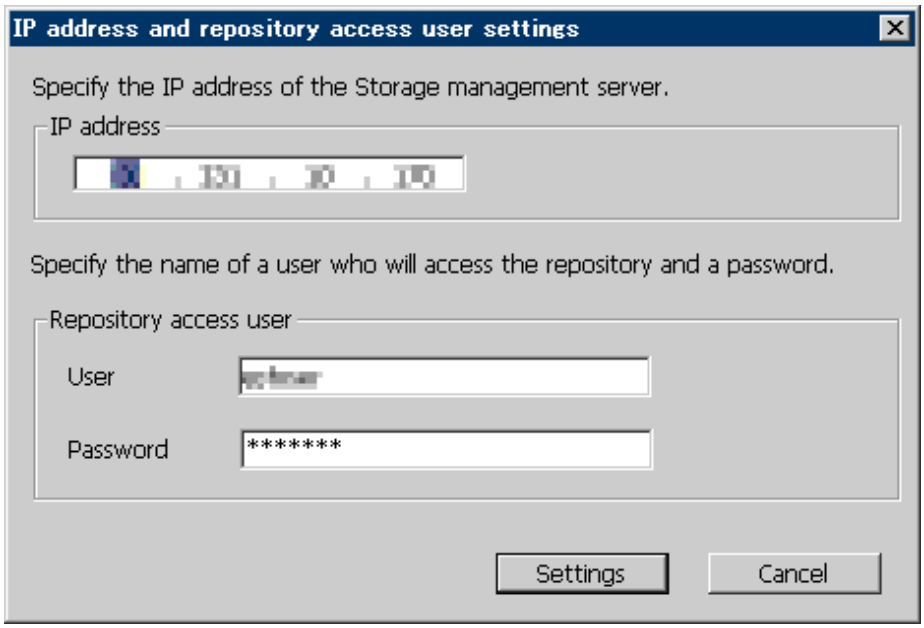
- Do not specify a shared folder in which to create the database.
- The number of characters in a folder name must be between 4 and 80. Spaces and the characters " | : * ? / . < > , % & ^ = ! ; # ' @ are not supported for file names.
- Do not select the option [Compress drive to save disk space] in the **General** tab for any of these drives.
  Overhead is greater to a compressed drive than a non compressed drive. Depending on the amount of I/O, access errors may occur in low OS resource conditions.

- Do not check the [Compress or Encrypt Attributes] in the [Advanced Attributes] section of the [Properties] or [Advanced] part of the **General** tab.
  Load is increased for a compressed and/or encrypted drive. Access errors may occur in an OS with insufficient resources. If the encryption property is selected, access errors may occur when decryption cannot be performed.

Database size

The database size is entered in megabyte units. To calculate the size, performed before installation, refer to "5.1.1.5 Estimating the database size" for details. To use the default value, select the [Default size (65 MB)] checkbox.

17. The following page will be is displayed. The default values will be displayed in the page. Change as necessary.
Enter the IP address and the database user settings. Then, click the [Settings] button.



IP address

Enter the IP address of the Management Server (local system).
If the previous version of AdvancedCopy Manager has been installed, specify the IP address of the Management Server used with the previous version.

Note

When the Management Server has multiple IP addresses, specify an IP address that can communicate with the Management Server from all of the AdvancedCopy Manager's agents.

Repository access user

Enter user name and password for the repository access user.
The user name entered here must have local login or domain login permissions at the OS level.
For the default user name and password, refer to "Installation procedure" in the *Software Release Guide*.
However, to avoid security issues, it is recommended to replace the default value.

The following conditions apply for the usernames and passwords:

- The user name and password must be compatible with the base operating system.
- The user name and password can be up to 18 characters (bytes).

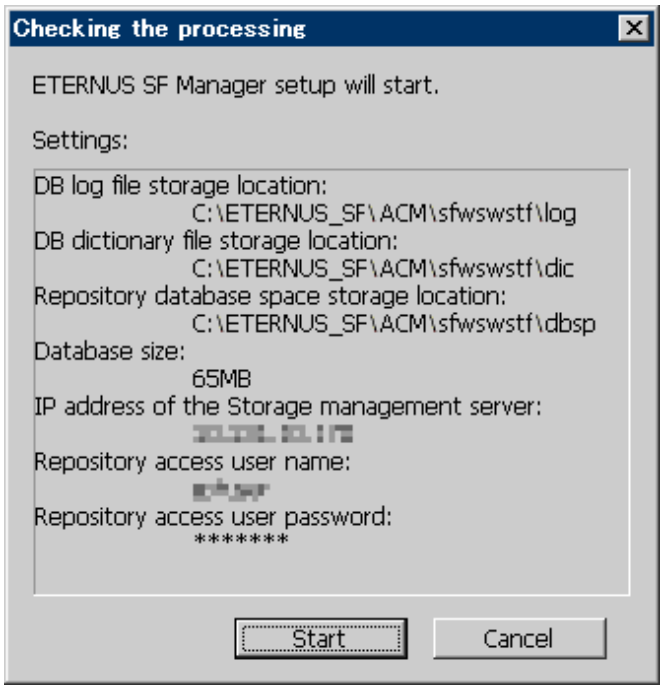
See

- If the user name specified here has not been registered to the system, perform the registration, and add either local login or domain login permissions. Refer to the table below and specify a user that corresponds to the server type being used.

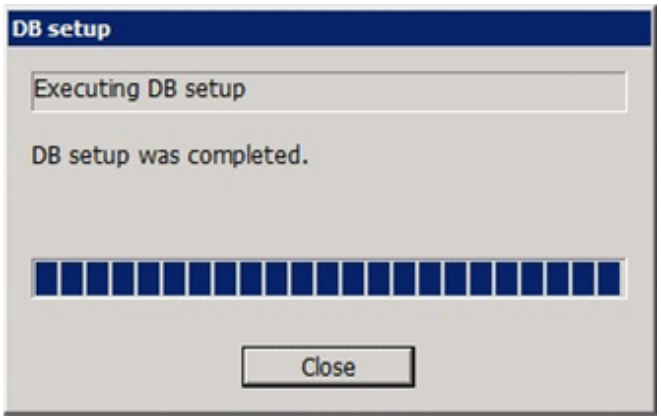
Server type	User type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- When specifying a user name that has been already registered to the system, use the identical characters (e.g. uppercase and lowercase letters) that were used for the registered user name.

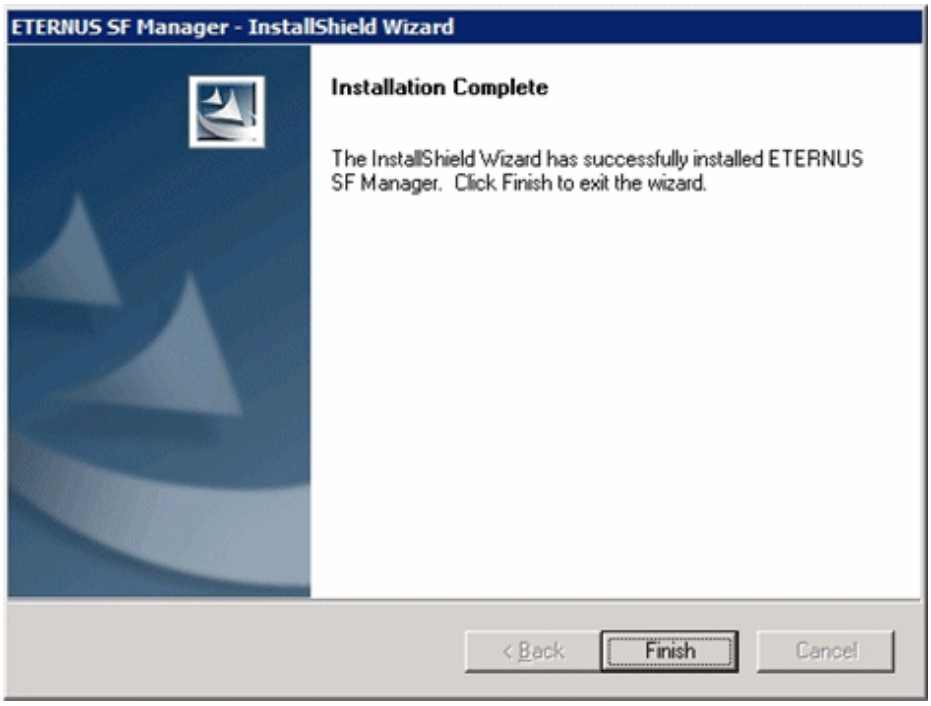
18. The following page will be displayed. Check the contents and click the [Start] button.



19. The database setup process starts. The following progress bar will be displayed, when the process is completed, click the [Close] button.



20. The following installation wizard page will be displayed. The upgrade process is completed. Click the [Finish] button.



21. Eject the DVD-ROM.

The upgrade for the Storage Cruiser's manager is complete.

For non-clustered systems, perform "5.1.4 Tasks to be performed after the upgrade" afterwards.

For clustered system, refer to "Preparations for Customizing Management Server Transactions" and "Customization for Management Server Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* for this version. Then, perform "5.1.4 Tasks to be performed after the upgrade" afterwards.

5.1.3 Performing the upgrade (for Solaris, Linux)

There are two methods of performing the upgrade, as follows.

- Default installation

  The following configuration is used without the need to input any values.

  - Installation destination

    The installation destination directories (/opt/FJSVesfcm, /etc/opt/FJSVesfcm, /var/opt/FJSVesfcm, etc) cannot be modified.

  - Port numbers for the various communication services

    The following ports are used:

Service	Service name	Used port number	Install parameter name
Web Console service	esfmanagerweb	9855/tcp	ETERNUS_SF_Manager_apache_service
communication service 1	stgxfws	1226/tcp	Communications_service_1
communication service 2	sscruisera	4917/tcp	Communications_service_2
Repository service 1	rdaswstf	32004/tcp	Repository_service_1
Repository service 2	esfpostgres	15432/tcp	Repository_service_2

Service	Service name	Used port number	Install parameter name
Remote access service	rmiswstf	9851/tcp	Remote_access_service
Exclusive control service	semswstf	9852/tcp	Exclusive_control_service
Internal use	esfmanagertomcat1	28005/tcp	Internal_port_1
	esfmanagertomcat2	28009/tcp	Internal_port_2
	esfmanagertomcat3	28443/tcp	Internal_port_3
	sscruiserm	24916/tcp	Internal_port_4
	astm	24917/tcp	Internal_port_5

- Custom installation

  The upgrade is performed by manually entering the configuration information into the interface (communication service port number, character code, and so on).

  Define the installation information in the install parameter file. Specify the install parameter file for which the installation information has been defined when executing the install shell.

  For information on the install parameter file, refer to "B.1 Install parameter file (for ETERNUS SF Manager)".

Note

- You cannot change these install directories: /opt/FJSVesfcm, /etc/opt/FJSVesfcm, /var/opt/FJSVesfcm.
- Ensure to perform the following tasks when the previous version of AdvancedCopy Manager has been installed and the Management Server has multiple IP addresses.
  - Perform custom installation.
  - Specify the same IP address of the Management Server used with the previous version for the install parameter "Management_server_IP_address".

Point

If an IP address for the Management Server is not specified in the install parameter "Management_server_IP_address", the IP address will be set automatically during installation. Change the IP address, if required, after the installation has completed. For information on changing the IP address, refer to "Changing the IP address of Management Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Management Server.

Note

When Symfoware has already been installed, perform the following procedure:

1. Stop the processes of Symfoware/RDB, WebDBtools, and RDA-SV temporarily.
2. Perform the upgrade.
3. Restart the processes of Symfoware/RDB, WebDBtools, and RDA-SV.

The upgrade is performed as follows:

1. Log in to the server as a superuser.

2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script.

   Example of a default installation:

```
# ./esfinstall.sh
```

   Example of a custom installation:

```
# ./esfinstall.sh -s <Install parameter file>
```

   Specify the full path name of the install parameter file edited in advance for <*Install parameter file*>.

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
+-------------------------------------------------------------+
|                       ETERNUS SF V15.2                      |
|                                                             |
|    All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012  |
+-------------------------------------------------------------+


License Agreement

Subject to the acceptance of the terms and conditions contained in this License Agreement
("Agreement"), Fujitsu Limited ("Fujitsu") grants to customers the license to use the obje
ct product as permitted hereunder.

This Agreement certifies the license to the ETERNUS SF Storage Cruiser / AdvancedCopy Mana
ger / Express ("Object Product") as permitted hereunder and your acceptance of the terms a
nd conditions hereof.


1. INSTALLATION
You are allowed to install and use manager module and agent module of the Object Product o
n any computer connected to the Storage Device directly or through network and you are als
o allowed to install and use client module of the Object Product on any computer.

2. ARCHIVAL COPY
You may make one (1) archival copy of the Object Product.

3. EMBEDDING
If the Object Product is expected to be used as embedded in another program, you may embed
the Object Product, in whole or in part, in such other program, in accordance with the pr
ocedure described in the applicable documentation.

4. NO ASSIGNMENT
You may not rent, lease, sublicense, assign, transfer or create lien against the Object Pr
```

oduct.

5. MODIFICATION
You may not modify or, except to the extent expressly permitted by applicable law, reverse engineer (including, without limitation, decompile and disassemble) the Object Product, a nd you may not permit others to do so.

6. LIMITED WARRANTY
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(d) The above states the entire liability of Fujitsu in connection with the use, performan ce or non-performance of the Object Product.

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7. MISCELLANEOUS
(a) The terms and conditions hereof represent the complete agreement concerning this licen se between the parties and supersede all prior or contemporaneous oral and written communi cations between them. In the event that any additional terms or conditions are provided in the accompanied documentation, you must also comply with such terms and conditions.

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```
Do you accept the terms of the above License Agreement? (default: n) [y,n]:
```

7. A confirmation message will be displayed containing the installation information. To continue, enter "y". To cancel, enter "q". Press **Enter** to proceed.

```
Setting of installation parameter file.

    Installation_function:       ETERNUS SF Manager

    Character_code:          UTF8

    Port number
      ETERNUS_SF_Manager_apache_service: 9855
      Communications_service_1:          1226
      Communications_service_2:          4917
      Repository_service_1:              32004
      Repository_service_2:              15432
      Remote_access_service:             9851
      Exclusive_control_service:         9852
      Internal_port_1:                   28005
      Internal_port_2:                   28009
      Internal_port_3:                   28443
      Internal_port_4:                   24916
      Internal_port_5:                   24917
    Repository database setup
      DB_file_directory:             /var/opt/FJSVswstf/sfwswstf/db
      RDB_dictionary_directory:      /var/opt/FJSVswstf/sfwswstf/dic
      RDB_log_file_directory:        /var/opt/FJSVswstf/sfwswstf/log
      Repository_DB_space_directory: /var/opt/FJSVswstf/sfwswstf/dbsp
      Repository_data_size:          65
      Management_server_IP_address:
    AdvancedCopy_Manager_ARCH: 32bit
    esfpostgres_UID:

Do you want to continue the installation? [y,q]:
```

8. A confirmation message will be displayed before uninstalling the previous version. To uninstall the previous version and proceed with the new installation, enter "y". To cancel the installation, enter "q". Press **Enter**.

```
An old version is installed in this system.
Do you want to remove old version from this system? [y,q]:
```

Point

For confirmation of uninstallation of the previous version, enter "y" to continue the uninstallation. If the uninstallation is cancelled, the upgrade process will be interrupted. When re-executing the installation after restart of the computer, the installation will be treated as new one.

9. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

10. Change to a directory other than the DVD-ROM.
    Example:

```
# cd
```

11. Unmount the DVD-ROM.
    Example:

```
# umount /mnt/dvd
```

12. Eject the DVD-ROM.

The upgrade for the Storage Cruiser's manager is complete.

For non-clustered systems, perform "5.1.4 Tasks to be performed after the upgrade" afterwards.

For clustered systems, refer to "Preparations for Customizing Management Server Transactions" and "Customization for Management Server Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* for this version. Then, perform "5.1.4 Tasks to be performed after the upgrade" afterwards.

5.1.4 Tasks to be performed after the upgrade

When the Storage Cruiser's manager upgrade has been completed, the tasks below need to be performed.

5.1.4.1 Restoring the environment from the previous version

Refer to the following locations in the *ETERNUS SF Storage Cruiser Operation Guide* to restore the operational environment that was backed up in "5.1.1.1 Backing up the operational environment of the previous version".

- For Windows:

  1. Execute the following batch file to stop the service of ETERNUS SF Manager:

     ```
     <Install directory>\Common\bin\Stop_ESFservice.bat
     ```

  2. Perform steps 5 to 11 in "Restoring Windows Manager". In step 5, perform "Upgrade from a previous version".
  3. Execute the following batch file to restart the service of ETERNUS SF Manager:

     ```
     <Install directory>\Common\bin\Start_ESFservice.bat
     ```

- For Solaris or Linux:

  1. Execute the shell script below to stop the daemon of ETERNUS SF Manager.
     An error will occur if you execute the shell script before the start up of the ETERNUS SF Manager daemon, which is started automatically during installation, is completed. If an error occurs, wait and then try again.

     ```
     /opt/FJSVesfcm/bin/stopesf.sh
     ```

  2. Perform steps 5 to 11 in "Restoring Solaris OS Manager". In step 5, perform "Upgrade from a previous version".
  3. Execute the shell script below to restart the daemon of ETERNUS SF Manager.

     ```
     /opt/FJSVesfcm/bin/startesf.sh
     ```

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, restore the operational environment that was backed up in "5.1.1.1 Backing up the operational environment of the previous version".

Note

For the operational environment restore, start a new window for command execution, and then perform the procedure on the window.

See

Restore the operational environment by referring to the following table.

Server type	OS	Reference
Management Server	Windows	A.9 Restoring the repository data (for Windows)
	Solaris, Linux	A.10 Restoring the repository data (for Solaris, Linux)
Management Server which also serves as a Managed Server	Windows	Perform the steps in the following order: 1. A.9 Restoring the repository data (for Windows) 2. A.11 Restoring the management information (for Windows)
	Solaris, Linux	Perform the steps in the following order: 1. A.10 Restoring the repository data (for Solaris, Linux) 2. A.12 Restoring the management information (for Solaris, Linux)

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, restore the operational environment that was backed up in "5.1.1.1 Backing up the operational environment of the previous version".

See

For information on performing a restore, refer to "A.14 Restoring the environment setting files".

License information

When AdvancedCopy Manager and/or AdvancedCopy Manager Copy Control Module are installed, restore the definition of the license information.

Restore the license management database of ETERNUS SF License Manager by executing "esflm restore" command. For information on the command, refer to the *ETERNUS SF Installation and Setup Guide* for this version.

Example of executing the command is shown below. The <*file_name*> is the file name specified when the backup data was created.

```
> esflm restore <file_name>
Restoration of license database was performed successfully
```

5.1.4.2 Importing the configuration information

Import the configuration information from the previous version by executing esfimportdevconf (configuration information import command) using Administrator permissions.

Check that the targeted devices can be accessed before executing esfimportdevconf.

- For Windows (DOS prompt):

```
<Program directory>\Common\bin\esfimportdevconf
```

- For Solaris or Linux:

```
# /opt/FJSVesfcm/bin/esfimportdevconf
```

After executing esfimportdevconf, confirm that "Complete" is displayed in the **IMPORT STATUS** column in esfimportdisplay (configuration import status display command) of the configuration information import.

See

Refer to "10.2 Command references" for information on each import command.

5.1.4.3 Setting up a user account

Set up a user account in order to use the ETERNUS SF Manager functions.

See

For information on setup, refer to "Setting up user account" in the *ETERNUS SF Installation and Setup Guide* for this version.

5.1.4.4 Setting up the Web Console

If firewalls are used between the PC on which the Web Console is launched and the Management Server, perform firewall settings to allow transmission.

See

For information on firewall setup, refer to "Setting up for using Web Console" in the *ETERNUS SF Installation and Setup Guide* for this version.

5.1.4.5 Setting the account information for access to ETERNUS Disk storage system

Set the account information, user name and password to access the ETERNUS Disk storage system.

See

For information on setup, refer to "Set and change the information of the account that can access ETERNUS Disk storage system" in the *ETERNUS SF Web Console Guide*.

5.1.4.6 Registering the license

Register the appropriate licenses.

See

Refer to "License Management" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the license settings.

5.1.4.7 Redefining missing information

- iSCSI HBA information

  If iSCSI was defined before the upgrade, perform the following procedure:

  1. Log in to the Web Console.
  2. Select the server featuring the iSCSI HBA, click [Add HBA] in the Action pane and enter the HBA information.

- AdvancedCopy Manage Copy Control Module configuration information

  To use the AdvancedCopy Manager Copy Control Module, set the device information again in accordance with the following procedure:

  See

  For information on the commands, refer to "Commands" in the *ETERNUS SF Operation Guide for Copy Control Module* for this version.

  1. Confirm the registered ETERNUS Disk storage system by executing "acarray list" (ETERNUS Disk storage system information display command).

     ```
     C:\>C:\ETERNUS_SF\CCM\bin\acarray list
     Name BOX-ID IP Address
     ----- ---------------------------------------- ------------
     DX90 00ETERNUSDXL##ET09E24B####LH4311015511## 10.124.6.251
     ```

  2. Confirm the detailed information of the registered ETERNUS Disk storage system by executing "acarray detail" (ETERNUS Disk storage system detail information display command).

     ```
     C:\>C:\ETERNUS_SF\CCM\bin\acarray detail -a DX90
     Disk Array Name : DX90
     BOX-ID : 00ETERNUSDXL##ET09E24B####LH4311015511##
     IP Address : 10.124.6.251
     Admin User : ****
     Access Volume : X:
     ```

  3. Remove all of the registered ETERNUS Disk storage system by executing "acarray remove" (ETERNUS Disk storage system registration information deletion command).

     ```
     C:\>C:\ETERNUS_SF\CCM\bin\acarray remove -a DX90
     Successful completion.
     ```

  4. Re-register all of the ETERNUS Disk storage systems that were removed in step 3 by executing "acarray add" (ETERNUS Disk storage system registration command).

     ```
     C:\>C:\ETERNUS_SF\CCM\bin\acarray add -a DX90 -ip 10.124.6.251 -user **** -password **** -
     path X:
     Successful completion.
     ```

     Point

     When the ETERNUS Disk storage system was registered by specifying a nonexistent drive letter or device name in the previous version of AdvancedCopy Manager CCM, re-register its ETERNUS Disk storage system as a remote device.

5. Reload the configuration information

See

For information on reloading the configuration information, refer to "Reload ETERNUS Disk storage system configuration information" in the *ETERNUS SF Web Console Guide* for this version.

5.1.4.8 Changing the access user password for the repository database

Do not use the access user default password for the repository database in order to avoid security issues.

Change the user information of the operating system and reconfigure the repository access user information by executing stguserset (Repository access user change command).

See

For information on the procedure to change the password, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the corresponding operating system.

5.1.5 Resuming operation

When the tasks described above have been performed, the upgrade of the Storage Cruiser's manager is complete. Restart the Storage Cruiser operation.

However, when you change the SELinux setting to "enforcing" mode during the upgrade in the Linux environment, refer to the following manual and restart the operation after the installation of the SELinux policy module for snmptrapd.

- "SNMP Trap setting (for Linux)" in the *ETERNUS SF Installation and Setup Guide* for this version

5.2 Upgrading the Storage Cruiser's agent

The upgrade is performed as follows:

1. Back up the Storage Cruiser's agent settings information.

   - For Windows:

No.	Settings information to be backed up	File to be backed up
1	SNMP Trap sending destination address	$OLD_TMP_DIR\Agent\var\sanm.ip ($OLD_TMP_DIR is "Work Directory" specified at the previous Storage Cruiser's agent installation.)
2	Agent definition file	All files under $OLD_ENV_DIR\Agent\etc directory ($OLD_ENV_DIR is "Environment Directory" specified at the previous Storage Cruiser's agent installation.)
3	User definition information	$OLD_INS_DIR\Agent\lib\defusr.dat ($OLD_INS_DIR is "Program Directory" specified at the previous Storage Cruiser's agent installation.) Note: If there is no file present, backup is not required.

   - For Solaris, Linux or HP-UX:

No.	Settings information to be backed up	File to be backed up
1	SNMP Trap sending destination address	/var/opt/FJSVssage/sanm.ip
2	Agent definition file	All files under the /etc/opt/FJSVssage directory
3	User definition information	/opt/FJSVssage/lib/defusr.dat Note: If there is no file present, backup is not required.

2. Uninstall the previous version of the Storage Cruiser's agent.

   For information on uninstallation, refer to the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version.

3. Install this version of the Storage Cruiser's agent.

   For information on installation, refer to "Installation of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for this version.

4. Set up the Storage Cruiser's agent.

   For information on setup, refer to "Setup of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for this version.

5. Restore the Storage Cruiser's agent settings information that was backed up in step 1.

   - For Windows:

     Refer to the table above and perform steps as follows:

     - Copy the file of No. 1 and create $TMP_DIR\Agent\var\sanm.ip.
       ($TMP_DIR is "Work Directory" specified at the Storage Cruiser's agent installation.)
     - Refer to each file of No. 2 and reflect the definitions which have been changed from the installation of the previous version of the Storage Cruiser's agent to the $ENV_DIR\Agent\etc directory.
       ($ENV_DIR is "Environment Directory" specified at the Storage Cruiser's agent installation.)

       Migration is not required for files whose definitions have not been changed. Use the new definition files.
     - Copy the file of No. 3 and create $INS_DIR\Agent\lib\defusr.dat.
       ($INS_DIR is "Program Directory" specified at the Storage Cruiser's agent installation.)

       This is not required if the file was not backed up in step 1.

   - For Solaris, Linux or HP-UX:

     Refer to the table above and perform steps as follows:

     - Copy the file of No. 1 and create /var/opt/FJSVssage/sanm.ip.
     - Refer to each file of No. 2 and reflect the definitions which have been changed from the installation of the previous version of the Storage Cruiser's agent to the /etc/opt/FJSVssage directory.

       Migration is not required for files whose definitions have not been changed. Use the new definition files.
     - Copy the file of No. 3 and create /opt/FJSVssage/lib/defusr.dat.

       This is not required if the file was not backed up in step 1.

6. Reload the server information using the Web Console.

See

For information on reloading server information, refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version.

Chapter 6 Upgrading Storage Cruiser Version 15.x

This chapter describes the upgrade procedure for Storage Cruiser Version 15.x.

To upgrade Storage Cruiser Version 15.x to this version, install the ETERNUS SF Manager.

Point

- If upgrading Storage Cruiser, ensure that the Storage Cruiser's manager version is the same or higher than the Storage Cruiser's agent version.
- If AdvancedCopy Manager and AdvancedCopy Manager Copy Control Module are both installed on the same server, when upgrading, both AdvancedCopy Manager and AdvancedCopy Manager Copy Control Module will be upgraded. Therefore, perform backups of the previous versions before starting the upgrade.

6.1 Upgrading the Storage Cruiser's manager (for Windows)

This section describes the upgrade procedure for the Storage Cruiser's manager for Windows.

Note

For the Windows Server 2003, the procedure below cannot be used for the upgrade procedure.
When performing an upgrade for a Windows Server 2003, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware. If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.
3. Install this product version.

6.1.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

6.1.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the Storage Cruiser's manager, as described below.

1. Checking the Symfoware

   The Symfoware product is bundled with this product. If Symfoware is already installed on the server where the upgrade will be performed, check the Symfoware environment before starting the upgrade.

   See

   For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.
2. Stopping the service of ETERNUS SF Manager

   Execute the following batch file.

```
$INS_DIR\Common\bin\Stop_ESFservice.bat
```

$INS_DIR is the program directory specified at the ETERNUS SF Manager installation.

3. When using the ETERNUS SF Storage Cruiser Optimization option, stop the Optimization option.

   From Windows [Services], stop the "ETERNUS SF Storage Cruiser Optimization option".

4. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, stop the Provider function.

   On the Windows Service screen, stop the "ETERNUS Information Provider".

5. Backing up the Windows system

Point

If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the Windows system before performing the upgrade.
If a failure occurs during the upgrade, restore the system from the backup.

Note

If the Windows system cannot be backed up, the upgrade procedure described in the section below cannot be performed.
In this case, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware. If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.

3. Install this product version.

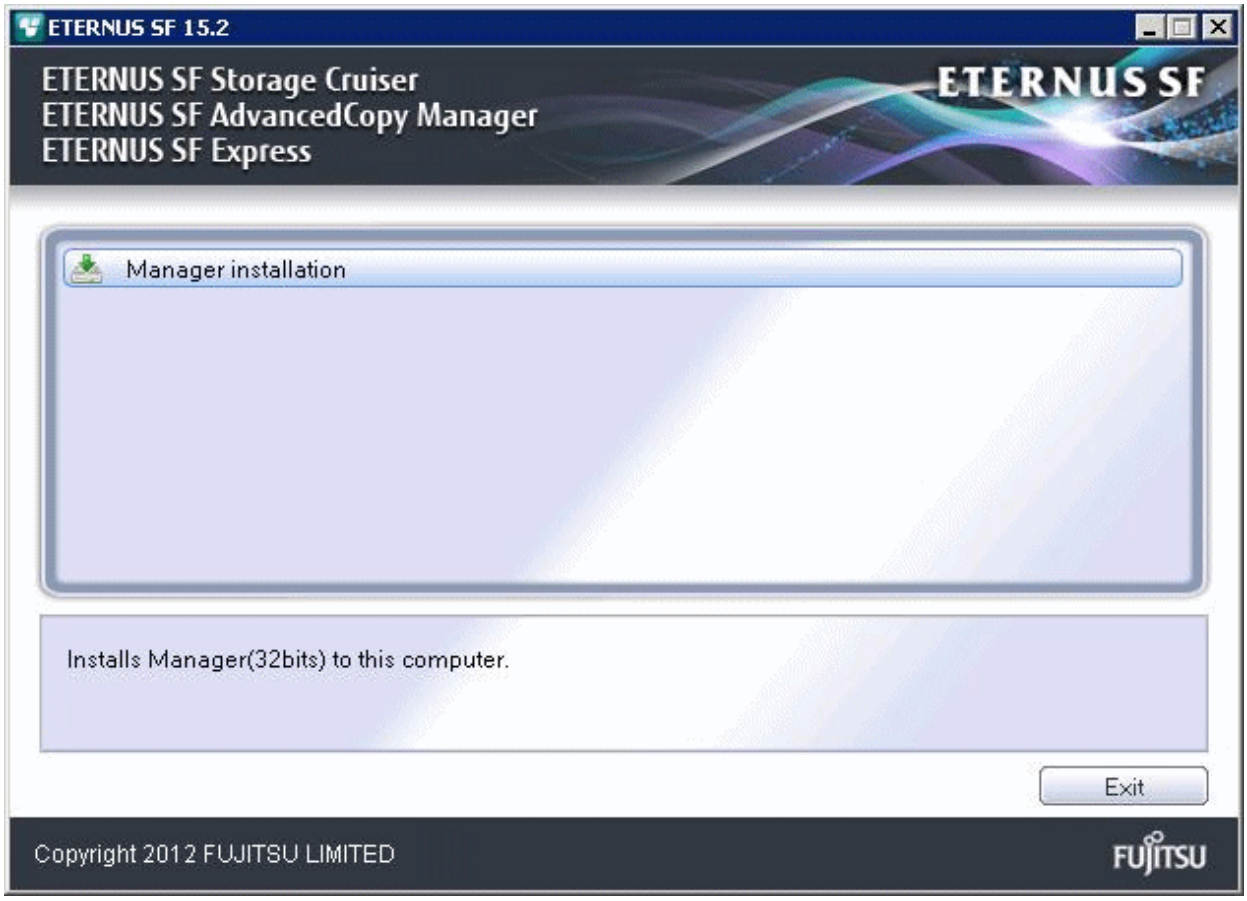
6.1.1.2 Performing the upgrade

The upgrade is performed as follows:

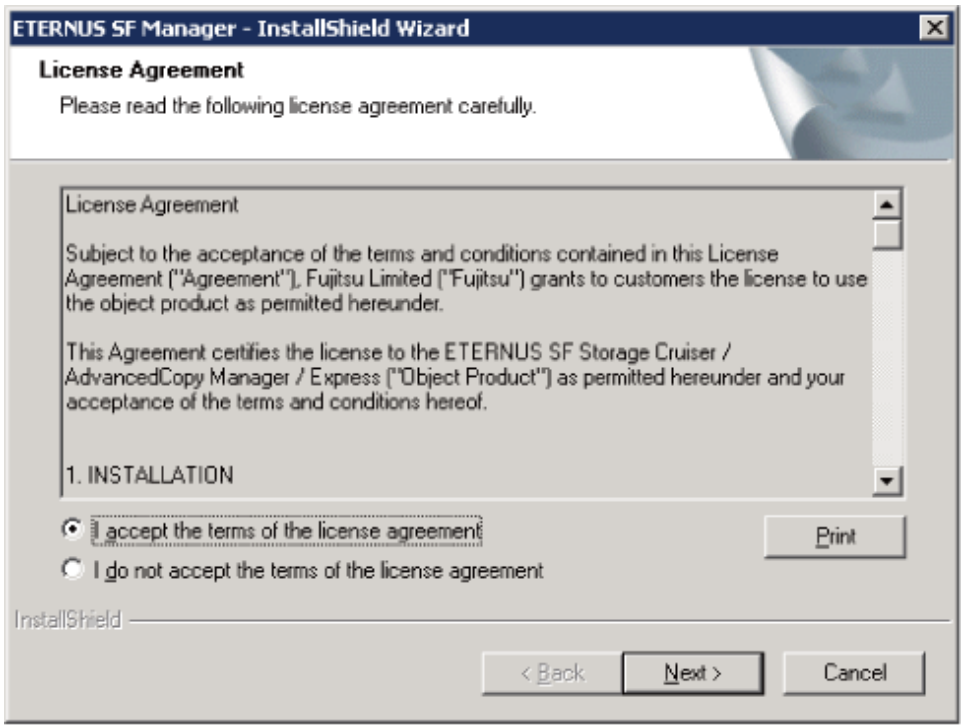
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

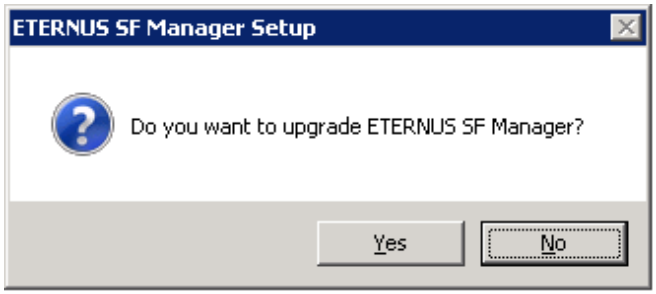
3. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.



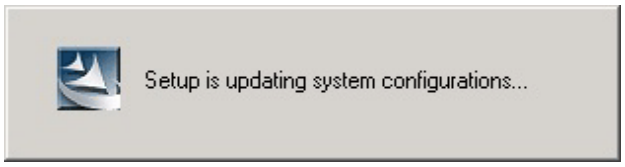
4. Read the terms and conditions of the [License Agreement] page.
   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.



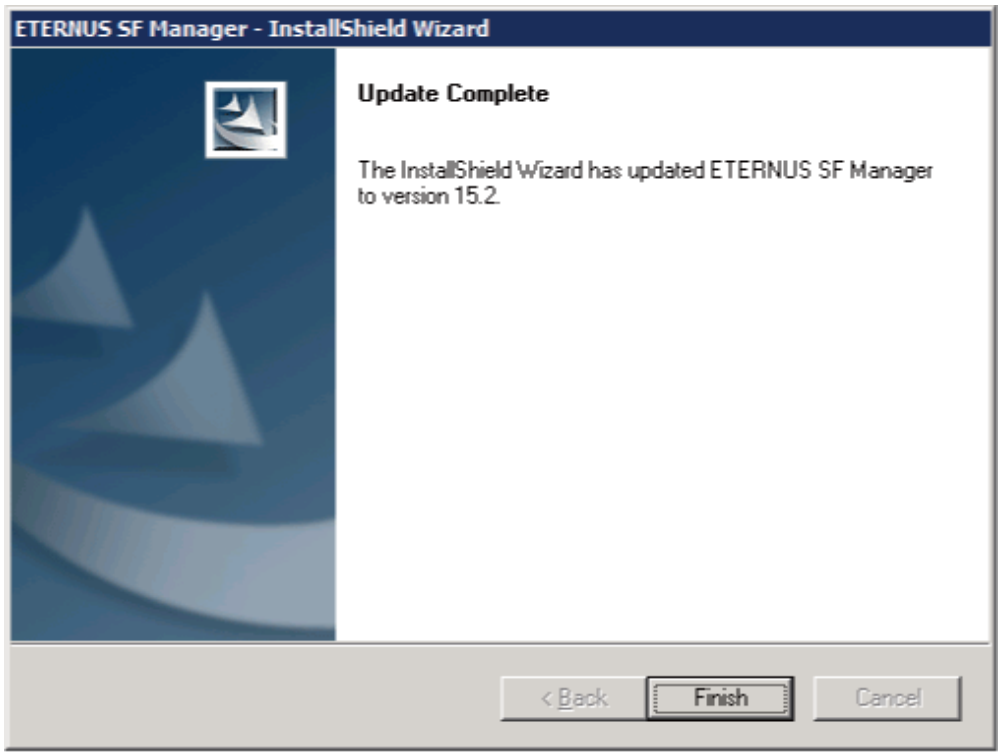
5. The following dialog box will be displayed. Click the [Yes] button.
   To cancel the upgrade, click the [No] button.



6. The system configuration will be updated. Wait for the configuration update process to complete.



7. The following installation wizard page will be displayed. The upgrade is completed. Click the [Finish] button.



8. Eject the DVD-ROM.

6.1.1.3 Tasks to be performed after the upgrade

When the upgrade has been completed, the tasks below need to be performed:

1. Editing the configuration file

   If the following SNMP Trap XML definition file has been customized, re-customize the definition file to use the new features of Storage Cruiser.
   Customize the newly installed definition file:

- 1_3_6_1_4_1_789.xml

See

For information on customizing the SNMP Trap XML definition file, refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide*.

2. Starting the service of ETERNUS SF Manager

   Execute the following batch file:

   ```
   $INS_DIR\Common\bin\Start_ESFservice.bat
   ```

   $INS_DIR is the program directory specified at the ETERNUS SF Manager installation.

3. Starting the service of Symfoware

   Start the SymfoWARE RDA RDBSWSTF services and the SymfoWARE RDB RDBSWSTF services referring to "Starting Services" in "Starting and Stopping Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

4. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, start the Provider function.

   From Windows [Services], start the "ETERNUS Information Provider".

5. When using the ETERNUS SF Storage Cruiser Optimization option, start the Optimization option.

   From Windows [Services], start the "ETERNUS SF Storage Cruiser Optimization option".

6. Resetting the password for the repository access user

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

   Point

   Even if the password has not changed, ensure that you reset the password.

   See

   For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

7. Changing the server information

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

Note

If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

6.1.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

The following values are used in the description:

Directory name	Explanation
$INS_DIR	"Program Directory" specified at the ETERNUS SF Manager installation.
$ETC_DIR	"Environment Directory" specified at the ETERNUS SF Manager installation.

6.1.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the Storage Cruiser's manager, as described below.

1. Checking the Symfoware

   The Symfoware product is bundled with this product. If Symfoware is already installed on the server where the upgrade will be performed, check the Symfoware environment before starting the upgrade.

   See

   For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

2. Check that the ETERNUS SF Manager services are stopped on the secondary node.

   If not stopped, use Failover Cluster Manager on the secondary node to stop the transactions of ETERNUS SF Manager.

3. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, check that the ETERNUS Information Provider service is stopped on the secondary node.

   If not stopped, use Failover Cluster Manager on the secondary node to stop the transactions of the ETERNUS Information Provider.

4. On the primary node, stop the ETERNUS SF Manager services.

   Use Failover Cluster Manager to stop the transactions of ETERNUS SF Manager.
   However, the shared disk for shared data of ETERNUS SF Manager must be online.

5. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, stop the ETERNUS Information Provider service on the primary node.

   Use Failover Cluster Manager to stop the transactions of the ETERNUS Information Provider.
   However, the shared disk for shared data of the ETERNUS Information Provider must be online.

6. If Managed Server transactions coexist in the clustered system, perform the following procedure:

   1. On the secondary node for a target transaction, check that the Managed Server transactions are stopped.

      If not stopped, use the Failover Cluster Manager to stop Managed Server transactions on the secondary node.
      If multiple Managed Server transactions exist, perform this procedure on each secondary node for Managed Server transactions.

   2. On the primary node for a target transaction, stop the Managed Server transaction.

      Use the Failover Cluster Manager to stop Managed Server transactions.
      However, the shared disk for shared data of Managed Server transactions must be online.
      If multiple Managed Server transactions exist, perform this procedure on each primary node for Managed Server transaction.

7. Stop the local transactions on all the nodes, perform the following procedure:

    1. Select [Control Panel] > [Administrative Tools] > [Services].
    2. Select "AdvancedCopy Manager COM Service" and click the [Stop] button.

8. Back up the environment and data.

    - On the primary and secondary nodes, back up the Windows system.
    - On the primary node, back up the shared disk for shared data of ETERNUS SF Manager.
    - If Managed Server transactions coexist in the clustered system, back up the shared disk for shared data of Managed Server transactions on each primary node for target transaction.

    Point

    If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the following before the upgrade.

    - Windows system
    - Shared disk for shared data of ETERNUS SF Manager
    - Shared disk for shared data of Managed Server transactions

    If a failure occurs during the upgrade, restore the system from the backup.

9. On the primary node, check that SymfoWARE RDB RDBSWSTF services are started.
   If not started, refer to "Starting Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)*.

Note

If the Windows system cannot be backed up, the upgrade procedure described in the section below cannot be performed.
In this case, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware.
   If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.
3. Install this product version.

6.1.2.2 Performing the upgrade (Primary node)

The following describes the upgrade procedure for the primary node.

1. Log on to the server using Administrator privileges.
2. Save the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\sys\sys.properties).

   Copy it to any directory other than the installation destination directory for AdvancedCopy Manager CCM.
   The saved file is required for post-Upgrade Installation.
3. Restore the original file of the AdvancedCopy Manager CCM environment setting file (sys.properties).

   Overwrite the original environment setting file with the copy destination file.

Original environment setting file	Copy destination file
$INS_DIR\CCM\noncluster\sys\sys.properties	$INS_DIR\CCM\sys\sys.properties

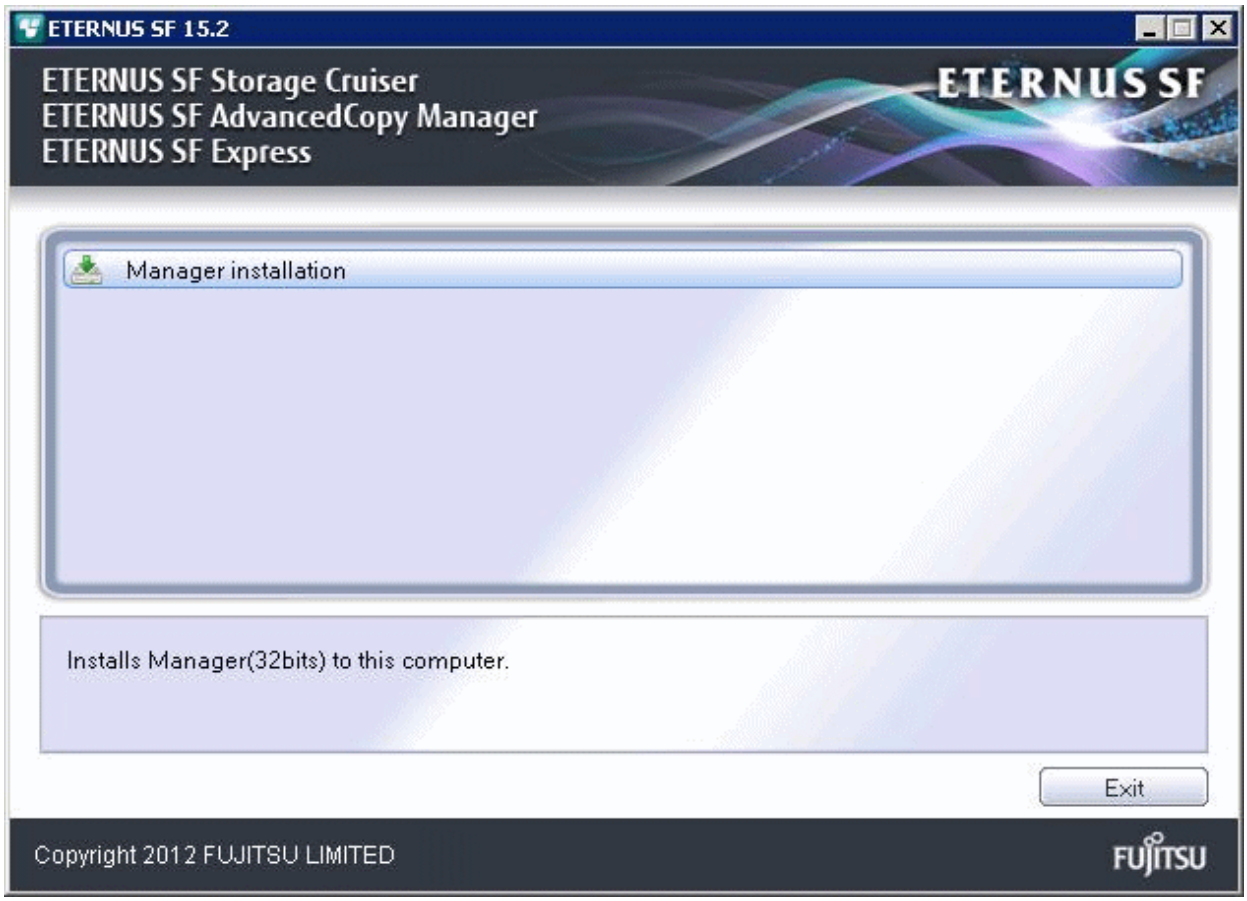
4. Save the generic script for AdvancedCopy Manager CCM.

   If stored the generic script under the bin directory of the program directory for AdvancedCopy Manager CCM according to "Preparation of generic script for AdvancedCopy Manager CCM" in the *ETERNUS SF Cluster Environment Setup Guide* for the relevant previous version for the corresponding operating system and node, copy it to any directory other than the installation destination directory for AdvancedCopy Manager CCM.
   The saved file is required for post-Upgrade Installation.

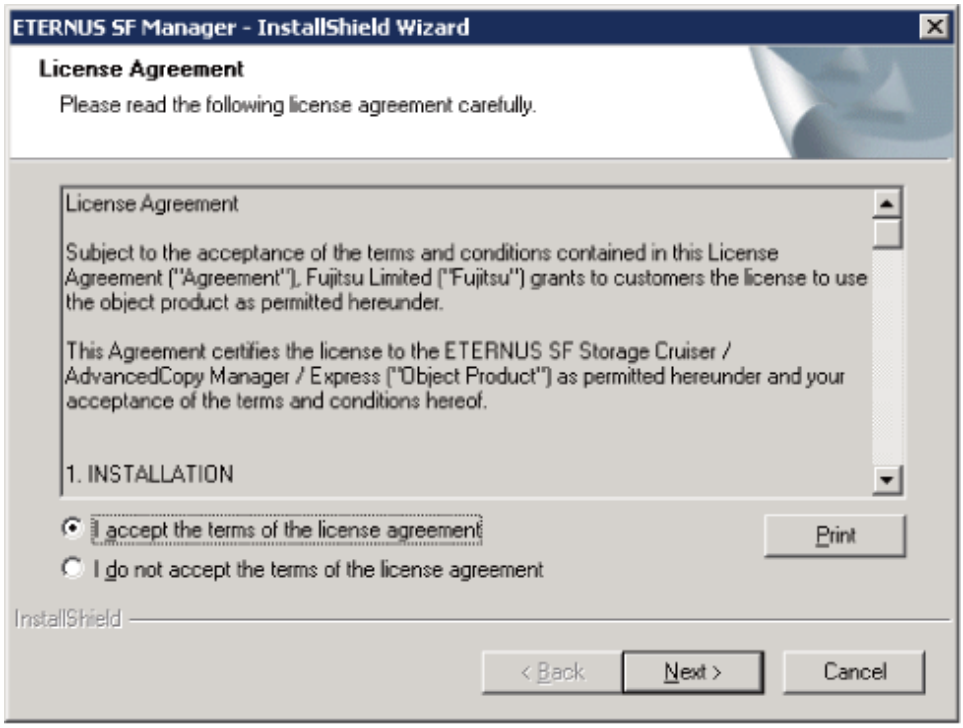
5. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

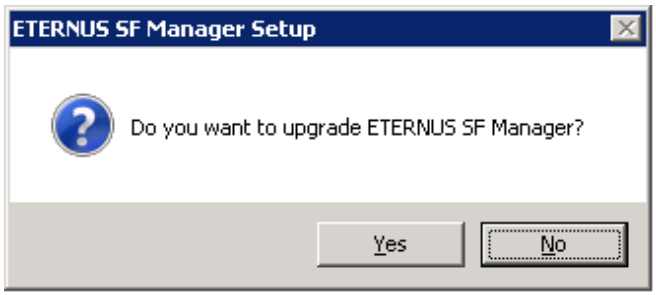
6. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.



7. Read the terms and conditions of the [License Agreement] page.
   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.

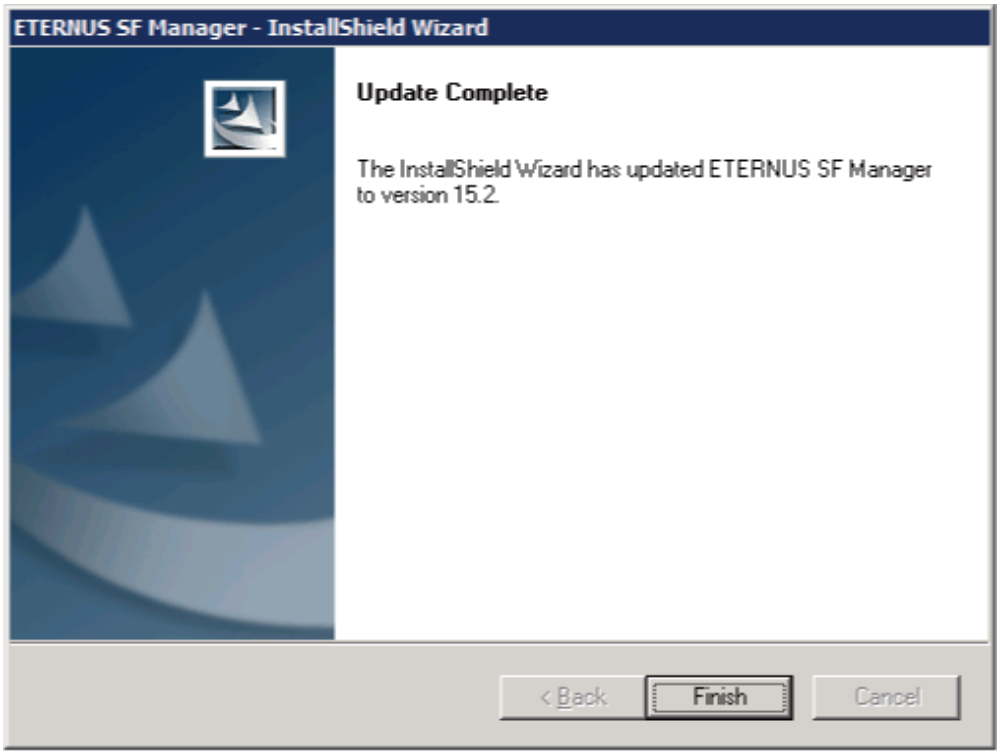


8. The following dialog box will be displayed. Click the [Yes] button.
   To cancel the upgrade, click the [No] button.



9. The system configuration will be updated. Wait for the configuration update process to complete.

10. The following installation wizard page will be displayed. The upgrade is completed. Click the [Finish] button.



11. Eject the DVD-ROM.

6.1.2.3 Tasks to be performed after the upgrade (Primary node)

When the upgrade has been completed, the tasks below need to be performed:

1. Check that SymfoWARE RDB RDBSWSTF services are stopped.
   If not stopped, refer to "Stopping Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)*.

2. Restore the AdvancedCopy Manager CCM environment setting file.

   Overwrite the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\sys\sys.properties) saved in step 2 of "6.1.2.2 Performing the upgrade (Primary node)" with the file after the upgrade.

3. Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\micc\sys\.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

*1: Specify the value of stxs_etcdir set to the $INS_DIR\CCM\noncluster\micc\sys\.install.sys file for *upgradedDir*.

Note

- Do not change anything other than the stxs_etcdir line in the $INS_DIR\CCM\micc\sys\.install.sys file.
- The $INS_DIR\CCM\noncluster\micc\sys\.install.sys file is for reference only, do not edit.

4. Restore the generic script for AdvancedCopy Manager CCM.

   If the generic script is saved in step 4 of "6.1.2.2 Performing the upgrade (Primary node)", copy the saved generic script to the directory that stored the generic script according to "Preparation of generic script for AdvancedCopy Manager CCM" in the *ETERNUS SF Cluster Environment Setup Guide* for the relevant previous version for the corresponding operating system and node.

5. Edit the following environment setting files for AdvancedCopy Manager on the shared disk for shared data of ETERNUS SF Manager:

   - <*Drive of shared disk for shared data of ETERNUS SF Manager*>:\etc\opt\swstorage\clsetup.ini
   - <*Drive of shared disk for shared data of ETERNUS SF Manager*>:\etc\opt\swstorage\etc\swstg.ini

   Change the version information within each file, as follows:

   For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

   For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

   Note

   Do not change anything other than the version information.

6. If Managed Server transactions exist in the clustered system, edit the environment setting files for AdvancedCopy Manager on the shared disk for Managed Server transactions shared data, on the primary node for a target service.

   On the primary node for target transactions, edit the following files:

   - <*Drive of shared disk for shared data of Managed Server transactions*>:\etc\opt\swstorage\clsetup.ini
   - <*Drive of shared disk for shared data of Managed Server transactions*>:\etc\opt\swstorage\etc\swstg.ini

   Change the version information within each file, as follows:

   For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

   For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

   Note

   Do not change anything other than the version information.

7. If the SNMP Trap XML definition file has been customized, re-customize the definition file to use the new features of Storage Cruiser.
   Customize the newly installed definition file:

   - 1_3_6_1_4_1_789.xml

   See

   For information on customizing the SNMP Trap XML definition file, refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide*.

6.1.2.4 Performing the upgrade (Secondary node)

Perform the upgrade for the secondary node.
The upgrade procedure is the same as that for the primary node. Refer to "6.1.2.2 Performing the upgrade (Primary node)".

6.1.2.5 Tasks to be performed after the upgrade (Secondary node)

When the upgrade has been completed, the tasks below need to be performed:

1. Restore the AdvancedCopy Manager CCM environment setting file.

   Overwrite the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\sys\sys.properties) saved in step 2 of "6.1.2.2 Performing the upgrade (Primary node)" with the file after the upgrade.

2. Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\micc\sys\.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

*1: Specify the value of stxs_etcdir set to the $INS_DIR\CCM\noncluster\micc\sys\.install.sys file for *upgradedDir*.

Note

- Do not change anything other than the stxs_etcdir line in the $INS_DIR\CCM\micc\sys\.install.sys file.
- The $INS_DIR\CCM\noncluster\micc\sys\.install.sys file is for reference only, do not edit.

6.1.2.6 Starting ETERNUS SF Manager

After performing "6.1.2.3 Tasks to be performed after the upgrade (Primary node)" and "6.1.2.5 Tasks to be performed after the upgrade (Secondary node)", perform the following procedure:

1. Start ETERNUS SF Manager services on the primary node.

   Use Failover Cluster Manager to start the transactions of ETERNUS SF Manager.

2. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, start the ETERNUS Information Provider service on the primary node.

   Use Failover Cluster Manager to start the transactions of the ETERNUS Information Provider.

3. If Managed Server transactions exist in a clustered system, start the Managed Server transactions in the primary node for a target transaction.

   Use Failover Cluster Manager to start the Managed Server transactions.
   If multiple Managed Server transactions exist, apply this procedure for each Managed Server transaction.

4. Start the local transactions on all the nodes, perform the following procedure:

   1. Select [Control Panel] > [Administrative Tools] > [Services].
   2. Select "AdvancedCopy Manager COM Service" and click the [Start] button.

5. Reset the password for the repository access user in the primary node.

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

Point

Even if the password has not changed, ensure that you reset the password.

See

For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

6. Change the server information in the primary node.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

7. If Managed Server transactions exist in the clustered system, change the server information.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.

   This operation should be performed on the primary node for Management Server transactions.
   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

Note

If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

6.2 Upgrading the Storage Cruiser's manager (for Solaris, Linux)

This section describes the upgrade procedure for the Storage Cruiser's manager for Solaris and Linux.

6.2.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

6.2.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the Storage Cruiser's manager, as described below.

1. Install of essential package.
   According to the environment in which the upgrade is performed, the packages required should be installed.

   The environment and the package are as follows. The installed package version shall be later than the described versions.

   When the upgrade is performed excluding the following environments, this procedure is not needed.

   - For Red Hat Enterprise Linux 5 (for Intel64), 32-bit AdvancedCopy Manager is installed of the previous version:

     ```
     libXrender-0.9.1-3.1.i386.rpm
     ```

   - For Red Hat Enterprise Linux 6 (for Intel64):

     ```
     libXrender-0.9.5-1.el6.i686.rpm
     ```

   Note

   When libXrender is installed, other packages might be demanded. Install the package (the end of the package name is i386.rpm or i686.rpm) of 32-bit when OS is 64-bit environment.

   The required packages for the installation are included in the OS installation media.

2. Execute the following command to stop the daemon of ETERNUS SF Manager:

   ```
   # /opt/FJSVesfcm/bin/stopesf.sh
   ```

3. When using the ETERNUS SF Storage Cruiser Optimization option, execute the following command to stop the Optimization option daemon:

   ```
   # /opt/FJSVssast/bin/astctl stop
   ```

4. Back up the operating system.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the operating system before performing the upgrade.
   If a failure occurs during the upgrade, restore the system from the backup.

Note

If cannot be backed up the operating system, using the procedure mentioned below cannot perform the Upgrade Installation process. If cannot be backed up the operating system, uninstall the before version product manually, and then install this version of product.

6.2.1.2 Performing the upgrade

The upgrade is performed as follows:

1. Log in to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script.

```
# ./esfinstall.sh
```

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
+-------------------------------------------------------------+
|                       ETERNUS SF V15.2                      |
|                                                             |
|    All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012  |
+-------------------------------------------------------------+


License Agreement

Subject to the acceptance of the terms and conditions contained in this License Agreement
("Agreement"), Fujitsu Limited ("Fujitsu") grants to customers the license to use the obje
ct product as permitted hereunder.

This Agreement certifies the license to the ETERNUS SF Storage Cruiser / AdvancedCopy Mana
ger / Express ("Object Product") as permitted hereunder and your acceptance of the terms a
nd conditions hereof.


1. INSTALLATION
You are allowed to install and use manager module and agent module of the Object Product o
n any computer connected to the Storage Device directly or through network and you are als
o allowed to install and use client module of the Object Product on any computer.

2. ARCHIVAL COPY
You may make one (1) archival copy of the Object Product.

3. EMBEDDING
If the Object Product is expected to be used as embedded in another program, you may embed
the Object Product, in whole or in part, in such other program, in accordance with the pr
ocedure described in the applicable documentation.

4. NO ASSIGNMENT
You may not rent, lease, sublicense, assign, transfer or create lien against the Object Pr
oduct.

5. MODIFICATION
You may not modify or, except to the extent expressly permitted by applicable law, reverse
engineer (including, without limitation, decompile and disassemble) the Object Product, a
nd you may not permit others to do so.

6. LIMITED WARRANTY
(a) You acknowledge that Fujitsu cannot guarantee that your use of the Object Product will
be uninterrupted, that the Object Product will be error free or that all Product errors w
ill be corrected. However, if within ninety (90) days following your acquisition of the Ob
ject Product you notify the reseller from which you have acquired the Object Product of ph
ysical defects of the media containing the Object Product, Fujitsu will, at its sole discr
```

```
etion, correct the non-conformance or provide you with information necessary to correct th
e non-conformance, or replace the defective media with a new media. Only if you inform suc
h reseller of your problem with the Object Product during the above mentioned warranty per
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```

7. The following upgrade message will be displayed.
   To continue the upgrade, enter "y". To discontinue, enter "q".

```
Do you want to upgrade? [y,q]:
```

8. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

9. Change to a directory other than the DVD-ROM.
   Example:

```
# cd
```

10. Unmount the DVD-ROM.
    Example:

```
# umount /mnt/dvd
```

11. Eject the DVD-ROM.

The upgrade for the Storage Cruiser's manager is complete.

6.2.1.3 Tasks to be performed after the upgrade

When the upgrade has been completed, the tasks below need to be performed:

1. Execute the following command to start the daemon of ETERNUS SF Manager.

   ```
   # /opt/FJSVesfcm/bin/startesf.sh
   ```

2. When using the ETERNUS SF Storage Cruiser Optimization option, execute the following command to start the Optimization option daemon.

   ```
   # /opt/FJSVssast/bin/astctl start
   ```

3. Reset the password for the repository access user.

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

   Point

   Even if the password has not changed, ensure that you reset the password.

   See

   For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

4. Change the server information.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

6.2.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

Note

If Cluster Unsetup is executed after upgrading from Version 15.0B to this version, the cluster resources and scripts created by the old version's commands starting with "stgclset" will not be deleted.

6.2.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the Storage Cruiser's manager, as described below.

1. Install of essential package.
   According to the environment in which the upgrade is performed, the packages required for primary node and secondary node should be installed.

   The environment and the package are as follows. The installed package version shall be later than the described versions.

   When the upgrade is performed excluding the following environments, this procedure is not needed.

   - For Red Hat Enterprise Linux 5 (for Intel64), 32-bit AdvancedCopy Manager is installed of the previous version:

     ```
     libXrender-0.9.1-3.1.i386.rpm
     ```

   - For Red Hat Enterprise Linux 6 (for Intel64):

     ```
     libXrender-0.9.5-1.el6.i686.rpm
     ```

   Note

   When libXrender is installed, other packages might be demanded. Install the package (the end of the package name is i386.rpm or i686.rpm) of 32-bit when OS is 64-bit environment.

   The required packages for the installation are included in the OS installation media.

2. Check that the cluster application (transaction) has stopped on the secondary node.

   Check whether the cluster application (transaction) to which ETERNUS SF Manager belongs has stopped.
   If not stopped, stop the cluster application (transaction).

   For information on stopping the cluster application (transaction), refer to the relevant cluster software manuals.

3. Stop the cluster application (transaction) on the primary node.

   Stop the cluster application (transaction) to which ETERNUS SF Manager belongs.
   However, the shared disk for shared data of ETERNUS SF Manager must be mounted.

   For information on stopping the cluster application (transaction), refer to the relevant cluster software manuals.

4. If Managed Server transactions exist in a clustered system, perform the following.

   1. On the secondary node for the target transactions, check that the Managed Server transactions have stopped.

      If not stopped, stop them on the secondary node.
      If multiple Managed Server transactions exist, perform this procedure for each secondary node for Managed Server transaction.

      For information on stopping the Managed Server transactions, refer to the relevant cluster software manuals.

   2. On the primary node for the target transactions, stop the Managed Server transactions.

      Stop the Managed Server transactions by referring to the relevant cluster software manuals.
      However, the shared disk for shared data of Managed Server transactions must be mounted.
      If multiple Managed Server transactions exist, perform this procedure for each primary node for Managed Server transaction.

5. Stop the local transactions on all the nodes.

   Stop the communication daemon for the local transactions of the AdvancedCopy Manager's manager.

   For information on stopping the daemon, refer to "Starting and stopping the communication daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

6. Back up the environment and data.

   - On the primary and secondary nodes, back up the operating system.
   - On the primary node, back up the shared disk for shared data of ETERNUS SF Manager.
   - If Managed Server transactions exist in a clustered system, backup the shared disk for shared data of Managed Server transactions for each the primary node for Managed Server transactions.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the following before performing the upgrade.

   - Operating system
   - Shared disk for shared data of ETERNUS SF Manager
   - Shared disk for shared data of Managed Server transaction

   If a failure occurs during the upgrade, restore the system from the backup.

7. On the primary node, check that AdvancedCopy Manager's RDB daemon is started.
   If not started, refer to "Starting and stopping the RDB daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for the corresponding operating system.

Note

If cannot be backed up the operating system, using the procedure mentioned below cannot perform the Upgrade Installation process. If cannot be backed up the operating system, uninstall the before version product manually, and then install this version of product.

If the RDB daemon is to be monitored in a clustered system, cancel the monitoring temporarily to perform the upgrade.

6.2.2.2 Performing the upgrade (Primary node)

The following describes the upgrade procedure for the primary node.

1. Login to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script:

```
# ./esfinstall.sh
```

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
+-------------------------------------------------------------+
|                       ETERNUS SF V15.2                      |
|                                                             |
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+-------------------------------------------------------------+


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```

7. The following upgrade message will be displayed.
   To continue the upgrade, enter "y". To discontinue, enter "q".

```
Do you want to upgrade? [y,q]:
```

8. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

9. Change to a directory other than the DVD-ROM.
   Example:

```
# cd
```

10. Unmount the DVD-ROM.
    Example:

```
# umount /mnt/dvd
```

11. Eject the DVD-ROM.

6.2.2.3 Tasks to be performed after the upgrade (Primary node)

When the upgrade has been completed, the tasks below need to be performed:

1. Check that AdvancedCopy Manager's RDB daemon is stopped.
   Stop the RDB daemon by referring to "Starting and stopping the RDB daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for the corresponding operating system.

   Note

   If you have temporarily cancelled monitoring setting of the RDB daemon using "6.2.2.1 Preparing for the upgrade", set monitoring to RESUME status.

2. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file (/opt/FJSVccm/micc/sys/.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

   *1: Specify the value of stxs_etcdir set to the /opt/FJSVccm/noncluster/micc/sys/.install.sys file for *upgradedDir*.

   Note

   - Do not change anything other than the stxs_etcdir line in the /opt/FJSVccm/micc/sys/.install.sys file.
   - The /opt/FJSVccm/noncluster/micc/sys/.install.sys file is for reference only, do not edit.

3. Edit the following environment setting files for ETERNUS SF Manager.

   - <*Mount point of shared disk for shared data of ETERNUS SF Manager*>/etc/opt/swstorage/clsetup.ini
   - <*Mount point of shared disk for shared data of ETERNUS SF Manager*>/etc/opt/swstorage/swstg.ini

   Change the version information within each file, as follows:

   For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

   For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

   Note

   Do not change anything other than the version information.

4. If Managed Server transactions exist in the clustered system, edit the environment setting files for AdvancedCopy Manager on the shared disk for shared data of Managed Server transactions, on the primary node for a target service.

   On the primary node for target transactions, edit the following files:

   - <*Mount point of shared disk for shared data of Managed Server transaction*>/etc/opt/swstorage/clsetup.ini

- <*Mount point of shared disk for shared data of Managed Server transaction*>/etc/opt/swstorage/swstg.ini

Change the version information within each file, as follows:

For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

Note

Do not change anything other than the version information.

5. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the line starting with "System=" in /opt/FJSVswstf/cluster/swcluster.ini as follows:

```
System=GEN
```

Note

Do not change anything other than the line starting with "System=".

6. If the SNMP Trap XML definition file has been customized, re-customize the definition file to use the new features of Storage Cruiser.
   Customize the newly installed definition file:

   - 1_3_6_1_4_1_789.xml

See

For information on customizing the SNMP Trap XML definition file, refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide*.

6.2.2.4 Performing the upgrade (Secondary node)

Perform the upgrade for the secondary node.
The upgrade procedure is the same as that for the primary node. Refer to "6.2.2.2 Performing the upgrade (Primary node)".

6.2.2.5 Tasks to be performed after the upgrade (Secondary node)

When the upgrade has been completed, the tasks below need to be performed:

1. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file (/opt/FJSVccm/micc/sys/.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

*1: Specify the value of stxs_etcdir set to the /opt/FJSVccm/noncluster/micc/sys/.install.sys file for *upgradedDir*.

Note

- Do not change anything other than the stxs_etcdir line in the /opt/FJSVccm/micc/sys/.install.sys file.
- The /opt/FJSVccm/noncluster/micc/sys/.install.sys file is for reference only, do not edit.

2. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the line starting with "System=" in /opt/FJSVswstf/cluster/swcluster.ini as follows:

```
System=GEN
```

Note

Do not change anything other than the line starting with "System=".

6.2.2.6 Starting the Managed Server transactions

After performing "6.2.2.3 Tasks to be performed after the upgrade (Primary node)" and "6.2.2.5 Tasks to be performed after the upgrade (Secondary node)", perform the following procedure:

1. Start the cluster application (transaction) on the primary node.

   Start the cluster application (transaction) to which ETERNUS SF Manager belongs.
   For information on starting the cluster application (transaction), refer to the relevant cluster software manuals.

2. If Managed Server transactions exist in a clustered system, start the Managed Server transactions on the primary node for the target transactions.

   Start the Managed Server transactions by referring to the relevant cluster software manuals.

   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

3. Start the local transactions on all the nodes.

   Start the communication daemon for local transactions of AdvancedCopy Manager's manager.

   For information on starting the daemon, refer to "Starting and stopping the communication daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

4. Reset the password of the repository access user.

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

Point

Even if the password has not changed, ensure that you reset the password.

See

For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

5. Change the server information.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information.
   When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

6. If Managed Server transactions exist in a clustered system, change the server information of the Managed Server transactions.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.

   This operation should be performed on the primary node for Management Server transactions.
   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

6.2.3 Resuming operation

When the tasks described above have been performed, the upgrade of the Storage Cruiser's manager is complete. Restart the Storage Cruiser operation.

However, when you change the SELinux setting to "enforcing" mode during the upgrade in the Linux environment, refer to the following manual and restart the operation after the installation of the SELinux policy module for snmptrapd.

- "SNMP Trap setting (for Linux)" in the *ETERNUS SF Installation and Setup Guide* for this version

Note

If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

6.3 Upgrading the Storage Cruiser's agent (for Windows)

This section describes the upgrade procedure for Storage Cruiser's agent for Windows.

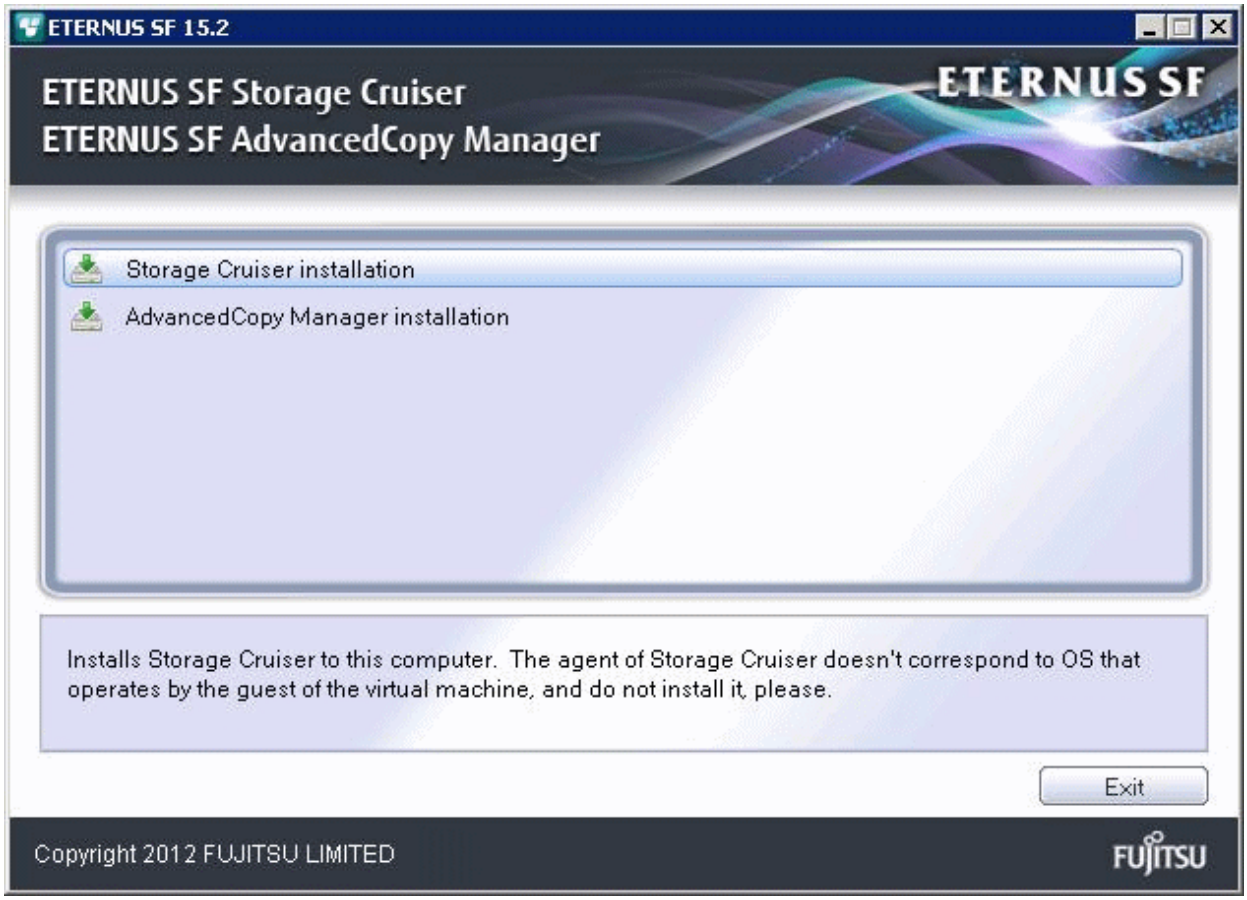
The upgrade is performed as follows:

1. Back up the Storage Cruiser's agent settings information.

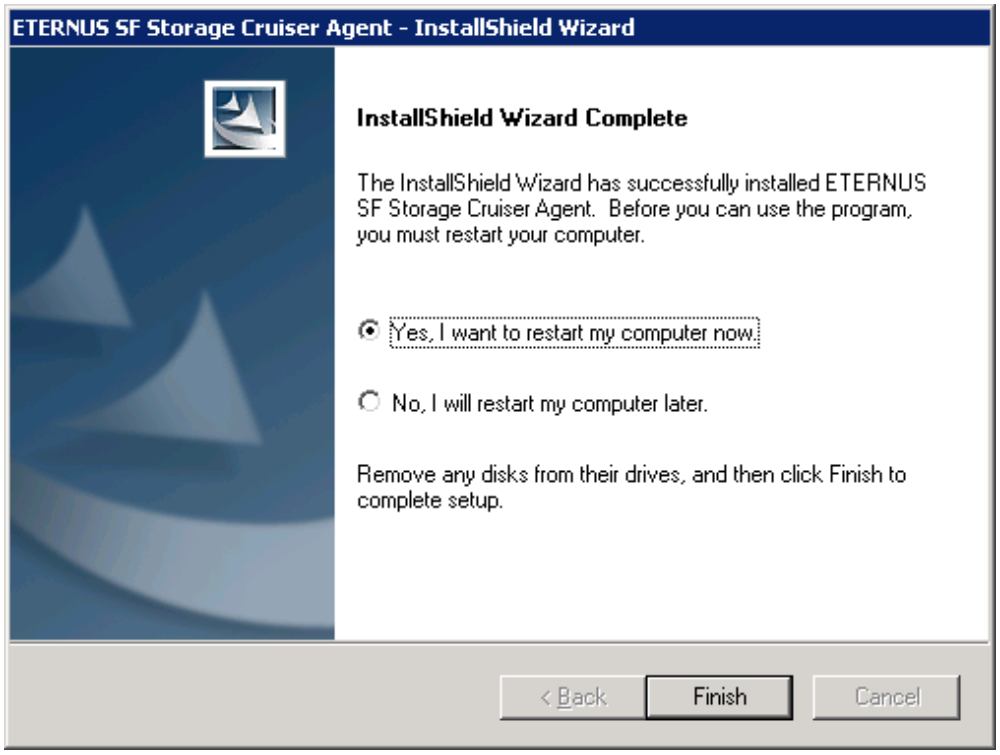
   If customization is not performed on "Correlation.ini Parameter" in the *ETERNUS SF Storage Cruiser Operation Guide*, backing up is not required.

No.	Settings information to be backed up	File to be backed up
1	Agent definition file	$ENV_DIR\Agent\etc\Correlation.ini ($ENV_DIR is "Environment Directory" specified at the previous Storage Cruiser's agent installation.)

2. Log on to the server using Administrator privileges.
3. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Agent Program and Manual)" for this version into the DVD-ROM drive.
4. The following window will be displayed. Click the [Storage Cruiser installation] button.



5. When the upgrade is completed, the following installation wizard page will be displayed. Eject the DVD-ROM, and then click the [Finish] button.



6. Reload the server information using the Web Console.

See

For information on reloading server information, refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version.

7. If the Storage Cruiser's agent configuration information is saved in step 1, restore the configuration information.

   Refer to the file of No. 1 (in the table above) and reflect the definitions which have been changed from the installation of the previous version of the Storage Cruiser's agent to the $ENV_DIR\Agent\etc\Correlation.ini file.

See

For information on customizing Correlation.ini parameters, refer to "Correlation.ini Parameter" in the *ETERNUS SF Storage Cruiser Operation Guide*.

6.4 Upgrading the Storage Cruiser's agent (for Solaris)

This section describes the upgrade procedure for Storage Cruiser's agent for Solaris.

The upgrade is performed as follows:

Point

For performing the upgrade in single-user mode:

Check that the local file system is already mounted before the installation. If it is not mounted yet, mount the local file system.

```
# /usr/sbin/mountall -l
```

1. Log in to the server as a superuser.
2. Execute the following command to stop the daemon:

   ```
   # /opt/FJSVssage/bin/pstorageagt
   ```

3. Execute the following command to confirm that the daemon has stopped:

   ```
   # /usr/bin/ps -ef | grep FJSVssage
   ```

   If not stopped, execute the following command to stop it forcibly:

   ```
   # /usr/bin/kill -9 <Process ID of daemon>
   ```

4. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack (Agent Program and Manual)" for this version into the DVD-ROM drive and mount the DVD-ROM.

   In command example below, the device name of the DVD-ROM drive is mounted as /dev/dsk/c0t4d0s0. The device name for the DVD-ROM drive, however, may be different for your particular device.

   ```
   # mount -F hsfs -o ro /dev/dsk/c0t4d0s0 <DVD-ROM mount point>
   ```

5. Execute the following command:

   ```
   # cd <DVD-ROM mount point>/Agent_unix/Storage_Cruiser/Solaris
   # ./scagtinstall.sh
   ```

6. The following message will be displayed. To continue, enter "y". To discontinue, enter "n" or "q".

   ```
   ETERNUS SF Storage Cruiser 15.2
   Copyright FUJITSU LIMITED 2006-2012
   This program will upgrade "ETERNUS SF Storage Cruiser" Agent on your system.

   Do you want to continue the upgrade of this package? [y,n,?,q]
   ```

7. If "y" was entered in step 6, the following message will be displayed. To continue, enter "y". To discontinue, enter "n".

   ```
   Using </opt> as the package base directory.
   ## Processing package information.
   ## Processing system information.
   ## Verifying disk space requirements.
   ## Checking for conflicts with packages already installed.
   ## Checking for setuid/setgid programs.

   This package contains scripts which will be executed with super-user
   permission during the process of installing this package.

   Do you want to continue with the installation of <FJSVssage> [y,n,?]
   ```

8. If "y" was entered in step 7, the upgrade will continue.

   If the upgrade completes normally, the following message will be displayed.

   ```
   Installing Storage System Agent for ETERNUS SF as <FJSVssage>
   ...
   Upgrade of <FJSVssage> was successful.
   INFO  : "ETERNUS SF Storage Cruiser" Agent was upgraded successfully.
   ```

   If there is an error during the upgrade, the following message will be displayed.

   ```
   ERROR : not privileged
   or
   ```

```
ERROR : "ETERNUS SF Storage Cruiser" Agent cannot be installed in non-global zone.
or
ERROR : Upgrading FJSVssage was failed.
```

9. Eject the DVD-ROM.
10. Execute the following command to start the daemon:

```
# /opt/FJSVssage/bin/sstorageagt
```

11. Reload the server information using the Web Console.

The upgrade of Storage Cruiser's agent for Solaris is completed.

6.5 Upgrading the Storage Cruiser's agent (for RHEL5/RHEL6, SUSE Linux Enterprise Server 11)

This section describes the upgrade procedure for Storage Cruiser's agent for RHEL5/RHEL6, SUSE Linux Enterprise Server 11.

The upgrade is performed as follows:

1. Log in to the server as a superuser.
2. Execute the following command to stop the daemon:

```
# /opt/FJSVssage/bin/pstorageagt
```

3. Execute the following command to confirm that the daemon has stopped:

```
# /usr/bin/ps -ef | grep FJSVssage
```

   If not stopped, execute the following command to stop it forcibly:

```
# /usr/bin/kill -9 <Process ID of daemon>
```

4. Back up the Storage Cruiser's agent settings information. (For SUSE Linux Enterprise Server 11 only)

   If customization is not performed on "Correlation.ini Parameter" in the *ETERNUS SF Storage Cruiser Operation Guide*, backing up is not required.

No.	Settings information to be backed up	File to be backed up
1	Agent definition file	/etc/opt/FJSVssage/Correlation.ini

5. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack (Agent Program and Manual)" for this version into the DVD-ROM drive and mount the DVD-ROM.

   In command example below, the device name of the DVD-ROM drive is mounted as /dev/cdrom. The device name for the DVD-ROM drive, however, may be different for your particular device.

```
# mount /dev/cdrom <DVD-ROM mount point>
```

6. Execute the following command:

```
# cd <DVD-ROM mount point>/Agent_unix/Storage_Cruiser/Linux
# /bin/sh ./scagtinstall.sh
```

7. The following message will be displayed. To continue, enter "y". To discontinue, enter "n" or "q".

```
ETERNUS SF Storage Cruiser 15.2
Copyright FUJITSU LIMITED 2006-2012
This program will upgrade "ETERNUS SF Storage Cruiser" Agent on your system.
```

```
Do you want to continue the upgrade of this package? [y,n,?,q]
```

8. If "y" was entered in step 7, the upgrade will continue.

   If the upgrade completes normally, the following message will be displayed.

```
INFO : Starting Upgrade of ETERNUS SF Storage Cruiser ...
...
INFO : Upgrade of <FJSVssage> was successful.
INFO : ETERNUS SF Storage Cruiser Agent was upgraded successfully.
```

   If there is an error during the upgrade, the following message will be displayed.

```
ERROR : not privileged
or
INFO  : Upgrade is terminated.
or
ERROR : Upgrading FJSVssage was failed.
```

9. Eject the DVD-ROM.

10. Execute the following command to start the daemon:

```
# /opt/FJSVssage/bin/sstorageagt
```

11. Reload the server information using the Web Console.

The upgrade of Storage Cruiser's agent for SUSE Linux Enterprise Server 11, RHEL5/RHEL6 is completed.

6.6 Upgrading the Storage Cruiser's agent (for RHEL-AS4/RHEL-ES4, HP-UX, AIX)

This section describes the upgrade procedure for Storage Cruiser's agent for RHEL-AS4/RHEL-ES4, HP-UX, or AIX.

The upgrade is performed as follows:

1. Back up the Storage Cruiser's agent settings information.

No.	Settings information to be backed up	File to be backed up
1	SNMP Trap sending destination address	/var/opt/FJSVssage/sanm.ip
2	Agent definition file	All files under the /etc/opt/FJSVssage directory
3	User definition information	/opt/FJSVssage/lib/defusr.dat *1: If there is no file, backing up is not required.

2. Uninstall the previous version of the Storage Cruiser's agent.

   For details, refer to "Uninstallation of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version.

3. Install this version of the Storage Cruiser's agent.

   For details, refer to "Installation of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for this version.

4. Set up the Storage Cruiser's agent.

   For details, refer to "Setup of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for this version.

5. Restore the Storage Cruiser's agent settings information that was backed up in step 1.

   - Copy the file of No. 1 (in the table above) and create /var/opt/FJSVssage/sanm.ip.

- Refer to each file of No. 2 (in the table above) and reflect the definitions which have been changed from the installation of the previous version of Storage Cruiser's agent to the /etc/opt/FJSVssage directory.

  Migration is not required for files whose definitions have not been changed. Use the new definition files.

- Copy the file of No. 3 (in the table above) and create /opt/FJSVssage/lib/defusr.dat.

  This is not required if the file was not backed up in step 1.

6. Reload the server information using the Web Console.

See

For information on reloading server information, refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version.

The upgrade of Storage Cruiser's agent for RHEL-AS4/RHEL-ES4, HP-UX, or AIX is completed.

Chapter 7 Upgrading AdvancedCopy Manager Version 13.x/14.x

This chapter describes the upgrade procedure for AdvancedCopy Manager Version 13.x and 14.x.

If performing an upgrade to a system environment using Agent-based operation model, perform the upgrade in the following sequence.

1. AdvancedCopy Manager's manager
2. AdvancedCopy Manager's agent

Point

- For AdvancedCopy Manager programs, the Upgrade Installation can be performed for the AdvancedCopy Manager's manager and AdvancedCopy Manager Copy Control Module.

  The AdvancedCopy Manager's agent cannot be upgraded by using the Upgrade Installation.
  For upgrading the AdvancedCopy Manager's agent, perform uninstallation and then perform a new installation of this version.
  For details, refer to "7.2 Upgrading the AdvancedCopy Manager's agent".

- If upgrading AdvancedCopy Manager, ensure that the AdvancedCopy Manager's manager version is the same or higher than the AdvancedCopy Manager's agent version.

- When upgrading AdvancedCopy Manager, the following information cannot be imported from the previous version:

  - User account for the GUI client

- If Storage Cruiser and AdvancedCopy Manager Copy Control Module are both installed on the same server, when upgrading, both Storage Cruiser and AdvancedCopy Manager Copy Control Module will be upgraded at the same time. Therefore, perform backups of the previous versions before starting the upgrade.

Note

The GUI client has been replaced with the Web Console.
If the GUI client is installed, uninstall it.

7.1 Upgrading the AdvancedCopy Manager's manager

This section describes the upgrade procedure for the AdvancedCopy Manager's manager.
To upgrade the AdvancedCopy Manager's manager to this version, install the ETERNUS SF Manager.

7.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's manager, as described below.

7.1.1.1 Backing up the operational environment of the previous version

Back up the AdvancedCopy Manager's manager operational environment using the following procedure:

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, backup the AdvancedCopy Manager operational environment.

Note

The following information cannot continue to be used.

- User account for the GUI client

See

Back up the operational environment by referring to the following table.

Server type	OS	Reference
Storage Management Server	Windows	A.1 Backing up the repository data (for Windows)
	Solaris, Linux	A.2 Backing up the repository data (for Solaris, Linux)
Storage Management Server which also serves as a Storage Server	Windows	Perform the steps in the following order: 1. A.1 Backing up the repository data (for Windows) 2. A.3 Backing up the management information (for Windows)
	Solaris, Linux	Perform the steps in the following order: 1. A.2 Backing up the repository data (for Solaris, Linux) 2. A.4 Backing up the management information (for Solaris, Linux)

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, backup the AdvancedCopy Manager Copy Control Module operational environment.

See

For information on performing a backup, refer to "A.6 Backing up the the environment setting files".

License information

When AdvancedCopy Manager and/or AdvancedCopy Manager Copy Control Module are installed, backup the definition of the license information.

Backup the license management database of ETERNUS SF License Manager by executing "esflm backup" command. For information on the command, refer to the *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide* for the previous version.

Example of executing the command is shown below. The file specified for <*file_name*> will be created as a backup file.

```
> esflm backup <file_name>
Backup of license database was performed successfully
```

7.1.1.2 Checking for available disk space

Ensure that there is enough available disk space on the server where the Upgrade Installation will be performed.
The required disk space for the upgrade is calculated as the "Required disk space for the new version to be installed" minus the "Required disk space for the previous version".

Required disk space for the new version

The space required to install this version of the ETERNUS SF Manager.
For information on the required disk space, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

Required disk space for the previous version

The space required to install the previous version of the AdvancedCopy Manager's manager.
For information on the required disk space, refer to the relevant *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide* for the previous version.

7.1.1.3 Uninstalling incompatible software

Check if any incompatible software for this version of the ETERNUS SF Manager is installed on the server where the upgrade will be performed.
If incompatible software is found, refer to the relevant software manual and uninstall it before starting the upgrade.

For information on the incompatible software, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.1.1.4 Checking Symfoware

The Symfoware product is bundled with this product. If Symfoware is already installed on the server where the upgrade will be performed, check the Symfoware environment before starting the upgrade.

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.1.1.5 Estimating the database size

A database is necessary to operate AdvancedCopy Manager of this version.
The database size must be estimated before starting the upgrade.

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.1.1.6 Registering the repository access user (for Solaris, Linux)

This version of the AdvancedCopy Manager's manager requires registration of the repository access user.
Therefore, register the repository access user before starting the upgrade.

See

For information on registering a user name and password, refer to "Installation procedure" in the *Software Release Guide*.

7.1.1.7 Tuning kernel parameters (for Solaris, Linux)

Kernel parameter tuning must be performed in order to use this version of the AdvancedCopy Manager's manager.
Therefore, perform the necessary kernel parameter tuning before starting the upgrade.

See

For information on tuning, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.1.1.8 Confirming the port number for the communication service (for Solaris, Linux)

This version of the AdvancedCopy Manager's manager uses additional ports.
Therefore, ensure the new ports are available before starting the upgrade.

See

For information on port numbers, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.1.1.9 Preparing for uninstallation

Before starting the upgrade, the following preparation is necessary before uninstalling the previous version.

1. Cancel the configuration information for the Web Server (for using AdvancedCopy Manager Version 13.x on Windows Server 2003 only).

   Cancel the Web Server configuration information as follows:

   1. Log on to the system using Administrator privileges to uninstall AdvancedCopy Manager.
   2. If you configured the Web Server during the previous installation, cancel the Web Server configuration information.
      Execute the following command.

      ```
      C:\> <Program directory>\bin\alias -u
      ```

      For information on the command, refer to "Web server setting and setting cancellation command (alias)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide* for the relevant previous version.

2. Stop the daemon (for Solaris or Linux).

   Execute the following command to stop the daemon of AdvancedCopy Manager on the Management Server (Storage Management Server).

   ```
   # /opt/swstorage/bin/stopacm
   ```

3. Execute the DB unsetup.

   Refer to the following sections to perform the repository database unsetup of the previous version:

- For Windows:

  "A.7 Unsetting up the database"

- For Solaris or Linux:

  "A.8 Cancelling the repository settings"

4. Uninstall Symfoware.

   Uninstall Symfoware if the Symfoware Server that was bundled with the previous version of AdvancedCopy Manager for Windows Server 2003 is being used.

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware. If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.

For clustered systems

For clustered systems, execute cluster unsetup before uninstallation.

See

For information on the cluster unsetup procedure, refer to "Deleting Storage Management Server Transactions and Storage Server Transactions" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide for Cluster Environment* for the relevant previous version.

7.1.2 Performing the upgrade (for Windows)

There are two methods of performing the upgrade, as follows.

- Default installation

  The following configuration is used without the need to input any values.

  - Installation destination

    The "<*System Drive*>:\ETERNUS_SF" directory is used as the root location for the Program Directory, Environment Directory and Work Directory.

  - Port numbers for the various communication services

    11 port numbers are used, as follows:

Service	[Port Registration] display name	Port number
Web Console service	ETERNUS SF Manager Apache service	9855
communication service 1	Communications service 1	1226
communication service 2	Communications service 2	4917
Repository service 1	Repository service 1	2004
Repository service 2	Repository service 2	15432
Remote access service	Remote access service	9851
Exclusive control service	Exclusive control service	9852
Internal use	Internal Port 1 Internal Port 2 Internal Port 3 Internal Port 4	28005 28009 28443 24916

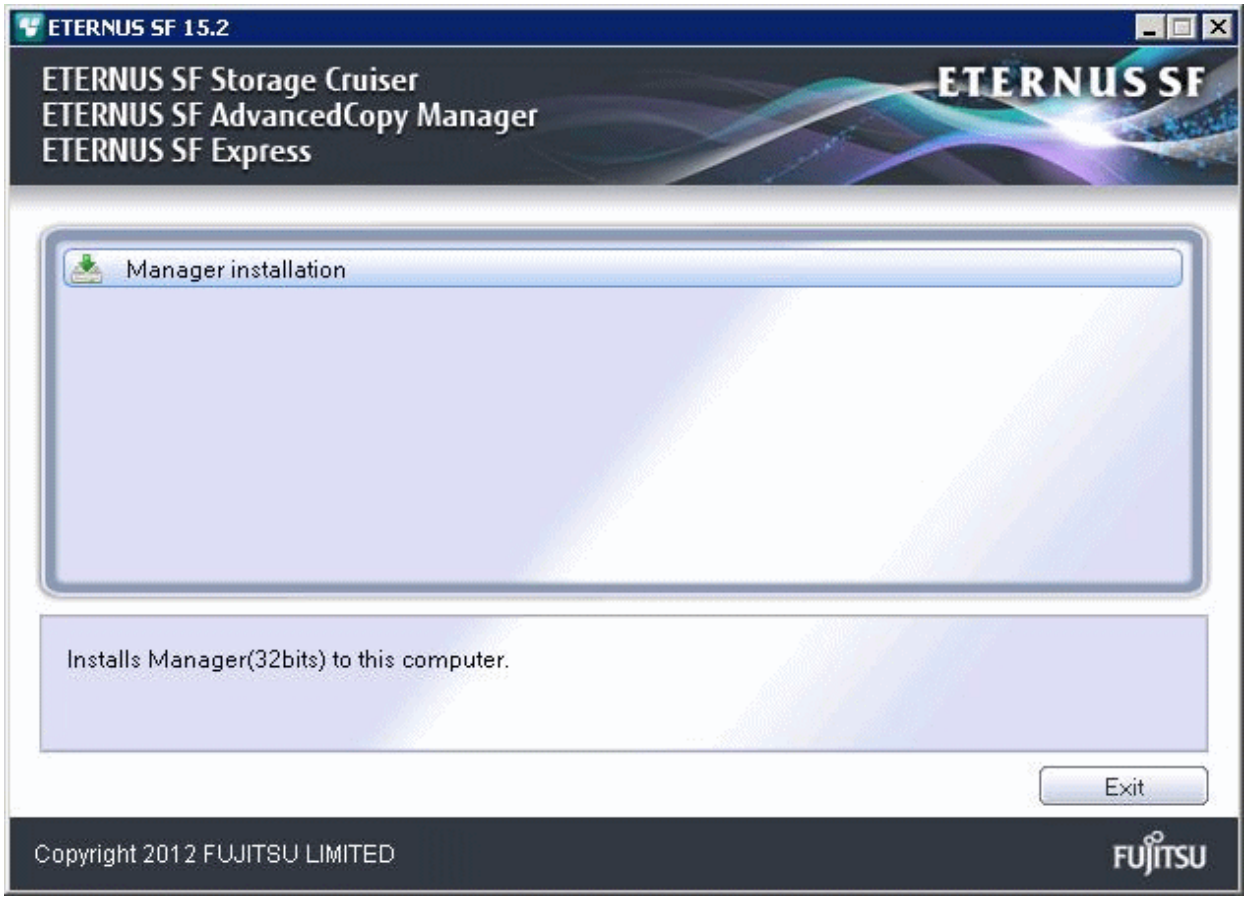
- Custom installation

  The upgrade is performed by manually entering the configuration information into the interface (installation destination and communication service port numbers).

The upgrade is performed as follows:

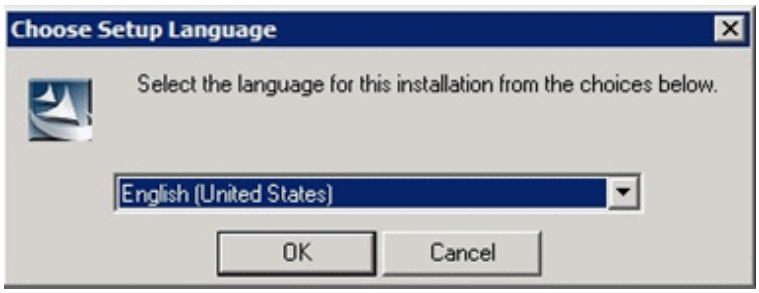
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.
3. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.

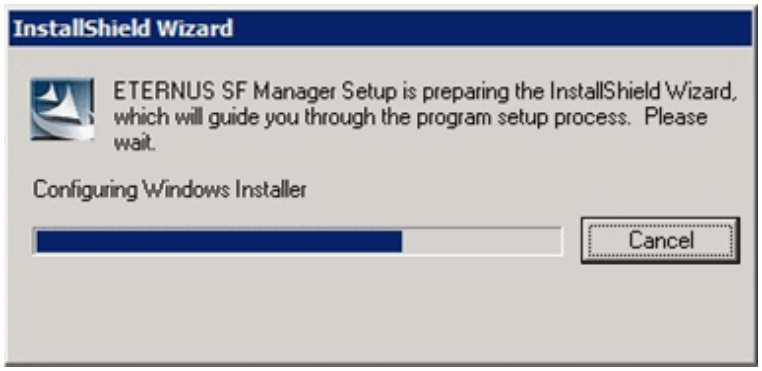


4. The [Choose Setup Language] dialog box will be displayed. Select the appropriate language and click the [OK] button.

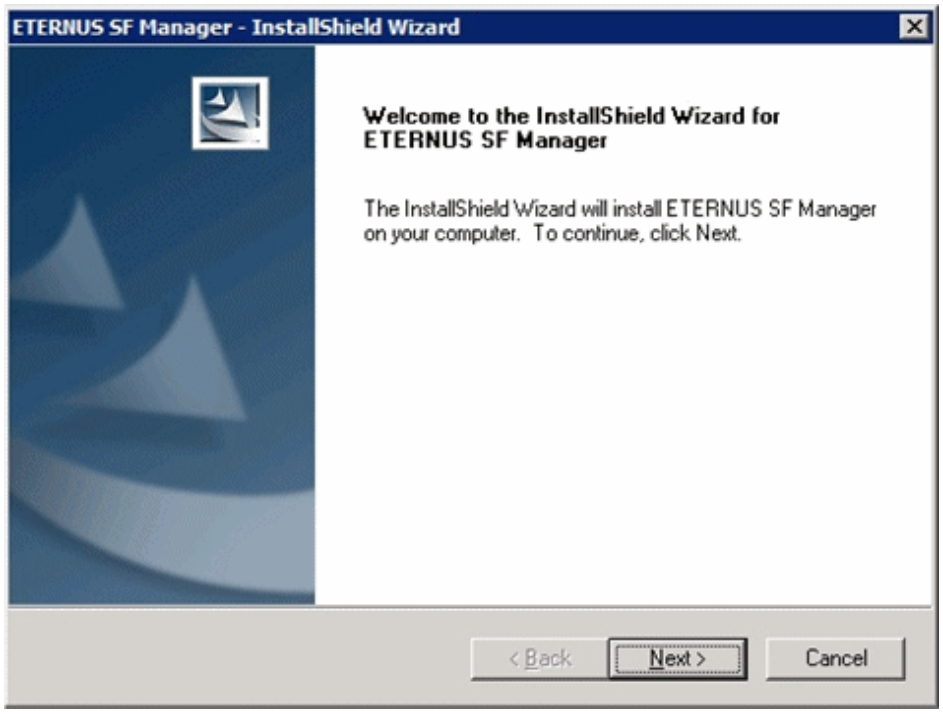
   The language selected in this dialog box will be used during installation and uninstallation.



5. The following progress bar will be displayed. To cancel the upgrade, click the [Cancel] button.

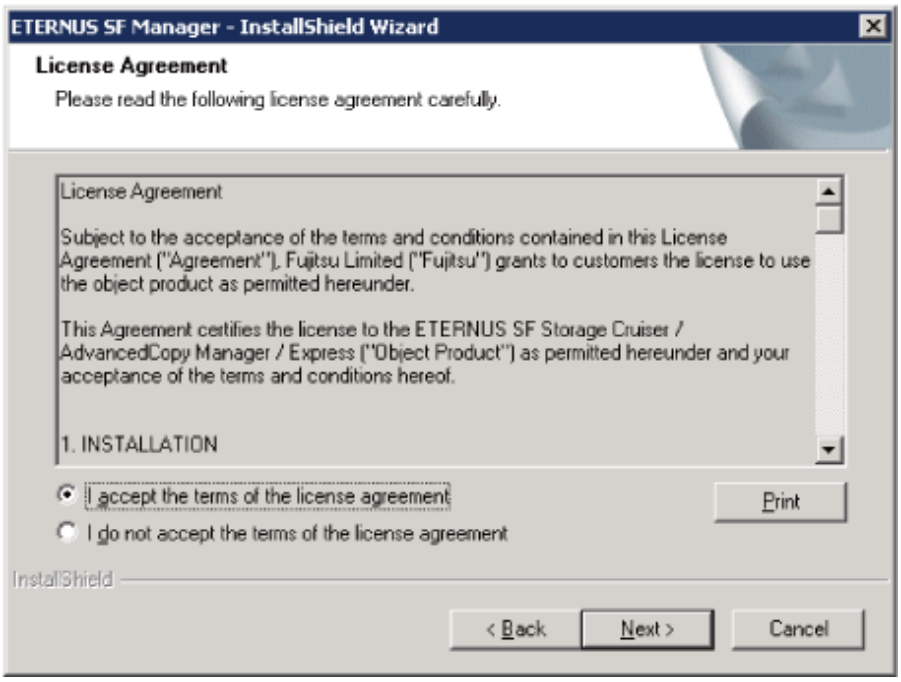


6. The installation wizard page will be displayed. Click the [Next] button.

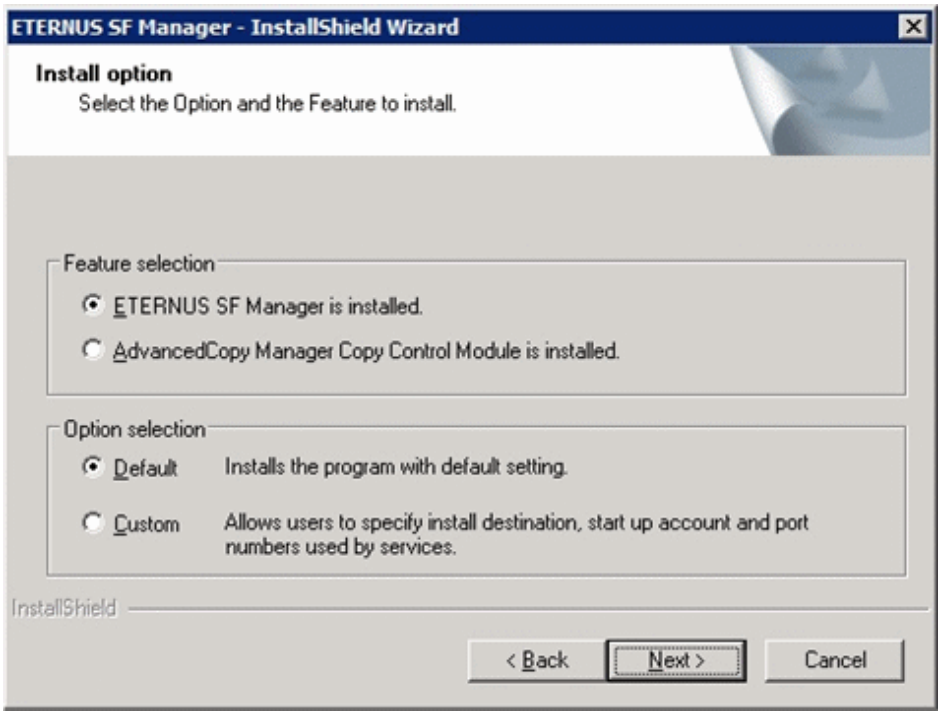


7. Read the terms and conditions of the [License Agreement] page.

   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.



8. Select the features and options to install from the [Install option] page.



Feature selection

Select [ETERNUS SF Manager is installed.].

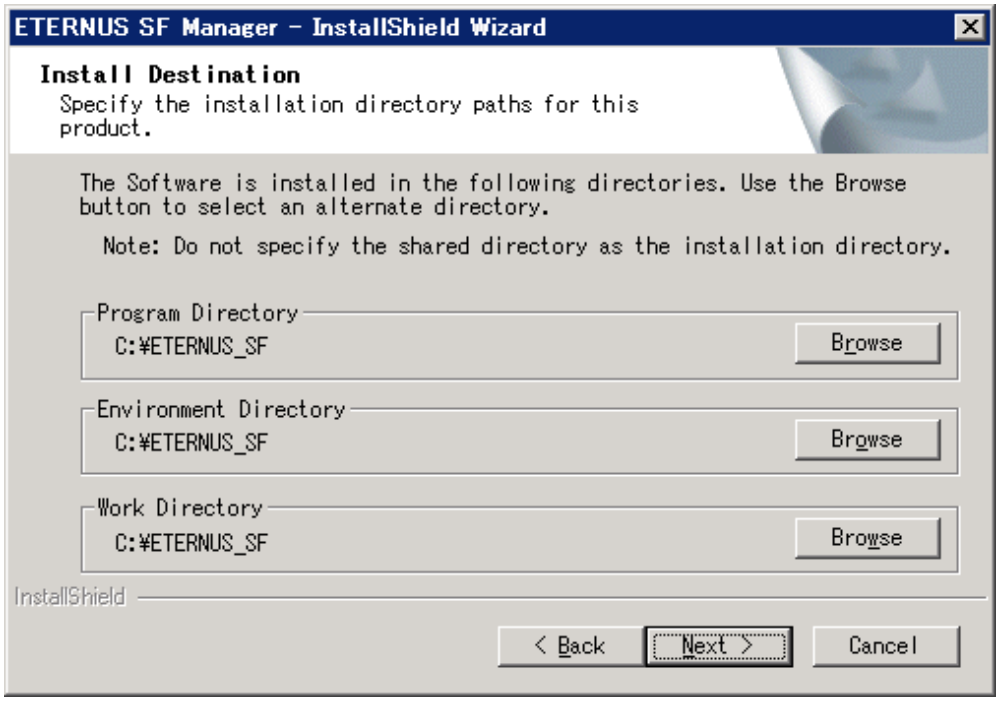
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	Changing values in the [Installation Destination] page and [Port Registration] page is optional. In this case, steps 9 and 10 can be skipped. For this installation method, the following checks are automatically performed relating to the information provided by default: - Is there enough disk space for the installation in the default directory? - Are the default port numbers available? If an error is detected at this stage, a warning dialog box will be displayed. If no error is detected, the [Start Copying Files] page will be displayed.
Custom	The installation information must be manually entered in the pages for step 9 and later.

9. Specify the installation directory in the [Installation Destination] page.

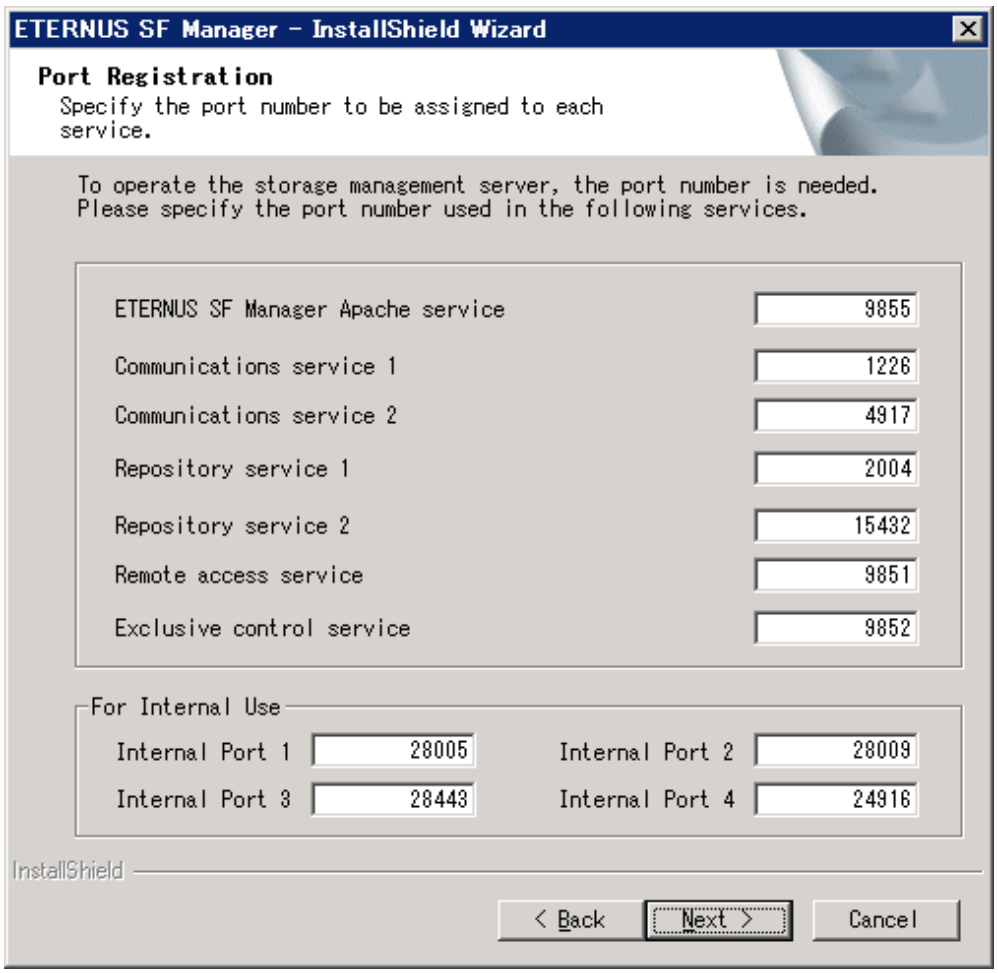
   If installing to a directory other than the default directory, click the [Browse] button and change the install destination. After designating all of the directories, click the [Next] button.



Note

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; are not supported for file names.
- The number of characters in a directory name must be between 4 and 70.

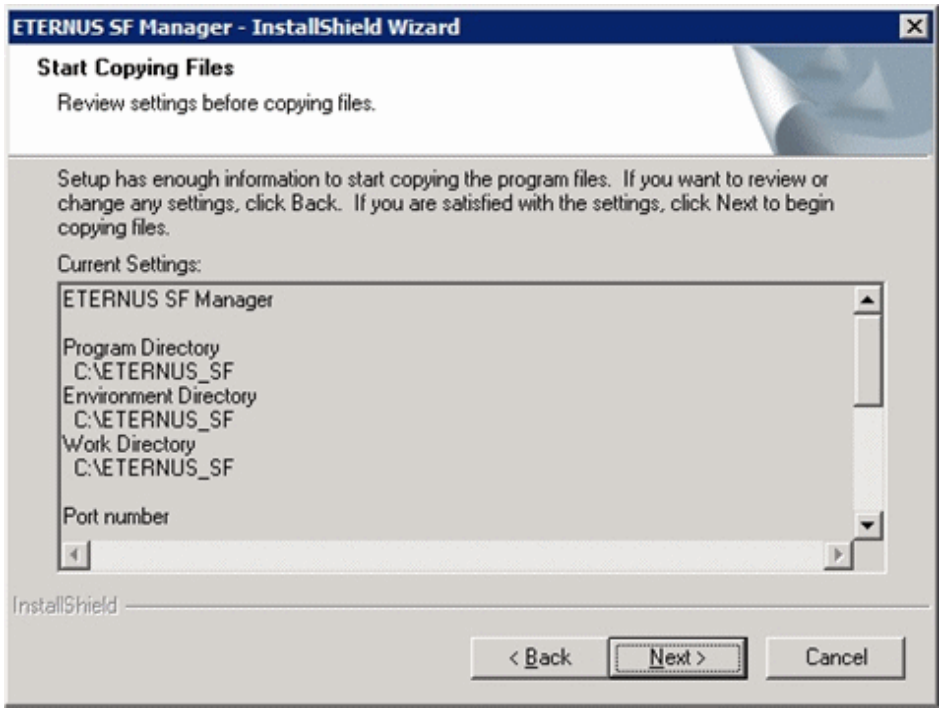
10. Specify the port number for the services in the [Port Registration] page.



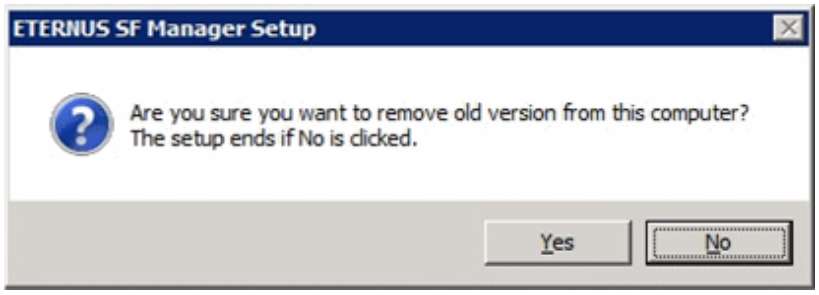
The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 5001 and 32767 are valid.
Then, click the [Next] button. If an entered value is already being used, the page will be displayed again.

11. Check the settings information in the [Start Copying Files] page.

    If the settings are correct, click the [Next] button.
    To change a setting, click the [Back] button.



12. The following dialog box will be displayed. To proceed with the uninstallation, click the [Yes] button.



13. The uninstallation is started.

    The uninstallation is executed.
    Answer any questions to proceed as the uninstallation executes.

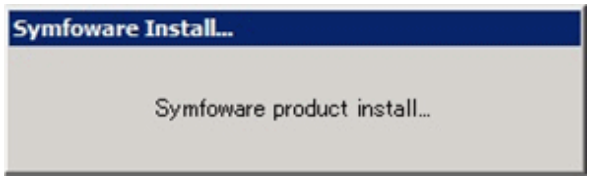
Point

- When requested to restart the computer, click the [No] button.
  If the [Yes] button is clicked, the upgrade will be interrupted. When clicking [Yes], the Upgrade Installation is interrupted. When re-executing the installation after a restart of the computer, the installation will be treated as new one.
- When the uninstallation completes successfully, the [Uninstallation was completed successfully] page may be displayed. Although the instruction on the page indicates the deletion of files and folders, do not delete files and folders when performing the upgrade.

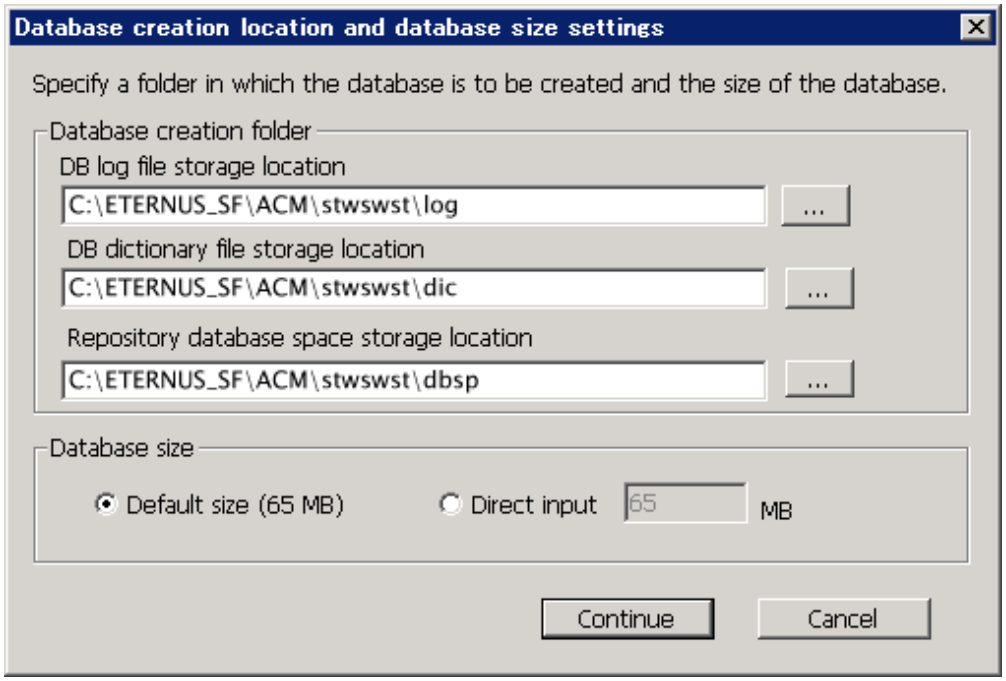
14. When the uninstallation is completed, the copying of the files for the new version will be started.

    During this process, the file copy completion status will be displayed in the [Setup Status] page.

15. When the copying process is completed, the system configuration will be updated. Wait for the configuration update process to complete.



16. Enter the requested information for the repository database creation in the following page.
Then, click the [Continue] button.



Database creation folder

This is the folder where the database will be created.
Enter the full path for each of the database directories shown below. The specified folders must be new NTFS folders. Only specify NTFS folders using unique folder names.

The default repository database will be displayed in each field. Change as necessary.

- DB log file storage location
  Specify the folder for storing the RDB log file.
- DB dictionary file storage location
  Specify the folder for storing the RDB dictionary file.
- Repository database space storage location
  Specify the folder for storing the repository database space.

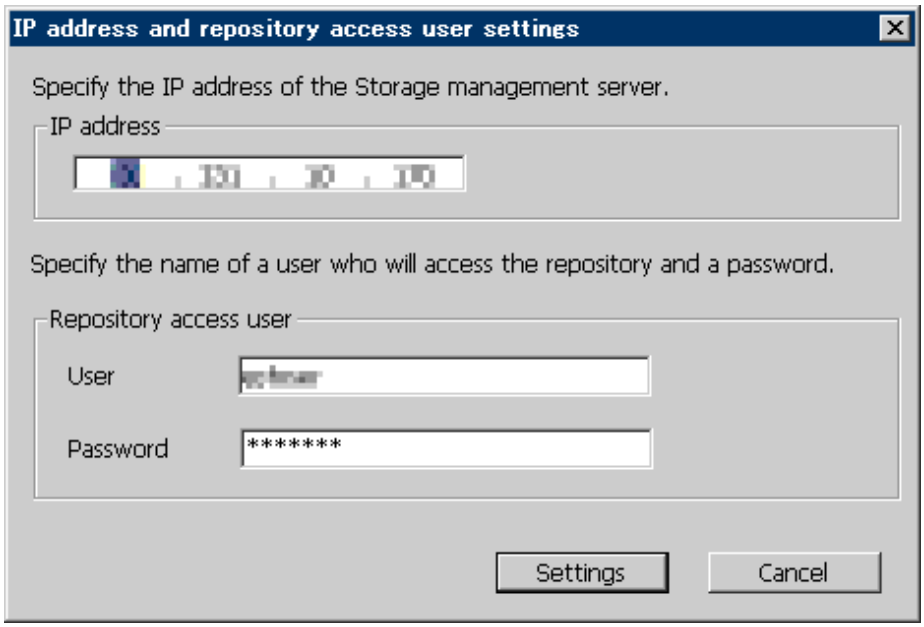
Note

- Do not specify a shared folder in which to create the database.
- The number of characters in a folder name must be between 4 and 80. Spaces and the characters " | : * ? / . < > , % & ^ = ! ; # ' @ are not supported for file names.
- Do not select the option [Compress drive to save disk space] in the **General** tab for any of these drives.
  Overhead is greater to a compressed drive than a non compressed drive. Depending on the amount of I/O, access errors may occur in low OS resource conditions.
- Do not check the [Compress or Encrypt Attributes] in the [Advanced Attributes] section of the [Properties] or [Advanced] part of the **General** tab.
  Load is increased for a compressed and/or encrypted drive. Access errors may occur in an OS with insufficient resources.
  If the encryption property is selected, access errors may occur when decryption cannot be performed.

Database size

The database size is entered in megabyte units. To calculate the size, performed before installation, refer to "7.1.1.5 Estimating the database size". To use the default value, select the [Default size (65 MB)] checkbox.

17. The following page will be displayed. The default values will be displayed in the page. Change as necessary.
Enter the IP address and the database user settings. Then, click the [Settings] button.



IP address

Enter the IP address of the Management Server (local system).
Specify the IP address of the Management Server used with the previous version.

Repository access user

Enter user name and password for the repository access user.
The user name entered here must have local login or domain login permissions at the OS level.
For the default user name and password, refer to "Installation procedure" in the *Software Release Guide*.
However, to avoid security issues, it is recommended to replace the default value.

The following conditions apply for the usernames and passwords:

- The user name and password must be compatible with the base operating system.
- The user name and password can be up to 18 characters (bytes).

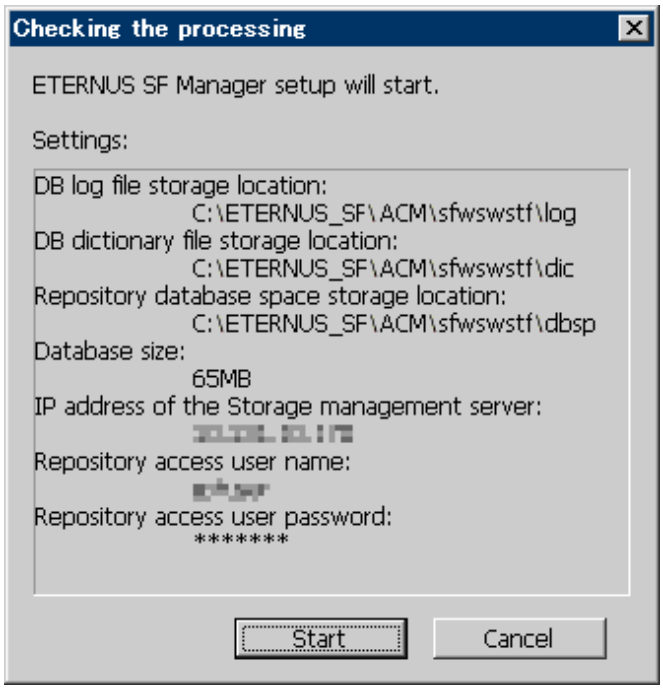
See

- If the user name specified here has not been registered to the system, perform the registration, and add either local login or domain login permissions. Refer to the table below and specify a user that corresponds to the server type being used.

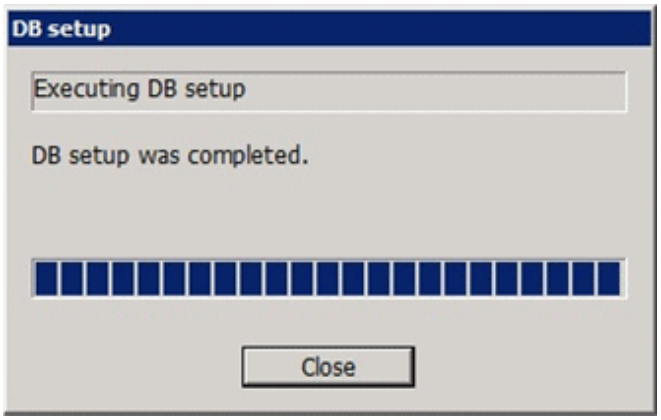
Server type	User type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- When specifying a user name that has been already registered to the system, use the identical characters (e.g. uppercase and lowercase letters) that were used for the registered user name.

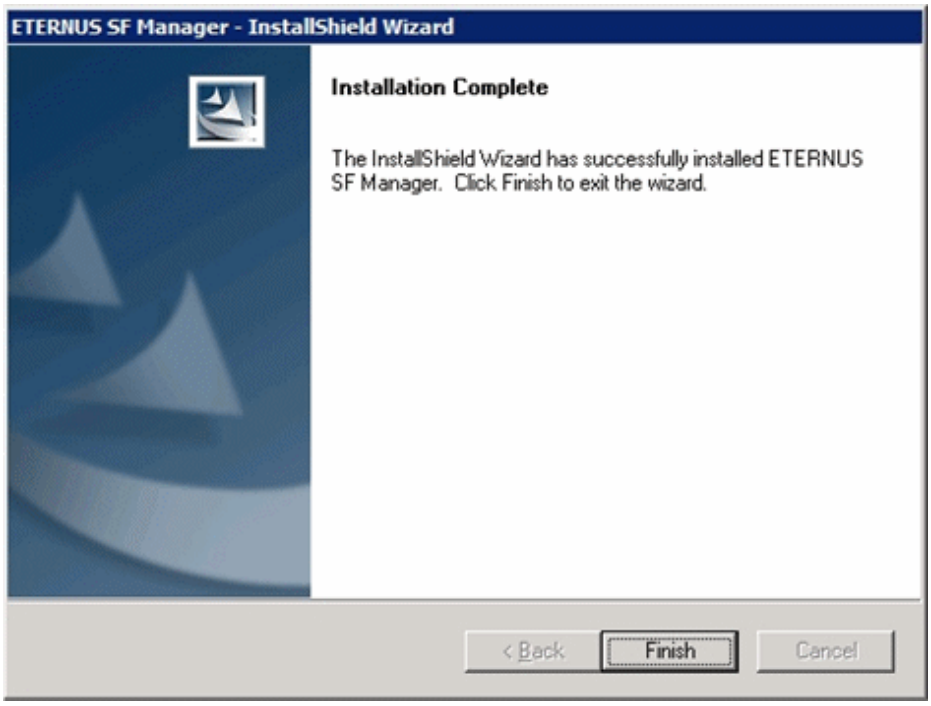
18. The following page will be displayed. Check the contents and click the [Start] button.



19. The database setup process starts. The following progress bar will be displayed, when the process is completed, click the [Close] button.



20. The following installation wizard page will be displayed. The upgrade process is completed. Click the [Finish] button.



21. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager's manager is complete.

For non-clustered systems, perform "7.1.4 Tasks to be performed after the upgrade" afterwards.

For clustered systems, refer to "Preparations for Customizing Management Server Transactions" and "Customization for Management Server Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* for this version. Then, perform "7.1.4 Tasks to be performed after the upgrade" afterwards.

7.1.3 Performing the upgrade (for Solaris, Linux)

There are two methods of performing the upgrade, as follows.

- Default installation

  The following configuration is used without the need to input any values.

  - Installation destination

    The installation destination directories (/opt/FJSVesfcm, /etc/opt/FJSVesfcm, /var/opt/FJSVesfcm, etc) cannot be modified.

  - Port numbers for the various communication services

    The following ports are used:

Service	Service name	Used port number	Install parameter name
Web Console service	esfmanagerweb	9855/tcp	ETERNUS_SF_Manager_apache_service
communication service 1	stgxfws	1226/tcp	Communications_service_1
communication service 2	sscruisera	4917/tcp	Communications_service_2
Repository service 1	rdaswstf	32004/tcp	Repository_service_1
Repository service 2	esfpostgres	15432/tcp	Repository_service_2

Service	Service name	Used port number	Install parameter name
Remote access service	rmiswstf	9851/tcp	Remote_access_service
Exclusive control service	semswstf	9852/tcp	Exclusive_control_service
Internal use	esfmanagertomcat1	28005/tcp	Internal_port_1
	esfmanagertomcat2	28009/tcp	Internal_port_2
	esfmanagertomcat3	28443/tcp	Internal_port_3
	sscruiserm	24916/tcp	Internal_port_4
	astm	24917/tcp	Internal_port_5

- Custom installation

  The upgrade is performed by manually entering the configuration information into the interface (communication service port number, character code, and so on).

  Define the installation information in the install parameter file. Specify the install parameter file for which the installation information has been defined when executing the install shell.

  For information on the install parameter file, refer to "B.1 Install parameter file (for ETERNUS SF Manager)".

Note

- You cannot change these install directories: /opt/FJSVesfcm, /etc/opt/FJSVesfcm, /var/opt/FJSVesfcm.
- Ensure to perform the following tasks when the Management Server has multiple IP addresses.
  - Perform custom installation.
  - Specify the same IP address of the Management Server used with the previous version for the install parameter "Management_server_IP_address".
- For Red Hat Enterprise Linux 5 (for Intel64), perform the following procedure to check that Symfoware to be customized has been installed.

  1. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version and mount it.
  2. Execute the following command.

     ```
     <DVD-ROM mount point>/Manager_unix/ACM/rhel5_x64/symfo/symfo_check -b
     ```

     When the execution result of the command displays "i386", specify "1" to the install parameter "AdvancedCopy_Manager_ARCH" and perform custom installation.

Point

If an IP address for the Management Server is not specified in the install parameter "Management_server_IP_address", the IP address will be set automatically during installation. Change the IP address, if required, after the installation has completed. For information on changing the IP address, refer to "Changing the IP address of Management Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Management Server.

The upgrade is performed as follows:

1. Log in to the server as a superuser.

2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script.

   Example of a default installation:

```
# ./esfinstall.sh
```

   Example of a custom installation:

```
# ./esfinstall.sh -s <Install parameter file>
```

   Specify the full path name of the install parameter file edited in advance for <*Install parameter file*>.

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
+-------------------------------------------------------------+
|                       ETERNUS SF V15.2                      |
|                                                             |
|    All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012  |
+-------------------------------------------------------------+


License Agreement

Subject to the acceptance of the terms and conditions contained in this License Agreement
("Agreement"), Fujitsu Limited ("Fujitsu") grants to customers the license to use the obje
ct product as permitted hereunder.

This Agreement certifies the license to the ETERNUS SF Storage Cruiser / AdvancedCopy Mana
ger / Express ("Object Product") as permitted hereunder and your acceptance of the terms a
nd conditions hereof.


1. INSTALLATION
You are allowed to install and use manager module and agent module of the Object Product o
n any computer connected to the Storage Device directly or through network and you are als
o allowed to install and use client module of the Object Product on any computer.

2. ARCHIVAL COPY
You may make one (1) archival copy of the Object Product.

3. EMBEDDING
If the Object Product is expected to be used as embedded in another program, you may embed
the Object Product, in whole or in part, in such other program, in accordance with the pr
ocedure described in the applicable documentation.

4. NO ASSIGNMENT
You may not rent, lease, sublicense, assign, transfer or create lien against the Object Pr
```

oduct.

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```
Do you accept the terms of the above License Agreement? (default: n) [y,n]:
```

7. A confirmation message will be displayed containing the installation information. To continue, enter "y". To cancel, enter "q". Press **Enter** to proceed.

```
Setting of installation parameter file.

    Installation_function:       ETERNUS SF Manager

    Character_code:          UTF8

    Port number
      ETERNUS_SF_Manager_Apache_service: 9855
      Communications_service_1:          1226
      Communications_service_2:          4917
      Repository_service_1:              32004
      Repository_service_2:              15432
      Remote_access_service:             9851
      Exclusive_control_service:         9852
      Internal_port_1:                   28005
      Internal_port_2:                   28009
      Internal_port_3:                   28443
      Internal_port_4:                   24916
      Internal_port_5:                   24917
    Repository database setup
      DB_file_directory:             /var/opt/FJSVswstf/sfwswstf/db
      RDB_dictionary_directory:      /var/opt/FJSVswstf/sfwswstf/dic
      RDB_log_file_directory:        /var/opt/FJSVswstf/sfwswstf/log
      Repository_DB_space_directory: /var/opt/FJSVswstf/sfwswstf/dbsp
      Repository_data_size:          65
      Management_server_IP_address:
    AdvancedCopy_Manager_ARCH: 32bit
    esfpostgres_UID:

Do you want to continue the installation? [y,q]:
```

8. A confirmation message will be displayed before uninstalling the previous version. To uninstall the previous version and proceed with the new installation, enter "y". To cancel the installation, enter "q". Press **Enter**.

```
An old version is installed in this system.
Do you want to remove old version from this system? [y,q]:
```

Point

For confirmation of uninstallation of the previous version, enter "y" to continue the uninstallation. If the uninstallation is cancelled, the upgrade process will be interrupted. When re-executing the installation after restart of the computer, the installation will be treated as new one.

9. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

10. Change to a directory other than the DVD-ROM.
    Example:

```
# cd
```

11. Unmount the DVD-ROM.
    Example:

```
 # umount /mnt/dvd
```

12. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager's manager is complete.

For non-clustered systems, perform "7.1.4 Tasks to be performed after the upgrade" afterwards.

For clustered systems, refer to "Preparations for Customizing Management Server Transactions" and "Customization for Management Server Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* for this version. Then, perform "7.1.4 Tasks to be performed after the upgrade" afterwards.

7.1.4 Tasks to be performed after the upgrade

When the AdvancedCopy Manager's manager upgrade has been completed, the tasks below need to be performed.

7.1.4.1 Restoring the environment from the previous version

Restore the backup of the operational environment of AdvancedCopy Manager's manager for the previous version.

AdvancedCopy Manager operational environment

Restore the operational environment that was backed up in "7.1.1.1 Backing up the operational environment of the previous version".

Note

For the operational environment restore, start a new window for command execution, and then perform the procedure on the window.

See

Restore the operational environment by referring to the following table.

Server type	OS	Reference
Management Server	Windows	A.9 Restoring the repository data (for Windows)
	Solaris, Linux	A.10 Restoring the repository data (for Solaris, Linux)
Management Server which also serves as a Managed Server	Windows	Perform the steps in the following order: 1. A.9 Restoring the repository data (for Windows) 2. A.11 Restoring the management information (for Windows)
	Solaris, Linux	Perform the steps in the following order: 1. A.10 Restoring the repository data (for Solaris, Linux) 2. A.12 Restoring the management information (for Solaris, Linux)

AdvancedCopy Manager Copy Control Module operational environment

Restore the operational environment that was backed up in "7.1.1.1 Backing up the operational environment of the previous version".

See

For information on performing a restore, refer to "A.14 Restoring the environment setting files".

License information

When AdvancedCopy Manager and/or AdvancedCopy Manager Copy Control Module are installed, restore the definition of the license information.

Restore the license management database of ETERNUS SF License Manager by executing "esflm restore" command. For information on the command, refer to the *ETERNUS SF Installation and Setup Guide* for this version.

Example of executing the command is shown below. The <*file_name*> is the file name specified when the backup data was created.

```
> esflm restore <file_name>
Restoration of license database was performed successfully
```

7.1.4.2 Importing the configuration information

Import the configuration information from the previous version by executing esfimportdevconf (configuration information import command) using Administrator permissions.
For the upgrade from ETERNUS SF Manager Version 15.0B, this step is not necessary.

Check that the targeted devices can be accessed before executing esfimportdevconf.

- For Windows (DOS prompt):

```
<Program directory>\Common\bin\esfimportdevconf
```

- For Solaris or Linux:

```
# /opt/FJSVesfcm/bin/esfimportdevconf
```

After executing esfimportdevconf, confirm that "Complete" is displayed in the **IMPORT STATUS** column in esfimportdisplay (configuration import status display command) of the configuration information import.

See

Refer to "10.2 Command references" for information on each import command.

7.1.4.3 Setting up a user account

Set up a user account in order to use the ETERNUS SF Manager functions.

See

For information on setup, refer to "Setting up user account" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.1.4.4 Setting up the Web Console

If firewalls are used between the PC on which the Web Console is launched and the Management Server, perform firewall settings to allow transmission.

See

For information on firewall setup, refer to "Setting up for using Web Console" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.1.4.5 Registering the license

Register the appropriate licenses.

See

Refer to "License Management" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the license settings.

7.1.4.6 Redefining missing information

- Server information

  When the Management Server serves as a Managed Server, the Management Server is registered in the server.

  See

  Refer to "Register the server" in the *ETERNUS SF Web Console Guide* for this version for information on server registration.

- AdvancedCopy Manage Copy Control Module configuration information

  To use the AdvancedCopy Manager Copy Control Module, set the device information again in accordance with the following procedure:

  See

  For information on the commands, refer to "Commands" in the *ETERNUS SF Operation Guide for Copy Control Module* for this version.

  1. Confirm the registered ETERNUS Disk storage system by executing "acarray list" (ETERNUS Disk storage system information display command).

     ```
     C:\>C:\ETERNUS_SF\CCM\bin\acarray list
     Name BOX-ID IP Address
     ----- ---------------------------------------- ------------
     DX90 00ETERNUSDXL##ET09E24B####LH4311015511## 10.124.6.251
     ```

2. Confirm the detailed information of the registered ETERNUS Disk storage system by executing "acarray detail" (ETERNUS Disk storage system detail information display command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray detail -a DX90
Disk Array Name : DX90
BOX-ID : 00ETERNUSDXL##ET09E24B####LH4311015511##
IP Address : 10.124.6.251
Admin User : ****
Access Volume : X:
```

3. Remove all of the registered ETERNUS Disk storage system by executing "acarray remove" (ETERNUS Disk storage system registration information deletion command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray remove -a DX90
Successful completion.
```

4. Re-register all of the ETERNUS Disk storage systems that were removed in step 3 by executing "acarray add" (ETERNUS Disk storage system registration command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray add -a DX90 -ip 10.124.6.251 -user **** -password **** -
path X:
Successful completion.
```

Point

When the ETERNUS Disk storage system was registered by specifying a nonexistent drive letter or device name in the previous version of AdvancedCopy Manager CCM, re-register its ETERNUS Disk storage system as a remote device.

7.1.4.7 Changing the access user password for repository database

Do not use the access user default password for the repository database in order to avoid security issues.

Change the user information of the operating system and reconfigure the repository access user information by executing stguserset (Repository access user change command).

See

For information on the procedure to change the password, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the corresponding operating system.

7.1.5 Resuming operation

When the tasks described above have been performed, the upgrade of the AdvancedCopy Manager's manager is complete. Restart the AdvancedCopy Manager operation.

7.2 Upgrading the AdvancedCopy Manager's agent

The upgrade is performed as follows:

1. 7.2.1 Backing up the repository data
2. 7.2.2 Backing up the management information
3. 7.2.3 Releasing the backup and restore in Exchange database (for Windows)
4. 7.2.4 Uninstalling the previous version

5. 7.2.5 Installing this version
6. 7.2.6 Restoring the repository data
7. 7.2.7 Changing server information
8. 7.2.8 Restoring the management information
9. 7.2.9 Setting the backup and restore in Exchange database (for Windows)
10. 7.2.10 Updating the version information

7.2.1 Backing up the repository data

Back up the repository data by referring to the following sections on the Management Server. (Only when the Managed Server is operated in a clustered system)

OS type of Managed Server	Reference
Windows	A.1 Backing up the repository data (for Windows)
Solaris, Linux	A.2 Backing up the repository data (for Solaris, Linux)

7.2.2 Backing up the management information

Back up the management information on the Managed Server by referring to the following sections.

OS type of Managed Server	Reference
Windows	A.3 Backing up the management information (for Windows)
Solaris, Linux	A.4 Backing up the management information (for Solaris, Linux)
HP-UX, AIX	A.5 Backing up the management information (for HP-UX, AIX)

7.2.3 Releasing the backup and restore in Exchange database (for Windows)

When the backup and the restoration function of the Exchange Database are used, release the setting in reference to the manual of the previous version.

- For Windows Server 2003:

  "Backup and restore of Exchange database in Windows Server 2003" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide (for Windows)*, please do the following.

  - Stopping backup copy process
  - Delete the copy set of the hardware provider
  - Delete source and replica volumes
  - Cancel the hardware provider registration

- For Windows Server 2008:

  "Backup and restore of Exchange Server database in Windows Server 2008" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide (for Windows)*, please do the following.

  - Stopping backup copy process

- Delete source and replica volumes
- Cancel the hardware provider registration

7.2.4 Uninstalling the previous version

Uninstall the previous version in reference to the relevant previous version manual.

For non-clustered systems

Note

In the course of the following procedures, be careful not to perform the procedure "Deletion of all storage servers".

- For Windows:
  - For AdvancedCopy Manager Version 13.1 or later:

    Perform the procedures following "Uninstall procedure" in "Windows Platform" in "Uninstall of Agent" in the *ETERNUS SF AdvancedCopy Manager Installation Guide* or *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide*.
  - For AdvancedCopy Manager Version 13.0:

    Perform the procedures following "Deleting applications or programs" in "Details of Agent of AdvancedCopy Manager uninstallation" in the *ETERNUS SF AdvancedCopy Manager Installation Guide*.
- For Solaris, Linux, HP-UX or AIX:
  - For AdvancedCopy Manager Version 13.1 or later:

    Perform the procedures following "Daemon deactivation" in "Solaris/Linux/HP-UX/AIX Platform" in "Uninstall of Agent" in the *ETERNUS SF AdvancedCopy Manager Installation Guide* or *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide*.
  - For AdvancedCopy Manager Version 13.0:

    Perform the procedures following "Daemon deactivation" in "Storage server uninstallation" in the *ETERNUS SF AdvancedCopy Manager Installation Guide* relevant to the OS of the Managed Server.

For clustered systems

If cluster operations are used for Managed Servers as Managed Server transactions, perform the un-setup of cluster settings before performing uninstallation.

See

For information on the procedures for the un-setup of cluster settings, refer to "Deleting Storage Management Server transactions and Storage Server transactions" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide for Cluster Environment* for the previous version.

7.2.5 Installing this version

Install the AdvancedCopy Manager's agent of this version, and setup the operating environment.

About installation

- For non-clustered systems:

  Refer to "Installation of AdvancedCopy Manager's agent" in the *ETERNUS SF Installation and Setup Guide* for this version, and install the AdvancedCopy Manager's agent.

- For clustered systems:

  Refer to "Installation of ETERNUS SF Agent" in the *ETERNUS SF Cluster Environment Setup Guide* for this version, and install the AdvancedCopy Manager's agent.

However, if the system environment is Red Hat Enterprise Linux 5 (for Intel64), in step 3 of "Installation procedure of AdvancedCopy Manager's agent (for Linux)" in the *ETERNUS SF Installation and Setup Guide*, select the installation directory that is stated for "OS type - Red Hat Enterprise Linux 5 (for Intel64), not using the Symfoware linkage function", even if you are actually using the Symfoware linkage function.

Setting up the operating environment

- For non-clustered systems:

  Refer to "Setup of AdvancedCopy Manager's agent" in the *ETERNUS SF Installation and Setup Guide* for this version, and setup the AdvancedCopy Manager's agent.

  Afterwards, start the AdvancedCopy Manager's agent on the Managed Server. For information on the start procedure, refer to "Starting and Stopping Daemons" or "Starting and Stopping Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Managed Server.

- For clustered systems:

  Refer to "Customization of Managed Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for this version, and setup the AdvancedCopy Manager's agent.

7.2.6 Restoring the repository data

Restore the backed up repository data on the Management Server. (Only when the Managed Server is operated in a cluster configuration)

Execute stgrepocnv (Repository data migration command) to restore the repository data and then convert it for use with the current version of the repository.

Note

For restoration of the repository data, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgrepocnv (Repository data migration command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

7.2.7 Changing server information

To ensure data consistency, use the Web Console or stgxfwcmmodsrv (Server information change command) to perform the server information change processing.

If executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.
Also, this command is to be performed on the Management Server.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

7.2.8 Restoring the management information

Restore the management information on the Managed Server by referring to the following sections.

OS type of Managed Server	Reference
Windows	A.11 Restoring the management information (for Windows)
Solaris, Linux	A.12 Restoring the management information (for Solaris, Linux)
HP-UX, AIX	A.13 Restoring the management information (for HP-UX, AIX)

7.2.9 Setting the backup and restore in Exchange database (for Windows)

Reconfigure the backup and restoration functions of the Exchange database for which the setting has been released in reference to the manual of this version.

- For Windows Server 2003:

  "Backup and restore of Exchange database in Windows Server 2003 " in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)*, please do the following.

  - Registration of provider
  - Configuring the source volume and replica volume
  - Registering the hardware provider copy set
  - Registering database information

- For Windows Server 2008:

  "Backup and restore of Exchange Server database in Windows Server 2008 or later" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)*, please do the following.

  - Installing and registering VSSHP
  - Configuring the source volume and replica volume
  - Registering the hardware provider copy set
  - Registering copy sets in a batch
  - Registering database information

7.2.10 Updating the version information

If not using cluster operation, and moreover, if the restoration of repository data has already been performed with the restoration of the replication management list, use the Web Console or stgxfwcmmodsrv (Server information change command) to update the version information for the Managed Server.

If executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.
Also, this command is to be performed on the Management Server.

Note

For updating the version information, start a new window for command execution, and then perform the procedure on the window.

See

- For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.
- For information on reloading the server information using the Web Console, refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide*.

7.3 Upgrading the AdvancedCopy Manager Copy Control Module

This section describes the upgrade procedures for the AdvancedCopy Manager Copy Control Module.

7.3.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager Copy Control Module, as described below.

7.3.1.1 Selecting the install program

There are two methods of performing the upgrade for the AdvancedCopy Manager Copy Control Module, as follows:

- [**Method 1**] Install the ETERNUS SF Manager program and use the AdvancedCopy Manager Copy Control Module included with the ETERNUS SF Manager.
- [**Method 2**] Install and use the AdvancedCopy Manager Copy Control Module.

Point

For **Method 1**, in addition to the command line interface, it is also possible to perform the AdvancedCopy Manager Copy Control Module operations from the Web Console. However, this approach has the following drawbacks:

- The disk space required for installation is greater than that for **Method 2**.
- There are more incompatible software issues when compared to **Method 2**.
- Checking Symfoware will be necessary (only if Symfoware is installed on the server for which this operation is being performed).
- Estimating the database size estimation will be necessary.

Using the information provided above, select the appropriate program to install.

7.3.1.2 Backing up the environment setting files

Back up the operational environment for the previous version.

See

For information on the backup method, refer to "A.6 Backing up the the environment setting files".

License information

When AdvancedCopy Manager and/or AdvancedCopy Manager Copy Control Module are installed, back up the definition of the license information.

Back up the license management database of ETERNUS SF License Manager by executing "esflm backup" command. For information on the command, refer to the *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide* for the previous version.

Example of executing the command is shown below. The file specified with <*file_name*> will be created as a backup file.

```
> esflm backup <file_name>
Backup of license database was performed successfully
```

7.3.1.3 Checking for available disk space

Ensure that there is enough available disk space on the server where the Upgrade Installation will be performed.
The required disk space for the upgrade is calculated as the "Required disk space for the new version to be installed" minus the "Required disk space of the previous version".

Required disk space for the new version

The space required to install this version of the ETERNUS SF Manager or AdvancedCopy Manager Copy Control Module. For information on the required disk space, refer to the following locations in the *ETERNUS SF Installation and Setup Guide* for this version.

- For using the AdvancedCopy Manager Copy Control Module in ETERNUS SF Manager:

  "Operating environment of ETERNUS SF Manager"

- For installing the AdvancedCopy Manager Copy Control Module:

  "Operating environment of AdvancedCopy Manager CCM"

Required disk space for the previous version

The space required to install this version of the AdvancedCopy Manager Copy Control Module of the previous version.
For information on the required disk space, refer to "Operating Environment" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module* for the relevant previous version.

7.3.1.4 Uninstalling incompatible software

Check if any incompatible software for AdvancedCopy Manager Copy Control Module of this version is installed on the server where the upgrade will be performed.
If incompatible software is found, refer to the relevant software manual and uninstall it before starting the upgrade.

See

For information on the incompatible software, refer to "Operating Environment" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.3.1.5 Checking Symfoware

The Symfoware product is bundled with the ETERNUS SF Manager. If the two following conditions are met, check the Symfoware environment before starting the upgrade.

- If Symfoware is already installed to the server to which the upgrade is performed. Moreover,
- The ETERNUS SF Manager is being installed.

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.3.1.6 Estimating the database size

For installing the ETERNUS SF Manager, a database is necessary.
The database size must be estimated before starting the upgrade.

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

7.3.2 Performing the upgrade (for Windows)

If use the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager

Perform the upgrade by referring to "7.1.2 Performing the upgrade (for Windows)".

After the upgrade has completed, refer to the following manual for this version and set up the AdvancedCopy Manager Copy Control Module.

- "Setup of AdvancedCopy Manager CCM" in the *ETERNUS SF Installation and Setup Guide*

If install and use the AdvancedCopy Manager Copy Control Module

There are two methods of performing the upgrade, as follows.

- Default installation

  The following configuration is used without the need to input any values.

  - Installation destination

    The "<*System Drive*>:\ETERNUS_SF" directory is used as the root location for the Program Directory, Environment Directory and Work Directory.

- Custom installation

  The upgrade is performed by manually entering the configuration information into the interface (installation destination).

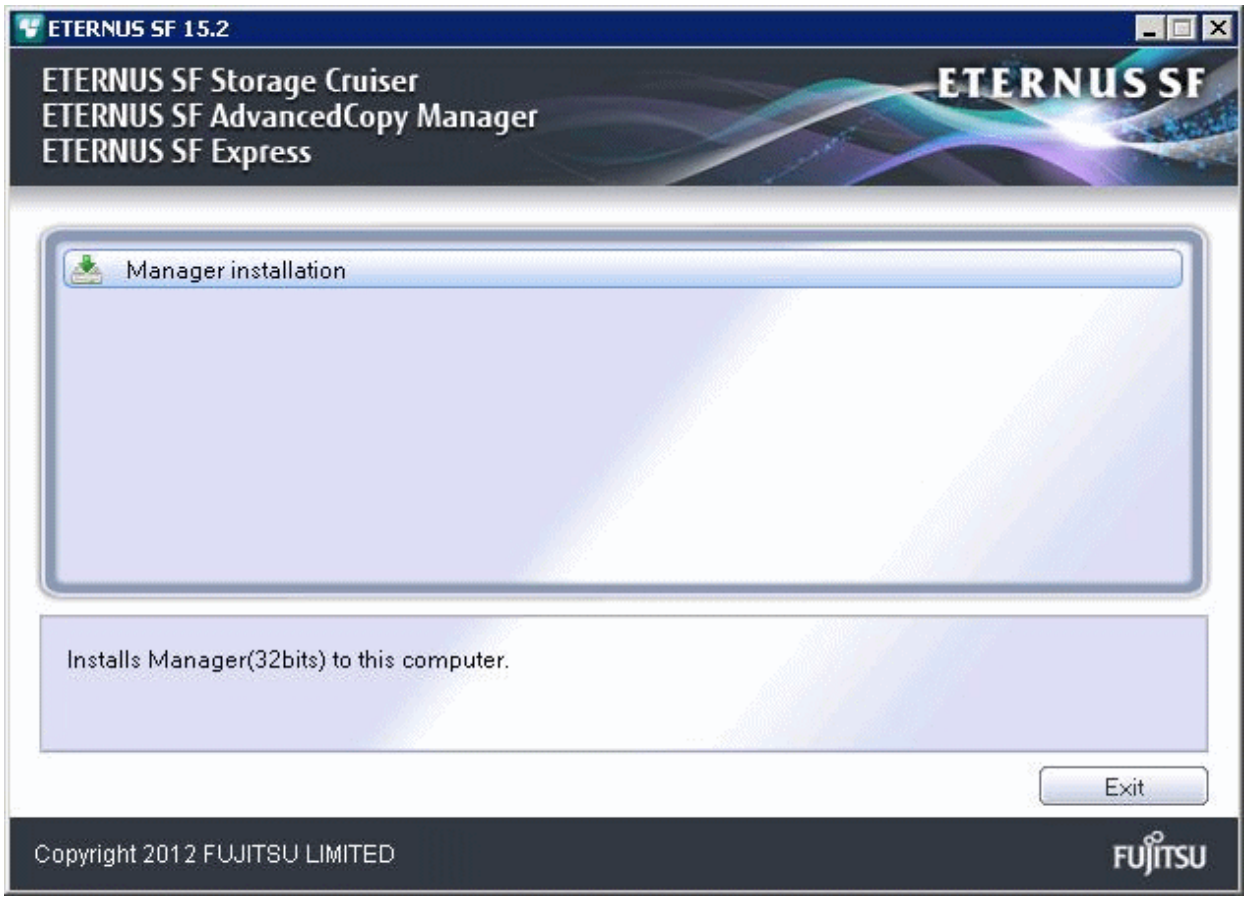
The upgrade is performed as follows:

1. Log on to the server using Administrator privileges.

2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

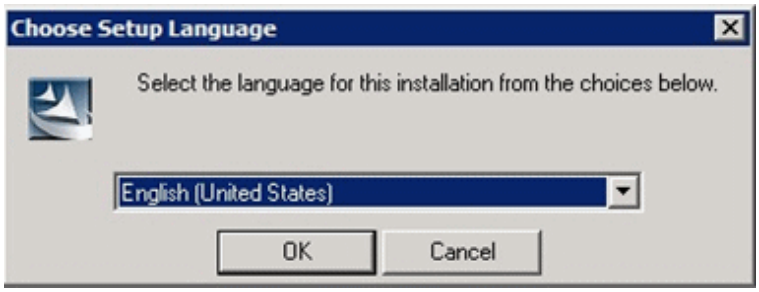
   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.

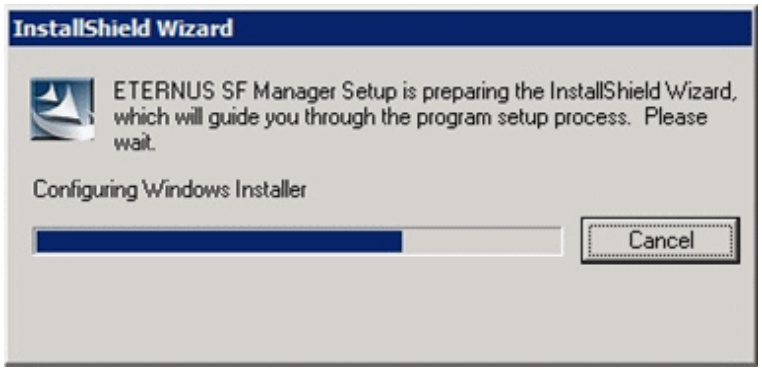


4. The [Choose Setup Language] dialog box will be displayed. Select the appropriate language and click the [OK] button.

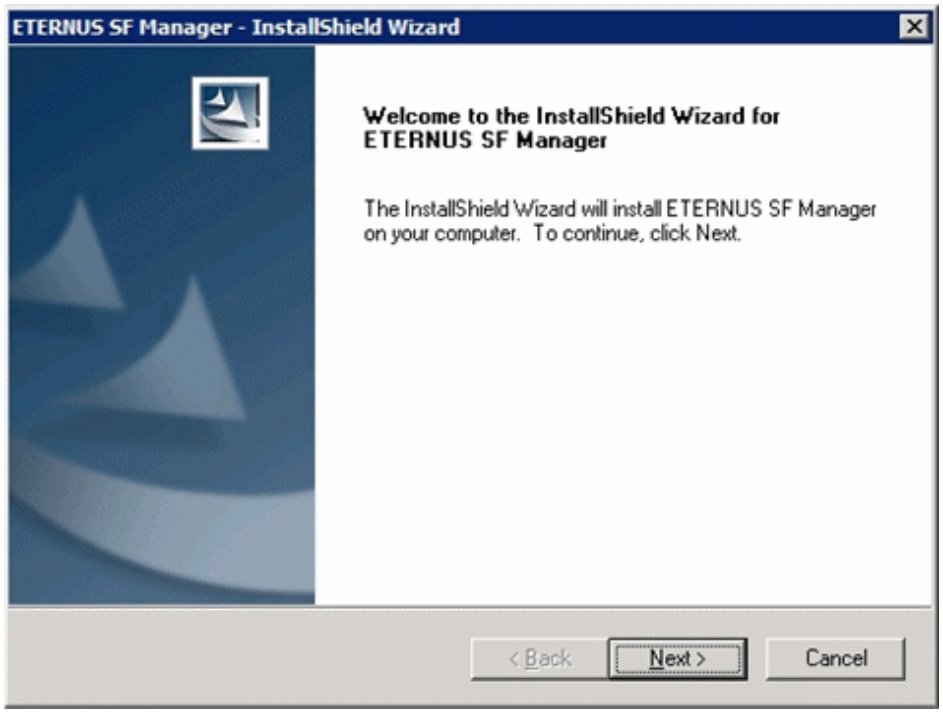
   The language selected in this dialog box will be used during installation and uninstallation.



5. The following progress bar will be displayed. To cancel the upgrade, click the [Cancel] button.

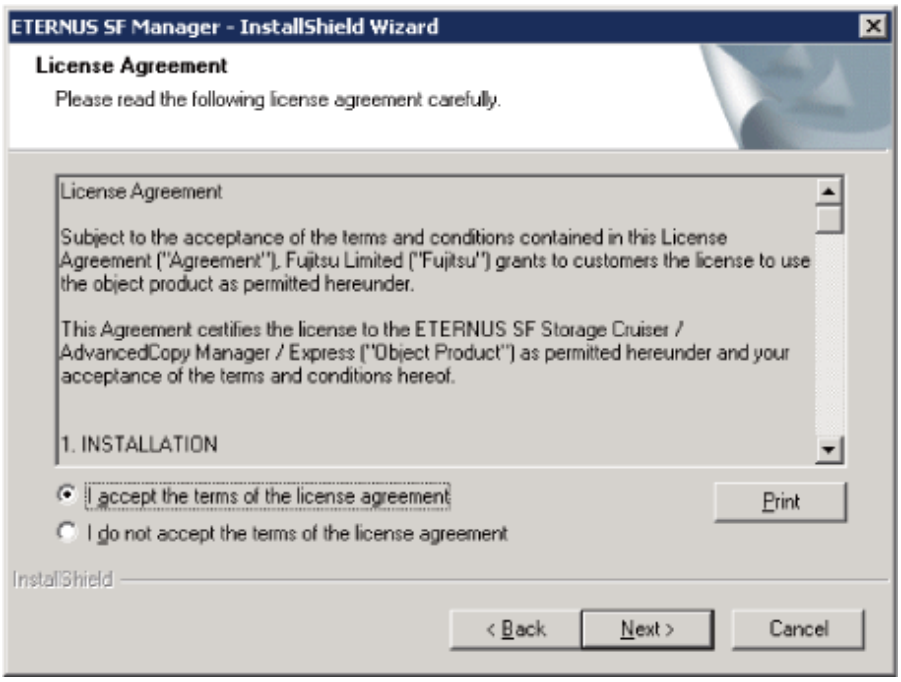


6. The installation wizard page will be displayed. Click the [Next] button.

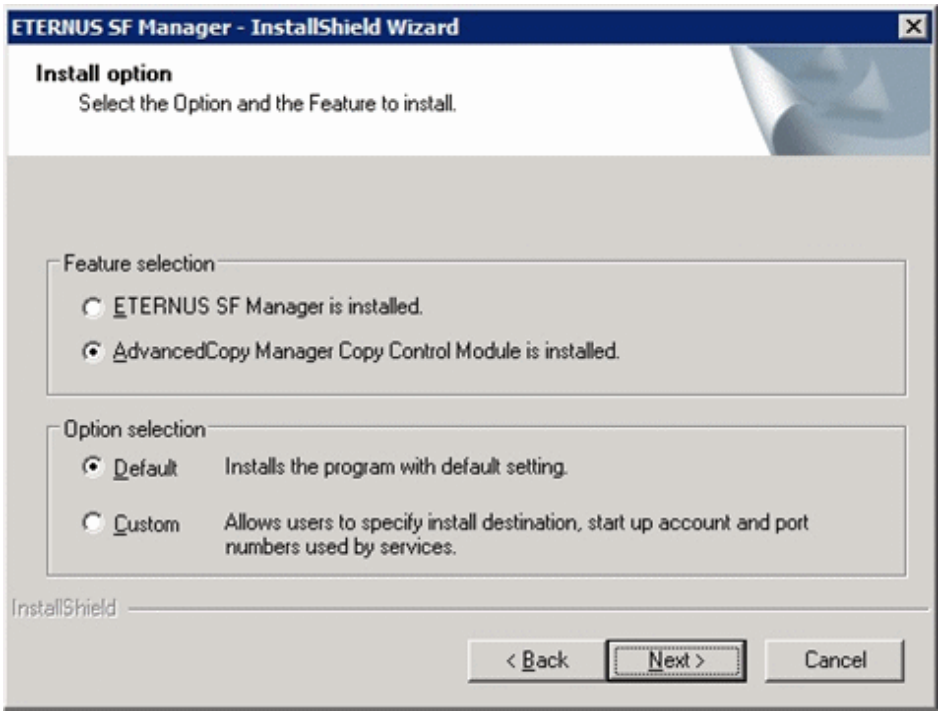


7. Read the terms and conditions of the [License Agreement] page.

   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.



8. Select the features and options to install from the [Install option] page.



Feature selection

Select [AdvancedCopy Manager Copy Control Module is installed.].

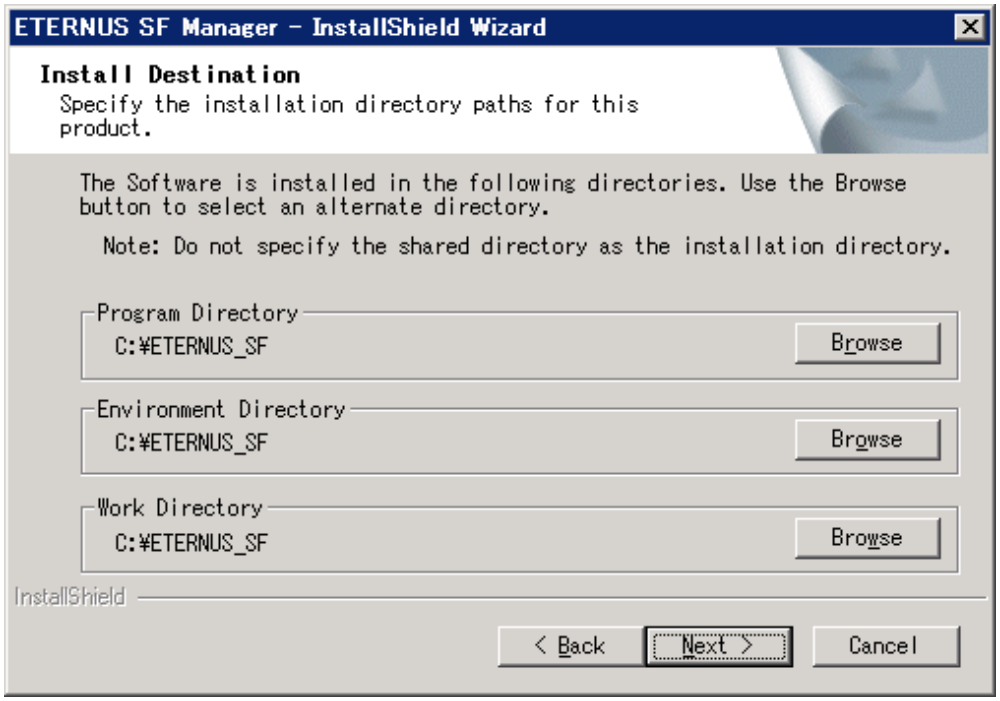
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	Changing values in the [Installation Destination] page is optional. In this case, step 9 can be skipped. For this installation method, the following checks are automatically performed relating to the information provided by default: - Is there enough disk space for the installation in the default directory? If an error is detected at this stage, a warning dialog box will be displayed. If no error is detected, the [Start Copying Files] page will be displayed.
Custom	The installation information must be manually entered in the pages of step 9.

9. Specify the installation directory in the [Installation Destination] page.

   If installing to a directory other than the default directory, click the [Browse] button and change the install destination. After designating all of the directories, click the [Next] button.

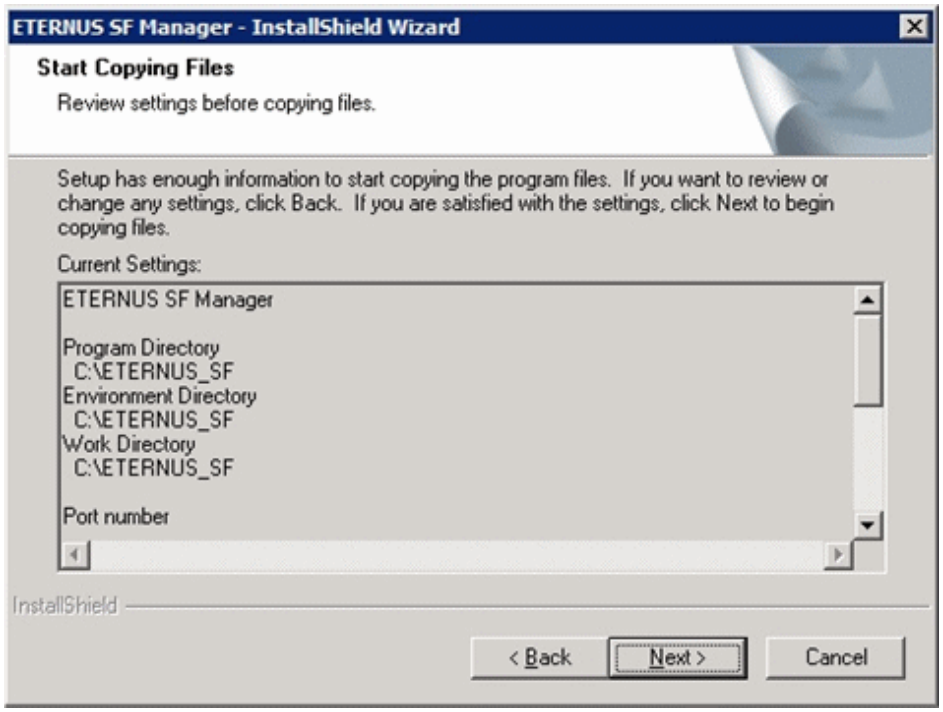


Note

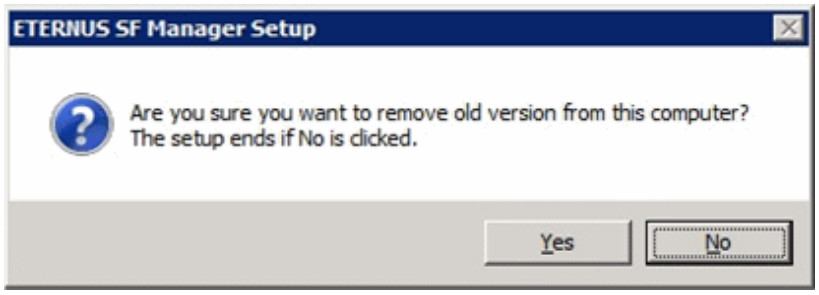
- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; are not supported for file names.
- The number of characters in a directory name must be between 4 and 70.

10. Check the settings information in the [Start Copying Files] page.

    If the settings are correct, click the [Next] button.
    To change a setting, click the [Back] button.



11. The following dialog box will be displayed. To proceed with the uninstallation, click the [Yes] button.



12. The uninstallation is started.

    The uninstallation is executed.
    Answer any questions to proceed as the uninstallation executes.

Point

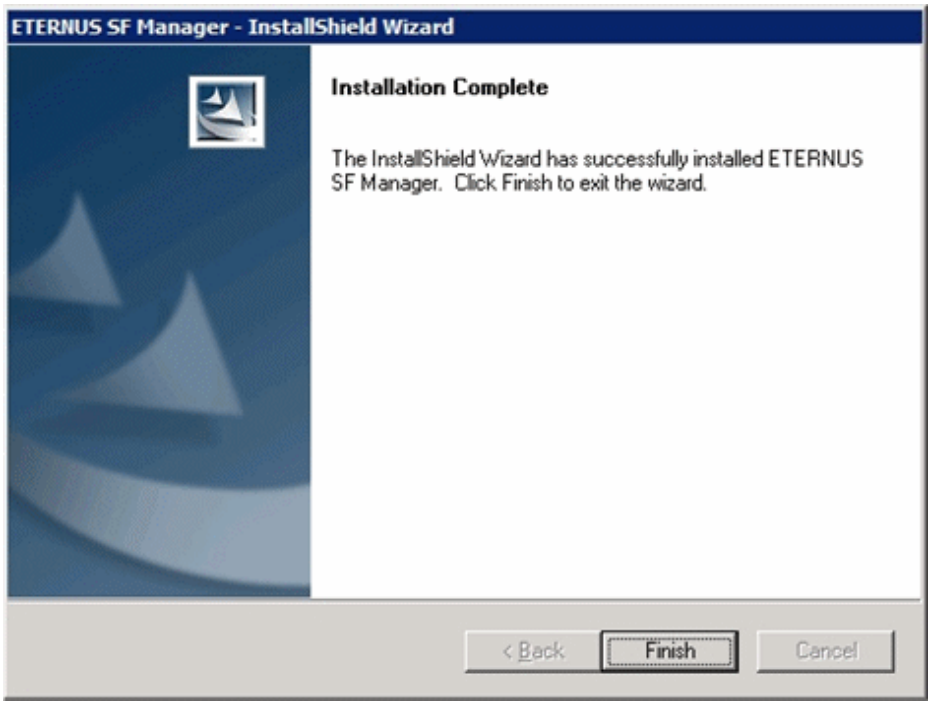
- When requested to restart the computer, click the [No] button.
  If the [Yes] button is clicked, the upgrade will be interrupted. When re-executing the installation after a restart of the computer, the installation will be treated as new one.
- Do not delete files and folders that are output after uninstallation completes successfully.

13. When the uninstallation is completed, the copying of the files for the new version will be started.

    During this process, the file copy completion status will be displayed in the [Setup Status] page.

14. When the copying process is completed, the system configuration will be updated. Wait for the configuration update process to complete.

15. The following installation wizard page will be displayed. The upgrade process is completed. Click the [Finish] button.



16. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager Copy Control Module is complete. Perform "7.3.4 Tasks to be performed after the upgrade" afterwards.

7.3.3 Performing the upgrade (for Solaris, Linux)

There are two methods of performing the upgrade, as follows.

Point

There is no need to modify the install parameter file for AdvancedCopy Manager Copy Control Module.

For information on the install parameter file, refer to "B.3 Install parameter file (for AdvancedCopy Manager Copy Control Module)".

1. Login to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Specify the install parameter file and execute the following installation shell script.

   Although the install parameter file exists in the same directory as the installation shell script, it must be specified by using the full path name.

   Example:

```
# ./esfinstall.sh -s /mnt/dvd/Manager_unix/install_parameter_ccm.txt
```

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
+-------------------------------------------------------------+
|                       ETERNUS SF V15.2                      |
|                                                             |
|    All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012  |
+-------------------------------------------------------------+


License Agreement

Subject to the acceptance of the terms and conditions contained in this License Agreement
("Agreement"), Fujitsu Limited ("Fujitsu") grants to customers the license to use the obje
ct product as permitted hereunder.

This Agreement certifies the license to the ETERNUS SF Storage Cruiser / AdvancedCopy Mana
ger / Express ("Object Product") as permitted hereunder and your acceptance of the terms a
nd conditions hereof.


1. INSTALLATION
You are allowed to install and use manager module and agent module of the Object Product o
n any computer connected to the Storage Device directly or through network and you are als
o allowed to install and use client module of the Object Product on any computer.

2. ARCHIVAL COPY
You may make one (1) archival copy of the Object Product.

3. EMBEDDING
If the Object Product is expected to be used as embedded in another program, you may embed
the Object Product, in whole or in part, in such other program, in accordance with the pr
ocedure described in the applicable documentation.

4. NO ASSIGNMENT
You may not rent, lease, sublicense, assign, transfer or create lien against the Object Pr
oduct.

5. MODIFICATION
You may not modify or, except to the extent expressly permitted by applicable law, reverse
engineer (including, without limitation, decompile and disassemble) the Object Product, a
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6. LIMITED WARRANTY
(a) You acknowledge that Fujitsu cannot guarantee that your use of the Object Product will
```

```
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(d) The above states the entire liability of Fujitsu in connection with the use, performan
ce or non-performance of the Object Product.

(e) Even if a part of the Object Product has been developed by a third party, the warranty
and remedy for that part of the Object Product are limited to those provided for in this
Section, and the third party developer shall have no liability in connection with the use,
performance or non-conformance of the Object Product.

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(a) The terms and conditions hereof represent the complete agreement concerning this licen
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(b) You agree to comply with all applicable export laws and regulations.

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in similar clauses in the NASA FAR Supplement. Contractor/manufacturer is Fujitsu Limited
, 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa-ken 211-8588, Japan.


Do you accept the terms of the above License Agreement? (default: n) [y,n]:
```

7. A confirmation message will be displayed before uninstalling the previous version. To uninstall the previous version and proceed with the new installation, enter "y". To cancel the installation, enter "q". Press **Enter**.

```
An old version is installed in this system.
Do you want to remove old version from this system? [y,q]:
```

Point

For confirmation of uninstallation of the previous version, enter "y" to continue the uninstallation. If the uninstallation is cancelled, the upgrade process will be interrupted. When re-executing the installation after restart of the computer, the installation will be treated as new one.

8. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

9. Change to a directory other than the DVD-ROM.
   Example:

```
# cd
```

10. Unmount the DVD-ROM.
    Example:

```
# umount /mnt/dvd
```

11. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager Copy Control Module is complete. Perform "7.3.4 Tasks to be performed after the upgrade" afterwards.

7.3.4 Tasks to be performed after the upgrade

When the AdvancedCopy Manager Copy Control Module upgrade has been completed, the tasks below need to be performed.

7.3.4.1 Restoring the environment setting files

Restore the environment setup file that was backed up in "7.3.1.2 Backing up the environment setting files".

See

For information on performing a restore, refer to "A.14 Restoring the environment setting files".

License information

When AdvancedCopy Manager and/or AdvancedCopy Manager Copy Control Module are installed, restore the definition of the license information.

Restore the license management database of ETERNUS SF License Manager by executing "esflm restore" command. For information on the command, refer to the *ETERNUS SF Installation and Setup Guide* for this version.

Example of executing the command is shown below. The <*file_name*> is the file name specified when the backup data was created.

```
> esflm restore <file_name>
Restoration of license database was performed successfully
```

7.3.4.2 Reconfiguring device information

The following procedure is required to reconfigure the ETERNUS Disk storage system information.
For information on the commands, refer to "Commands" in the *ETERNUS SF Operation Guide for Copy Control Module* for this version.

1. Confirm the registered ETERNUS Disk storage system by executing "acarray list" (ETERNUS Disk storage system information display command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray list

Name  BOX-ID                                    IP Address
----- ----------------------------------------- ------------
E4000 00E4000M3#####E450S20A####KD4030639004## 10.124.6.251
E8000 00E8000M9#####E890S20A####KO4070639003## 10.124.6.241
```

2. Confirm the detailed information of the registered ETERNUS Disk storage system by executing "acarray detail" (ETERNUS Disk storage system detail information display command).

```
C:\>acarray detail -a E4000

Disk Array Name : E4000
BOX-ID          : 00E4000M3#####E450S20A####KD4030639004##
IP Address      : 10.124.6.251
Admin User      : ****
Access Volume   : X:

C:\>C:\ETERNUS_SF\CCM\bin\acarray detail -a E8000

Disk Array Name : E8000
BOX-ID          : 00E8000M9#####E890S20A####KO4070639003##
IP Address      : 10.124.6.241
Admin User      : ****
Access Volume   : Y:
```

3. Remove all of the registered ETERNUS Disk storage system by executing "acarray remove" (ETERNUS Disk storage system registration information deletion command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray remove -a E4000
Successful completion.

C:\>acarray remove -a E8000
Successful completion.
```

4. Re-register all of the ETERNUS Disk storage systems that were removed in step 3 by executing "acarray add" (ETERNUS Disk storage system registration command).

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray add -a E4000 -ip 10.124.6.251 -user **** -password **** -path
X:
Successful completion.

C:\>C:\ETERNUS_SF\CCM\bin\acarray add -a E8000 -ip 10.124.6.241 -user **** -password **** -path
Y:
Successful completion.
```

Point

When the ETERNUS Disk storage system was registered by specifying a nonexistent drive letter or device name in the previous version of AdvancedCopy Manager CCM, re-register its ETERNUS Disk storage system as a remote device.

7.3.4.3 Registering the license

Register the appropriate licenses.

See

Refer to "License Management" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the license settings.

7.3.5 Resuming operation

When the tasks described above have been performed, the upgrade of AdvancedCopy Manager Copy Control Module is complete. The task below is the reconstruction of the managed environment in AdvancedCopy Manager. Refer to the following manual:

- "Setup of AdvancedCopy Manager CCM" in the *ETERNUS SF Installation and Setup Guide* for this version

Chapter 8 Upgrading AdvancedCopy Manager Version 15.x

This chapter describes the upgrade procedure for AdvancedCopy Manager Version 15.x.

To upgrade AdvancedCopy Manager's manager to this version, install the ETERNUS SF Manager.

If performing an upgrade to a system environment using Agent-based operation model, perform the upgrade in the following sequence.

1. AdvancedCopy Manager's manager
2. AdvancedCopy Manager's agent

Point

- If upgrading AdvancedCopy Manager, ensure that the AdvancedCopy Manager's manager version is the same or higher than the AdvancedCopy Manager's agent version.
- If Storage Cruiser and AdvancedCopy Manager Copy Control Module are both installed on the same server, when upgrading, both Storage Cruiser and AdvancedCopy Manager Copy Control Module will be upgraded at the same time. Therefore, perform backups of the previous versions before starting the upgrade.

8.1 Upgrading the AdvancedCopy Manager's manager (for Windows)

This section describes the upgrade procedure for the AdvancedCopy Manager's manager for Windows.

Note

For the Windows Server 2003, the procedure below cannot be used for the upgrade procedure.
When performing an upgrade for a Windows Server 2003, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware. If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.
3. Install this product version.

8.1.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

8.1.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's manager, as described below.

1. Checking the Symfoware

   The Symfoware product is bundled with this product. If Symfoware is already installed on the server where the upgrade will be performed, check the Symfoware environment before starting the upgrade.

See

For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

2. Stopping the service of ETERNUS SF Manager

   Execute the following batch file.

   ```
   $INS_DIR\Common\bin\Stop_ESFservice.bat
   ```

   $INS_DIR is the program directory specified at the ETERNUS SF Manager installation.

3. When using the ETERNUS SF Storage Cruiser Optimization option, stop the Optimization option.

   From Windows [Services], stop the "ETERNUS SF Storage Cruiser Optimization option".

4. Backing up the Windows system

Point

If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the Windows system before performing the upgrade.
If a failure occurs during the upgrade, restore the system from the backup.

Note

If the Windows system cannot be backed up, the upgrade procedure described in the section below cannot be performed.
In this case, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware.
   If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.

3. Install this product version.

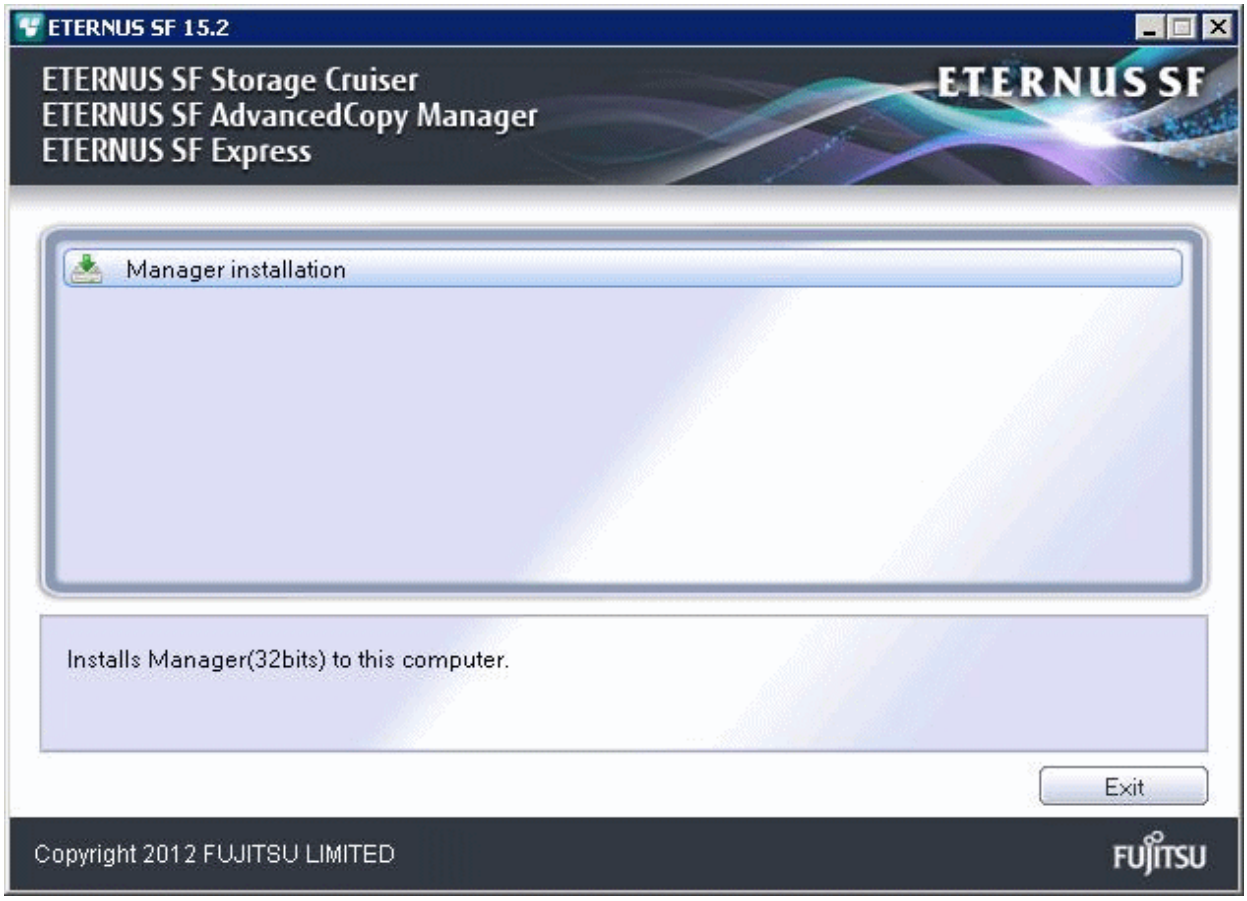
8.1.1.2 Performing the upgrade

The upgrade is performed as follows:

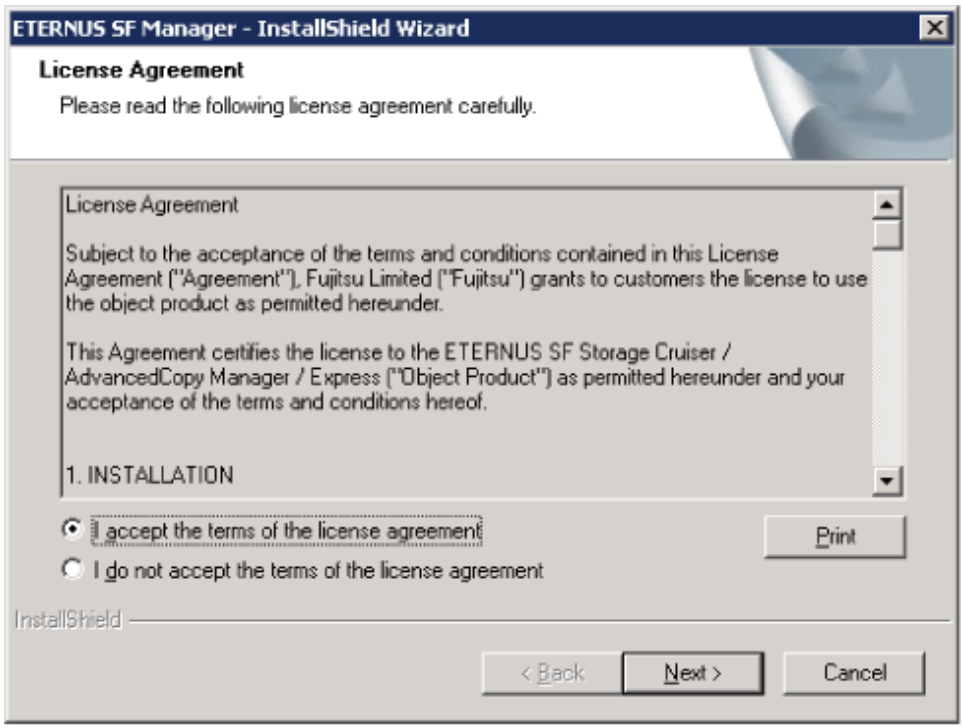
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

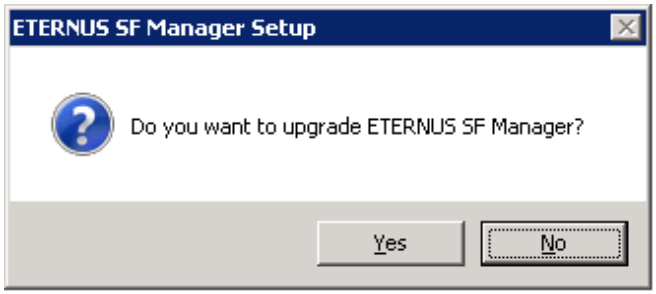
3. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.



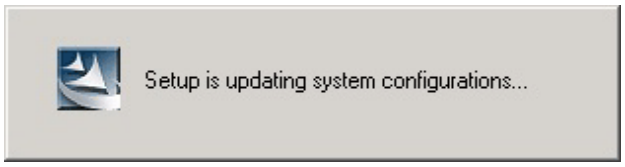
4. Read the terms and conditions of the [License Agreement] page.
   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.



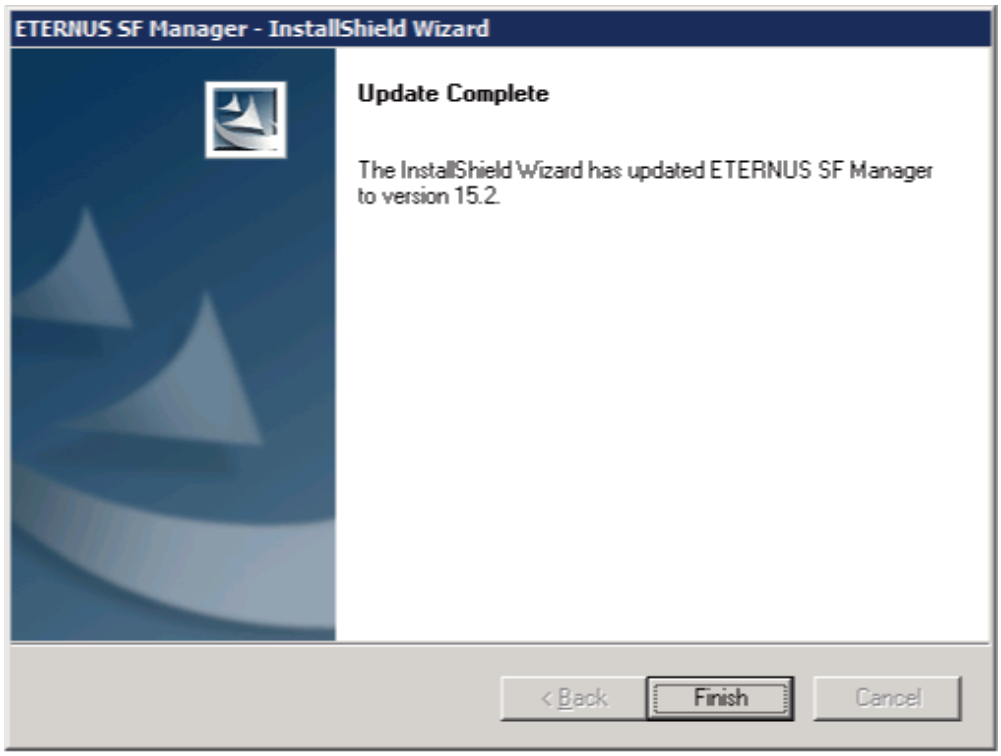
5. The following dialog box will be displayed. Click the [Yes] button.
   To cancel the upgrade, click the [No] button.



6. The system configuration will be updated. Wait for the configuration update process to complete.



7. The following installation wizard page will be displayed. The upgrade is completed. Click the [Finish] button.



8. Eject the DVD-ROM.

8.1.1.3 Tasks to be performed after the upgrade

When the upgrade has been completed, the tasks below need to be performed:

1. Starting the service of ETERNUS SF Manager

   Execute the following batch file:

   ```
   $INS_DIR\Common\bin\Start_ESFservice.bat
   ```

   $INS_DIR is the program directory specified at the ETERNUS SF Manager installation.

2. When using the ETERNUS SF Storage Cruiser Optimization option, start the Optimization option.

   From Windows [Services], start the "ETERNUS SF Storage Cruiser Optimization option".

3. Starting the service of Symfoware

   Start the SymfoWARE RDA RDBSWSTF services and the SymfoWARE RDB RDBSWSTF services referring to "Starting Services" in "Starting and Stopping Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

4. Resetting the password for the repository access user

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

   Point

   Even if the password has not changed, ensure that you reset the password.

   See

   For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

5. Changing the server information

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

Note

If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

8.1.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

The following values are used in the description:

Directory name	Explanation
$INS_DIR	"Program Directory" specified at the ETERNUS SF Manager installation.
$ETC_DIR	"Environment Directory" specified at the ETERNUS SF Manager installation.

8.1.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's manager, as described below.

1. Checking the Symfoware.

   The Symfoware product is bundled with this product. If Symfoware is already installed on the server where the upgrade will be performed, check the Symfoware environment before starting the upgrade.

   See

   For details, refer to "Before installation" in "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version.

2. Check that the ETERNUS SF Manager services are stopped on the secondary node.

   If not stopped, use Failover Cluster Manager on the secondary node to stop the transactions of ETERNUS SF Manager.

3. Stop the ETERNUS SF Manager services on the primary node.

   Use the Failover Cluster Manager to stop the transactions of ETERNUS SF Manager.
   However, the shared disk for shared data of ETERNUS SF Manager must be online.

4. If Managed Server transactions coexist in the clustered system, perform the following procedure:

   1. On the secondary node for a target transaction, check that the Managed Server transactions are stopped.

      If not stopped, use Failover Cluster Manager to stop the Managed Server transactions on the secondary node.
      If multiple Managed Server transactions exist, perform this procedure on each secondary node for Managed Server transactions.

   2. On the primary node for a target transaction, stop the Managed Server transaction.

      Use the Failover Cluster Manager to stop the Managed Server transactions.
      However, leave the shared disk for shared data of Managed Server transactions online.
      If multiple Managed Server transactions exist, perform this procedure on each primary node for Managed Server transaction.

5. Stop the local transactions on all the nodes, perform the following procedure:

   1. Select [Control Panel] > [Administrative Tools] > [Services].
   2. Select "AdvancedCopy Manager COM Service" and click the [Stop] button.

6. Back up the environment and data.

   - On the primary and secondary nodes, back up the Windows system.
   - On the primary node, back up the shared disk for shared data of ETERNUS SF Manager.
   - If Managed Server transactions coexist in the clustered system, back up the shared disk for shared data of Managed Server transactions on each primary node for target transaction.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the following before the upgrade.

   - Windows system
   - Shared disk for shared data of ETERNUS SF Manager
   - Shared disk for shared data of Managed Server transactions

   If a failure occurs during the upgrade, restore the system from the backup.

7. On the primary node, check that SymfoWARE RDB RDBSWSTF services are started.
   If not started, refer to "Starting Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)*.

Note

If the Windows system cannot be backed up, the upgrade procedure described in the section below cannot be performed.
In this case, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware.
   If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.
3. Install this version of product.

8.1.2.2 Performing the upgrade (Primary node)

The following describes the upgrade procedure for the primary node.

1. Log on to the server using Administrator privileges.
2. Save the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\sys\sys.properties).

   Copy it to any directory other than the installation destination directory for AdvancedCopy Manager CCM.
   The saved file is required for post-Upgrade Installation.
3. Restore the original file of the AdvancedCopy Manager CCM environment setting file (sys.properties).

   Overwrite the original environment setting file with the copy destination file.

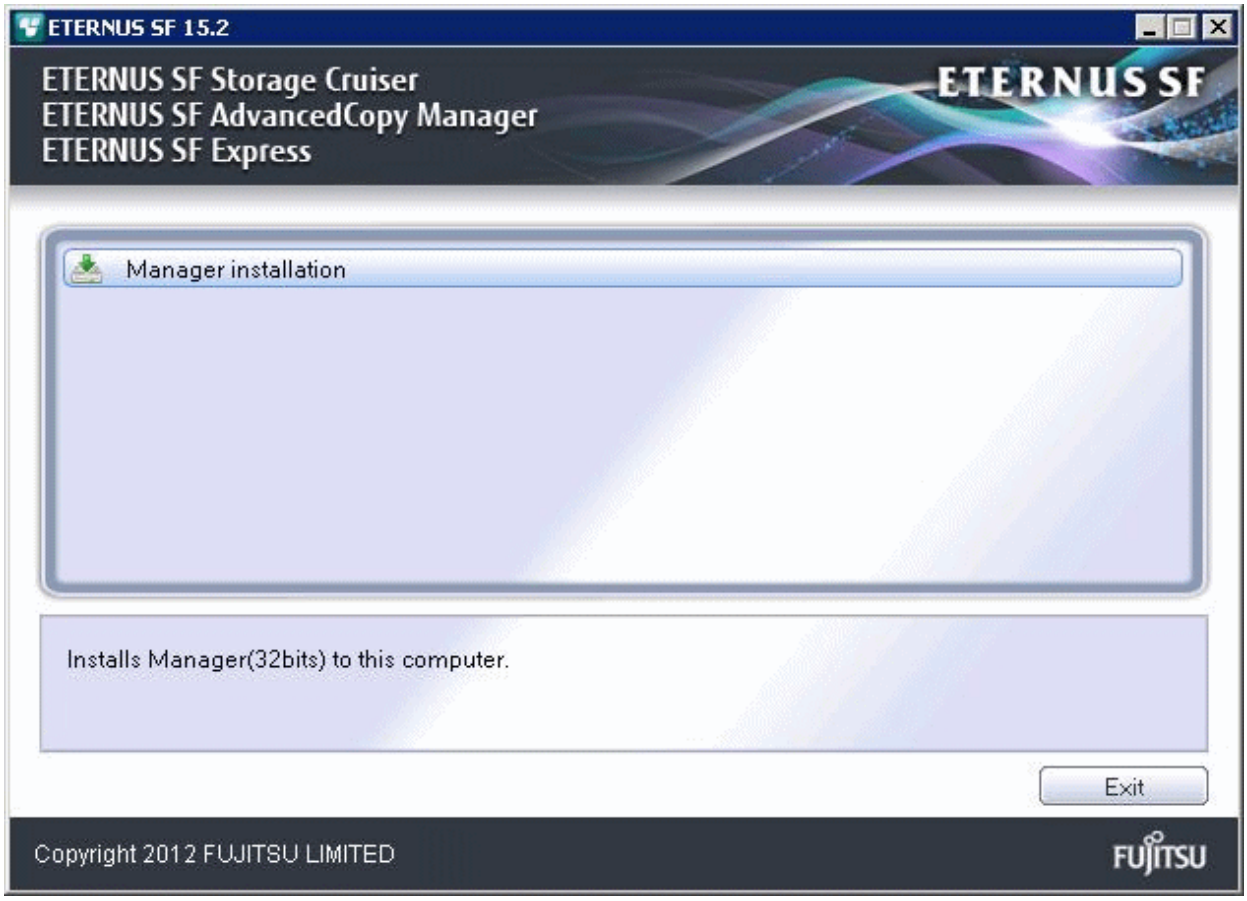
Original environment setting file	Copy destination file
$INS_DIR\CCM\noncluster\sys\sys.properties	$INS_DIR\CCM\sys\sys.properties

4. Save the generic script for AdvancedCopy Manager CCM.

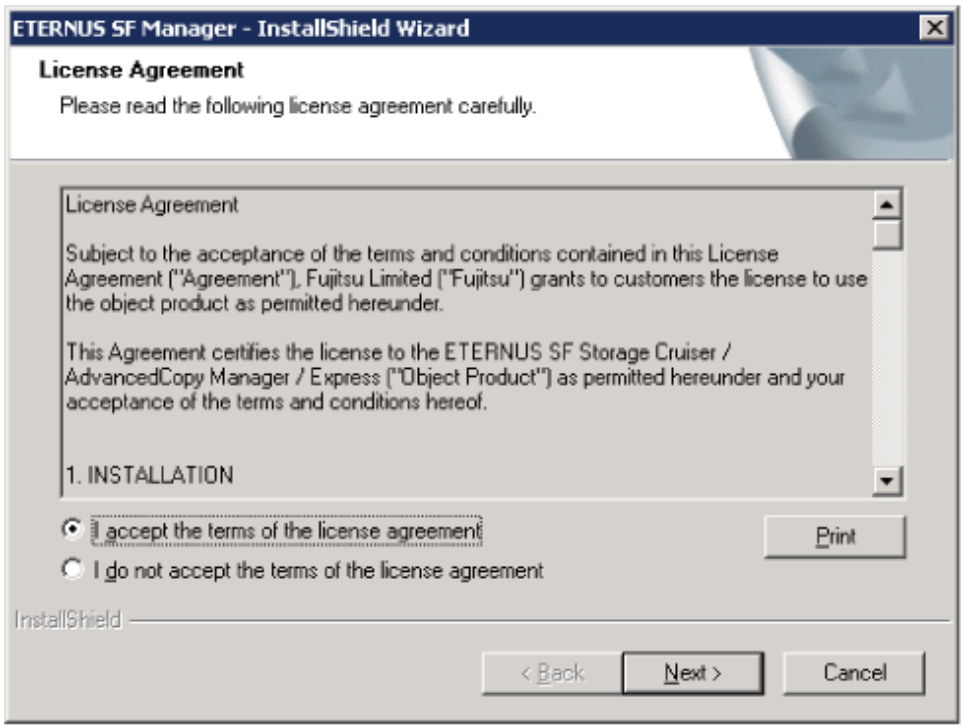
   If stored the generic script under the bin directory of the program directory for AdvancedCopy Manager CCM according to "Preparation of generic script for AdvancedCopy Manager CCM" in the *ETERNUS SF Cluster Environment Setup Guide* for the relevant previous version for the corresponding operating system and node, copy it to any directory other than the installation destination directory for AdvancedCopy Manager CCM.
   The saved file is required for post-Upgrade Installation.
5. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

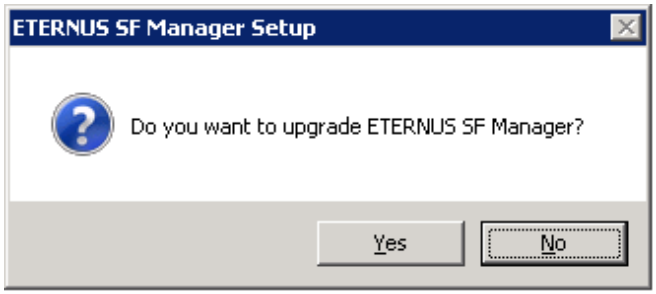
6. The window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.



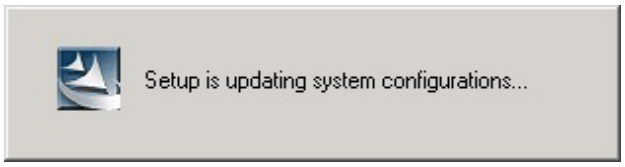
7. Read the terms and conditions of the [License Agreement] page.
   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.



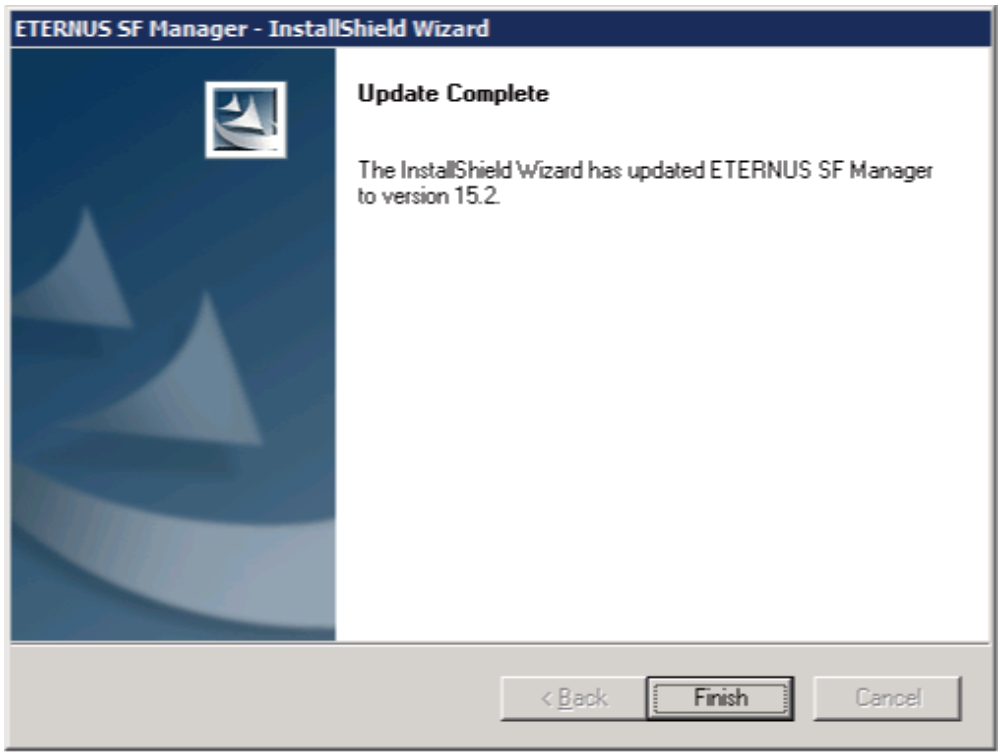
8. The following dialog box will be displayed. Click the [Yes] button.
   To cancel the upgrade, click the [No] button.



9. The system configuration will be updated. Wait for the configuration update process to complete.



10. The following installation wizard page will be displayed. The upgrade is completed. Click the [Finish] button.



11. Eject the DVD-ROM.

8.1.2.3 Tasks to be performed after the upgrade (Primary node)

When the upgrade has been completed, the tasks below need to be performed:

1. Check that SymfoWARE RDB RDBSWSTF services are stopped.
   If not stopped, refer to "Stopping Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)*.

2. Restore the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\sys\sys.properties).

   Overwrite the environment setting file (sys.properties) saved in step 2 of "8.1.2.2 Performing the upgrade (Primary node)" with the file after the upgrade.

3. Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\micc\sys\.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

*1: Specify the value of stxs_etcdir set to the $INS_DIR\CCM\noncluster\micc\sys\.install.sys file for the *upgradedDir*.

Note

- Do not change anything other than the stxs_etcdir line in the $INS_DIR\CCM\micc\sys\.install.sys file.
- The $INS_DIR\CCM\noncluster\micc\sys\.install.sys file is for reference only, do not edit.

4. Restore the generic script for AdvancedCopy Manager CCM.

   If the generic script is saved in step 4 of "8.1.2.2 Performing the upgrade (Primary node)", copy the saved generic script to the directory that stored the generic script according to "Preparation of generic script for AdvancedCopy Manager CCM" in the *ETERNUS SF Cluster Environment Setup Guide* for the relevant previous version for the corresponding operating system and node.

5. Edit the following environment setting files for AdvancedCopy Manager on the shared disk for shared data of ETERNUS SF Manager:

   - <*Drive of shared disk for shared data of ETERNUS SF Manager*>:\etc\opt\swstorage\clsetup.ini
   - <*Drive of shared disk for shared data of ETERNUS SF Manager*>:\etc\opt\swstorage\etc\swstg.ini

   Change the version information within each file, as follows:

   For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

   For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

   Note

   Do not change anything other than the version information.

6. If Managed Server transactions coexist in the clustered system, edit the environment setting files for AdvancedCopy Manager on the shared disk for Managed Server transactions shared data.

   On the primary node for target transactions, edit the following files:

   - <*Drive of shared disk for shared data of Managed Server transactions*>:\etc\opt\swstorage\clsetup.ini
   - <*Drive of shared disk for shared data of Managed Server transactions*>:\etc\opt\swstorage\etc\swstg.ini

   Change the version information within each file, as follows:

   For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

   For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

Note

Do not change anything other than the version information.

8.1.2.4 Performing the upgrade (Secondary node)

Perform the upgrade for the secondary node.

The upgrade procedure is the same as that for the primary node. Refer to "8.1.2.2 Performing the upgrade (Primary node)".

8.1.2.5 Tasks to be performed after the upgrade (Secondary node)

When the upgrade has been completed, the tasks below need to be performed:

1. Restore the AdvancedCopy Manager CCM environment setting file.

   Overwrite the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\sys\sys.properties) saved in step 2 of "8.1.2.2 Performing the upgrade (Primary node)" with the file after the upgrade.

2. Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\micc\sys\.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

*1: Specify the value of stxs_etcdir set to the $INS_DIR\CCM\noncluster\micc\sys\.install.sys file for *upgradedDir*.

Note

- Do not change anything other than the stxs_etcdir line in the $INS_DIR\CCM\micc\sys\.install.sys file.
- The $INS_DIR\CCM\noncluster\micc\sys\.install.sys file is for reference only, do not edit.

8.1.2.6 Starting ETERNUS SF Manager

After performing "8.1.2.3 Tasks to be performed after the upgrade (Primary node)" and "8.1.2.5 Tasks to be performed after the upgrade (Secondary node)", perform the following procedure:

1. Start ETERNUS SF Manager services on the primary node.

   Use Failover Cluster Manager to start the transactions included of ETERNUS SF Manager.

2. If Managed Server transactions coexist in the clustered system, start the Managed Server transactions in the primary node for a target transaction.

   Use Failover Cluster Manager to start the Managed Server transactions.
   If multiple Managed Server transactions exist, apply this procedure for each Managed Server transaction.

3. Start the local transactions on all the nodes, perform the following procedure:

   1. Select [Control Panel] > [Administrative Tools] > [Services].
   2. Select "AdvancedCopy Manager COM Service" and click the [Start] button.

4. Reset the password for the repository access user in the primary node.

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

Point

Even if the password has not changed, ensure that you reset the password.

See

For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

5. Change the server information in the primary node.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version.

6. If Managed Server transactions exist in a clustered system, change the server information for Managed Server transactions.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.

   This operation should be performed on the primary node for Management Server transactions.
   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

Note

If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

8.2 Upgrading the AdvancedCopy Manager (for Solaris, Linux)

This section describes the upgrade procedure for the AdvancedCopy Manager's manager for Solaris and Linux.

8.2.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

8.2.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's manager, as described below.

1. Install of essential package.
   According to the environment in which the upgrade is performed, the packages required should be installed.

   The environment and the package are as follows. The installed package version shall be later than the described versions.

   When the upgrade is performed excluding the following environments, this procedure is not needed.

   - For Red Hat Enterprise Linux 5 (for Intel64), 32-bit AdvancedCopy Manager is installed of the previous version:

     ```
     libXrender-0.9.1-3.1.i386.rpm
     ```

   - For Red Hat Enterprise Linux 6 (for Intel64):

     ```
     libXrender-0.9.5-1.el6.i686.rpm
     ```

   Note

   When libXrender is installed, other packages might be demanded. Install the package (the end of the package name is i386.rpm or i686.rpm) of 32-bit when OS is 64-bit environment.

   The required packages for the installation are included in the OS installation media.

2. Execute the following command to stop the daemon of ETERNUS SF Manager.

   ```
   # /opt/FJSVesfcm/bin/stopesf.sh
   ```

3. When using the ETERNUS SF Storage Cruiser Optimization option, execute the following command to stop the Optimization option daemon:

   ```
   # /opt/FJSVssast/bin/astctl stop
   ```

4. Back up the operating system.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the operating system before performing the upgrade.
   If a failure occurs during the upgrade, restore the system from the backup.

Note

If cannot be backed up the operating system, using the procedure mentioned below cannot perform the Upgrade Installation process. If cannot be backed up the operating system, uninstall the before version product manually, and then install this version of product.

8.2.1.2 Performing the upgrade

The upgrade is performed as follows:

1. Log in to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script.

```
# ./esfinstall.sh
```

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
+-------------------------------------------------------------+
|                       ETERNUS SF V15.2                      |
|                                                             |
|    All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012  |
+-------------------------------------------------------------+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This Agreement certifies the license to the ETERNUS SF Storage Cruiser / AdvancedCopy Mana
ger / Express ("Object Product") as permitted hereunder and your acceptance of the terms a
nd conditions hereof.


1. INSTALLATION
You are allowed to install and use manager module and agent module of the Object Product o
n any computer connected to the Storage Device directly or through network and you are als
o allowed to install and use client module of the Object Product on any computer.

2. ARCHIVAL COPY
You may make one (1) archival copy of the Object Product.

3. EMBEDDING
If the Object Product is expected to be used as embedded in another program, you may embed
the Object Product, in whole or in part, in such other program, in accordance with the pr
ocedure described in the applicable documentation.

4. NO ASSIGNMENT
You may not rent, lease, sublicense, assign, transfer or create lien against the Object Pr
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```
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Do you accept the terms of the above License Agreement? (default: n) [y,n]:
```

7. The following upgrade message will be displayed.
   To continue the upgrade, enter "y". To discontinue, enter "q".

```
Do you want to upgrade? [y,q]:
```

8. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

9. Change to a directory other than the DVD-ROM.
   Example:

```
# cd
```

10. Unmount the DVD-ROM.
    Example:

```
 # umount /mnt/dvd
```

11. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager's manager is complete.

8.2.1.3 Tasks to be performed after the upgrade

When the upgrade has been completed, the tasks below need to be performed:

1. Execute the following command to start the daemon of ETERNUS SF Manager.

   ```
   # /opt/FJSVesfcm/bin/startesf.sh
   ```

2. When using the ETERNUS SF Storage Cruiser Optimization option, execute the following command to start the Optimization option daemon.

   ```
   # /opt/FJSVssast/bin/astctl start
   ```

3. Reset the password for the repository access user.

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

   Point

   Even if the password has not changed, ensure that you reset the password.

   See

   For information on the procedure of changing password, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

4. Change the server information.

   To ensure data consistency, execute the stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

8.2.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

Note

If Cluster Unsetup is executed after upgrading from Version 15.0B to this version, the cluster resources and scripts created by the old version's commands starting with "stgclset" will not be deleted.

8.2.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's manager, as described below.

1. Install of essential package.
   According to the environment in which the upgrade is performed, the packages required for primary node and secondary node should be installed.

   The environment and the package are as follows. The installed package version shall be later than the described versions.

   When the upgrade is performed excluding the following environments, this procedure is not needed.

   - For Red Hat Enterprise Linux 5 (for Intel64), 32-bit AdvancedCopy Manager is installed of the previous version:

     ```
     libXrender-0.9.1-3.1.i386.rpm
     ```

   - For Red Hat Enterprise Linux 6 (for Intel64):

     ```
     libXrender-0.9.5-1.el6.i686.rpm
     ```

   Note

   When libXrender is installed, other packages might be demanded. Install the package (the end of the package name is i386.rpm or i686.rpm) of 32-bit when OS is 64-bit environment.

   The required packages for the installation are included in the OS installation media.

2. Check that the cluster application (transaction) has stopped on the secondary node.

   Check whether the cluster application (transaction) to which ETERNUS SF Manager belongs has stopped.
   If not stopped, stop the cluster application (transaction).

   For information on stopping the cluster application (transaction), refer to the relevant cluster software manuals.

3. Stop the cluster application (transaction) on the primary node.

   Stop the cluster application (transaction) to which ETERNUS SF Manager belongs.
   However, the shared disk for shared data of ETERNUS SF Manager must be mounted.

   For information on stopping the cluster application (transaction), refer to the relevant cluster software manuals.

4. If Managed Server transactions exist in a clustered system, perform the following.

   1. On the secondary node for the target transactions, check that the Managed Server transactions have stopped.

      If not stopped, stop them on the secondary node.
      If multiple Managed Server transactions exist, perform this procedure for each secondary node for Managed Server transaction.

      For information on stopping the Managed Server transactions, refer to the relevant cluster software manuals.

2. On the primary node for the target transactions, stop the Managed Server transactions.

   Stop the Managed Server transactions by referring to the relevant cluster software manuals.
   However, the shared disk for shared data of Managed Server transactions must be mounted.
   If multiple Managed Server transactions exist, perform this procedure for each primary node for Managed Server transaction.

5. Stop the local transactions on all the nodes.

   Stop the communication daemon for the local transactions of the AdvancedCopy Manager's manager.

   For information on stopping the daemon, refer to "Starting and stopping the communication daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

6. Back up the environment and data.

   - On the primary and secondary nodes, back up the operating system.
   - On the primary node, back up the shared disk for shared data of ETERNUS SF Manager.
   - If Managed Server transactions exist in a clustered system, back up the shared disk for shared data of Managed Server transactions for each the primary node for Managed Server transactions.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the following before performing the upgrade.

   - Operating system
   - Shared disk for shared data of ETERNUS SF Manager
   - Shared disk for shared data of Managed Server transaction

   If a failure occurs during the upgrade, restore the system from the backup.

7. On the primary node, check that AdvancedCopy Manager's RDB daemon is started.
   If not started, refer to "Starting and stopping the RDB daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for the corresponding operating system.

Note

If cannot be backed up the operating system, using the procedure mentioned below cannot perform the Upgrade Installation process. If cannot be backed up the operating system, uninstall the before version product manually, and then install this version of product.

If the RDB daemon is to be monitored in a clustered system, cancel the monitoring temporarily to perform the upgrade.

8.2.2.2 Performing the upgrade (Primary node)

The following describes the upgrade procedure for the primary node.

1. Log in to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script:

```
# ./esfinstall.sh
```

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
+-------------------------------------------------------------+
|                       ETERNUS SF V15.2                      |
|                                                             |
|    All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012  |
+-------------------------------------------------------------+


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ger / Express ("Object Product") as permitted hereunder and your acceptance of the terms a
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```

```
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in similar clauses in the NASA FAR Supplement. Contractor/manufacturer is Fujitsu Limited
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Do you accept the terms of the above License Agreement? (default: n) [y,n]:
```

7. The following upgrade message will be displayed.
   To continue the upgrade, enter "y". To discontinue, enter "q".

```
Do you want to upgrade? [y,q]:
```

8. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

9. Change to a directory other than the DVD-ROM.
   Example:

```
# cd
```

10. Unmount the DVD-ROM.
    Example:

```
# umount /mnt/dvd
```

11. Eject the DVD-ROM.

8.2.2.3 Tasks to be performed after the upgrade (Primary node)

When the upgrade has been completed, the tasks below need to be performed:

1. Check that AdvancedCopy Manager's RDB daemon is stopped.
   Stop the RDB daemon by referring to "Starting and stopping the RDB daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for the corresponding operating system.

   Note

   If you have temporarily cancelled monitoring setting of the RDB daemon using "8.2.2.1 Preparing for the upgrade", set monitoring to RESUME status.

2. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file (/opt/FJSVccm/micc/sys/.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

   *1: Specify the value of stxs_etcdir set to the /opt/FJSVccm/noncluster/micc/sys/.install.sys file for *upgradedDir*.

   Note

   - Do not change anything other than the stxs_etcdir line in the /opt/FJSVccm/micc/sys/.install.sys file.
   - The /opt/FJSVccm/noncluster/micc/sys/.install.sys file is for reference only, do not edit.

3. Edit the following environment setting files for ETERNUS SF Manager.

   - <*Mount point of shared disk for shared data of ETERNUS SF Manager*>/etc/opt/swstorage/clsetup.ini
   - <*Mount point of shared disk for shared data of ETERNUS SF Manager*>/etc/opt/swstorage/swstg.ini

   Change the version information within each file, as follows:

   For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

   For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

   Note

   Do not change anything other than the version information.

4. If Managed Server transactions exist in the clustered system, edit the environment setting files for AdvancedCopy Manager on the shared disk for shared data of Managed Server transactions, on the primary node for a target service.

   On the primary node for target transactions, edit the following files:

   - <*Mount point of shared disk for shared data of Managed Server transaction*>/etc/opt/swstorage/clsetup.ini
   - <*Mount point of shared disk for shared data of Managed Server transaction*>/etc/opt/swstorage/swstg.ini

   Change the version information within each file, as follows:

   For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

   For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

   Note

   Do not change anything other than the version information.

5. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the line starting with "System=" in /opt/FJSVswstf/cluster/swcluster.ini as follows:

   ```
   System=GEN
   ```

   Note

   Do not change anything other than the line starting with "System=".

6. If the SNMP Trap XML definition file has been customized, re-customize the definition file to use the new features of Storage Cruiser.
   Customize the newly installed definition file:

   - 1_3_6_1_4_1_789.xml

   See

   For information on customizing the SNMP Trap XML definition file, refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide*.

8.2.2.4 Performing the upgrade (Secondary node)

Perform the upgrade for the secondary node.

The upgrade procedure is the same as that for the primary node. Refer to "8.2.2.2 Performing the upgrade (Primary node)".

8.2.2.5 Tasks to be performed after the upgrade (Secondary node)

When the upgrade has been completed, the tasks below need to be performed:

1. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file (/opt/FJSVccm/micc/sys/.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

   *1: Specify the value of stxs_etcdir set to the /opt/FJSVccm/noncluster/micc/sys/.install.sys file for *upgradedDir*.

Note

- Do not change anything other than the stxs_etcdir line in the /opt/FJSVccm/micc/sys/.install.sys file.
- The /opt/FJSVccm/noncluster/micc/sys/.install.sys file is for reference only, do not edit.

2. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the line starting with "System=" in /opt/FJSVswstf/cluster/swcluster.ini as follows:

```
System=GEN
```

Note

Do not change anything other than the line starting with "System=".

8.2.2.6 Starting ETERNUS SF Manager

After performing "8.2.2.3 Tasks to be performed after the upgrade (Primary node)" and "8.2.2.5 Tasks to be performed after the upgrade (Secondary node)", perform the following procedure:

1. Start the cluster application (transaction) on the primary node.

   Start the cluster application (transaction) to which ETERNUS SF Manager belongs.
   For information on starting the cluster application (transaction), refer to the relevant cluster software manuals.

2. If Managed Server transactions exist in a clustered system, start the Managed Server transactions on the primary node for the target transactions.

   Start the Managed Server transactions by referring to the relevant cluster software manuals.

   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

3. Start the local transactions on all the nodes.

   Start the communication daemon for local transactions of AdvancedCopy Manager's manager.

   For information on starting the daemon, refer to "Starting and stopping the communication daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

4. Reset the password of the repository access user.

   Execute stguserset (Repository access user change command) to reset the password for the repository access user.

Point

Even if the password has not changed, ensure that you reset the password.

See

For information on the procedure, refer to "Change of password or deletion of the user who was specified as the repository access user" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

5. Change the server information.

   To ensure data consistency, execute the stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Management Server name for the -n option.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

6. If Managed Server transactions exist in a clustered system, change the server information of the Managed Server transactions.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information. When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.

   This operation should be performed on the primary node for Management Server transactions.
   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version.

8.2.3 Resuming operation

When the tasks described above have been performed, the upgrade of the AdvancedCopy Manager's manager is complete. Restart the AdvancedCopy Manager operation.

Note

If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.

8.3 Upgrading the AdvancedCopy Manager's agent (for Windows Server 2008)

This section explains the upgrade procedures for the AdvancedCopy Manager's agent for Windows Server 2008.

8.3.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

8.3.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's agent, as described below.

1. Stop the service of AdvancedCopy Manager's agent.

   Perform the following procedure:

   1. Select [Control Panel] > [Administrative Tools] > [Services].
   2. Select "AdvancedCopy Manager COM Service" and click the [Stop] button.

2. Back up the Windows system.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the Windows system before performing the upgrade.
   If a failure occurs during the upgrade, restore the system from the backup.

8.3.1.2 Performing the upgrade

The upgrade is performed as follows:

1. Log on to the server using Administrator privileges.
2. Check the architecture of the installed AdvancedCopy Manager's agent.

   Select [Control Panel] > [Add or Remove Programs] to check the architecture of the AdvancedCopy Manager's agent.

   - For "AdvancedCopy Manager (x86) - Agent":

     32-bit AdvancedCopy Manager's agent is installed.

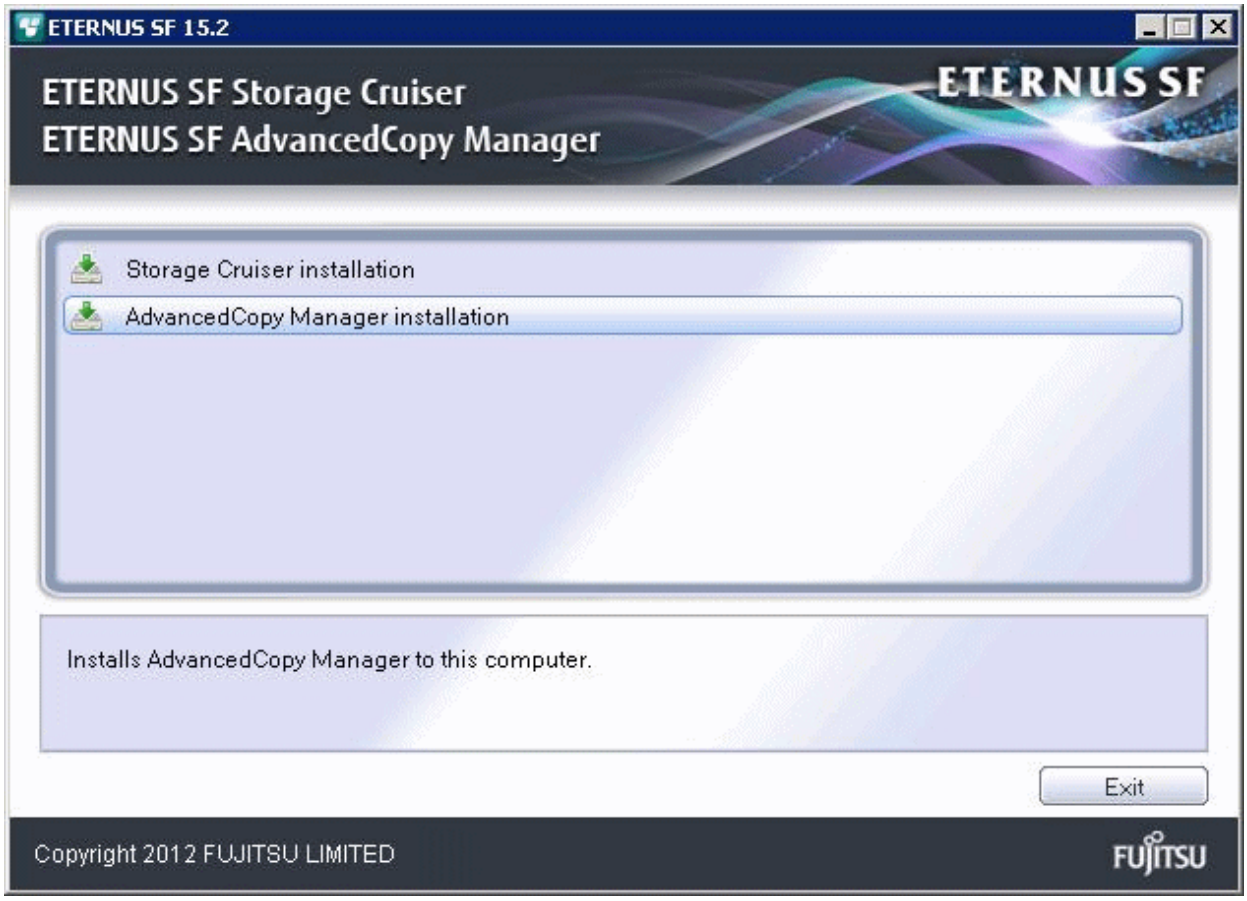
   - For "AdvancedCopy Manager (x64) - Agent":

     64-bit AdvancedCopy Manager's agent is installed.

3. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Agent Program and Manual)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

4. The following window will be displayed.
   For the upgrade installation, this window is not used. Click the [Exit] button.



5. Start the following installation wizard corresponding to the architecture of AdvancedCopy Manager's agent checked in step 2:

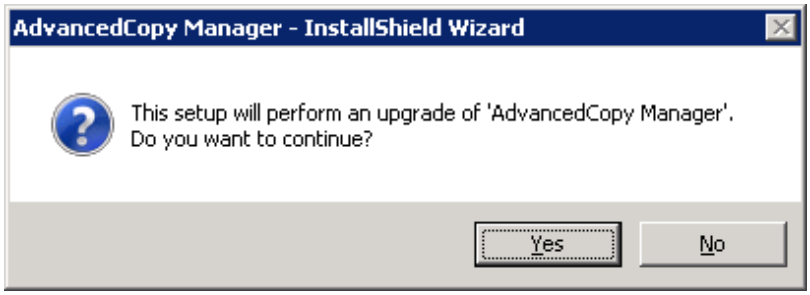
   - For 32-bit version:

     ```
     <DVD-ROM drive>:\Agent_windows\AdvancedCopy_Manager\agent\windows_x86\setup.exe
     ```

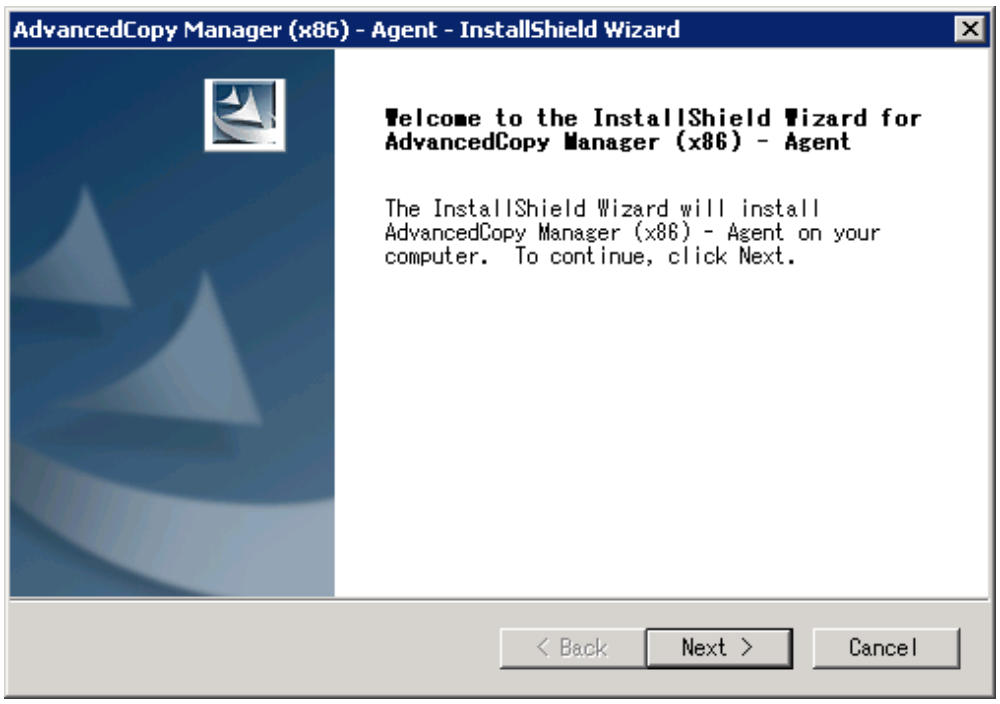
   - For 64-bit version:

     ```
     <DVD-ROM drive>:\Agent_windows\AdvancedCopy_Manager\agent\windows_x64\setup.exe
     ```

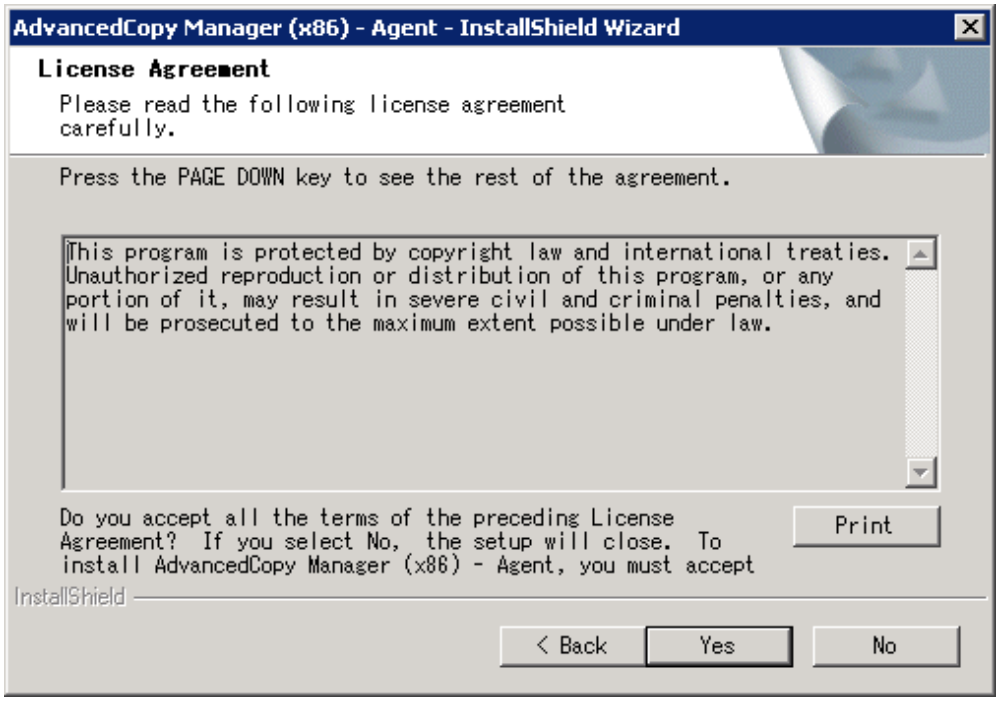
6. The following dialog box will be displayed. Click the [Yes] button.



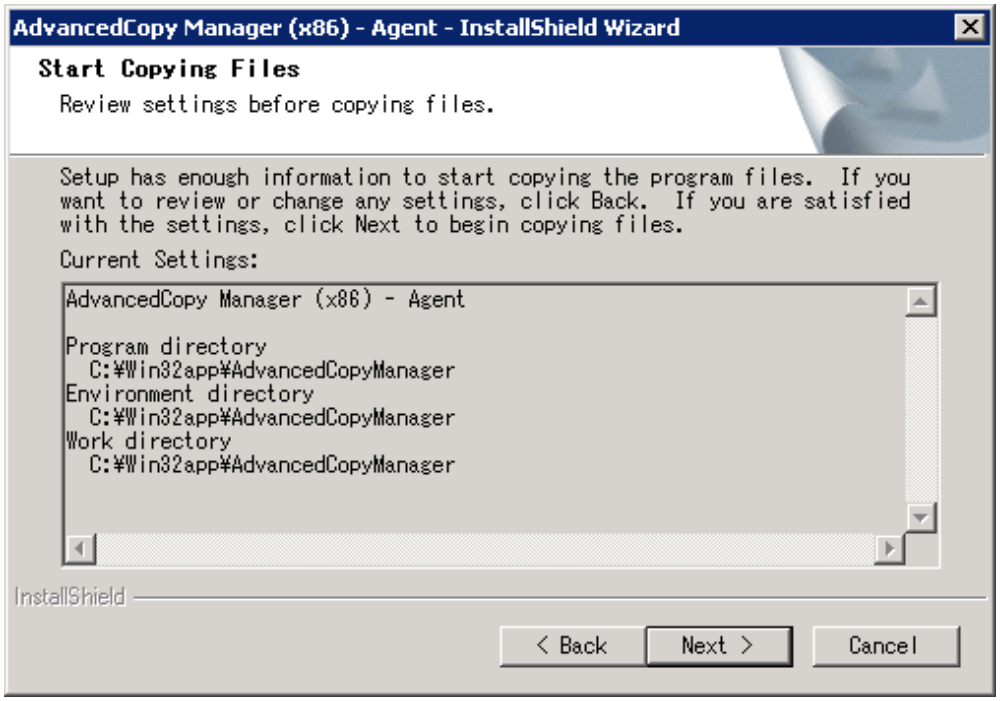
7. The installation wizard page will be displayed. Click the [Next] button.



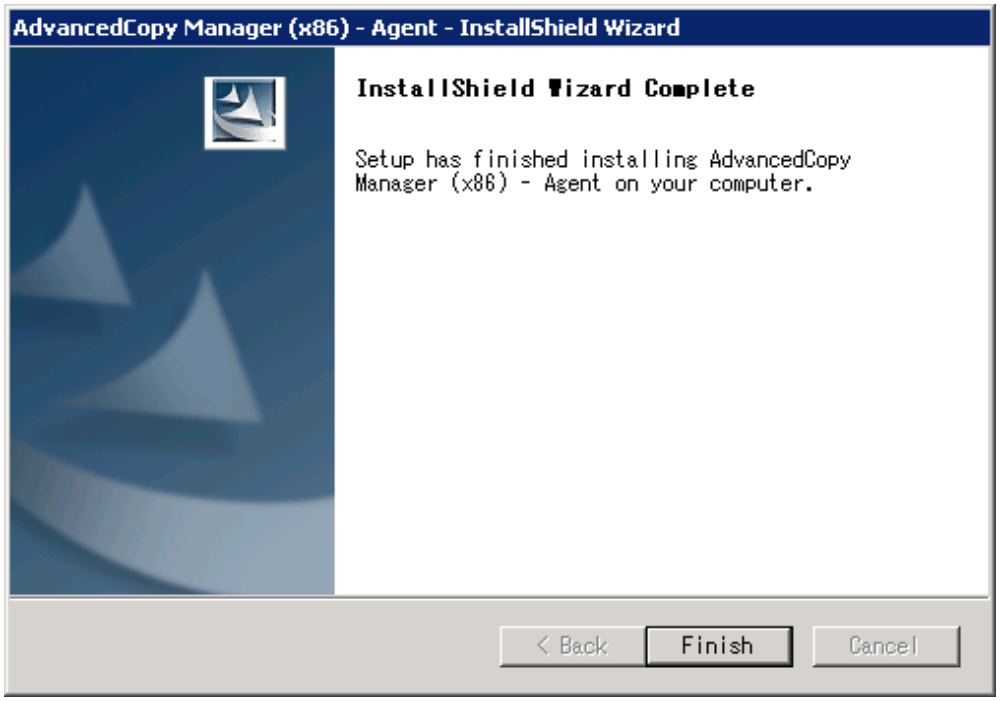
8. Read the terms and conditions of the [License Agreement] page.
   If the conditions are agreeable, click the [Yes] button.



9. Check the settings information in the [Start Copying Files] page. If the settings are correct, click the [Next] button. To change a setting, click the [Back] button.



10. Copying of the program is started.
The following installation wizard page will be displayed. The upgrade process is completed. Click the [Finish] button.



11. Eject the DVD-ROM.

8.3.1.3 Tasks to be performed after the upgrade

When the upgrade has been completed, the tasks below need to be performed:

1. Starting the service of AdvancedCopy Manager's agent

   Perform the following procedure:

1. Select [Control Panel] > [Administrative Tools] > [Services].
2. Select "AdvancedCopy Manager COM Service" and click the [Start] button.

2. Changing the server information

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information.
   When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.
   This command should be performed on the Management Server.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

8.3.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

8.3.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's agent, as described below.

1. Check that Managed Server transactions are stopped on the secondary node.

   If not stopped, use Failover Cluster Manager to stop Managed Server transactions on the secondary node.
   If multiple Managed Server transactions exist, perform this procedure on each secondary node for Managed Server transactions.

2. Stop the Managed Server transaction on the primary node.

   Use Failover Cluster Manager to stop the Managed Server transactions.
   However, the shared disk for shared data of Managed Server transactions must be online.
   If multiple Managed Server transactions exist, perform this procedure on each primary node for Managed Server transaction.

3. Stop the local transactions on all the nodes, perform the following procedure:
   1. Select [Control Panel] > [Administrative Tools] > [Services].
   2. Select "AdvancedCopy Manager COM Service" and click the [Stop] button.

4. Back up the environment and data.
   - Back up the Windows system on the primary and secondary nodes.
   - Back up the shared disk for shared data of Managed Server transactions on the primary node.
   - If multiple Managed Server transactions exist, back up the shared disk for shared data of Managed Server transactions on each the primary node for Managed Server transactions.

Point

If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the following before the upgrade.

- Windows system
- Shared disk for shared data of Managed Server transactions

If a failure occurs during the upgrade, restore the system from the backup.

8.3.2.2 Performing the upgrade (Primary node)

The following describes the upgrade procedure for the primary node.

If multiple Managed Server transactions exist, use this procedure on each primary node for Managed Server transactions.

1. Log on to the server using Administrator privileges.
2. Check the architecture of the installed AdvancedCopy Manager's agent.

   Select [Control Panel] -> [Add or Remove Programs] to check the architecture of AdvancedCopy Manager's agent.

   - For "AdvancedCopy Manager (x86) - Agent":

     32-bit AdvancedCopy Manager's agent is installed.

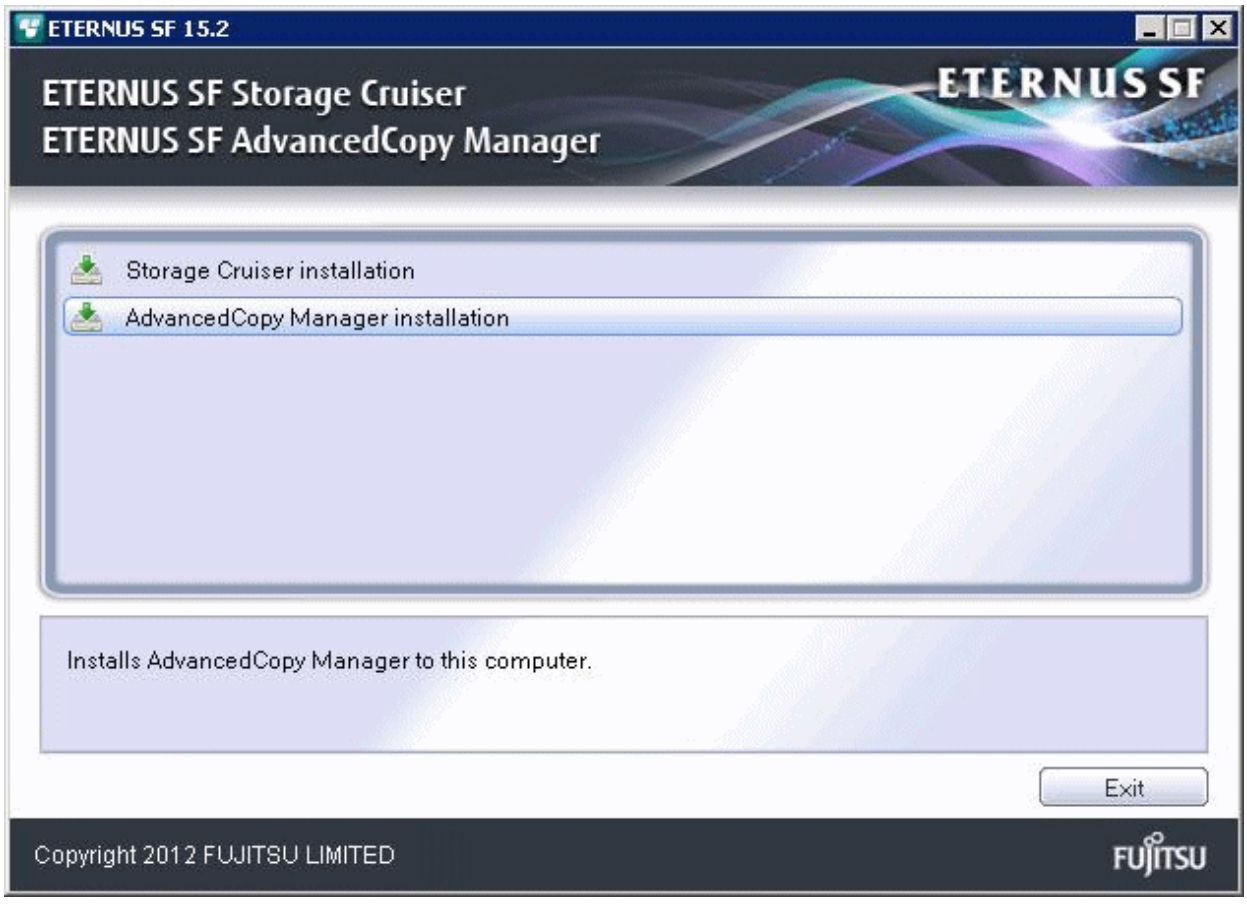
   - For "AdvancedCopy Manager (x64) - Agent":

     64-bit AdvancedCopy Manager's agent is installed.

3. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Agent Program and Manual)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

4. The following window will be displayed.
   For the upgrade installation, this window is not used. Click the [Exit] button.



5. Start the following installation wizard corresponding to the architecture of AdvancedCopy Manager's agent checked in step 2.

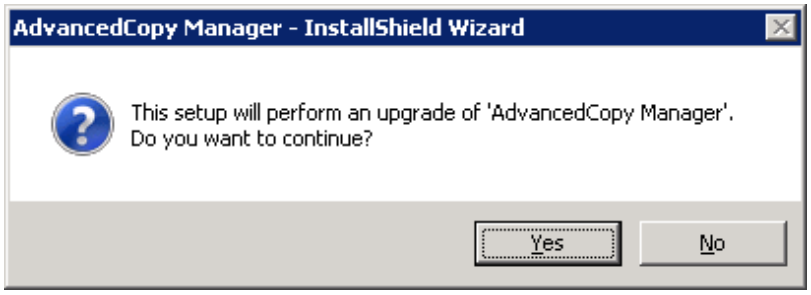
   - For 32-bit version:

     <DVD-ROM drive>:\Agent_windows\AdvancedCopy_Manager\agent\windows_x86\setup.exe

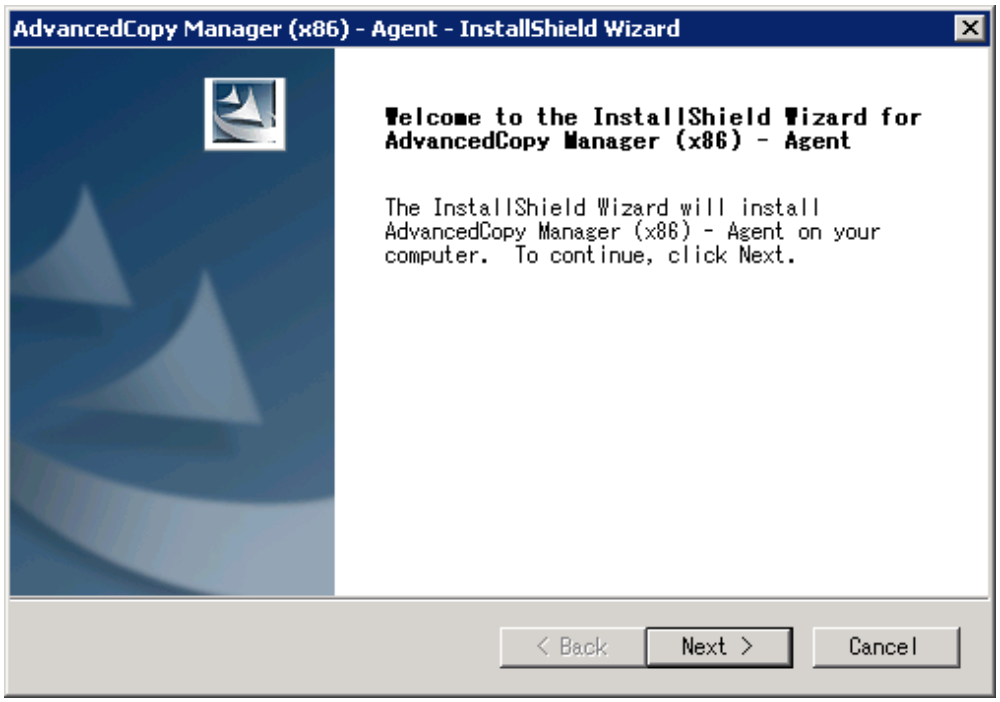
- For 64-bit version:

  <DVD-ROM drive>:\Agent_windows\AdvancedCopy_Manager\agent\windows_x64\setup.exe

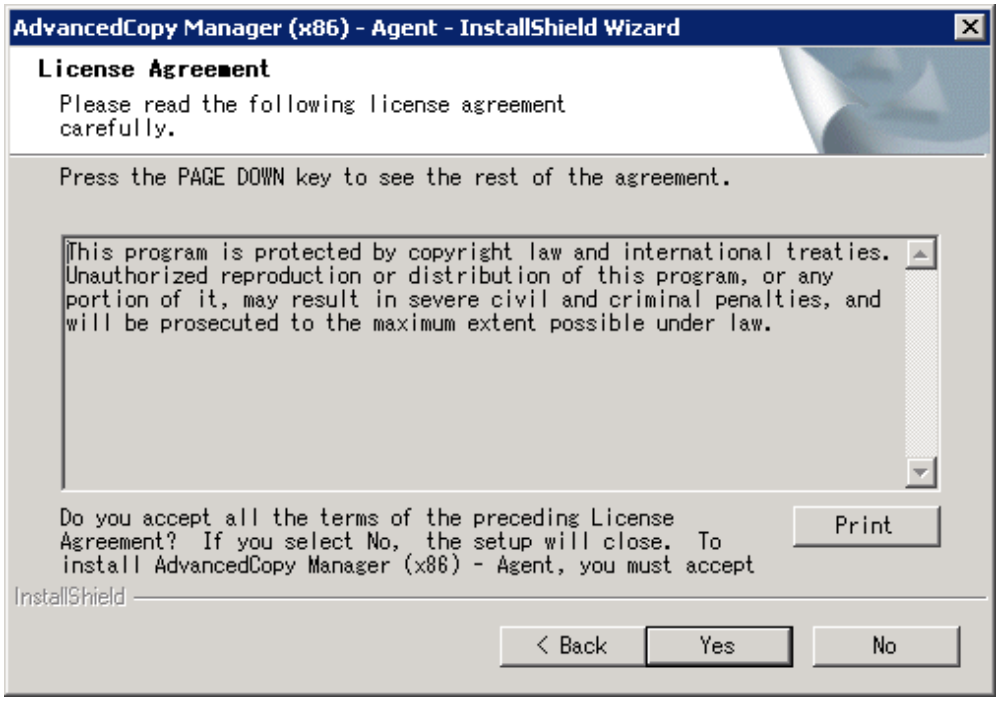
6. The following dialog box will be displayed. Click the [Yes] button.



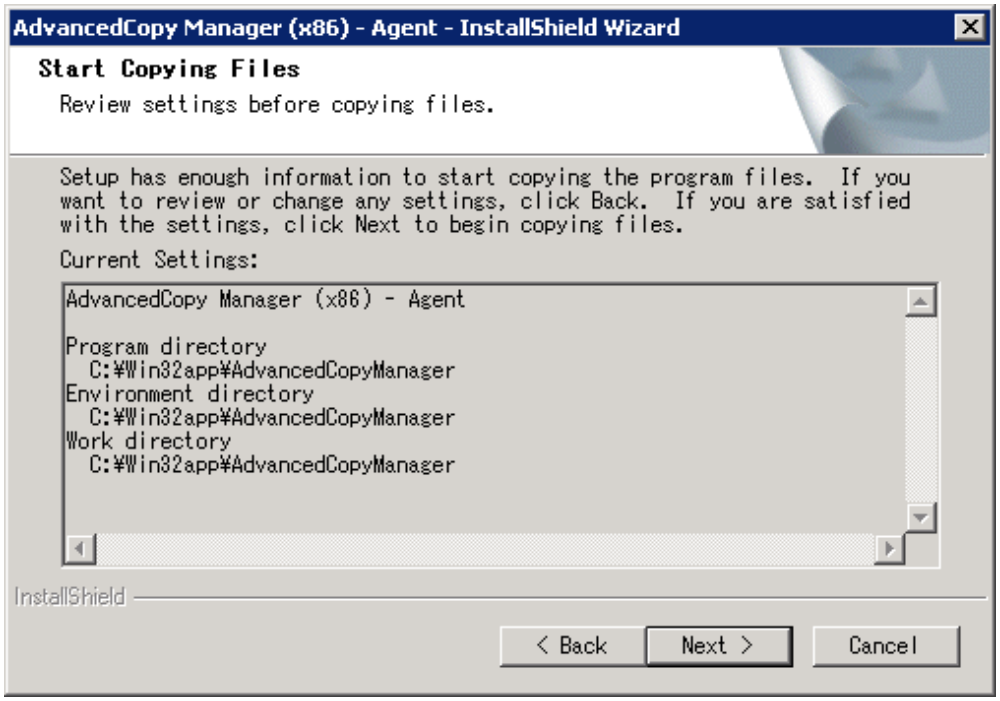
7. The following installation wizard page will be displayed. Click the [Next] button.



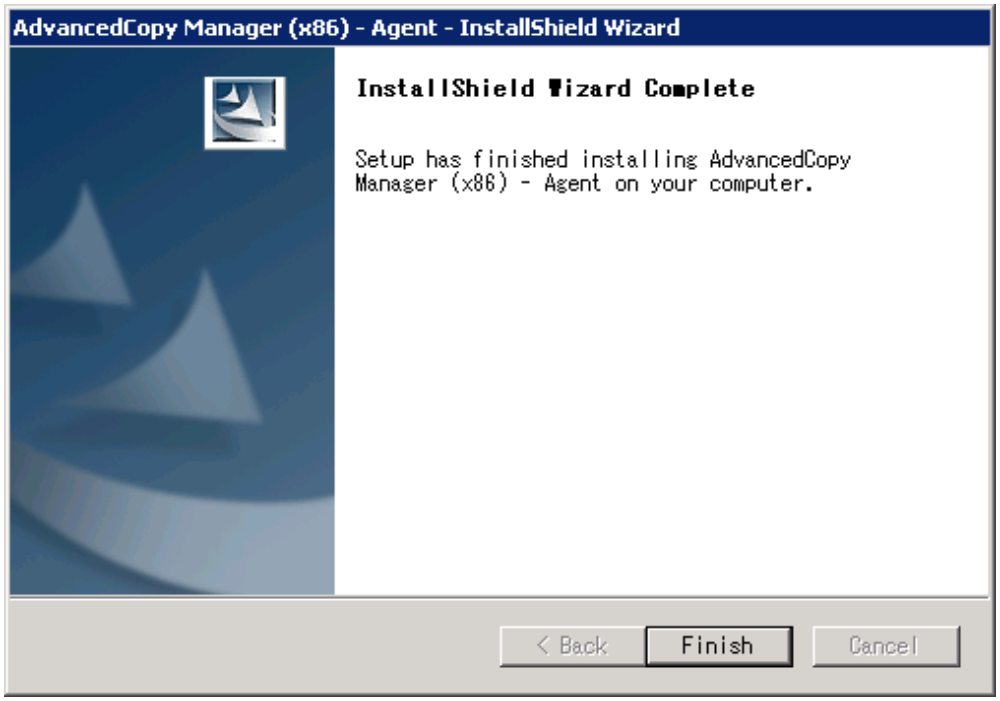
8. Read the terms and conditions of the [License Agreement] page.
   If the conditions are agreeable, click the [Yes] button.



9. Check the settings information in the [Start Copying Files] page. If the settings are correct, click the [Next] button. To change a setting, click the [Back] button.



10. Copying of the program is started.
    The following installation wizard page will be displayed. The upgrade process is completed. Click the [Finish] button.



11. Eject the DVD-ROM.

8.3.2.3 Tasks to be performed after the upgrade (Primary node)

When the upgrade has been completed, the tasks below need to be performed:

If multiple Managed Server transactions exist, use this procedure in each primary node for Managed Server transaction.

Edit the following environment setting files for Managed Server transaction on the shared disk for shared data:

- <*Drive of shared disk for shared data of Managed Server transaction*>:\etc\opt\swstorage\clsetup.ini
- <*Drive of shared disk for shared data of Managed Server transaction*>:\etc\opt\swstorage\etc\swstg.ini

Change the version information within each file, as follows:

For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

Note

Do not change anything other than the version information.

8.3.2.4 Performing the upgrade (Secondary node)

Perform the upgrade for the secondary node.

The upgrade procedure is the same as that for the primary node. Refer to "8.3.2.2 Performing the upgrade (Primary node)".

Point

If this secondary node acts as a primary node for other Managed Server transactions, it is upgraded as a primary node, so this procedure is not needed.

8.3.2.5 Tasks to be performed after the upgrade (Secondary node)

There is no further action required after the upgrade for the secondary node.

8.3.2.6 Starting the Managed Server transactions

After the upgrade, perform the following procedure:

1. Start the Managed Server transactions on the primary node.

   Use Failover Cluster Manager to start the Managed Server transactions.
   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

2. Start the local transactions on all the nodes, perform the following procedure:

   1. Select [Control Panel] > [Administrative Tools] > [Services].
   2. Select "AdvancedCopy Manager COM Service" and click the [Start] button.

3. Change the server information for Managed Server transactions.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information.
   When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.
   This command should be performed on the Management Server.
   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

   In addition, if there is any node that is running local transactions, perform this procedure on the relevant node.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

8.4 Upgrading the AdvancedCopy Manager's agent (for Solaris, RHEL5/RHEL6, SUSE Linux Enterprise Server 11)

This section explains the upgrade procedures for the AdvancedCopy Manager's agent for Solaris, RHEL5/RHEL6, SUSE Linux Enterprise Server 11.

8.4.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

8.4.1.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's agent, as described below.

1. Execute the following command to stop the daemon of AdvancedCopy Manager's agent.

```
# /opt/swstorage/bin/stopacm
```

2. Back up the operating system.

Point

If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the operating system before performing the upgrade.
If a failure occurs during the upgrade, restore the system from the backup.

8.4.1.2 Performing the upgrade

The upgrade is performed as follows:

1. Log in to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack (Agent Program and Manual)" for this version into the DVD-ROM drive and mount the DVD-ROM.
3. Mount the DVD-ROM.
   - Example for Solaris:

```
# mount -F hsfs -o ro /dev/dsk/c0t4d0s0 <DVD-ROM mount point>
```

     The device name for the DVD-ROM drive may be different for your particular device. In this example, the device name of the DVD-ROM drive is mounted as /dev/dsk/c0t4d0s0.

   - Example for RHEL5/RHEL6 and SUSE Linux Enterprise Server 11:

```
# mount /dev/cdrom <DVD-ROM mount point>
```

     The device name for the DVD-ROM drive may be different for your particular device. In this example, the device name of the DVD-ROM drive is mounted as /dev/cdrom.

4. Install the AdvancedCopy Manager's agent.

   Execute the following commands to install the AdvancedCopy Manager's agent.

```
# cd <Environment specific directory>
# ./swsetup
```

   The <*Environment specific directory*> is as follows:

OS type	Directory
Solaris	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/Solaris
Red Hat Enterprise Linux 5 (for x86)	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/rhel5_x86
Red Hat Enterprise Linux 5 (for Intel64), using the Symfoware linkage function	
Red Hat Enterprise Linux 5 (for Intel64), not using the Symfoware linkage function	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/rhel5_x64
Red Hat Enterprise Linux 6 (for x86) Red Hat Enterprise Linux 6 (for Intel64)	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/rhel6_x86
SUSE Linux Enterprise Server 11 for x86 SUSE Linux Enterprise Server 11 for EM64T	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/sles11_x86

5. The installation information is displayed.

```
swsetup: Installer is preparing for installation...

+-------------------------------------------------------------+
|              ETERNUS SF AdvancedCopy Manager                |
|                          15.2                               |
|                  Copyright FUJITSU LIMITED 2012             |
+-------------------------------------------------------------+


Welcome to Setup.
This program will install "AdvancedCopy Manager" on your system.


Agent setup...
```

6. A confirmation message will be displayed before uninstalling the previous version. To uninstall the previous version and proceed with the new installation, enter "y". To cancel the installation, enter "q". Press **Enter**.

```
An old version is installed in this system.
Do you want to upgrade? [y,q]:
```

7. If "y" was entered for step 6, the upgrade will continue.

   If the upgrade completes successfully, the following message is displayed.

```
swsetup: AdvancedCopy Manager was installed successfully.
```

8. Execute the following commands, and then eject the DVD-ROM:

```
# cd /
# umount <DVD-ROM mount point>
```

8.4.1.3 Tasks to be performed after the upgrade

When the upgrade has been completed, the tasks below need to be performed:

1. Execute the following command to start the daemon of AdvancedCopy Manager's agent.

```
# /opt/swstorage/bin/startacm
```

2. Change the server information.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information.
   When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.
   This command should be performed on the Management Server.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

8.4.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

Note

If Cluster Unsetup is executed after upgrading from Version 15.0B to this version, the cluster resources and scripts created by the old version's commands starting with "stgclset" will not be deleted.

8.4.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager's agent, as described below.

1. Check that Managed Server transactions are stopped on the secondary node.

   If not stopped, stop them on the secondary node.
   If multiple Managed Server transactions exist, perform this procedure on each secondary node for Managed Server transactions.

2. Stop the Managed Server transaction on the primary node.

   Stop the Managed Server transactions by referring to the relevant cluster software manuals.
   However, the shared disk for shared data of Managed Server transactions must be mounted.
   If multiple Managed Server transactions exist, perform this procedure on each primary node for Managed Server transaction.

3. Execute the following command to stop the local transactions on all the nodes.

```
# /opt/swstorage/bin/stopacm
```

4. Back up the environment and data.

   - On the primary and secondary nodes, back up the operating system.
   - On the primary node, back up the shared disk for shared data of Managed Server transactions.
   - If multiple Managed Server transactions exist, back up the shared disk for shared data of Managed Server transactions on each the primary node for Managed Server transactions.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the following before performing the upgrade.

   - Operating system
   - Shared disk for shared data of Managed Server transactions

   If a failure occurs during the upgrade, restore the system from the backup.

8.4.2.2 Performing the upgrade (Primary node)

The following describes the upgrade procedure for the primary node.

1. Log in to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack (Agent Program and Manual)" for this version into the DVD-ROM drive and mount the DVD-ROM.
3. Mount the DVD-ROM.

   - Example for Solaris:

```
# mount -F hsfs -o ro /dev/dsk/c0t4d0s0 <DVD-ROM mount point>
```

     The device name for the DVD-ROM drive may be different for your particular device. In this example, the device name of the DVD-ROM drive is mounted as /dev/dsk/c0t4d0s0.

- Example for RHEL5/RHEL6 and SUSE Linux Enterprise Server 11:

```
# mount /dev/cdrom <DVD-ROM mount point>
```

The device name for the DVD-ROM drive may be different for your particular device. In this example, the device name of the DVD-ROM drive is mounted as /dev/cdrom.

4. Install the AdvancedCopy Manager's agent.

Execute the following commands to install the AdvancedCopy Manager's agent.

```
# cd <Environment specific directory>
# ./swsetup
```

The <*Environment specific directory*> is as follows:

OS type	Directory
Solaris	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/Solaris
Red Hat Enterprise Linux 5 (for x86)	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/rhel5_x86
Red Hat Enterprise Linux 5 (for Intel64), using the Symfoware linkage function	
Red Hat Enterprise Linux 5 (for Intel64), not using the Symfoware linkage function	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/rhel5_x64
Red Hat Enterprise Linux 6 (for x86) Red Hat Enterprise Linux 6 (for Intel64)	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/rhel6_x86
SUSE Linux Enterprise Server 11 for x86 SUSE Linux Enterprise Server 11 for EM64T	<*DVD-ROM mount point*>/Agent_unix/AdvancedCopy_Manager/sles11_x86

5. The installation information is displayed.

```
swsetup: Installer is preparing for installation...

+-------------------------------------------------------------+
|              ETERNUS SF AdvancedCopy Manager                |
|                          15.2                               |
|                  Copyright FUJITSU LIMITED 2012             |
+-------------------------------------------------------------+


Welcome to Setup.
This program will install "AdvancedCopy Manager" on your system.


Agent setup...
```

6. A confirmation message will be displayed before uninstalling the previous version. To uninstall the previous version and proceed with the new installation, enter "y". To cancel the installation, enter "q". Press **Enter**.

```
An old version is installed in this system.
Do you want to upgrade ? [y,q]:
```

7. If "y" was entered for step 6, the upgrade will continue.

If the upgrade completes successfully, the following message is displayed.

```
swsetup: AdvancedCopy Manager was installed successfully.
```

8. Execute the following commands, and then eject the DVD-ROM:

```
# cd /
# umount <DVD-ROM mount point>
```

8.4.2.3 Tasks to be performed after the upgrade (Primary node)

When the upgrade has been completed, the tasks below need to be performed:

1. When the AdvancedCopy Manager's agent upgrade has been completed for the primary node, perform the following procedure:

   If multiple Managed Server transactions exist, perform this procedure on each primary node for Managed Server transaction.

   Edit the following environment setting files for Managed Server transaction on the shared disk for shared data:

   - <*Mount point of shared disk for shared data of Managed Server transaction*>/etc/opt/swstorage/clsetup.ini
   - <*Mount point of shared disk for shared data of Managed Server transaction*>/etc/opt/swstorage/swstg.ini

   Change the version information within each file, as follows:

   For upgrading from Version 15.0B to 15.2

Before	After
Version=V15.0	Version=V15.2

   For upgrading from Version 15.1 to 15.2

Before	After
Version=V15.1	Version=V15.2

   Note

   Do not change anything other than the version information.

2. For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

   Edit the line starting with "System=" in /opt/FJSVswstf/cluster/swcluster.ini as follows:

   ```
   System=GEN
   ```

   Note

   Do not change anything other than the line starting with "System=".

8.4.2.4 Performing the upgrade (Secondary node)

Perform the upgrade for the secondary node.

The upgrade procedure is the same as that for the primary node. Refer to "8.4.2.2 Performing the upgrade (Primary node)".

8.4.2.5 Tasks to be performed after the upgrade (Secondary node)

For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

Edit the line starting with "System=" in /opt/FJSVswstf/cluster/swcluster.ini as follows:

```
System=GEN
```

Note

Do not change anything other than the line starting with "System=".

8.4.2.6 Starting the Managed Server transactions

After the upgrade, perform the following procedure:

1. Start the Managed Server transactions on the primary node.

   Start the Managed Server transactions by referring to the relevant cluster software manuals.
   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

2. Perform the following command to start the local transactions on all the nodes.

   ```
   # /opt/swstorage/bin/startacm
   ```

3. Change the server information for Managed Server transactions.

   To ensure data consistency, execute stgxfwcmmodsrv (Server information change command) to change the server information.
   When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.
   This command should be performed on the Management Server.
   If multiple Managed Server transactions exist, perform this procedure for each Managed Server transaction.

   In addition, if there is any node that is running local transactions, perform this procedure on the relevant node.

   Note

   For changing the server information, start a new window for command execution, and then perform the procedure on the window.

   See

   For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

8.5 Upgrading the AdvancedCopy Manager's agent (for Windows Server 2003, RHEL-AS4, RHEL-ES4, HP-UX, AIX)

This section describes the upgrade procedure for AdvancedCopy Manager's agent.

1. 8.5.1 Backing up the repository data
2. 8.5.2 Backing up the management information
3. 8.5.3 Releasing the backup and restore in Exchange database (for Windows Server 2003)
4. 8.5.4 Uninstalling the previous version
5. 8.5.5 Installing this version
6. 8.5.6 Restoring the repository data
7. 8.5.7 Changing server information
8. 8.5.8 Restoring the management information
9. 8.5.9 Setting the backup and restore in Exchange database (for Windows Server 2003)
10. 8.5.10 Updating the version information

8.5.1 Backing up the repository data

Back up the repository data by referring to the following sections on the Management Server (only when the Managed Server is operated in a clustered system).

OS type of Managed Server	Reference
Windows Server 2003	A.1 Backing up the repository data (for Windows)
RHEL-AS4, RHEL-ES4	A.2 Backing up the repository data (for Solaris, Linux)

8.5.2 Backing up the management information

Back up the management information on the Managed Server by referring to the following sections.

OS type of Managed Server	Reference
Windows Server 2003	A.3 Backing up the management information (for Windows)
RHEL-AS4, RHEL-ES4	A.4 Backing up the management information (for Solaris, Linux)
HP-UX, AIX	A.5 Backing up the management information (for HP-UX, AIX)

8.5.3 Releasing the backup and restore in Exchange database (for Windows Server 2003)

When the backup and restoration function of the Exchange database are used, release the setting by referring to the manual of the previous version.

"Backup and restore of Exchange database in Windows Server 2003" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)*, please do the following.

- Stopping backup copy process
- Delete the copy set of the hardware provider
- Delete source and replica volumes
- Cancel the hardware provider registration

8.5.4 Uninstalling the previous version

Uninstall the previous version by referring to the relevant previous version manual.

For non-clustered systems

Note

For the procedures below, be careful not to perform the procedure "Deletion of all Managed Servers".

- For Windows Server 2003:

  Perform "Uninstallation procedure of AdvancedCopy Manager's agent (for Windows)" in the *ETERNUS SF Installation and Setup Guide*.

- For RHEL-AS4, RHEL-ES4, HP-UX or AIX:

  Perform the procedures for "Stopping services/daemons" in the *ETERNUS SF Installation and Setup Guide*.

For clustered systems

If clustered systems are used for Managed Servers as Managed Server transactions, perform the unsetup of cluster settings before performing uninstallation.

For information on the unsetup of cluster settings, refer to "Deletion of Cluster Environment for Managed Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for the previous version.

8.5.5 Installing this version

Install the AdvancedCopy Manager's agent of this version, and setup the operating environment.

About installation

- For non-clustered systems:

  Refer to "Installation of AdvancedCopy Manager's agent" in the *ETERNUS SF Installation and Setup Guide* for this version, and install the AdvancedCopy Manager's agent.

- For clustered systems:

  Refer to "Installation of ETERNUS SF Agent" in the *ETERNUS SF Cluster Environment Setup Guide* for this version, and install the AdvancedCopy Manager's agent.

Setting up the operating environment

- For non-clustered systems:

  Refer to "Setup of AdvancedCopy Manager's agent" in the *ETERNUS SF Installation and Setup Guide* for this version, and setup the AdvancedCopy Manager's agent.

  Afterwards, start the AdvancedCopy Manager's agent on the Managed Server. For the start procedure, refer to "Starting and Stopping Daemons" or "Starting and Stopping Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Managed Server.

- For clustered systems:

  Refer to "Customization of Managed Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for this version, and setup the AdvancedCopy Manager's agent.

8.5.6 Restoring the repository data

Restore the backed up repository data on the Management Server (only when the Managed Server is operated in a cluster configuration).

Execute stgrepocnv (Repository data migration command) to restore the repository data and then convert it for use with the current version of the repository.

Note

For restoration of the repository data, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgrepocnv (Repository data migration command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

8.5.7 Changing server information

To ensure data consistency, execute the Web Console or stgxfwcmmodsrv (Server information change command) to change the server information.

When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.
This command should be performed on the Management Server.

Note

For changing the server information, start a new window for command execution, and then perform the procedure on the window.

See

For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.

8.5.8 Restoring the management information

Restore the management information on the Managed Server by referring to the following sections.

OS type of Managed Server	Reference
Windows Server 2003	A.11 Restoring the management information (for Windows)
RHEL-AS4, RHEL-ES4	A.12 Restoring the management information (for Solaris, Linux)
HP-UX, AIX	A.13 Restoring the management information (for HP-UX, AIX)

8.5.9 Setting the backup and restore in Exchange database (for Windows Server 2003)

Reconfigure the backup and restoration functions of the Exchange database for which the setting has been released by referring to the manual of this version.

"Backup and restore of Exchange database in Windows Server 2003" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)*, please do the following.

- Registration of provider
- Configuring the source volume and replica volume
- Registering the hardware provider copy set
- Registering database information

8.5.10 Updating the version information

If not using clustered systems, and moreover, if the restoration of repository data has already been performed with the restoration of the replication management list, execute the Web Console or stgxfwcmmodsrv (Server information change command) to update the version information for the Managed Server.

When executing stgxfwcmmodsrv, specify the Managed Server name for the -n option.
This command should be performed on the Management Server.

Note

For updating the version information, start a new window for command execution, and then perform the procedure on the window.

See

- For information on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server.
- For information on reloading the server information using Web Console, refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide*.

8.6 Upgrading the AdvancedCopy Manager Copy Control Module (for Windows)

This section describes the upgrade procedures for the AdvancedCopy Manager Copy Control Module for Windows.

If only AdvancedCopy Manager CCM is installed and used, perform the upgrade mentioned in this section.

If ETERNUS SF Manager is installed and AdvancedCopy Manager CCM is used, refer to "8.1 Upgrading the AdvancedCopy Manager's manager (for Windows)" to perform the upgrade.

Note

For Windows Server 2003, the procedure below cannot be used for the upgrade procedure.
When performing an upgrade for a Windows Server 2003, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware.
   If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.
3. Install this product version.

8.6.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

8.6.1.1 Preparing for the upgrade

Back up the Windows system before starting the upgrade for the AdvancedCopy Manager Copy Control Module.

Point

If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the Windows system before performing the upgrade.
If a failure occurs during the upgrade, restore the system from the backup.

Note

If the Windows system cannot be backed up, the upgrade procedure described in the section below cannot be performed.
In this case, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware. If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.
3. Install this product version.

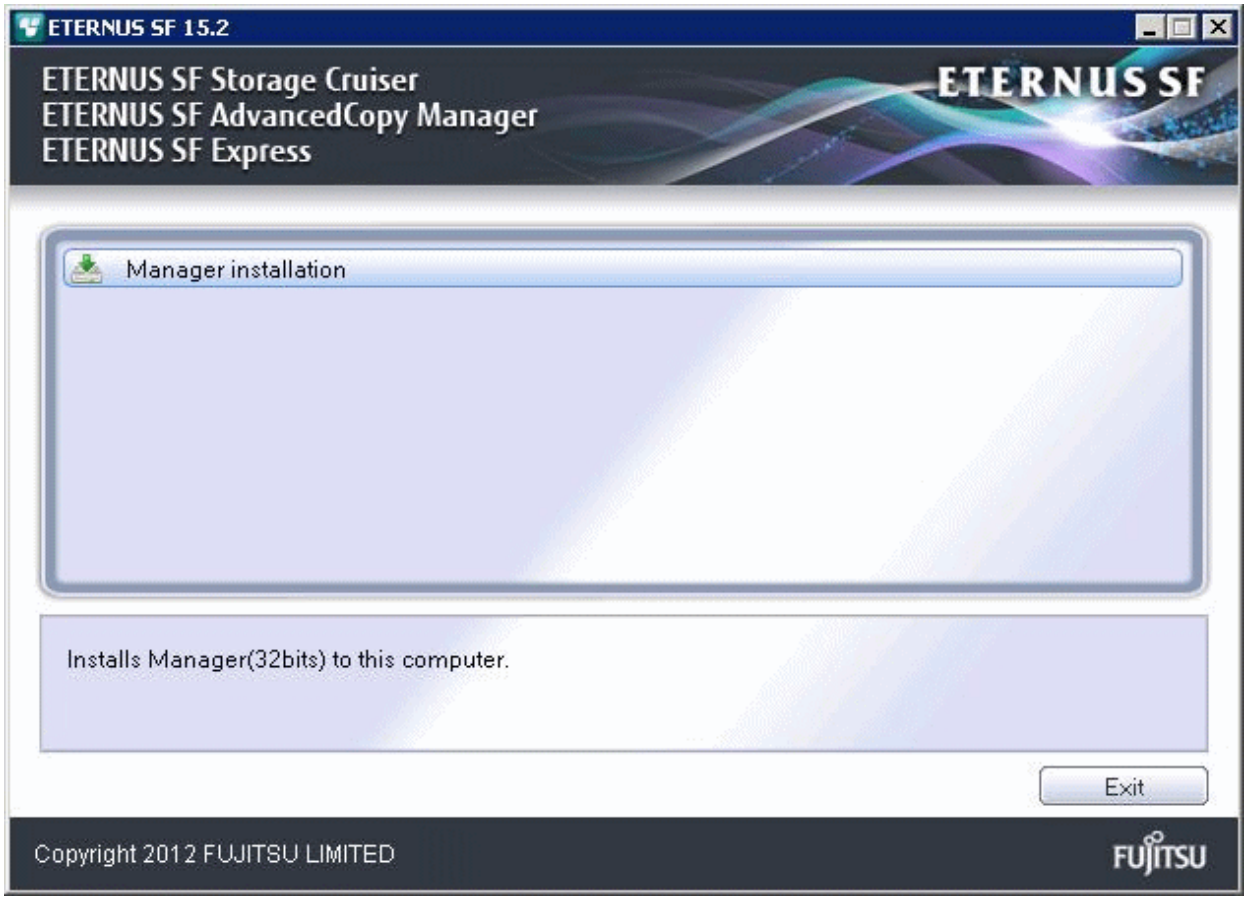
8.6.1.2 Performing the upgrade

The upgrade is performed as follows:

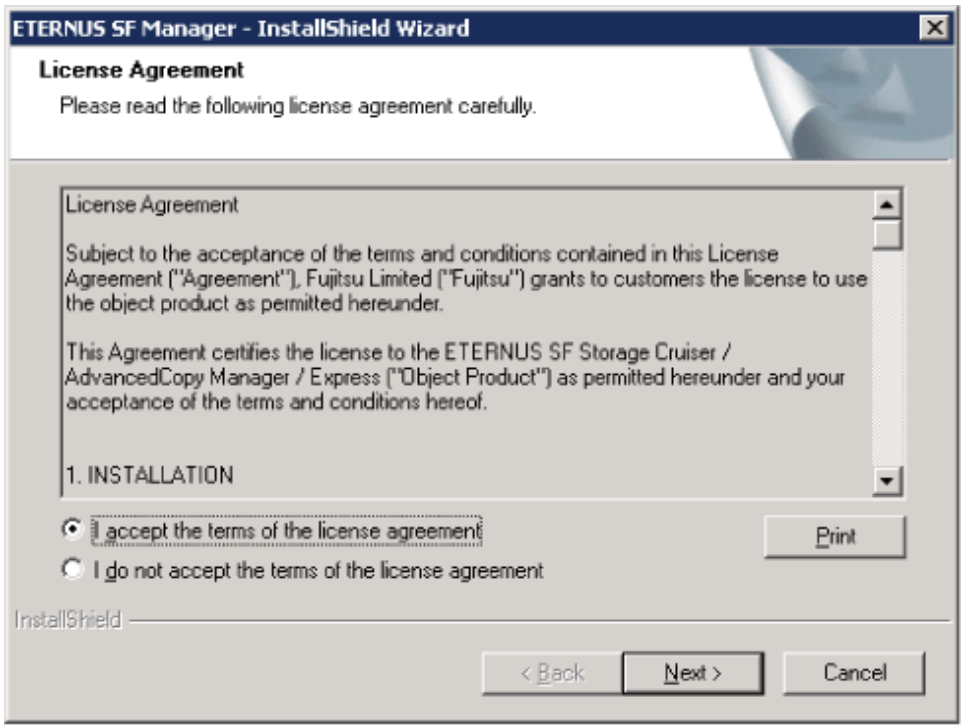
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

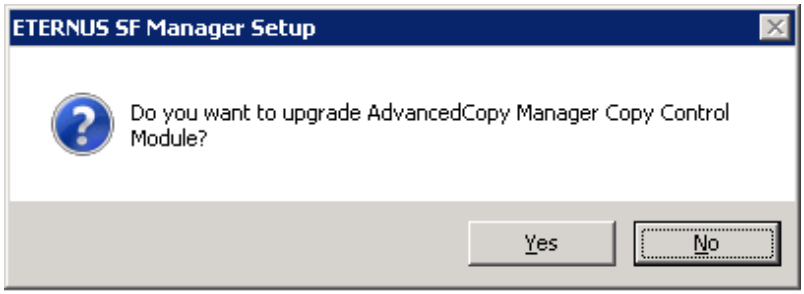
3. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.



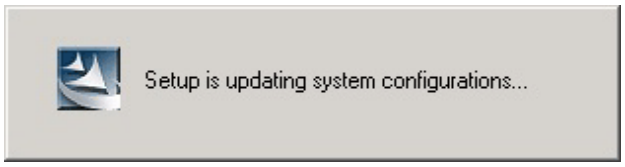
4. Read the terms and conditions of the [License Agreement] page.
   If the conditions are agreeable, select [I accept the terms of the license agreement] and then click the [Next] button.



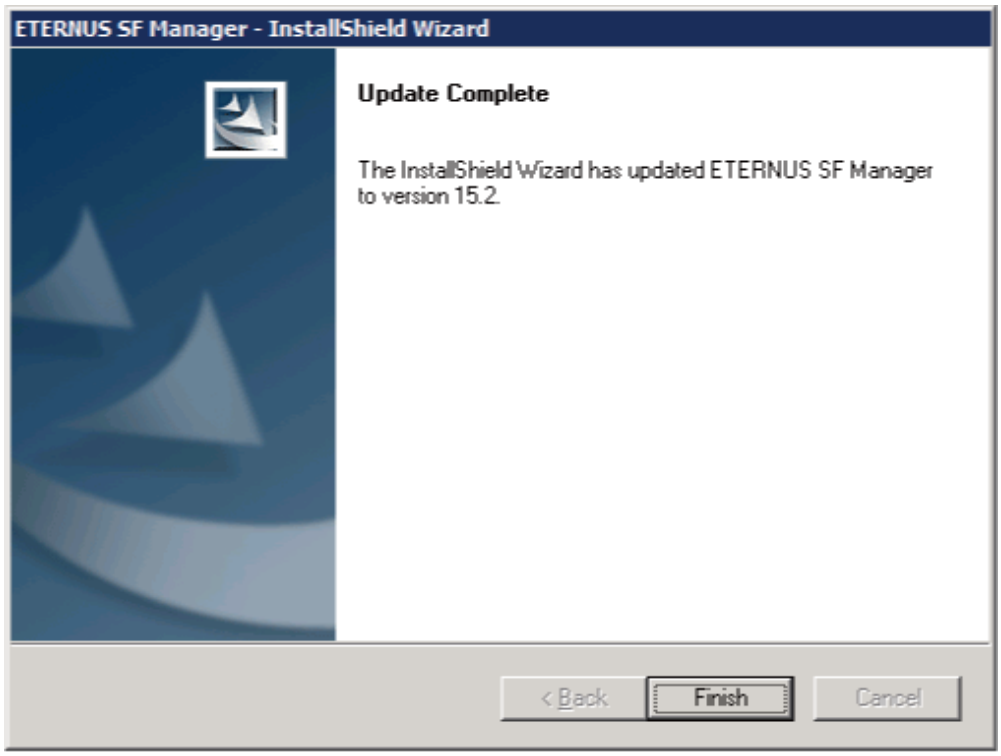
5. The following dialog box will be displayed. Click the [Yes] button.
   To cancel the upgrade, click the [No] button.



6. The system configuration will be updated. Wait for the configuration update process to complete.



7. The following installation wizard page will be displayed. The upgrade is completed. Click the [Finish] button.



8. Eject the DVD-ROM.

8.6.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

The following values are used in the description:

Value	Description
$INS_DIR	"Program Directory" specified at the AdvancedCopy Manager CCM installation.

8.6.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager Copy Control Module, as described below.

1. Check that the CCM Server transactions are stopped on the secondary node.

   If not stopped, use Failover Cluster Manager on the secondary node to stop the transactions included in AdvancedCopy Manager Copy Control Module.

2. Stop the CCM Server transactions on the primary node.

   Use Failover Cluster Manager to stop the transactions included in AdvancedCopy Manager Copy Control Module.
   However, the shared disk for shared data of AdvancedCopy Manager Copy Control Module must be online.

3. Back up the environment and data.

   - On the primary and secondary nodes, back up the Windows system.
   - On the primary node, back up the shared disk for shared data of AdvancedCopy Manager CCM.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the following before the upgrade.

   - Windows system
   - Shared disk for shared data of AdvancedCopy Manager CCM

   If a failure occurs during the upgrade, restore the system from the backup.

Note

If the Windows system cannot be backed up, the upgrade procedure described in the section below cannot be performed.
In this case, perform the following procedure:

1. Uninstall the previous product version.
2. If Symfoware Server that was bundled with AdvancedCopy Manager is being used, perform the following:

   From the Windows Control Panel, use the [Add or Remove Programs] or [Programs and Features] function to uninstall Symfoware.
   If you have installed both the Symfoware Server and the Symfoware Server Client, uninstall the Symfoware Server Client first.

3. Install this product version.

8.6.2.2 Performing the upgrade (Primary node)

The following describes the upgrade procedure for the primary node.

1. Log on to the server using Administrator privileges.
2. Save the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\sys\sys.properties).

   Copy it to any directory other than the installation destination directory for AdvancedCopy Manager CCM.
   The saved file is required for post-Upgrade Installation.

3. Restore the original file of the AdvancedCopy Manager CCM environment setting file (sys.properties).

   Overwrite the original environment setting file with the copy destination file.

Original environment setting file	Copy destination file
$INS_DIR\CCM\noncluster\sys\sys.properties	$INS_DIR\CCM\sys\sys.properties

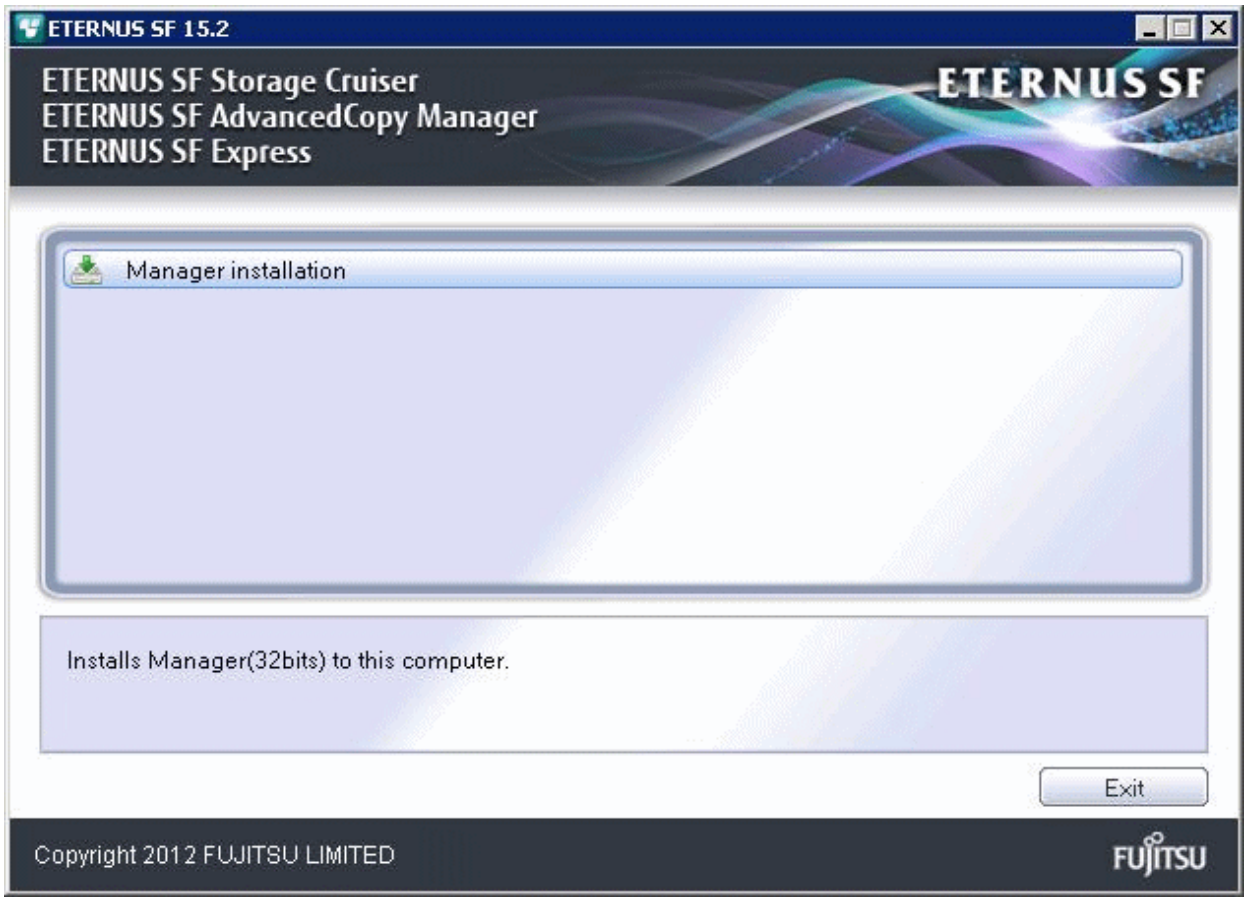
4. Save the generic script for AdvancedCopy Manager CCM.

   If stored the generic script under the bin directory of the program directory for AdvancedCopy Manager CCM according to "Preparation of generic script for AdvancedCopy Manager CCM" in the *ETERNUS SF Cluster Environment Setup Guide* for the relevant previous version for the corresponding operating system and node, copy it to any directory other than the installation destination directory for AdvancedCopy Manager CCM.
   The saved file is required for post-Upgrade Installation.

5. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

6. The following window will be displayed. Click the [Manager installation] button.
   To cancel the upgrade at this point, click the [Exit] button.



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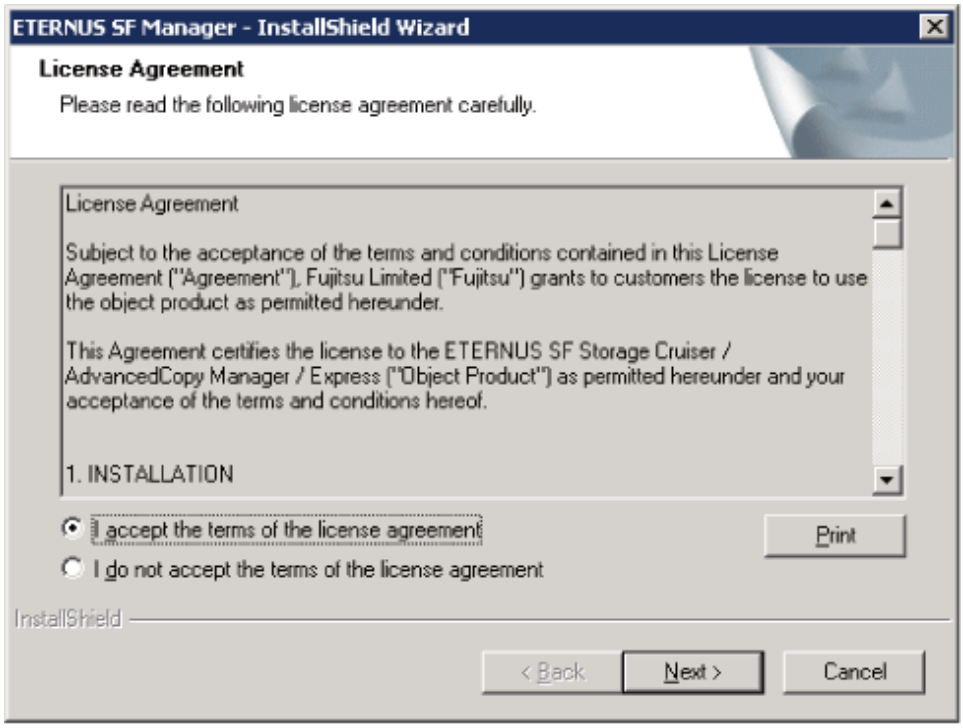
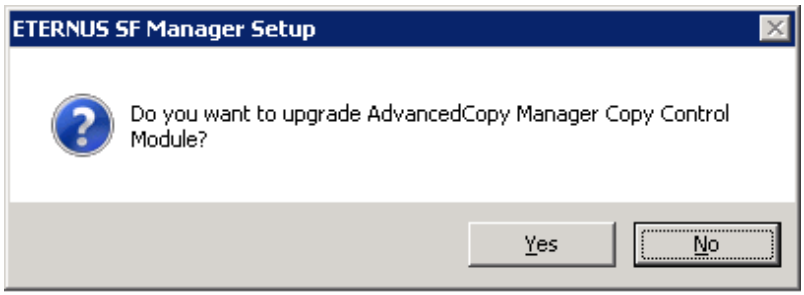
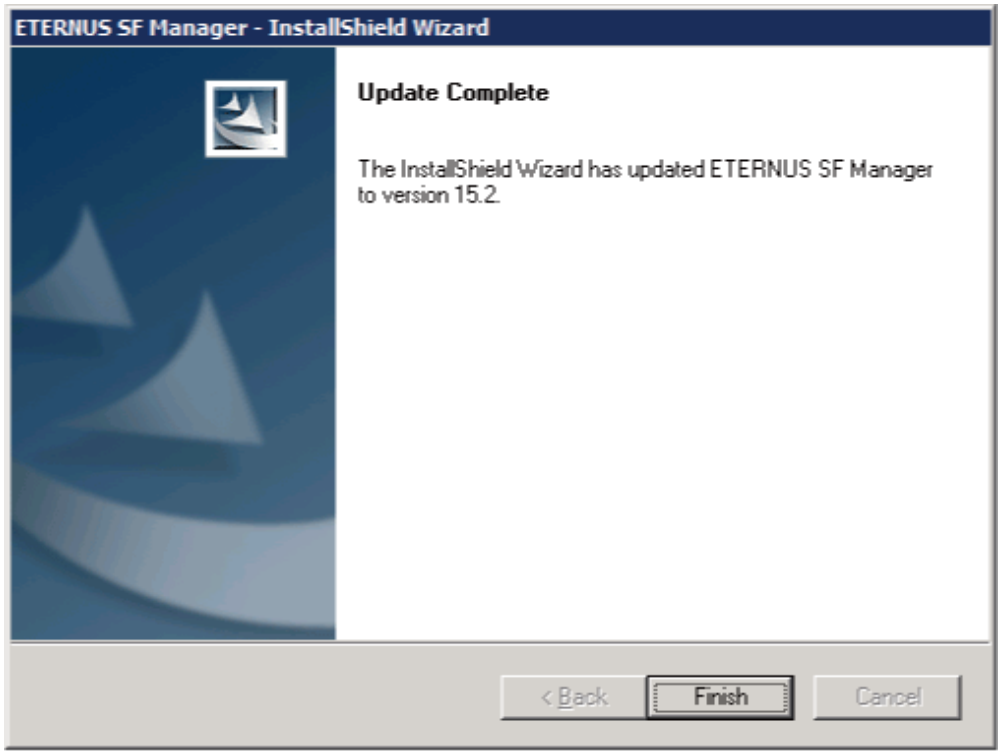


8. The following dialog box will be displayed. Click the [Yes] button.
   To cancel the upgrade, click the [No] button.



9. The system configuration will be updated. Wait for the configuration update process to complete.

10. The following installation wizard page will be displayed. The upgrade is completed. Click the [Finish] button.



11. Eject the DVD-ROM.

8.6.2.3 Tasks to be performed after the upgrade (Primary node)

When the upgrade has been completed, the tasks below need to be performed:

1. Restore the AdvancedCopy Manager CCM environment setting file.

   Overwrite the environment setting file ($INS_DIR\CCM\sys\sys.properties) saved in step 2 of "8.6.2.2 Performing the upgrade (Primary node)" with the file after the upgrade.

2. Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file ($INS_DIR\CCM\micc\sys\.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

   *1: Specify the value of stxs_etcdir set to the $INS_DIR\CCM\noncluster\micc\sys\.install.sys file for *upgradedDir*.

   Note

   - Do not change anything other than the stxs_etcdir line in the $INS_DIR\CCM\micc\sys\.install.sys file.
   - The $INS_DIR\CCM\noncluster\micc\sys\.install.sys file is for reference only, do not edit.

3. Restore the generic script for AdvancedCopy Manager CCM.

   If the generic script is saved in step 4 of "8.6.2.2 Performing the upgrade (Primary node)", copy the saved generic script to the directory that stored the generic script according to "Preparation of generic script for AdvancedCopy Manager CCM" in the *ETERNUS SF Cluster Environment Setup Guide* for the relevant previous version for the corresponding operating system and node.

8.6.2.4 Performing the upgrade (Secondary node)

Perform the upgrade for the secondary node.

The upgrade procedure is the same as that for the primary node. Refer to "8.6.2.2 Performing the upgrade (Primary node)".

8.6.2.5 Tasks to be performed after the upgrade (Secondary node)

The required procedure after performing the upgrade for the secondary node is the same as that for the primary node. Refer to "8.6.2.3 Tasks to be performed after the upgrade (Primary node)".

8.6.2.6 Start the CCM Server transactions

When the upgrade is complete, start the CCM Server transactions.

Use Failover Cluster Manager on the primary node to start the transactions included in AdvancedCopy Manager CCM.

8.7 Upgrading the AdvancedCopy Manager Copy Control Module (for Solaris, Linux)

This section describes the upgrade procedures for the AdvancedCopy Manager Copy Control Module for Solaris and Linux.

If only AdvancedCopy Manager CCM is installed and used, perform the procedure mentioned in this section.

If ETERNUS SF Manager is installed and AdvancedCopy Manager CCM is used, refer to "8.2 Upgrading the AdvancedCopy Manager (for Solaris, Linux)" to perform the upgrade.

8.7.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

8.7.1.1 Preparing for the upgrade

Backup the operating system before starting the upgrade for the AdvancedCopy Manager Copy Control Module.

Point

If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the operating system before performing the upgrade.
If a failure occurs during the upgrade, restore the system from the backup.

Note

If cannot be backed up the operating system, using the procedure mentioned below cannot perform the Upgrade Installation process. If cannot be backed up the operating system, uninstall the before version product manually, and then install this version of product.

8.7.1.2 Performing the upgrade

The upgrade is performed as follows:

1. Log in to the server as a superuser.

2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.

3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script:

```
# ./esfinstall.sh
```

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

```
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```

7. The following upgrade message will be displayed.
   To continue the upgrade, enter "y". To discontinue, enter "q".

```
Do you want to upgrade? [y,q]:
```

8. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

9. Change to a directory other than the DVD-ROM.
   Example:

```
# cd
```

10. Unmount the DVD-ROM.
    Example:

```
# umount /mnt/dvd
```

11. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager Copy Control Module is complete.

8.7.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

8.7.2.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager Copy Control Module, as described below.

1. Check that the CCM Server transactions are stopped on the secondary node.

   If not stopped, stop the transaction for AdvancedCopy Manager Copy Control Module.
   For stopping the CCM Server transaction, refer to the relevant cluster software manuals.

2. Stop the CCM Server transaction on the primary node.

   The shared disk for shared data of AdvancedCopy Manager Copy Control Module must be mounted.
   For stopping the CCM Server transaction, refer to the relevant cluster software manuals.

3. Back up the environment and data.

   - On the primary and secondary nodes, back up the operating system.
   - On the primary node, back up the shared disk for shared data of AdvancedCopy Manager Copy Control Module.

   Point

   If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, back up the following before performing the upgrade.

   - Operating system
   - Shared disk for shared data of AdvancedCopy Manager Copy Control Module

   If a failure occurs during the upgrade, restore the system from the backup.

Note

If cannot be backed up the operating system, using the procedure mentioned below cannot perform the Upgrade Installation process. If cannot be backed up the operating system, uninstall the before version product manually, and then install this version of product.

8.7.2.2 Performing the upgrade (Primary node)

The following describes the upgrade procedure for the primary node.

1. Log in to the server as a superuser.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version into the DVD-ROM drive.

   For information on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version.
3. Mount the DVD-ROM (if automount is not enabled).
   Example:

```
# mount /mnt/dvd
```

4. Change the directory on the DVD-ROM where the installation shell script is stored.
   Example:

```
# cd /mnt/dvd/Manager_unix
```

5. Execute the following installation shell script:

```
# ./esfinstall.sh
```

6. The license agreement information will be displayed. Display example is mentioned below.
   If the conditions are agreeable, enter "y".

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7. The following upgrade message will be displayed.
   To continue the upgrade, enter "y". To discontinue, enter "q".

```
Do you want to upgrade? [y,q]:
```

8. If the upgrade completes successfully, the following message is displayed.

```
INFO: ETERNUS SF was installed successfully.
```

9. Change to a directory other than the DVD-ROM.
   Example:

```
# cd
```

10. Unmount the DVD-ROM.
    Example:

```
# umount /mnt/dvd
```

11. Eject the DVD-ROM.

8.7.2.3 Tasks to be performed after the upgrade (Primary node)

When the upgrade has been completed, the tasks below need to be performed:

For the ETERNUS SF Manager Version 15.0B installed environment, perform the following procedure.

Edit the stxs_etcdir information within the AdvancedCopy Manager CCM environment setting file (/opt/FJSVccm/micc/sys/.install.sys) as follows:

Before	After
stxs_etcdir=*previousDir*	stxs_etcdir=*upgradedDir* (*1)

*1: Specify the value of stxs_etcdir set to the /opt/FJSVccm/noncluster/micc/sys/.install.sys file for *upgradedDir*.

Note

- Do not change anything other than the stxs_etcdir line in the /opt/FJSVccm/micc/sys/.install.sys file.
- The /opt/FJSVccm/noncluster/micc/sys/.install.sys file is for reference only, do not edit.

8.7.2.4 Performing the upgrade (Secondary node)

Perform the upgrade for the secondary node.

The upgrade procedure is the same as that for the primary node. Refer to "8.7.2.2 Performing the upgrade (Primary node)".

8.7.2.5 Tasks to be performed after the upgrade (Secondary node)

The required procedure after performing the upgrade for the secondary node is the same as that for the primary node. Refer to "8.7.2.3 Tasks to be performed after the upgrade (Primary node)".

8.7.2.6 Start the CCM Server transactions

When the upgrade is complete, start the CCM Server transactions.

For starting the CCM Server transaction, refer to the relevant cluster software manuals.

8.7.3 Resuming operation

When the tasks described above have been performed, the upgrade and setup of AdvancedCopy Manager Copy Control Module is complete. Restart the AdvancedCopy Manager Copy Control Module operation.

Chapter 9 Troubleshooting

This chapter describes the method for troubleshooting if a problem occurs during the Upgrade Installation process.

The troubleshooting method differs according to the way the upgrade fails.
Please use the appropriate method according to the problem type.

In case of a problem during the uninstallation of the previous version:

After the problem has been diagnosed and solved, restart the Upgrade Installation process from the beginning.

Point

- When an error message is displayed, refer to the following manuals for the previous version, and perform the action for relevant message.
  - For the previous version is Version 13.x or 14.x:

Target for upgrade	Reference
Express	"Messages" in the *ETERNUS SF Express User's Guide*
Storage Cruiser	*ETERNUS SF Storage Cruiser Message Guide*
AdvancedCopy Manager	*ETERNUS SF AdvancedCopy Manager Message Guide*
AdvancedCopy Manager Copy Control Module	"Messages for AdvancedCopy Manager CCM" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module*

  - For the previous version is Version 15.x:

Target for upgrade	Reference
Express	*ETERNUS SF Messages*
Storage Cruiser	
AdvancedCopy Manager	
AdvancedCopy Manager Copy Control Module	

- When no error message is displayed, refer to the following manuals for the previous version, to collect the troubleshooting information and then contact your Fujitsu system engineer.
  - For the previous version is Version 13.x or 14.x:

Target for upgrade	Reference
Express	"Trouble analysis" in the *ETERNUS SF Express User's Guide* for the previous version
Storage Cruiser	"Troubleshooting information" in the *ETERNUS SF Storage Cruiser User's Guide* for the previous version
AdvancedCopy Manager	"Collecting maintenance information" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide* for the previous version
AdvancedCopy Manager Copy Control Module	"How to Collect Data" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module* for the previous version

  - For the previous version is Version 15.x:

Target for upgrade	Reference
Express	"Trouble analysis" in the *ETERNUS SF Express Operation Guide*

Target for upgrade	Reference
Storage Cruiser	"Troubleshooting information" in the *ETERNUS SF Storage Cruiser Operation Guide*
AdvancedCopy Manager	"Collecting maintenance information" in the *ETERNUS SF AdvancedCopy Manager Operation Guide*
AdvancedCopy Manager Copy Control Module	"How to collect data" in the *ETERNUS SF Operation Guide for Copy Control Module*

In case of a problem during the installation of this version:

The uninstallation of the previous version has succeeded.
After the installation problem has been diagnosed and solved, install this version by referring to the *ETERNUS SF Installation and Setup Guide* for this version.

Point

- When an error message is displayed, refer to the following manuals for this version, and perform the action for relevant message.

Target for upgrade	Reference
Express	*ETERNUS SF Messages*
Storage Cruiser	
AdvancedCopy Manager	
AdvancedCopy Manager Copy Control Module	

- When no error message is displayed, refer to the following manuals for this version, to collect the troubleshooting information and then contact your Fujitsu system engineer.

Target for upgrade	Reference
Express	"Trouble analysis" in the *ETERNUS SF Express Operation Guide*
Storage Cruiser	"Troubleshooting information" in the *ETERNUS SF Storage Cruiser Operation Guide*
AdvancedCopy Manager	"Collecting maintenance information" in the *ETERNUS SF AdvancedCopy Manager Operation Guide*
AdvancedCopy Manager Copy Control Module	"How to collect data" in the *ETERNUS SF Operation Guide for Copy Control Module*

Chapter 10 Configuration import

This chapter describes the configuration import.

Point

The configuration import is required only for Version 13.x and 14.x.

10.1 Devices supported by the configuration import command

The devices supported by the configuration import command are listed in the following table.

- Storage devices

Type	Device name	Notes
Disk array devices	ETERNUS DX60/DX60 S2/DX80/DX80 S2/DX90/DX90 S2 ETERNUS DX400/DX400 S2 series ETERNUS DX8000/DX8000 S2 series ETERNUS2000 ETERNUS4000 ETERNUS8000	Automatic registration only
Fibre channel switches	ETERNUS SN200 series (except model 250M) ETERNUS SN200 MDS Brocade Fibre Channel switches McDATA Fibre Channel switches PRIMEGRY Fibre Channel switch blades	Automatic registration only
Tape library	ETERNUS LT250 ETERNUS LT270	Automatic registration only
	ETERNUS LT20/LT20 S2 ETERNUS LT40/LT40 S2 ETERNUS LT60/LT60 S2 ETERNUS LT200 ETERNUS LT210 ETERNUS LT220 ETERNUS LT230	Manual registration only
Other devices	ETERNUS VS850/VS850 S2 ETERNUS CS800 NetApp FAS Series	Manual registration

- Servers

  The migration judge depends on the server configuration of the previous version. The migration pattern for the previous version configuration information to this version is shown below.
  Register on the Web Console, if the server cannot be migrated.

  - If only Storage Cruiser's agent is registered on the configuration information in the previous version.

No.	Server type in the previous version	This version	
		Server type	Function level
1	VMware Host	VMware Host	Storage Cruiser

No.	Server type in the previous version	This version	
		Server type	Function level
2	VMware Guest	VMware Guest	No Agent
3	Server registered automatically	Stand -alone	Storage Cruiser
4	Server registered manually		No Agent

- If only AdvancedCopy Manager's agent is registered on the configuration information in the previous version.

No.	Server type in the previous version (*1)	This version	
		Server type	Function level
1	Storage Management Server	Cannot be migrated	
2	Storage Server	Stand -alone	AdvancedCopy Manager

*1: Listed name is the one used in the previous version.

- If Storage Cruiser's agent and AdvancedCopy Manager's agent are registered on the configuration information in the previous version.

No.	Server type in the previous version		This version	
	Storage Cruiser	AdvancedCopy Manager (*1)	Server type	Function level
1	VMware Host	-	VMware Host	Storage Cruiser (*2)
2	VMware Guest	Storage Management Server	VMware Guest	No Agent
3		Storage Server		- No Agent (VMware Tool is in startup status) - AdvancedCopy Manager (VMware Tool is not started)
4	Server registered automatically	Storage Management Server	Cannot be migrated	
5		Storage Server	Stand -alone	Storage Cruiser AdvancedCopy Manager
6	Server registered manually	Storage Management Server	Stand -alone	No Agent
7		Storage Server		AdvancedCopy Manager
8	Server unregistered	Storage Management Server	Cannot be migrated	
9		Storage Server		

*1: Listed name is the one used in the previous version.

*2: In this version, the AdvancedCopy Manager's agent cannot be registered to a server in which VMware host is registered.

10.2 Command references

This section explains the command used for importing configuration information from a previous version.

10.2.1 esfimportdevconf (Configuration import command)

NAME

esfimportdevconf - import the configuration information from the previous version for the devices in the system.

SYNOPSIS

Windows environment

```
$INS_DIR\Common\bin\esfimportdevconf
```

($INS_DIR is the program directory specified at the ETERNUS SF Manager installation.)

Solaris or Linux environment

```
/opt/FJSVesfcm/bin/esfimportdevconf
```

DESCRIPTION

A request for the configuration information from the previous version for the devices in the system is issued to this product. OS Administrator permissions are required in order to execute the command.

When the command is executed, this product starts asynchronously to import and convert the configuration information from the previous version.

EXIT STATUS

=0 : Normal end

EXAMPLES

Windows environment

```
> C:\ETERNUS_SF\Common\bin\esfimportdevconf
esccs90000 Operation is accepted.
```

Solaris or Linux environment

```
# /opt/FJSVesfcm/bin/esfimportdevconf
esccs90000 Operation is accepted.
```

NOTES

- Check that the targeted devices can be accessed from this product before executing the import command.
  Refer to "10.1 Devices supported by the configuration import command" about the devices targeted by the command.
- Some configuration information cannot be imported by the configuration import command.
  Refer to "10.3 What to do when configuration import is not possible" about the alternative options for these configurations.
- Operation is not possible on the targeted devices during the command execution.
- Imported configuration information is based on the configuration information that was registered in the previous version. If imported devices do not exist anymore in the new configuration, remove them using the Web Console. To remove a device, refer to "Delete ETERNUS Disk storage system" in the *ETERNUS SF Web Console Guide* for this version.
- Import time for a storage device is approximately 10 minutes. For an estimate of the total import time, do the following calculation:

  ```
  [Total import time] = number of storage systems x 10 minutes
  ```

- The result of the import process is output in the Web Console Operation History. To try again to import the devices for which the import process has failed, execute the [Device re-reading] operation after the message has been output in the Operation History.

- Ensure that ETERNUS SF Manager Tomcat service is running before executing the configuration information import command. If it is not running, the configuration information cannot be imported but the execution of the command is issued.
  Restart the ETERNUS SF Manager Tomcat service before executing the command again. If the service is not restarted, the message "esccs90010 Operation has already been accepted." is output and the command cannot be executed.

10.2.2 esfimportdisplay (configuration import status display command)

NAME

esfimportdisplay - Displays the status of operation of configuration information from the previous Version.

SYNOPSIS

Windows environment

```
$INS_DIR\Common\bin\esfimportdisplay
```

($INS_DIR is the program directory specified at the ETERNUS SF Manager installation.)

Solaris or Linux environment

```
/opt/FJSVesfcm/bin/esfimportdisplay
```

DESCRIPTION

Display the import status of the devices configuration information from the previous version.
OS Administrator permissions are required in order to execute the command.

The information displayed is as follows:

- Import process status
  The status of the process of configuration information import into previous version is displayed.

Title	Displayed contents
IMPORT STATUS	Configuration information import status Request : the configuration import request has been received Execute : the configuration information import process is executing Complete : the configuration information import is complete

- Specified device import status
  The importation status for the configuration information of the specified device from the previous version is displayed.

Title	Displayed contents
CATEGORY	Device category. storage : storage fcswitch : fibre channel switch server : server library : tape library
DEVICE NAME	Name of the device
IP ADDRESS	IP address of the device
REGISTER MODE	Device registration mode Auto : Automatic registration Manual : Manual registration
STATUS	Import status for the specified device

Title	Displayed contents
	Wait : Paused Execute : Executing Complete : Completed Failed : Failed (*1)

*1: For details, refer to the Web Console Operation History.

EXIT STATUS

=0 : Normal end

EXAMPLES

Windows environment

```
> C:\ETERNUS_SF\Common\bin\esfimportdisplay
------------------------------------------------------------------------
IMPORT STATUS
------------------------------------------------------------------------
Complete
------------------------------------------------------------------------

------------------------------------------------------------------------
CATEGORY   DEVICE NAME     IP ADDRESS      REGISTER MODE   STATUS
------------------------------------------------------------------------
server     WIN-IJP9VFKMUQQ 10.xxx.xxx.xxx  Manual          Complete
server     fujitsu-7370c8b 10.xxx.xxx.xxx  Auto            Complete
storage    ETERNUSDX80     10.xxx.xxx.xxx  Auto            Complete
storage    DX90S2          10.xxx.xxx.xxx  Auto            Complete
storage    EMJ3#13         10.xxx.xxx.xxx  Auto            Complete
storage    DX410S2         10.xxx.xxx.xxx  Auto            Complete
storage    DX440S2         10.xxx.xxx.xxx  Auto            Complete
storage    DX90_6_5        10.xxx.xxx.xxx  Auto            Complete
fcswitch   sn200_6_8       10.xxx.xxx.xxx  Auto            Complete
fcswitch   SN200_02        10.xxx.xxx.xxx  Auto            Complete
fcswitch   Switch          10.xxx.xxx.xxx  Auto            Complete
library    LT270           10.xxx.xxx.xxx  Auto            Complete
------------------------------------------------------------------------
```

10.3 What to do when configuration import is not possible

When the configuration information cannot be imported with the command, they can be registered as described below:

No.	Information that cannot be imported	Action
1	User name/password	Register the user name and password with the following procedure: 1. Log in to the Web Console. 2. Select the specified device, and click [Reset Password] in the Action pane. Register the user name and password for the device.
2	AdvancedCopy Manager Copy Control Module configuration	Register the configuration information with the following procedure: 1. Delete the existing registered information with "acarray remove" command.

No.	Information that cannot be imported	Action
		2. Register the ETERNUS Disk storage system in AdvancedCopy Manager Copy Control Module with "acarray add" command. Set the ETERNUS Disk storage system name as the ETERNUS name. 3. Log in to the Web Console. 4. If the user name and password are not set for the specified device, click [Reset Password] in the Action pane and register the user name and password. 5. Execute the [Reload Conf.] command in the Action pane.
3	iSCSI HBA information	Register the iSCSI HBA information with the following procedure. 1. Log in to the Web Console. 2. Select the server where the iSCSI HBA is configured, click [Add] under [HBA] in the Action pane and set the HBA information.

See

- For information on the instructions regarding the Web Console operations, refer to "Web Console Operation Method" in the *ETERNUS SF Web Console Guide* for this version.
- For information on the "acarray remove" command and "acarray add" command, refer to "Commands" in the *ETERNUS SF Operation Guide for Copy Control Module* for this version.

10.4 What to do when an error occurs

The results of the import process are output in the Web Console Operation History. To try and import again the devices for which the import process has failed, execute the [Device re-reading] operation after the message has been output in the Operation History.

If the import status does not change or nothing is displayed, there is a possibility of this product malfunctioning. Check that there is no error message in the Web Console Event log.

Appendix A Operation for Previous Version Environment

A.1 Backing up the repository data (for Windows)

Save the repository data to the specified directory all at once.
Perform this operation on the Management Server (Storage Management Server).

Note

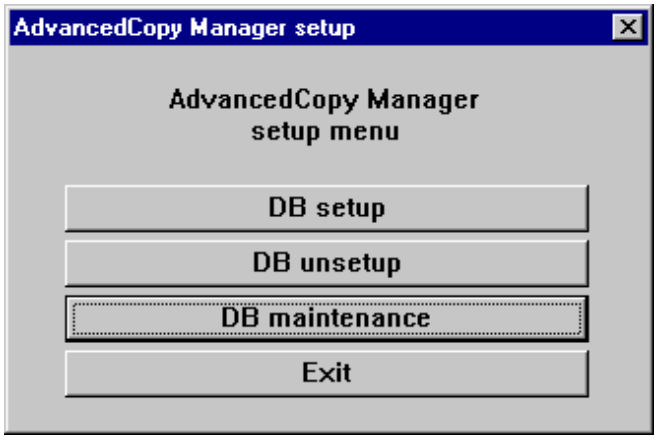
- Create a directory in which data will be saved in advance.
- Terminal service (via a remote desktop connection)

  If the operating system for the Management Server is Windows Server 2003, the Terminal Service must connect to a console session. Refer to the following links for information on how to make console session connections:

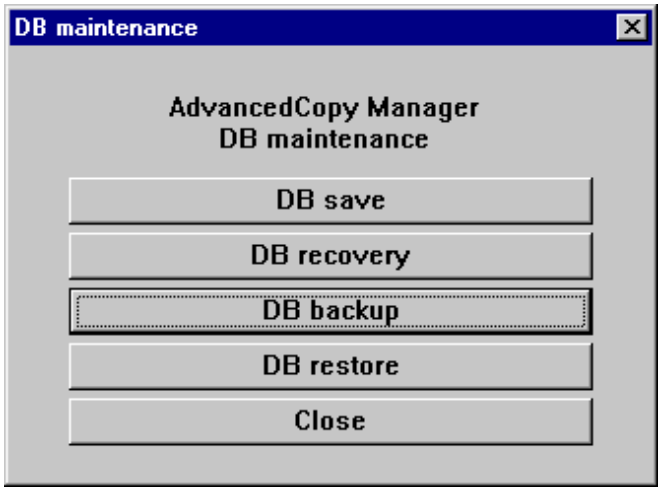
  http://support.microsoft.com/kb/947723
  http://support.microsoft.com/kb/278845
- Do not use the telnet server service.
  This operation will fail when issued from the telnet server service.

The procedure is shown below:

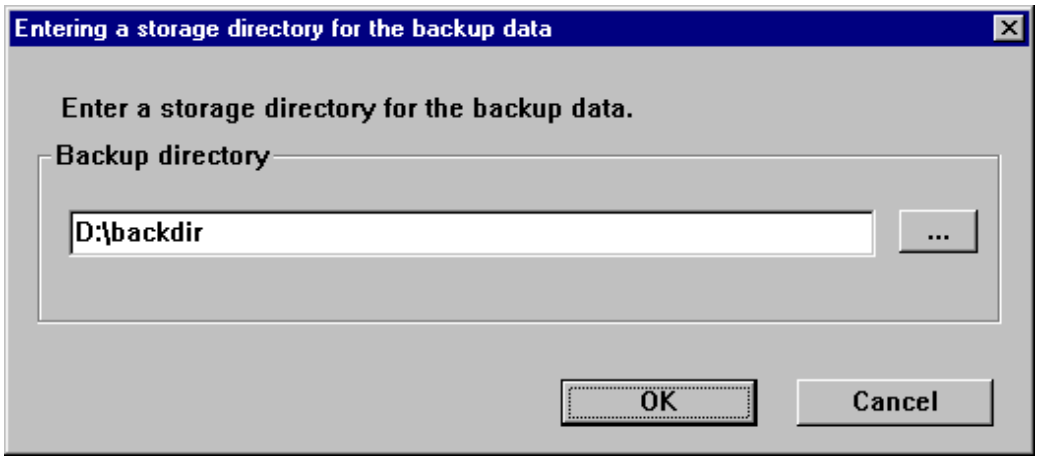
1. Click the [Start] button and select [Programs] -> [AdvancedCopy Manager] or [ETERNUS SF Manager] -> [DB Setup].
2. The following screen is displayed.
   Click the [DB maintenance] button.



3. The following screen is displayed.
   Click the [DB backup] button.

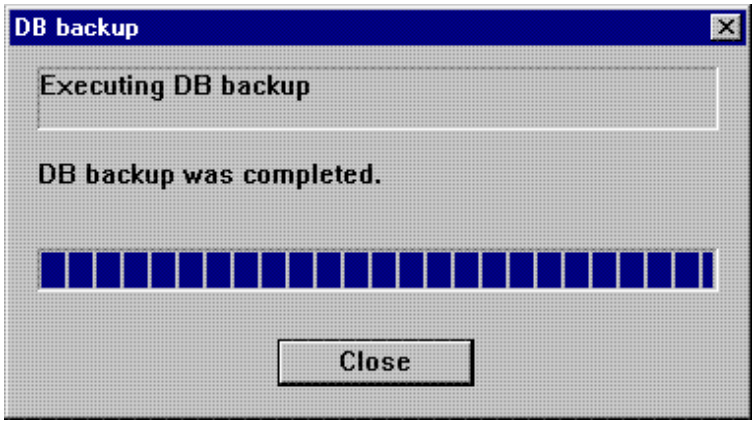


4. The following screen is displayed.
   Enter a backup directory and click the [OK] button.



5. The following screen is displayed.
   Check that the displayed information is correct and click the [Start] button.

6. The following screen is displayed after the process is completed.
   Click the [Close] button.



7. Click the [Close] button displayed in step 3 to complete the DB maintenance.
8. Click the [Exit] button displayed in step 2 to complete the DB backup.
9. Check that the backup of database has been completed successfully.
   Make sure that the file with ".unl" extension is created in the specified directory.

A.2 Backing up the repository data (for Solaris, Linux)

Save the repository data to the specified directory all at once.
Perform this operation on the Management Server (Storage Management Server).

Note

- Create a directory in which data will be saved in advance.
- Perform this operation as a root user.
- Perform this operation with the locale specified when you installed the Management Server. If Symfoware has been installed in advance, perform this operation with the locale specified at the time of installing Symfoware.

The procedure is shown below:

1. Execute the following command.

```
# /opt/swstorage/bin/stgdbbackup
```

2. The following message is displayed.
   To continue processing, enter "y". To stop processing, enter "n".

```
////////////////////////////////////////////////////////////////
      AdvancedCopy Manager Storage Management Server ( **** )
                          Database backup
////////////////////////////////////////////////////////////////

  +--------------------------------------------------------------+
  |                                                              |
  |   All of the stored data will be saved in an external file.  |
  |                                                              |
  |  [Notes]                                                     |
  |    Prepare a directory for storing the data to be saved.     |
  |                                                              |
  +--------------------------------------------------------------+
```

```
         Do you want to continue with processing? [y/n] ==> y
```

3. The following message is displayed.
   Enter the absolute path name of the directory for storing the data to be saved.

```
////////////////////////////////////////////////////////////////////
      AdvancedCopy Manager Storage Management Server ( **** )
                          Database backup
////////////////////////////////////////////////////////////////////


         Enter the absolute path name of the directory
         for storing the data to be saved.

                  Enter ==> /storage/backdir
```

Note

If the saved data exists in the directory, the processing is not performed.
Delete the saved data in the directory or specify another directory to retry the processing.

4. The following message is displayed.
   Enter "y" to continue processing or "n" to stop processing.
   When you enter "n", the screen returns step 2.

```
////////////////////////////////////////////////////////////////////
      AdvancedCopy Manager Storage Management Server ( **** )
                          Database backup
////////////////////////////////////////////////////////////////////

         Directory containing the saved data : /storage/backdir

         Do you want to continue with processing? [y/n] ==> y
```

5. The processing is performed and the execution results are displayed on the screen.
   The following example is for the execution result.

```
////// AdvancedCopy Manager database backup //////

====================================================================
DB data backup will start.
====================================================================
....
Unloading of data is complete.(base)
...
Unloading of data is complete.(backup)
.
Unloading of data is complete.(repl)

====================================================================
Backup of DB data is complete.
====================================================================

Database backup ended normally.

#
```

6. Check that the backup of database has been completed successfully.
   Make sure that the file with ".unl" extension is created in the specified directory.

A.3 Backing up the management information (for Windows)

Save the management information which exists in the Managed Server (Storage Server).

If a backup operation has been done

1. Check the data size of the backup management list under the following directory:

   - If the Managed Server is in a non-cluster environment:
     <*Environment directory*>\etc\backup\data
   - If the Managed Server is in a cluster environment:
     <*Drive letter of shared disk for shared data for AdvancedCopy Manager*>:\etc\opt\swstorage\etc\backup\data

   If you were backing up Symfoware databases, also check the file sizes in the target directory for output of the recovery control file.

2. Save the device.ini file.

   Save the following file by using the copy command:

   In the case of non-cluster operation

File for save	File name
device.ini	<*Environment directory*>\etc\device.ini

   In the case of cluster operation

File for save	File name
device.ini	<*shared disk*>:\etc\opt\swstorage\etc\device.ini

3. Save the backup management list.

   Specify the directory which can store the data size checked in step 1 and execute the following command:

   ```
   C:\> <Program directory>\bin\swstresback <save directory>
   ```

   See

   For details on commands, refer to manuals according to the previous operating environment's version.

   - In the case of 14.2 or earlier
     "swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide*.
   - In the case of 15.0 or later
     "swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide*.

4. Save pre-processing and post-processing scripts and specification files.

   Save the following files by using the copy command:

   - Pre-processing and post-processing scripts for backup management function
   - Transaction volume locking specification file for backups
   - Backup volume locking specification file for backups
   - Backup-restored volume locking specification file

   Information

   The volume locking specification files might not exist according to the environment. In this case, it is unnecessary to save them.

   In the case of non-cluster operation

File for save	File name
Pre-processing and post-processing scripts for backup management function	<*Environment directory*>\etc\backup\scripts\OpcBackupPre.js <*Environment directory*>\etc\backup\scripts\OpcBackupPost.js <*Environment directory*>\etc\backup\scripts\OpcRestorePre.js <*Environment directory*>\etc\backup\scripts\OpcRestorePost.js
Transaction volume locking specification file for backups	<*Environment directory*>\etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	<*Environment directory*>\etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	<*Environment directory*>\etc\backup\data\RDSTLOCK.INI

In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for backup management function	<*shared disk*>:\etc\opt\swstorage\etc\backup\scripts\OpcBackupPre.js <*shared disk*>:\etc\opt\swstorage\etc\backup\scripts\OpcBackupPost.js <*shared disk*>:\etc\opt\swstorage\etc\backup\scripts\OpcRestorePre.js <*shared disk*>:\etc\opt\swstorage\etc\backup\scripts\OpcRestorePost.js
Transaction volume locking specification file for backups	<*shared disk*>:\etc\opt\swstorage\etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	<*shared disk*>:\etc\opt\swstorage\etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	<*shared disk*>:\etc\opt\swstorage\etc\backup\data\RDSTLOCK.INI

If a replication operation has been done

1. Save the device.ini file.

   Save the following file by using the copy command:

   In the case of non-cluster operation

File for save	File name
device.ini	<*Environment directory*>\etc\device.ini

   In the case of cluster operation

File for save	File name
device.ini	<*shared disk*>:\etc\opt\swstorage\etc\device.ini

2. Save the replication management list.

   The replication management list is stored in the repository on the Management Server. For this reason, if the repository data has been saved when migrating the Management Server, this step is not required.

   If the repository data on the Storage Management Serve has not been saved, perform the operation with reference to the following:

   - If the Management Server is in Windows environment:

     "A.1 Backing up the repository data (for Windows)"

   - If the Management Server is in Solaris, Linux environment:

     "A.2 Backing up the repository data (for Solaris, Linux)"

3. Save pre-processing and post-processing scripts and specification files.

   Save the following files by using the copy command:

   - Pre-processing and post-processing scripts for replication management function
   - Copy source volume locking specification file
   - Copy destination volume locking specification file
   - Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

Information

The volume locking specification files might not exist according to the environment. In this case, it is unnecessary to save them.

In the case of non-cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	<*Environment directory*>\etc\repl\scripts\RepSrcPre.js <*Environment directory*>\etc\repl\scripts\RepDstPre.js <*Environment directory*>\etc\repl\scripts\RepSrcPost.js <*Environment directory*>\etc\repl\scripts\RepDstPost.js
Copy source volume locking specification file	<*Environment directory*>\etc\repl\data\SRCLOCK.INI
Copy destination volume locking specification file	<*Environment directory*>\etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<*Environment directory*>\etc\repl\data\DEFAULT\check.ini

In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	<*shared disk*>:\etc\opt\swstorage\etc\repl\scripts\RepSrcPre.js <*shared disk*>:\etc\opt\swstorage\etc\repl\scripts\RepDstPre.js <*shared disk*>:\etc\opt\swstorage\etc\repl\scripts\RepSrcPost.js <*shared disk*>:\etc\opt\swstorage\etc\repl\scripts\RepDstPost.js
Copy source volume locking specification file	<*shared disk*>:\etc\opt\swstorage\etc\repl\data\SRCLOCK.INI
Copy destination volume locking specification file	<*shared disk*>:\etc\opt\swstorage\etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<*shared disk*>:\etc\opt\swstorage\etc\repl\data\DEFAULT\check.ini

Note

There is incompatibility in the copy source volume locking specification file between Version 14.2 or earlier and this version. If the previous environment's version is 14.2 or earlier, change the settings of file by referring to "Changes to the processing of the swsrpmake (Replication creation command) and swsrpcancel (Replication cancellation command)" in "2.3.3 Changes for Version 15.0", and then perform the backup.

4. If using the backup and the restoration function of the Exchange Database, save the following management information:

   - Drive letter map file
   - Device definition file (Windows Server 2003 environment only)

File for save	File name
Drive letter map file	<*Environment directory*>\etc\repl\data\EXDMAP.INI
Device definition file	<*Environment directory*>\etc\eternus_hardope.def

A.4 Backing up the management information (for Solaris, Linux)

Save the management information which exists in the Managed Server (Storage Server).

If a backup operation has been done

1. Check the data size of the backup management list under the following directory:

   - If the Managed Server is in a non-cluster environment:
     /etc/opt/FJSVswsts/data
   - If the Managed Server is in a cluster environment:
     /etc/opt/FJSVswsts/<*logical-node-name*>/data

   If you were backing up Symfoware databases, also check the file sizes in the target directory for output of the recovery control file.

   Point

   When you use the directory which has been saved as the save directory before, at least three times greater than the size calculated above is required.

2. Save the backup management list.

   Specify the directory which can store the data size checked in step 1 and execute the following command:

   ```
   # /opt/FJSVswsts/bin/swstresback <save directory>
   ```

   See

   For details on commands, refer to manuals according to the previous operating environment's version.

   - In the case of 14.2 or earlier
     "swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide*.
   - In the case of 15.0 or later
     "swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide*.

3. Save pre-processing and post-processing scripts.

   Save the following files by using the cp command:

   - Pre-processing and post-processing scripts for backup management function

   In the case of non-cluster operation

File for save	File name
Pre-processing and post-processing scripts for backup management function	/etc/opt/FJSVswsts/sh/OpcBackup.pre /etc/opt/FJSVswsts/sh/OpcBackup.post /etc/opt/FJSVswsts/sh/OpcRestore.pre /etc/opt/FJSVswsts/sh/OpcRestore.post

   In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for backup management function	/etc/opt/FJSVswsts/<*logical-node-name*>/sh/OpcBackup.pre /etc/opt/FJSVswsts/<*logical-node-name*>/sh/OpcBackup.post /etc/opt/FJSVswsts/<*logical-node-name*>/sh/OpcRestore.pre /etc/opt/FJSVswsts/<*logical-node-name*>/sh/OpcRestore.post

If a replication operation has been done

1. Save the replication management list.

   The replication management list is stored in the repository on the Management Server (Storage Management Server). For this reason, if the repository data has been saved when migrating the Management Server, this step is not required.

   If the repository data on the Storage Management Serve has not been saved, perform the operation with reference to the following:

   - If the Management Server is in Windows environment:

     "A.1 Backing up the repository data (for Windows)"

   - If the Management Server is in Solaris, Linux environment:

     "A.2 Backing up the repository data (for Solaris, Linux)"

2. Save pre-processing and post-processing scripts and specification files.

   Save the following files by using the cp command:

   - Pre-processing and post-processing scripts for replication management function
   - Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

   In the case of non-cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/sh/RepSrc.pre /etc/opt/FJSVswsrp/sh/RepDst.pre /etc/opt/FJSVswsrp/sh/RepSrc.post /etc/opt/FJSVswsrp/sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/data/DEFAULT/check.ini

   In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/<*logical-node-name*>/sh/RepSrc.pre /etc/opt/FJSVswsrp/<*logical-node-name*>/sh/RepDst.pre /etc/opt/FJSVswsrp/<*logical-node-name*>/sh/RepSrc.post /etc/opt/FJSVswsrp/<*logical-node-name*>/sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/<*logical-node-name*>/data/DEFAULT/check.ini

A.5 Backing up the management information (for HP-UX, AIX)

Save the management information which exists in the Managed Server (Storage Server).

If a backup operation has been done

1. Check the data size of the backup management list under the following directory:

   - If the Managed Server is in a non-cluster environment:
     /etc/opt/FJSVswsts/data
   - If the Managed Server is in a cluster environment:
     /etc/opt/FJSVswsts/<*logical-node-name*>/data

2. Save the backup management list.

   Specify the directory which can store the data size checked in step 1 and execute the following command:

   ```
   # /opt/FJSVswsts/bin/swstresback <save directory>
   ```

   See

   For details on commands, refer to manuals according to the previous operating environment's version.

   - In the case of 14.2 or earlier
     "swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide*.
   - In the case of 15.0 or later
     "swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide*.

3. Save pre-processing and post-processing scripts.

   Save the following files by using the cp command.

   - Pre-processing and post-processing scripts for backup management function

   In the case of non-cluster operation

File for save	File name
Pre-processing and post-processing scripts for backup management function	/etc/opt/FJSVswsts/sh/OpcBackup.pre /etc/opt/FJSVswsts/sh/OpcBackup.post /etc/opt/FJSVswsts/sh/OpcRestore.pre /etc/opt/FJSVswsts/sh/OpcRestore.post

   In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for backup management function	/etc/opt/FJSVswsts/<*logical-node-name*>/sh/OpcBackup.pre /etc/opt/FJSVswsts/<*logical-node-name*>/sh/OpcBackup.post /etc/opt/FJSVswsts/<*logical-node-name*>/sh/OpcRestore.pre /etc/opt/FJSVswsts/<*logical-node-name*>/sh/OpcRestore.post

If a replication operation has been done

1. Save the replication management list.

   The replication management list is stored in the repository on the Management Server (Storage Management Server). For this reason, if the repository data has been saved when migrating the Management Server, this step is not required.

   If the repository data on the Storage Management Serve has not been saved, perform the operation with reference to the following:

   - If the Management Server is in Windows environment:

     "A.1 Backing up the repository data (for Windows)"

   - If the Management Server is in Solaris, Linux environment:

     "A.2 Backing up the repository data (for Solaris, Linux)"

2. Save pre-processing and post-processing scripts and specification files.

   Save the following files by using the cp command:

   - Pre-processing and post-processing scripts for replication management function
   - Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

   In the case of non-cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/sh/RepSrc.pre /etc/opt/FJSVswsrp/sh/RepDst.pre /etc/opt/FJSVswsrp/sh/RepSrc.post /etc/opt/FJSVswsrp/sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/data/DEFAULT/check.ini

   In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/<*logical-node-name*>/sh/RepSrc.pre /etc/opt/FJSVswsrp/<*logical-node-name*>/sh/RepDst.pre /etc/opt/FJSVswsrp/<*logical-node-name*>/sh/RepSrc.post /etc/opt/FJSVswsrp/<*logical-node-name*>/sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/<*logical-node-name*>/data/DEFAULT/check.ini

A.6 Backing up the the environment setting files

Save the environment setting files for AdvancedCopy Manager Copy Control Module.

It is unnecessary to save files which are not listed in the following table.

In case of non-cluster operation

Copy the following files to any directory.

For Windows environment:

[AdvancedCopy Manager Copy Control Module Version 14.2 or earlier]

File name	Remarks
- $INS_DIR\etc\db\eternus.xml - All files under $INS_DIR\etc\db\cg directory	
- $INS_DIR\etc\prop\user.properties - $INS_DIR\etc\stxc.alias - $INS_DIR\etc\stxcvolinf	Only when files exist.
- $INS_DIR\var\micc\database\DeviceRegList.xml	

$INS_DIR is the "Program Directory" as specified during AdvancedCopy Manager CCM installation.

[AdvancedCopy Manager Copy Control Module Version 15.0 or later]

File name	Remarks
- $ENV_DIR\CCM\etc\db\eternus.xml	

File name	Remarks
- All files under $ENV_DIR\CCM\etc\db\cg directory	
- $ENV_DIR\CCM\etc\prop\user.properties - $ENV_DIR\CCM\etc\stxc.alias - $ENV_DIR\CCM\etc\stxc_ext.alias - $ENV_DIR\CCM\etc\stxcvolinf	Only when files exist.
- $TMP_DIR\CCM\var\micc\database\DeviceRegList.xml	

$ENV_DIR is the "Environment Directory" as specified during AdvancedCopy Manager CCM installation.
$TMP_DIR is the "Work Directory" as specified during AdvancedCopy Manager CCM installation.

For Solaris, Linux environment:

[AdvancedCopy Manager Copy Control Module Version 14.2 or earlier]

File name	Remarks
- /etc/opt/FJSVccm/db/eternus.xml - All files under /etc/opt/FJSVccm/db/cg directory	
- /etc/opt/FJSVccm/prop/user.properties - /etc/opt/FJSVccm/accc/etc/stxc.alias - /etc/opt/FJSVccm/accc/etc/stxcvolinf	Only when files exist.
- /var/opt/FJSVccm/micc/database/DeviceRegList.xml	

[AdvancedCopy Manager Copy Control Module Version 15.0 or later]

File name	Remarks
- /etc/opt/FJSVccm/db/eternus.xml - All files under /etc/opt/FJSVccm/db/cg directory	
- /etc/opt/FJSVccm/prop/user.properties - /etc/opt/FJSVccm/accc/etc/stxc.alias - /etc/opt/FJSVccm/accc/etc/stxc_ext.alias - /etc/opt/FJSVccm/accc/etc/stxcvolinf	Only when files exist.
- /var/opt/FJSVccm/micc/database/DeviceRegList.xml	

In case of cluster operation

Copy the following files to any directory.

For Windows environment:

File name	Remarks
- $SHARE_DL:$SHARE_TOP\etc\db\eternus.xml - All files under $SHARE_DL:$SHARE_TOP\etc\db\cg directory	
- $SHARE_DL:$SHARE_TOP\etc\prop\user.properties - $SHARE_DL:$SHARE_TOP\etc\stxc.alias - $SHARE_DL:$SHARE_TOP\etc\stxc_ext.alias	Only when files exist.

File name	Remarks
- $SHARE_DL:$SHARE_TOP\etc\stxcvolinf	
- $SHARE_DL:$SHARE_TOP\var\micc\database\DeviceRegList.xml	
- $INS_DIR\micc\sys\.install.sys - $INS_DIR\bin\.stxc_install.sys - $INS_DIR\sys\sys.properties - $INS_DIR\noncluster\micc\sys\.install.sys - $INS_DIR\noncluster\bin\.stxc_install.sys - $INS_DIR\noncluster\sys\sys.properties	Do not restore using the procedure described at "Restoring environment settings files" or "Changing the cluster environment" in the *ETERNUS SF Operation Guide for Copy Control Module*.

$SHARE_DL is the drive letter of the shared disk for AdvancedCopy Manager CCM shared data.

$SHARE_TOP is the directory that contains "Environment Directory" and "Work Directory" of the shared disk for AdvancedCopy Manager CCM shared data.

$INS_DIR is the "Program Directory" as specified during AdvancedCopy Manager CCM installation.

For Solaris, Linux environment:

File name	Remarks
- $SHARE_MNT/etc/opt/FJSVccm/db/eternus.xml - All files under $SHARE_MNT/etc/opt/FJSVccm/db/cg directory	
- $SHARE_MNT/etc/opt/FJSVccm/prop/user.properties - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxc.alias - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxc_ext.alias - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxcvolinf	Only when files exist.
- $SHARE_MNT/var/opt/FJSVccm/micc/database/DeviceRegList.xml	
- /opt/FJSVccm/micc/sys/.install.sys - /opt/FJSVccm/bin/.stxc_install.sys - /opt/FJSVccm/sys/sys.properties - /opt/FJSVccm/noncluster/micc/sys/.install.sys - /opt/FJSVccm/noncluster/bin/.stxc_install.sys - /opt/FJSVccm/noncluster/sys/sys.properties	Do not restore using the procedure described at "Restoring environment settings files" or "Changing the cluster environment" in the *ETERNUS SF Operation Guide for Copy Control Module*.

$SHARE_MNT is the mount point of the shared disk for AdvancedCopy Manager CCM shared data.

A.7 Unsetting up the database

Perform the database unsetup to delete the database, its environment or cancel the repository settings.

Note

- Terminal service (via a remote desktop connection)

  If the operating system for the Management Server (Storage Management Server) is Windows Server 2003, the Terminal Service must connect to a console session. Refer to the following links for information on how to make console session connections:

http://support.microsoft.com/kb/947723
http://support.microsoft.com/kb/278845

- Do not use the telnet server service.
  This operation will fail when issued from the telnet server service.
- When another software is monitoring Symfoware, stop Symfoware monitoring before executing the database unsetup.
  During Symfoware monitoring, the database unsetup may fail.

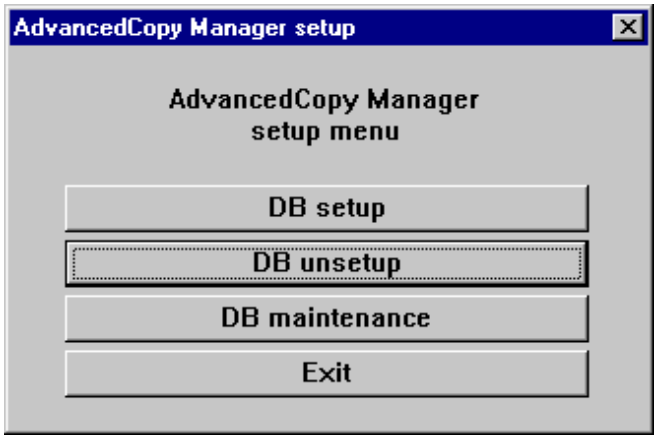
The procedure is shown below:

1. Login to the server where the database unsetup will be performed.

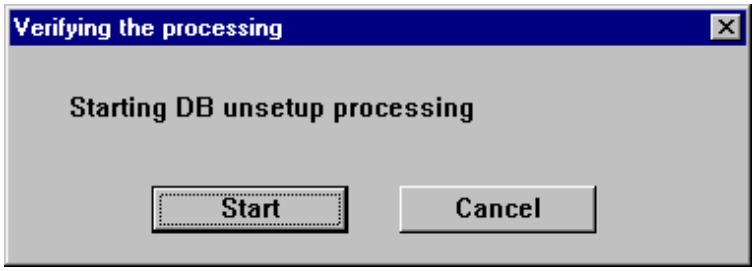
   For installing AdvancedCopy Manager of the previous version, login to the server as the user that has been specified when setting the database information.

   If you login to the server with another user, this operation may fail.

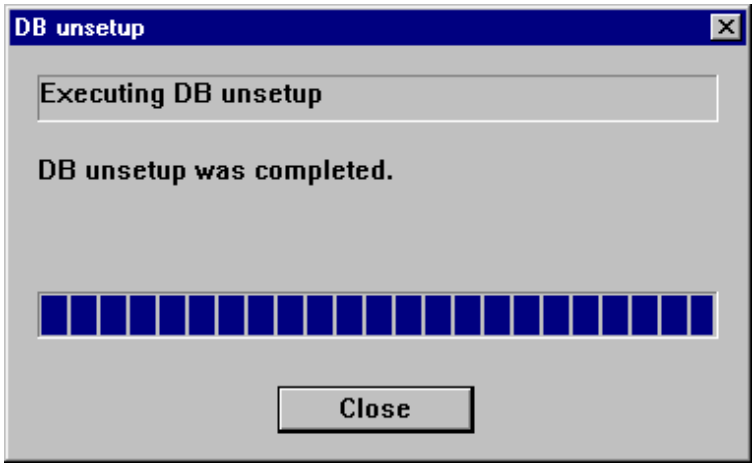
2. Click the [Start] button and select [Programs] -> [AdvancedCopy Manager] or [ETERNUS SF Manager] -> [DB Setup].
3. The following screen is displayed.
   Click the [DB unsetup] button.



4. The following screen is displayed.
   Click the [Start] button.



5. When the processing is completed, the following screen is displayed.
   Click the [Close] button.



6. Finish the database unsetup by clicking the [Exit] button on the screen displayed in step 3.

A.8 Cancelling the repository settings

Delete the database and its environment to cancel the repository configurations.

Note

- Perform this operation as a root user.
- When the Management Server (Storage Management Server) is operated on the clustered system, the repository configurations are cancelled by deleting the Management Server transaction. Therefore, it is unnecessary to carry out this operation.
- Perform this operation with the locale specified when you installed the Management Server. If Symfoware has been installed in advance, perform this operation with the locale specified at the time of installing Symfoware.
- When another software is monitoring Symfoware, stop Symfoware monitoring before executing the database unsetup.
  During Symfoware monitoring, the database unsetup may fail.

The procedure is shown below:

1. Execute the following command:

```
# /opt/swstorage/bin/stgdbunset
```

2. The following message is displayed.
   To continue processing, enter "y". To stop processing, enter "n".

```
////////////////////////////////////////////////////////////////////
      AdvancedCopy Manager Storage management server ( **** )
                          Database unsetup
////////////////////////////////////////////////////////////////////

  +-----------------------------------------------------------------+
  |                                                                 |
  |   All of database environments of AdvancedCopy Manager         |
  |   will be deleted.                                              |
  |                                                                 |
  |  [Notes]                                                        |
  |    Once processing has started, all stored data is discarded.   |
  |    Make sure that the environment allows execution              |
```

```
|    before proceeding.                                          |
|                                                                |
+----------------------------------------------------------------+

        Do you want to continue with processing? [y/n] ==>
```

3. Deletion of the Management Server database is executed and the execution results are displayed on the screen.
   The following example is for the execution result.

Point

If an RDA-SV definition file overwrite confirmation message is displayed on the screen during processing, enter "y".

```
////// AdvancedCopy Manager database unsetup //////

Activation of RDB is complete.
================================================================
The replication management will be deleted.
================================================================

================================================================
Clearing of database will start. (replication management)
================================================================
.
Tables have been deleted. (replication management)
================================================================
Clearing of database is complete. (replication management)
================================================================

================================================================
The replication management has been deleted.
================================================================

            :

================================================================
Clearing of database environment is complete.
================================================================

================================================================
The basic section has been deleted.
================================================================

Database unsetup ended normally.
```

A.9 Restoring the repository data (for Windows)

Restore the repository data from the specified directory.
Perform this operation on the Management Server.

The procedure is shown below:

1. Restore the repository data.

   Execute stgrepocnv (Repository data migration command) to recover the migration target repository data to the current version repository.

   C:\> <*Program directory*>\ACM\bin\stgrepocnv -d <*save directory*>

See

For details on the command, refer to "stgrepocnv (Repository data migration command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

2. Change the server information.

   To ensure data consistency, use stgxfwcmmodsrv (Server information change command) to perform the server information change processing.
   Specify the Management Server name to the -n option and execute stgxfwcmmodsrv (Server information change command).
   Check the [Server] column of stgxfwcmdispsrv (Server information display command) execution result for the Management Server name specified to the -n option.

   ```
   C:\> <Program directory>\ACM\bin\stgxfwcmmodsrv -n <Management Server name>
   ```

   See

   For details on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

A.10 Restoring the repository data (for Solaris, Linux)

Restore the repository data from the specified directory.
Perform this operation on the Management Server.

The procedure is shown below:

1. Restore the repository data.

   Execute stgrepocnv (Repository data migration command) to recover the migration target repository data to the current version repository.

   ```
   # /opt/FJSVswstf/bin/stgrepocnv -d <save directory>
   ```

   See

   For details on the command, refer to "stgrepocnv (Repository data migration command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

2. Change the server information.

   To ensure data consistency, use stgxfwcmmodsrv (Server information change command) to perform the server information change processing.
   Specify the Management Server name to the -n option and execute stgxfwcmmodsrv (Server information change command).
   Check the [Server] column of stgxfwcmdispsrv (Server information display command) execution result for the Management Server name specified to the -n option.

   ```
   # /opt/FJSVswstf/bin/stgxfwcmmodsrv -n <Management Server name>
   ```

   See

   For details on the command, refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

A.11 Restoring the management information (for Windows)

Restore the management information which exists in the Managed Server.

If a backup operation has been done

1. Restore the device.ini file.

   Restore the device.ini file saved in "A.3 Backing up the management information (for Windows)" by using the copy command.

   In the case of non-cluster operation on Management Server which also serves as a Managed Server

File for restoration	Full path name for restoration destination
device.ini	<*Environment directory*>\ACM\etc\device.ini

   In the case of non-cluster operation on Managed Server

File for restoration	Full path name for restoration destination
device.ini	<*Environment directory*>\etc\device.ini

   In the case of cluster operation

File for restoration	Full path name for restoration destination
device.ini	<*shared disk*>:\etc\opt\swstorage\etc\device.ini

2. Restore the backup management list.

   Specify the directory saved in "A.3 Backing up the management information (for Windows)" and execute the following command:

   In the case of Management Server which also serves as a Managed Server

   ```
   C:\> <Program directory>\ACM\bin\swstresrst <save directory>
   ```

   In the case of Managed Server

   ```
   C:\> <Program directory>\bin\swstresrst <save directory>
   ```

   See

   For details on the command, refer to "swstresrst (Resource restore command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

3. Restore specification files.

   Information

   The volume locking specification files might not exist according to the environment. If they were not backed up in "A.3 Backing up the management information (for Windows)", this step is not needed.

   Restore the following files saved in "A.3 Backing up the management information (for Windows)" by using the copy command:

   - Transaction volume locking specification file for backups
   - Backup volume locking specification file for backups
   - Backup-restored volume locking specification file

   In the case of non-cluster operation on Management Server which also serves as a Managed Server

File for restoration	Full path name for restoration destination
Transaction volume locking specification file for backups	<*Environment directory*>\ACM\etc\backup\data\BTRANLOCK.INI

File for restoration	Full path name for restoration destination
Backup volume locking specification file for backups	<*Environment directory*>\ACM\etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	<*Environment directory*>\ACM\etc\backup\data\RDSTLOCK.INI

In the case of non-cluster operation on Managed Server

File for restoration	Full path name for restoration destination
Transaction volume locking specification file for backups	<*Environment directory*>\etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	<*Environment directory*>\etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	<*Environment directory*>\etc\backup\data\RDSTLOCK.INI

In the case of cluster operation

File for restoration	Full path name for restoration destination
Transaction volume locking specification file for backups	<*shared disk*>:\etc\opt\swstorage\etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	<*shared disk*>:\etc\opt\swstorage\etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	<*shared disk*>:\etc\opt\swstorage\etc\backup\data\RDSTLOCK.INI

Note

Do not restore pre-processing and post-processing scripts for backup management function by using copy command.

The sample of pre-processing and post-processing scripts may be changed when upgrading a version. If you have customized pre-processing and post-processing scripts before the upgrade, re-customize it in reference to pre-processing and post-processing scripts which has been saved before the upgrade.

If a replication operation has been done

1. Restore the device.ini file. No need to restore this file if you have already restored it in "If a backup operation has been done".

   Restore the device.ini file saved in "A.3 Backing up the management information (for Windows)" by using the copy command.

   In the case of non-cluster operation on Management Server which also serves as a Managed Server

File for restoration	Full path name for restoration destination
device.ini	<*Environment directory*>\ACM\etc\device.ini

   In the case of non-cluster operation on Managed Server

File for restoration	Full path name for restoration destination
device.ini	<*Environment directory*>\etc\device.ini

   In the case of cluster operation

File for restoration	Full path name for restoration destination
device.ini	<*shared disk*>:\etc\opt\swstorage\etc\device.ini

2. Restore the replication management list.

   The replication management list is stored in the repository on the Management Server. Execute the following command:

   In the case of Management Server which also serves as a Managed Server

   ```
   C:\> <Program directory>\ACM\bin\swsrprecoverres -r
   ```

   In the case of Managed Server

   ```
   C:\> <Program directory>\bin\swsrprecoverres -r
   ```

   ### See

   For details on the command, refer to "swsrprecoverres (Resource adjustment command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

3. Restore specification files.

   Restore the following files saved in "A.3 Backing up the management information (for Windows)" by using the copy command:

   - Copy source volume locking specification file
   - Copy destination volume locking specification file
   - Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

   ### Information

   The volume locking specification files might not exist according to the environment. If they were not backed up in "A.3 Backing up the management information (for Windows)", this step is not needed.

   In the case of non-cluster operation on Management Server which also serves as a Managed Server

File for restoration	Full path name for restoration destination
Copy source volume locking specification file	<*Environment directory*>\ACM\etc\repl\data\SRCLOCK.INI
Copy destination volume locking specification file	<*Environment directory*>\ACM\etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<*Environment directory*>\ACM\etc\repl\data\DEFAULT\check.ini

   In the case of non-cluster operation on Managed Server

File for restoration	Full path name for restoration destination
Copy source volume locking specification file	<*Environment directory*>\etc\repl\data\SRCLOCK.INI
Copy destination volume locking specification file	<*Environment directory*>\etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<*Environment directory*>\etc\repl\data\DEFAULT\check.ini

   In the case of cluster operation

File for restoration	Full path name for restoration destination
Copy source volume locking specification file	<*shared disk*>:\etc\opt\swstorage\etc\repl\data\SRCLOCK.INI

File for restoration	Full path name for restoration destination
Copy destination volume locking specification file	<*shared disk*>:\etc\opt\swstorage\etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<*shared disk*>:\etc\opt\swstorage\etc\repl\data\DEFAULT\check.ini

Note

Do not restore pre-processing and post-processing scripts for replication management function by using copy command.

The sample of pre-processing and post-processing scripts may be changed when upgrading a version. If you have customized pre-processing and post-processing scripts before the upgrade, re-customize it in reference to pre-processing and post-processing scripts which has been saved before the upgrade.

4. If using the backup and the restoration function of the Exchange Database, restore the following management information:

   - Drive letter map file
   - Device definition file (Windows Server 2003 environment only)

File for restoration	Full path name for restoration destination
Drive letter map file	<*Environment directory*>\etc\repl\data\EXDMAP.INI
Device definition file	<*Environment directory*>\etc\eternus_hardope.def

A.12 Restoring the management information (for Solaris, Linux)

Restore the management information which exists in the Managed Server.

Note

Caution regarding the AdvancedCopy Manager's agent in Linux environment

For environments in which udev devices exist, prioritize and use the following udev device names after upgrade.

- normal device
- PRIMECLUSTER GDS SDX object (operating time of slice unit only)

  For details of udev device names, refer to "Managing a Device on AdvancedCopy Manager" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)*.

If you had used compatible device names before the upgrade, perform the following actions depending on the device names using after the upgrade:

- For operations that use compatible device names:

  Use stgxfwcmsetmode (Information collection mode configuration command) to change the information collection mode such that udev device names are not used.

  For details of changing the information collection mode, refer to "Managing a Device on AdvancedCopy Manager" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)*.

- For operations that use udev device names:

  Delete the backup management definition information and replication management definition information, and fetch the udev device names. Then, it is necessary to redefine the backup and replication using udev device names.
  For the procedures, refer to "Changing the device configuration" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)*.

If a backup operation has been done

1. Restore the backup management list.

   Specify the directory saved in "A.4 Backing up the management information (for Solaris, Linux)" and execute the following command:

   ```
   # /opt/FJSVswsts/bin/swstresrst <save directory>
   ```

   See

   For details on the command, refer to "swstresrst (Resource restore command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

2. Restore pre-processing and post-processing scripts.

   Note

   Do not restore pre-processing and post-processing scripts for backup management function by using copy command.

   The sample of pre-processing and post-processing scripts may be changed when upgrading a version. If you have customized pre-processing and post-processing scripts before the upgrade, re-customize it in reference to pre-processing and post-processing scripts which has been saved before the upgrade.

If a replication operation has been done

1. Restore the replication management list.

   The replication management list is stored in the repository on the Management Server. Execute the following command:

   ```
   # /opt/FJSVswsrp/bin/swsrprecoverres -r
   ```

   See

   For details on the command, refer to "swsrprecoverres (Resource adjustment command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

2. Restore specification files.

   Restore the following files saved in "A.4 Backing up the management information (for Solaris, Linux)" by using the copy command:

   - Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

   In the case of non-cluster operation

File for restoration	Full path name for restoration destination
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/data/DEFAULT/check.ini

   In the case of cluster operation

File for restoration	Full path name for restoration destination
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/<*logical-node-name*>/data/DEFAULT/check.ini

   Note

   Do not restore pre-processing and post-processing scripts for replication management function by using copy command.

The sample of pre-processing and post-processing scripts may be changed when upgrading a version. If you have customized pre-processing and post-processing scripts before the upgrade, re-customize it in reference to pre-processing and post-processing scripts which has been saved before the upgrade.

A.13 Restoring the management information (for HP-UX, AIX)

Restore the management information which exists in the Managed Server.

Note

Caution regarding the AdvancedCopy Manager's agent in HP-UX environment

- If using HP-UX 11i v2 or earlier:

  Fetch the device information. If new devices, modified devices or deleted devices are detected, perform the reflective operation if necessary. For details on how to fetch device information, refer to "Fetching device information on a Managed Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)*.

- If using HP-UX 11i v3 or later:

  In HP-UX 11i v3 or later, as a device format, there are two device names: new format and legacy format. For details on device names, refer to "Managing a Device on AdvancedCopy Manager" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)*. Depending on the device format, perform the procedure below.

  - If using a different format device name before and after upgrade:

    Before upgrading, set the device format using stgxfwcmsetmode (Information collection mode configuration command), and then delete the definition for the backup management and replication management. After that, set the device format used after upgrading using stgxfwcmsetmode (Information collection mode configuration command), and then fetch the device information and redefine the backup management and replication management.
    For details on setting the information collection mode, refer to "Configuration Management Commands" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)*.

    For details on backup management and replication management, refer to "Changing the device configuration" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)*.

  - If using the same format device name before and after upgrade:

    Even if using the same format device name as before upgrade, always set up the device format being used by executing the stgxfwcmsetmode (Information collection mode configuration command).
    For details on setting the information collection mode, refer to "Configuration Management Commands" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)*.

If a backup operation has been done

1. Restore the backup management list.

   Specify the directory saved in "A.5 Backing up the management information (for HP-UX, AIX)" and execute the following command:

   ```
   # /opt/FJSVswsts/bin/swstresrst <save directory>
   ```

   ### See

   For details on the command, refer to "swstresrst (Resource restore command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

2. Restore pre-processing and post-processing scripts.

Note

Do not restore pre-processing and post-processing scripts for backup management function by using copy command.

The sample of pre-processing and post-processing scripts may be changed when upgrading a version. If you have customized pre-processing and post-processing scripts before the upgrade, re-customize it in reference to pre-processing and post-processing scripts which has been saved before the upgrade.

If a replication operation has been done

1. Restore the replication management list.

   The replication management list is stored in the repository on the Management Server. Execute the following command:

   ```
   # /opt/FJSVswsrp/bin/swsrprecoverres -r
   ```

   ### See

   For details on the command, refer to "swsrprecoverres (Resource adjustment command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version.

2. Restore specification files.

   Restore the following files saved in "A.5 Backing up the management information (for HP-UX, AIX)" by using the cp command:

   - Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

   In the case of non-cluster operation

File for restoration	Full path name for restoration destination
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/data/DEFAULT/check.ini

   In the case of cluster operation

File for restoration	Full path name for restoration destination
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/<*logical-node-name*>/data/DEFAULT/check.ini

   ### Note

   Do not restore pre-processing and post-processing scripts for replication management function by using copy command.

   The sample of pre-processing and post-processing scripts may be changed when upgrading a version. If you have customized pre-processing and post-processing scripts before the upgrade, re-customize it in reference to pre-processing and post-processing scripts which has been saved before the upgrade.

A.14 Restoring the environment setting files

Restore the environment setting files for AdvancedCopy Manager Copy Control Module saved in "A.6 Backing up the the environment setting files".

In case of non-cluster operation

Restore the environment setting files according to the following procedure.

1. Delete the following files.

   - For Windows environment:

File name	Remarks
- All files under $ENV_DIR\CCM\etc\db\cg directory	
- $ENV_DIR\CCM\etc\prop\user.properties - $ENV_DIR\CCM\etc\stxc.alias - $ENV_DIR\CCM\etc\stxc_ext.alias - $ENV_DIR\CCM\etc\stxcvolinf	Only when files exist.

   $ENV_DIR is the "Environment Directory" as specified during AdvancedCopy Manager CCM installation.

   - For Solaris, Linux environments:

File name	Remarks
- All files under /etc/opt/FJSVccm/db/cg directory	
- /etc/opt/FJSVccm/prop/user.properties - /etc/opt/FJSVccm/accc/etc/stxc.alias - /etc/opt/FJSVccm/accc/etc/stxc_ext.alias - /etc/opt/FJSVccm/accc/etc/stxcvolinf	Only when files exist.

2. Copy the files which are saved in "A.6 Backing up the the environment setting files" to the following files and directories:

   - For Windows environment:

File name	Remarks
- $ENV_DIR\CCM\etc\db\eternus.xml - All files under $ENV_DIR\CCM\etc\db\cg directory	
- $ENV_DIR\CCM\etc\prop\user.properties - $ENV_DIR\CCM\etc\stxc.alias - $ENV_DIR\CCM\etc\stxc_ext.alias - $ENV_DIR\CCM\etc\stxcvolinf	Only when files ware backed up.
- $TMP_DIR\CCM\var\micc\database\DeviceRegList.xml	

   $ENV_DIR is the "Environment Directory" as specified during AdvancedCopy Manager CCM installation.
   $TMP_DIR is the "Work Directory" as specified during AdvancedCopy Manager CCM installation.

   - For Solaris, Linux environments:

File name	Remarks
- /etc/opt/FJSVccm/db/eternus.xml - All files under /etc/opt/FJSVccm/db/cg directory	
- /etc/opt/FJSVccm/prop/user.properties - /etc/opt/FJSVccm/accc/etc/stxc.alias - /etc/opt/FJSVccm/accc/etc/stxc_ext.alias - /etc/opt/FJSVccm/accc/etc/stxcvolinf	Only when files ware backed up.
- /var/opt/FJSVccm/micc/database/DeviceRegList.xml	

The restoration for the environment setting files is completed.

In case of cluster operation

Restore the environment setting files according to the following procedure.

1. Delete the following files.

   - For Windows environment:

File name	Remarks
- All files under $SHARE_DL:$SHARE_TOP\etc\db\cg directory	
- $SHARE_DL:$SHARE_TOP\etc\prop\user.properties - $SHARE_DL:$SHARE_TOP\etc\stxc.alias - $SHARE_DL:$SHARE_TOP\etc\stxc_ext.alias - $SHARE_DL:$SHARE_TOP\etc\stxcvolinf	Only when files exist.

     $SHARE_DL is the drive letter of the shared disk for AdvancedCopy Manager CCM shared data.

     $SHARE_TOP is the directory that contains "Environment Directory" and "Work Directory" of the shared disk for AdvancedCopy Manager CCM shared data.

   - For Solaris, Linux environments:

File name	Remarks
- All files under $SHARE_MNT/etc/opt/FJSVccm/db/cg directory	
- $SHARE_MNT/etc/opt/FJSVccm/prop/user.properties - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxc.alias - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxc_ext.alias - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxcvolinf	Only when files exist.

     $SHARE_MNT is the mount point of the shared disk for AdvancedCopy Manager CCM shared data.

2. Copy the files which are saved in "A.6 Backing up the the environment setting files" to the following files and directories:

   - For Windows environment:

File name	Remarks
- $SHARE_DL:$SHARE_TOP\etc\db\eternus.xml - All files under $SHARE_DL:$SHARE_TOP\etc\db\cg directory	
- $SHARE_DL:$SHARE_TOP\etc\prop\user.properties - $SHARE_DL:$SHARE_TOP\etc\stxc.alias - $SHARE_DL:$SHARE_TOP\etc\stxc_ext.alias - $SHARE_DL:$SHARE_TOP\etc\stxcvolinf	Only when files ware backed up.
- $SHARE_DL:$SHARE_TOP\var\micc\database\DeviceRegList.xml	

     $SHARE_DL is the drive letter of the shared disk for AdvancedCopy Manager CCM shared data.
     $SHARE_TOP is the directory that contains "Environment Directory" and "Work Directory" of the shared disk for AdvancedCopy Manager CCM shared data.

   - For Solaris, Linux environments:

File name	Remarks
- $SHARE_MNT/etc/opt/FJSVccm/db/eternus.xml - All files under $SHARE_MNT/etc/opt/FJSVccm/db/cg directory	
- $SHARE_MNT/etc/opt/FJSVccm/prop/user.properties - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxc.alias - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxc_ext.alias - $SHARE_MNT/etc/opt/FJSVccm/accc/etc/stxcvolinf	Only when files ware backed up.
- $SHARE_MNT/var/opt/FJSVccm/micc/database/DeviceRegList.xml	

$SHARE_MNT is the mount point of the shared disk for AdvancedCopy Manager CCM shared data.

The restoration for the environment setting files is completed.

A.15 Backing up the common control repository (for Windows)

Save the common control repository.

Information

About the notation in procedure

Directory name	Explanation
$BAK_DIR	Backup destination directory.
$INS_DIR	"Program Directory" specified at the ETERNUS SF Manager installation.

1. Stop the ETERNUS SF Express Tomcat service.

   Open Service Control Manager to stop the following service.

   - ETERNUS SF Manager Tomcat Service

2. Create backup data.

   1. Using Explorer, create the following backup directories:

      - $BAK_DIR\Common

   2. From a user with OS Administrator privilege, execute the following command to create backup data.

      If you did not change the port number, specify 15432 for <*port number*>. If you did change the port number, specify the changed port number for <*port number*>.
      The file name of the created backup data is <*file_name*>.

      ```
      $INS_DIR\Common\sys\postgres\bin\pg_dump -U esfpostgres -C --attribute-inserts -p <port number> -f $BAK_DIR\Common\<file_name> esfdb
      ```

   3. The prompt is displayed, and waiting for input. Input the following strings.

      ```
      master01!
      ```

3. Start the ETERNUS SF Express Tomcat service.

   Open Service Control Manager to start the following service.

   - ETERNUS SF Manager Tomcat Service

A.16 Backing up the common control repository (for Solaris, Linux)

Save the common control repository.

Information

About the notation in procedure

Directory name	Explanation
$BAK_DIR	Backup destination directory.

1. Stop the ETERNUS SF Manager Web service.
   Execute the following shell script to stop the service.

   ```
   /opt/FJSVesfcm/bin/stop-webservice.sh
   ```

2. Create backup data.

   1. Create the following backup directories:

      ```
      mkdir -p $BAK_DIR/Common
      ```

   2. From a user with OS Administrator privilege, execute the following command to create backup data.

      If you did not change the port number, specify 15432 for <*port number*>. If you did change the port number, specify the changed port number for <*port number*>.
      The file name of the created backup data is <*file_name*>.

      ```
      /opt/FJSVesfcm/postgres/bin/pg_dump -U esfpostgres -C --attribute-inserts -p <port number>
      -f $BAK_DIR/Common/<file_name> esfdb
      ```

   3. The prompt is displayed, and waiting for input. Input the following strings.

      ```
      master01!
      ```

3. Start the ETERNUS SF Manager Web service.

   Execute the following shell script to start the service.

   ```
   /opt/FJSVesfcm/bin/start-webservice.sh
   ```

A.17 Backing up the license management database (for Windows)

Save the license management database.

Information

About the notation in procedure

Directory name	Explanation
$BAK_DIR	Backup destination directory.
$INS_DIR	"Program Directory" specified at the ETERNUS SF Manager installation.

1. Using Explorer, create the following backup directories:

   - $BAK_DIR\LM

2. From a user with OS Administrator privilege, execute the following command to create backup data.
   The file name of the created backup data is <*file_name*>.

   ```
   $INS_DIR\LM\bin\esflm backup $BAK_DIR\LM\<file_name>
   ```

A.18 Backing up the license management database (for Solaris, Linux)

Save the license management database.

Information

About the notation in procedure

Directory name	Explanation
$BAK_DIR	Backup destination directory.

1. Create the following backup directories:

   ```
   mkdir -p $BAK_DIR/LM
   ```

2. From a user with OS Administrator privilege, execute the following command to create backup data.
   The file name of the created backup data is <*file_name*>.

   ```
   /opt/FJSVesflm/bin/esflm backup $BAK_DIR/LM/<file_name>
   ```

A.19 Restoring the common control repository (for Windows)

Restore the common control repository.

Information

About the notation in procedure

Directory name	Explanation
$BAK_DIR	Backup destination directory.
$INS_DIR	"Program Directory" specified at the ETERNUS SF Manager installation.

1. Stop the ETERNUS SF Express Tomcat service.

   Open Service Control Manager to stop the following service.

   - ETERNUS SF Manager Tomcat Service

2. Restore the backup data. The following procedure must be implemented by a user with administrator privileges for the operating system.

    1. Execute the following command.

        If you did not change the port number, specify 15432 for <*port number*>. If you did change the port number, specify the changed port number for <*port number*>.

        ```
        $INS_DIR\Common\sys\postgres\bin\psql -U esfpostgres -p <port number> postgres
        ```

    2. The prompt is displayed, and waiting for input. Input the following strings in order.

        ```
        master01!
        drop database esfdb;
        \q
        ```

    3. Execute the following command to restore the backup data.
        If you did not change the port number, specify 15432 for <*port number*>. If you did change the port number, specify the changed port number for <*port number*>.
        The <*file_name*> is the file name specified when the backup data was created.

        ```
        $INS_DIR\Common\sys\postgres\bin\psql -U esfpostgres -p <port number> -f $BAK_DIR\Common
        \<file_name> postgres
        ```

    4. The prompt is displayed, and waiting for input. Input the following strings.

        ```
        master01!
        ```

3. Start the ETERNUS SF Express Tomcat service.

    Open Service Control Manager to start the following service.

    - ETERNUS SF Manager Tomcat Service

Note

After restoring the shared control repository, it takes approximately 2 minutes before the Web Console becomes available.

A.20 Restoring the common control repository (for Solaris, Linux)

Restore the common control repository.

Information

About the notation in procedure

Directory name	Explanation
$BAK_DIR	Backup destination directory.

1. Stop the ETERNUS SF Manager Web service.

    Execute the following shell script to stop the service.

    ```
    /opt/FJSVesfcm/bin/stop-webservice.sh
    ```

2. Restore the backup data. The following procedure must be implemented by a user with administrator privileges for the operating system.

3. Execute the following command.

   If you did not change the port number, specify 15432 for <*port number*>. If you did change the port number, specify the changed port number for <*port number*>.

   ```
   /opt/FJSVesfcm/postgres/bin/psql -U esfpostgres -p <port number> postgres
   ```

   1. The prompt is displayed, and waiting for input. Input the following strings in order.

      ```
      master01!
      drop database esfdb;
      \q
      ```

   2. Execute the following command to restore the backup data.
      If you did not change the port number, specify 15432 for <*port number*>. If you did change the port number, specify the changed port number for <*port number*>.
      The <*file_name*> is the file name specified when the backup data was created.

      ```
      /opt/FJSVesfcm/postgres/bin/psql -U esfpostgres -p <port number> -f $BAK_DIR/Common/
      <file_name> postgres
      ```

   3. The prompt is displayed, and waiting for input. Input the following strings.

      ```
      master01!
      ```

4. Start the ETERNUS SF Manager Web service.

   Execute the following shell script to start the service.

   ```
   /opt/FJSVesfcm/bin/start-webservice.sh
   ```

Note

After restoring the shared control repository, it takes approximately 2 minutes before the Web Console becomes available.

A.21 Restoring the license management database (for Windows)

Restore the license management database.

Information

About the notation in procedure

Directory name	Explanation
$BAK_DIR	Backup destination directory.
$INS_DIR	"Program Directory" specified at the ETERNUS SF Manager installation.

Execute the following command with administrator privileges for the operating system.
The <*file_name*> is the file name specified when the backup data was created.

```
$INS_DIR\LM\bin\esflm restore $BAK_DIR\LM\<file_name>
```

A.22 Restoring the license management database (for Solaris, Linux)

Restore the license management database.

Information

About the notation in procedure

Directory name	Explanation
$BAK_DIR	Backup destination directory.

Execute the following command with administrator privileges for the operating system.
The <*file_name*> is the file name specified when the backup data was created.

```
/opt/FJSVesflm/bin/esflm restore $BAK_DIR/LM/<file_name>
```

Appendix B Install parameter

This appendix explains the install parameter file and the details of each install parameter.

B.1 Install parameter file (for ETERNUS SF Manager)

The sample of the install parameter file is provided on the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version.

- Stored location

```
<DVD-ROM mount directory>/Manager_unix/install_parameter.txt
```

For changing install parameters, copy the form of the install parameter file in a convenient location and modify the installation information.

The following is the form of the install parameter file.

For the description for the each parameter, refer to "B.2 Install parameters (for ETERNUS SF Manager)".

```
#------------------------------------------------#
# Installation function
#     1: ETERNUS SF Manager
#     2: ETERNUS SF AdvancedCopy Manager CCM
#------------------------------------------------#
Installation_function: 1

#------------------------------------------------#
# Character code
#    Solaris:
#       1: EUC
#       2: SJIS
#       3: UTF8
#       NULL: System default
#         (Solaris 9/10 --> EUC
#          Solaris 11   --> UTF8)
#
#    Linux:
#       1: UTF8
#       2: EUC
#       NULL: System default (UTF8)
#------------------------------------------------#
Character_code:

#------------------------------------------------#
# Port number
#     range: 1024 - 65535
#------------------------------------------------#
ETERNUS_SF_Manager_apache_service: 9855
Communications_service_1: 1226
Communications_service_2: 4917
Repository_service_1: 32004
Repository_service_2: 15432
Remote_access_service: 9851
Exclusive_control_service: 9852
Internal_port_1: 28005
Internal_port_2: 28009
Internal_port_3: 28443
Internal_port_4: 24916
Internal_port_5: 24917
```

```
#-----------------------------------------------#
# Repository database setup
#   Repository_data_size: Min. 65
#   Management_server_IP_address: format xxx.xxx.xxx.xxx
#-----------------------------------------------#
DB_file_directory: /var/opt/FJSVswstf/sfwswstf/db
RDB_dictionary_directory: /var/opt/FJSVswstf/sfwswstf/dic
RDB_log_file_directory: /var/opt/FJSVswstf/sfwswstf/log
Repository_DB_space_directory: /var/opt/FJSVswstf/sfwswstf/dbsp
Repository_data_size: 65
Management_server_IP_address:

#-----------------------------------------------#
# AdvancedCopy Manager ARCH
#    Linux(RHEL5):
#        NULL: System dependence
#           1: 32bit
#           2: 64bit
#-----------------------------------------------#
AdvancedCopy_Manager_ARCH:

#-----------------------------------------------#
# esfpostgres UID
#    For primecluster system:
#        NULL: System allocate
#        integer : range 100-59999
#-----------------------------------------------#
esfpostgres_UID:
```

Note

- Only LF is permitted for linefeed code.
  Do not use CR+LF or CR.
- Do not use double-byte character such as double-byte space.

B.2 Install parameters (for ETERNUS SF Manager)

The explanation of the install parameters described below:

Parameter name	Description	Default value
Installation_function	When installing ETERNUS SF Manager, set to [1].	1
Character_code	Specify the character encoding used in AdvancedCopy Manager. For Solaris, specify the following numbers corresponding to the character codes. - For EUC : [1] - For SJIS : [2] - For UTF8 : [3] For Linux, specify the following numbers corresponding to the character codes.	None (*4)

Parameter name	Description	Default value
	- For UTF8 : [1] - For EUC : [2]	
ETERNUS_SF_Manager_apache_service	Web Console service port number	9855
Communications_service_1	Communications service 1 port number	1226
Communications_service_2	Communications service 2 port number	4917
Repository_service_1	Repository service 1 port number	32004
Repository_service_2	Repository service 2 port number	15432
Remote_access_service	Remote access service port number	9851
Exclusive_control_service	Exclusive control service port number	9852
Internal_port_1	Port numbers for various internal services	28005
Internal_port_2		28009
Internal_port_3		28443
Internal_port_4		24916
Internal_port_5		24917
DB_file_directory	DB file directory	/var/opt/FJSVswstf/sfwswstf/db
RDB_dictionary_directory	RDB dictionary directory	/var/opt/FJSVswstf/sfwswstf/dic
RDB_log_file_directory	RDB log file directory	/var/opt/FJSVswstf/sfwswstf/log
Repository_DB_space_directory	Repository DB space directory	/var/opt/FJSVswstf/sfwswstf/dbsp
Repository_data_size	Repository DB size (MB)	65
Management_server_IP_address	Management Server IP address (*1)	None
AdvancedCopy_Manager_ARCH	Architecture of AdvancedCopy Manager to be installed (*2)	None
esfpostgres_UID	User ID which ETERNUS SF Manager internally uses on installation of PRIMECLUSTER (*3)	None

*1: When the Management Server has two or more IP addresses, specify the IP address which is available for communicating with the Management Server from all of the AdvancedCopy Manager's agents. (For upgrading Storage Cruiser)

*2: If 32-bit architecture Symfoware is installed on Red Hat Enterprise Linux 5 (for Intel64), specify "1" to install 32-bit architecture AdvancedCopy Manager. Specify a blank in other cases. (For upgrading Storage Cruiser)

*3: On installation in PRIMECLUSTER environments, specify an unregistered user ID for the system by using integer number from 100 to 59999. Specify a blank in other cases.

*4: If no number is specified for Character_code (default value), the character code will be as follows:

- For Solaris 9 or Solaris 10 : [EUC]
- For Solaris 11 : [UTF8]
- For Linux : [UTF8]

B.3 Install parameter file (for AdvancedCopy Manager Copy Control Module)

The sample of the install parameter file is provided on the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (Manager Program) (2/2)", "ETERNUS SF SC/ACM/Express Mediapack for Linux (Manager Program) (2/2)" or "ETERNUS SF SC/ACM/Express Mediapack for Linux 64bit (Manager Program) (2/2)" for this version.

- Stored location

```
<DVD-ROM mount directory>/Manager_unix/install_parameter_ccm.txt
```

The following is the form of the install parameter file.

```
#-----------------------------------------------#
# Installation function
#     1: ETERNUS SF Manager
#     2: ETERNUS SF AdvancedCopy Manager CCM
#-----------------------------------------------#
Installation_function: 2
```