

ETERNUS SF



ETERNUS SF

Express V15.3/

Storage Cruiser V15.3/

AdvancedCopy Manager V15.3



Migration Guide

B1FW-5958-06ENZ0(00)
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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 Upgrading Express Version 14.x](#)

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

[Chapter 3 Upgrading Express Version 15.x](#)

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

[Chapter 4 Upgrading Storage Cruiser Version 13.x/14.x](#)

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

[Chapter 5 Upgrading Storage Cruiser Version 15.x](#)

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

[Chapter 6 Upgrading AdvancedCopy Manager Version 13.x/14.x](#)

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

[Chapter 7 Upgrading AdvancedCopy Manager Version 15.x](#)

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

[Chapter 8 Troubleshooting](#)

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

[Chapter 9 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
Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T)	RHEL-ES4	

Formal name	Abbreviation	
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 DX series	ETERNUS Disk storage system
ETERNUS DX60/DX60 S2 ETERNUS DX80/DX80 S2 ETERNUS DX90/DX90 S2	-			
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 Release Notes	ETERNUS SF Release Notes
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

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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	
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 corrective actions to be taken when any error occurs in the Upgrade Installation from Version 15.x for Solaris and Linux.	Chapter 4, 6 and 8	
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.	2.1.1, 2.2.1, 2.3.1	
Added the description of IPv6.	1.4.1	6

Content of update	Updated section	Revision
Deleted the whole Chapter 2 because incompatible information is described in a new manual "Release Information".	(old) Chapter 2	
Added notes on performance management to the upgrade procedure for Storage Cruiser's manager.	4.1.1.1,4.1.4	

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 (*1)			Explanation
		EXP	SC	ACM	
Before installation	Quick Reference	Yes	Yes	Yes	This manual is unique for each product. The following manuals are available: <ul style="list-style-type: none"> - Express Quick Reference - Storage Cruiser Quick Reference - AdvancedCopy Manager Quick Reference
	Release Notes	Yes	Yes	Yes	This manual is common for all products.
	Overview	-	-	Yes	This manual is unique for each product.
During installation	Installation and Setup Guide	Yes	Yes	Yes	This manual is common for all products.
	Cluster Environment Setup Guide	-	Yes	Yes	This manual is common for Storage Cruiser and AdvancedCopy Manager.
	Migration Guide	Yes	Yes	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: <ul style="list-style-type: none"> - 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) - AdvancedCopy Manager Operation Guide (for AIX) - AdvancedCopy Manager for Exchange Server Operation Guide
	Operation Guide for Copy Control Module	Yes	-	Yes	This manual is common for Express and AdvancedCopy Manager.

When to read	Related manuals (abbreviated)	Related products (*1)			Explanation
		EXP	SC	ACM	
	Web Console Guide	Yes	Yes	Yes	This manual is common for all products.
Anytime	Event Guide	Yes	Yes	-	This manual is common for Express and Storage Cruiser.
	Messages	Yes	Yes	Yes	This manual is common for all products.
	Glossary	Yes	Yes	Yes	This manual is common for all products.

*1: "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 (*1)	Manual	Main contents	How to read
Acquiring a product overview and basic operation knowledge	EXP	- Express Quick Reference	- Product overview	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	- Installation decision	
	ACM	- AdvancedCopy Manager Quick Reference	- Overview of the necessary tasks from installation to first use	
		- AdvancedCopy Manager Overview	- Main functions - Linkable applications - Procedure overview for Advanced Copy of ETERNUS Disk storage system	
Confirming the updated contents	common	- ETERNUS SF Release Notes	- New function overview - Incompatibilities with previous version - Fixed bugs	Please read if you want to know the updated contents from a previous version and if you perform the upgrade.
Deciding if a version upgrade is required	common	- ETERNUS SF Migration Guide	- 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 (*1)	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	
	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)	- Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference	
		- AdvancedCopy Manager for Exchange Server Operation Guide	- Restoring the Exchange Server database using the Restore Wizard	

Purpose	Related products (*1)	Manual	Main contents	How to read
	common	- ETERNUS SF Web Console Guide	- Operating environment - Screen layout description	Please read if you want to understand the 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.

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

Contents

Chapter 1 Overview.....	1
1.1 Upgrade patterns.....	1
1.2 What is the Upgrade Installation.....	2
1.3 Products which can be upgraded with the Upgrade Installation.....	2
1.4 Notes on upgrade.....	4
1.4.1 Common notes for all products.....	4
1.4.2 Notes for Express.....	4
1.4.3 Notes for Storage Cruiser.....	5
1.4.4 Notes for AdvancedCopy Manager.....	5
Chapter 2 Upgrading Express Version 14.x.....	7
2.1 Preparing for the upgrade.....	7
2.1.1 Backing up the operational environment of the previous version.....	7
2.1.2 Checking for available disk space.....	8
2.1.3 Uninstalling incompatible software.....	8
2.1.4 Checking Symfoware.....	9
2.1.5 Estimating the database size.....	9
2.1.6 Preparing for uninstallation.....	9
2.2 Performing the upgrade.....	10
2.3 Tasks to be performed after the upgrade.....	20
2.3.1 Restoring the environment from the previous version.....	20
2.3.2 Importing the configuration information.....	21
2.3.3 Setting up a user account.....	22
2.3.4 Setting up the Web Console.....	22
2.3.5 Setting the account information for access to ETERNUS Disk storage system.....	22
2.3.6 Registering the license.....	22
2.3.7 Redefining missing information.....	23
2.3.8 Changing the access user password for the repository database.....	24
2.3.9 Resuming operation.....	24
Chapter 3 Upgrading Express Version 15.x.....	25
3.1 Upgrading Express (for Windows).....	25
3.1.1 Preparing for the upgrade.....	25
3.1.2 Performing the upgrade.....	26
3.1.3 Tasks to be performed after the upgrade.....	28
3.2 Upgrading Express (for Linux).....	29
3.2.1 Preparing for the upgrade.....	29
3.2.2 Performing the upgrade.....	30
3.2.3 Tasks to be performed after the upgrade.....	32
3.2.4 Resuming operation.....	33
Chapter 4 Upgrading Storage Cruiser Version 13.x/14.x.....	34
4.1 Upgrading the Storage Cruiser's manager.....	34
4.1.1 Preparing for the upgrade.....	34
4.1.1.1 Backing up the operational environment of the previous version.....	34
4.1.1.2 Checking for available disk space.....	36
4.1.1.3 Uninstalling incompatible software.....	37
4.1.1.4 Checking Symfoware.....	37
4.1.1.5 Estimating the database size.....	37
4.1.1.6 Registering the repository access user (for Solaris, Linux).....	37
4.1.1.7 Tuning kernel parameters (for Solaris, Linux).....	38
4.1.1.8 Confirming the port number for the communication service (for Solaris, Linux).....	38
4.1.1.9 Preparing for uninstallation.....	38
4.1.2 Performing the upgrade (for Windows).....	39
4.1.3 Performing the upgrade (for Solaris, Linux).....	49

4.1.4 Tasks to be performed after the upgrade.....	54
4.1.4.1 Restoring the environment from the previous version.....	54
4.1.4.2 Importing the configuration information.....	55
4.1.4.3 Setting up a user account.....	56
4.1.4.4 Setting up the Web Console.....	56
4.1.4.5 Setting the account information for access to ETERNUS Disk storage system.....	56
4.1.4.6 Registering the license.....	56
4.1.4.7 Redefining missing information.....	57
4.1.4.8 Changing the access user password for the repository database.....	58
4.1.5 Resuming operation.....	58
4.2 Upgrading the Storage Cruiser's agent.....	58
Chapter 5 Upgrading Storage Cruiser Version 15.x.....	61
5.1 Upgrading the Storage Cruiser's manager (for Windows).....	61
5.1.1 Upgrading non-clustered systems.....	61
5.1.1.1 Preparing for the upgrade.....	61
5.1.1.2 Performing the upgrade.....	62
5.1.1.3 Tasks to be performed after the upgrade.....	64
5.1.2 Upgrading clustered systems.....	66
5.1.2.1 Preparing for the upgrade.....	66
5.1.2.2 Performing the upgrade (Primary node).....	67
5.1.2.3 Tasks to be performed after the upgrade (Primary node).....	70
5.1.2.4 Performing the upgrade (Secondary node).....	72
5.1.2.5 Tasks to be performed after the upgrade (Secondary node).....	72
5.1.2.6 Starting ETERNUS SF Manager.....	72
5.2 Upgrading the Storage Cruiser's manager (for Solaris, Linux).....	73
5.2.1 Upgrading non-clustered systems.....	73
5.2.1.1 Preparing for the upgrade.....	73
5.2.1.2 Performing the upgrade.....	74
5.2.1.3 Tasks to be performed after the upgrade.....	77
5.2.2 Upgrading clustered systems.....	77
5.2.2.1 Preparing for the upgrade.....	78
5.2.2.2 Performing the upgrade (Primary node).....	79
5.2.2.3 Tasks to be performed after the upgrade (Primary node).....	82
5.2.2.4 Performing the upgrade (Secondary node).....	83
5.2.2.5 Tasks to be performed after the upgrade (Secondary node).....	83
5.2.2.6 Starting the Managed Server transactions.....	84
5.2.3 Resuming operation.....	85
5.3 Upgrading the Storage Cruiser's agent (for Windows).....	85
5.4 Upgrading the Storage Cruiser's agent (for Solaris).....	87
5.5 Upgrading the Storage Cruiser's agent (for RHEL5/RHEL6, SUSE Linux Enterprise Server 11).....	89
5.6 Upgrading the Storage Cruiser's agent (for RHEL-AS4/RHEL-ES4, HP-UX, AIX).....	91
Chapter 6 Upgrading AdvancedCopy Manager Version 13.x/14.x.....	93
6.1 Upgrading the AdvancedCopy Manager's manager.....	93
6.1.1 Preparing for the upgrade.....	93
6.1.1.1 Backing up the operational environment of the previous version.....	93
6.1.1.2 Checking for available disk space.....	94
6.1.1.3 Uninstalling incompatible software.....	95
6.1.1.4 Checking Symfaware.....	95
6.1.1.5 Estimating the database size.....	95
6.1.1.6 Registering the repository access user (for Solaris, Linux).....	95
6.1.1.7 Tuning kernel parameters (for Solaris, Linux).....	96
6.1.1.8 Confirming the port number for the communication service (for Solaris, Linux).....	96
6.1.1.9 Preparing for uninstallation.....	96
6.1.2 Performing the upgrade (for Windows).....	97
6.1.3 Performing the upgrade (for Solaris, Linux).....	107
6.1.4 Tasks to be performed after the upgrade.....	112

6.1.4.1 Restoring the environment from the previous version.....	112
6.1.4.2 Importing the configuration information.....	113
6.1.4.3 Setting up a user account.....	114
6.1.4.4 Setting up the Web Console.....	114
6.1.4.5 Registering the license.....	114
6.1.4.6 Redefining missing information.....	114
6.1.4.7 Changing the access user password for repository database.....	115
6.1.5 Resuming operation.....	115
6.2 Upgrading the AdvancedCopy Manager's agent.....	115
6.2.1 Backing up the repository data.....	116
6.2.2 Backing up the management information.....	116
6.2.3 Releasing the backup and restore in Exchange database (for Windows).....	116
6.2.4 Uninstalling the previous version.....	117
6.2.5 Installing this version.....	118
6.2.6 Restoring the repository data.....	118
6.2.7 Changing server information.....	118
6.2.8 Restoring the management information.....	119
6.2.9 Setting the backup and restore in Exchange database (for Windows).....	119
6.2.10 Updating the version information.....	120
6.3 Upgrading the AdvancedCopy Manager Copy Control Module.....	120
6.3.1 Preparing for the upgrade.....	120
6.3.1.1 Selecting the install program.....	120
6.3.1.2 Backing up the environment setting files.....	121
6.3.1.3 Checking for available disk space.....	121
6.3.1.4 Uninstalling incompatible software.....	121
6.3.1.5 Checking Symfaware.....	122
6.3.1.6 Estimating the database size.....	122
6.3.2 Performing the upgrade (for Windows).....	122
6.3.3 Performing the upgrade (for Solaris, Linux).....	128
6.3.4 Tasks to be performed after the upgrade.....	131
6.3.4.1 Restoring the environment setting files.....	131
6.3.4.2 Reconfiguring device information.....	132
6.3.4.3 Registering the license.....	132
6.3.5 Resuming operation.....	133
Chapter 7 Upgrading AdvancedCopy Manager Version 15.x.....	134
7.1 Upgrading the AdvancedCopy Manager's manager (for Windows).....	134
7.1.1 Upgrading non-clustered systems.....	134
7.1.1.1 Preparing for the upgrade.....	134
7.1.1.2 Performing the upgrade.....	135
7.1.1.3 Tasks to be performed after the upgrade.....	137
7.1.2 Upgrading clustered systems.....	138
7.1.2.1 Preparing for the upgrade.....	138
7.1.2.2 Performing the upgrade (Primary node).....	140
7.1.2.3 Tasks to be performed after the upgrade (Primary node).....	142
7.1.2.4 Performing the upgrade (Secondary node).....	144
7.1.2.5 Tasks to be performed after the upgrade (Secondary node).....	144
7.1.2.6 Starting ETERNUS SF Manager.....	144
7.2 Upgrading the AdvancedCopy Manager (for Solaris, Linux).....	145
7.2.1 Upgrading non-clustered systems.....	145
7.2.1.1 Preparing for the upgrade.....	145
7.2.1.2 Performing the upgrade.....	146
7.2.1.3 Tasks to be performed after the upgrade.....	149
7.2.2 Upgrading clustered systems.....	149
7.2.2.1 Preparing for the upgrade.....	150
7.2.2.2 Performing the upgrade (Primary node).....	151
7.2.2.3 Tasks to be performed after the upgrade (Primary node).....	154

7.2.2.4	Performing the upgrade (Secondary node)	155
7.2.2.5	Tasks to be performed after the upgrade (Secondary node)	155
7.2.2.6	Starting ETERNUS SF Manager	156
7.2.3	Resuming operation	157
7.3	Upgrading the AdvancedCopy Manager's agent (for Windows Server 2008 or later)	157
7.3.1	Upgrading non-clustered systems	157
7.3.1.1	Preparing for the upgrade	157
7.3.1.2	Performing the upgrade	158
7.3.1.3	Tasks to be performed after the upgrade	161
7.3.2	Upgrading clustered systems	162
7.3.2.1	Preparing for the upgrade	162
7.3.2.2	Performing the upgrade (Primary node)	163
7.3.2.3	Tasks to be performed after the upgrade (Primary node)	166
7.3.2.4	Performing the upgrade (Secondary node)	167
7.3.2.5	Tasks to be performed after the upgrade (Secondary node)	167
7.3.2.6	Starting the Managed Server transactions	167
7.4	Upgrading the AdvancedCopy Manager's agent (for Solaris, RHEL5/RHEL6, SUSE Linux Enterprise Server 11)	168
7.4.1	Upgrading non-clustered systems	168
7.4.1.1	Preparing for the upgrade	168
7.4.1.2	Performing the upgrade	168
7.4.1.3	Tasks to be performed after the upgrade	170
7.4.2	Upgrading clustered systems	170
7.4.2.1	Preparing for the upgrade	170
7.4.2.2	Performing the upgrade (Primary node)	171
7.4.2.3	Tasks to be performed after the upgrade (Primary node)	172
7.4.2.4	Performing the upgrade (Secondary node)	173
7.4.2.5	Tasks to be performed after the upgrade (Secondary node)	173
7.4.2.6	Starting the Managed Server transactions	173
7.5	Upgrading the AdvancedCopy Manager's agent (for Windows Server 2003, RHEL-AS4, RHEL-ES4, HP-UX, AIX)	174
7.5.1	Backing up the repository data	174
7.5.2	Backing up the management information	175
7.5.3	Releasing the backup and restore in Exchange database (for Windows Server 2003)	175
7.5.4	Uninstalling the previous version	175
7.5.5	Installing this version	176
7.5.6	Restoring the repository data	176
7.5.7	Changing server information	177
7.5.8	Restoring the management information	177
7.5.9	Setting the backup and restore in Exchange database (for Windows Server 2003)	177
7.5.10	Updating the version information	178
7.6	Upgrading the AdvancedCopy Manager Copy Control Module (for Windows)	178
7.6.1	Upgrading non-clustered systems	178
7.6.1.1	Preparing for the upgrade	178
7.6.1.2	Performing the upgrade	179
7.6.2	Upgrading clustered systems	181
7.6.2.1	Preparing for the upgrade	182
7.6.2.2	Performing the upgrade (Primary node)	182
7.6.2.3	Tasks to be performed after the upgrade (Primary node)	185
7.6.2.4	Performing the upgrade (Secondary node)	185
7.6.2.5	Tasks to be performed after the upgrade (Secondary node)	186
7.6.2.6	Start the CCM Server transactions	186
7.7	Upgrading the AdvancedCopy Manager Copy Control Module (for Solaris, Linux)	186
7.7.1	Upgrading non-clustered systems	186
7.7.1.1	Preparing for the upgrade	186
7.7.1.2	Performing the upgrade	186
7.7.2	Upgrading clustered systems	189
7.7.2.1	Preparing for the upgrade	189
7.7.2.2	Performing the upgrade (Primary node)	189

7.7.2.3	Tasks to be performed after the upgrade (Primary node).....	192
7.7.2.4	Performing the upgrade (Secondary node).....	192
7.7.2.5	Tasks to be performed after the upgrade (Secondary node).....	192
7.7.2.6	Start the CCM Server transactions.....	192
7.7.3	Resuming operation.....	192
Chapter 8	Troubleshooting.....	193
Chapter 9	Configuration import.....	195
9.1	Devices supported by the configuration import command.....	195
9.2	Command references.....	196
9.2.1	esfimportdevconf (Configuration import command).....	197
9.2.2	esfimportdisplay (configuration import status display command).....	198
9.3	What to do when configuration import is not possible.....	199
9.4	What to do when an error occurs.....	200
Appendix A	Operation for Previous Version Environment.....	201
A.1	Backing up the repository data (for Windows).....	201
A.2	Backing up the repository data (for Solaris, Linux).....	203
A.3	Backing up the management information (for Windows).....	205
A.4	Backing up the management information (for Solaris, Linux).....	208
A.5	Backing up the management information (for HP-UX, AIX).....	209
A.6	Backing up the the environment setting files.....	211
A.7	Unsetting up the database.....	213
A.8	Cancelling the repository settings.....	215
A.9	Restoring the repository data (for Windows).....	216
A.10	Restoring the repository data (for Solaris, Linux).....	217
A.11	Restoring the management information (for Windows).....	217
A.12	Restoring the management information (for Solaris, Linux).....	221
A.13	Restoring the management information (for HP-UX, AIX).....	223
A.14	Restoring the environment setting files.....	224
A.15	Backing up the common control repository (for Windows).....	227
A.16	Backing up the common control repository (for Solaris, Linux).....	228
A.17	Backing up the license management database (for Windows).....	228
A.18	Backing up the license management database (for Solaris, Linux).....	229
A.19	Restoring the common control repository (for Windows).....	229
A.20	Restoring the common control repository (for Solaris, Linux).....	230
A.21	Restoring the license management database (for Windows).....	231
A.22	Restoring the license management database (for Solaris, Linux).....	232
Appendix B	Install parameter.....	233
B.1	Install parameter file (for ETERNUS SF Manager).....	233
B.2	Install parameters (for ETERNUS SF Manager).....	234
B.3	Install parameter file (for AdvancedCopy Manager Copy Control Module).....	236

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	-	-	-	<ul style="list-style-type: none"> - When upgrading from Express Version 14.x: "Chapter 2 Upgrading Express Version 14.x" - When upgrading from Express Version 15.x: "Chapter 3 Upgrading Express Version 15.x"
Y	-	Y	-	
Y	-	-	Y	
Y	-	Y	Y	
-	Y	-	-	<ul style="list-style-type: none"> - When upgrading from Storage Cruiser Version 13.x/14.x: "Chapter 4 Upgrading Storage Cruiser Version 13.x/14.x" - When upgrading from Storage Cruiser Version 15.x: "Chapter 5 Upgrading Storage Cruiser Version 15.x"
-	Y	Y	-	
-	Y	-	Y	
-	Y	Y	Y	
-	-	Y	-	<ul style="list-style-type: none"> - When upgrading from AdvancedCopy Manager Version 13.x/14.x: "Chapter 6 Upgrading AdvancedCopy Manager Version 13.x/14.x" - When upgrading from AdvancedCopy Manager Version 15.x: "Chapter 7 Upgrading AdvancedCopy Manager Version 15.x"
-	-	Y	Y	

Combination of products				Reference
Express	Storage Cruiser	AdvancedCopy Manager	AdvancedCopy Manager Copy Control Module	
-	-	-	Y	<ul style="list-style-type: none"> - When upgrading from AdvancedCopy Manager Version 13.x/14.x: "6.3 Upgrading the AdvancedCopy Manager Copy Control Module" - When upgrading from AdvancedCopy Manager Version 15.x: <ul style="list-style-type: none"> - "7.6 Upgrading the AdvancedCopy Manager Copy Control Module (for Windows)" - "7.7 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 15.3
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 15.3
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 15.3

*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 15.3
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 15.3

*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 15.3
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 15.3
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 15.3

*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.



See

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

Migration to IPv6 environment

After performing the upgrade installation of this product, change the settings for IP address environments in this product, operating system and associated software.



See

-
- Refer to "Changing the IP address of the Management Server" and "Changing the IP address of a server node (host)" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on changing the IP address environment in Storage Cruiser.
 - Refer to "Changing the IP address of Management Server" and "Changing the IP address of Managed Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the corresponding operating system of the server to be changed for information on changing the IP address environment in AdvancedCopy Manager.
-

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



See

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

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** page 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

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

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:

- For 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 or Linux, or by the startup account specified at the time of the installation of the AdvancedCopy Manager's manager in Windows.

- For 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 or Linux, or by the startup account specified at the time of the installation of the AdvancedCopy Manager's manager in Windows.

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



See

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

Chapter 2 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

2.1 Preparing for the upgrade

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

2.1.1 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

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

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

Refer to the following table to back up the operational environment.

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: <ol style="list-style-type: none"> A.1 Backing up the repository data (for Windows) 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

Refer to "[A.6 Backing up the the environment setting files](#)" for information on performing a backup.

2.1.2 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.

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

Required disk space for the previous version

The space required to install the previous version of Express.

Refer to the *ETERNUS SF Express User's Guide* for the relevant previous version for information on the required disk space.

2.1.3 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

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

2.1.4 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.



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

2.1.5 Estimating the database size

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



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

2.1.6 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:\> programDir\bin\alias -u
```

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

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 **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.

2.2 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 "*systemDrive*\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	28005
	Internal Port 2	28009
	Internal Port 3	28443
	Internal Port 4	24916

- Custom installation

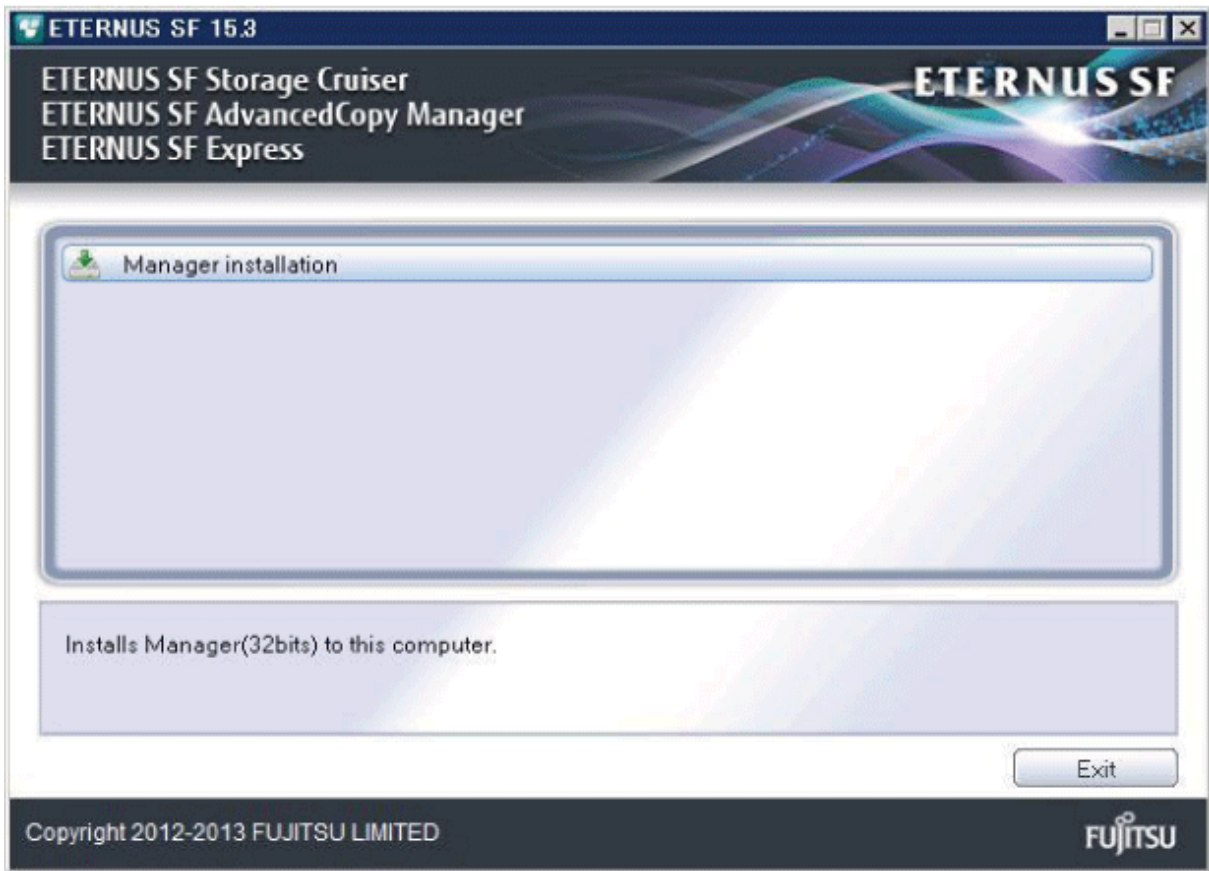
The upgrade is performed by manually entering the configuration information into the interface (installation destination and communication service port numbers).

The upgrade is performed as follows:

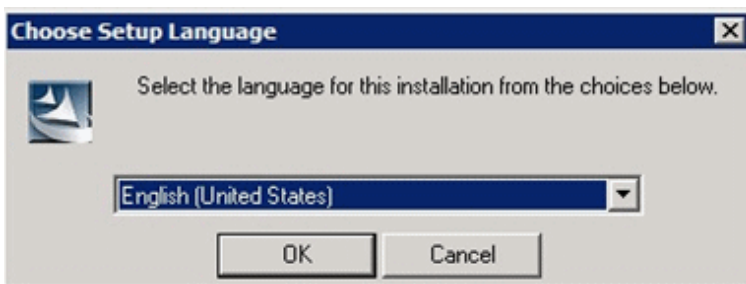
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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

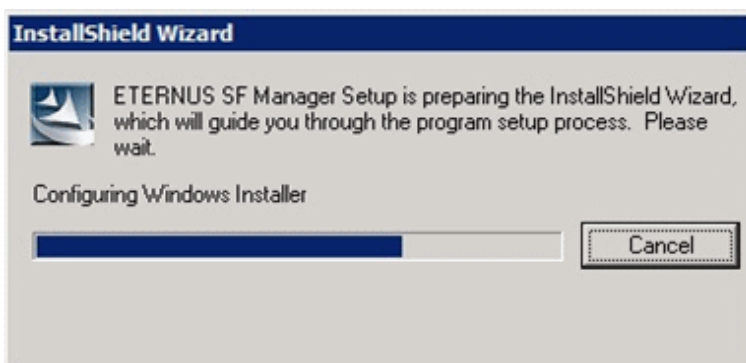
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



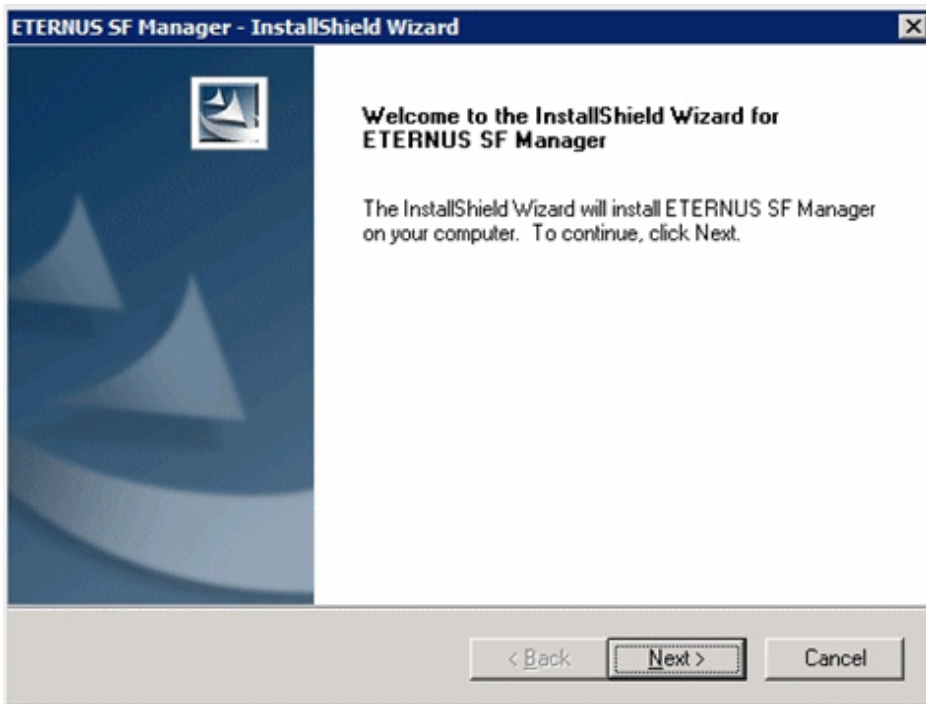
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

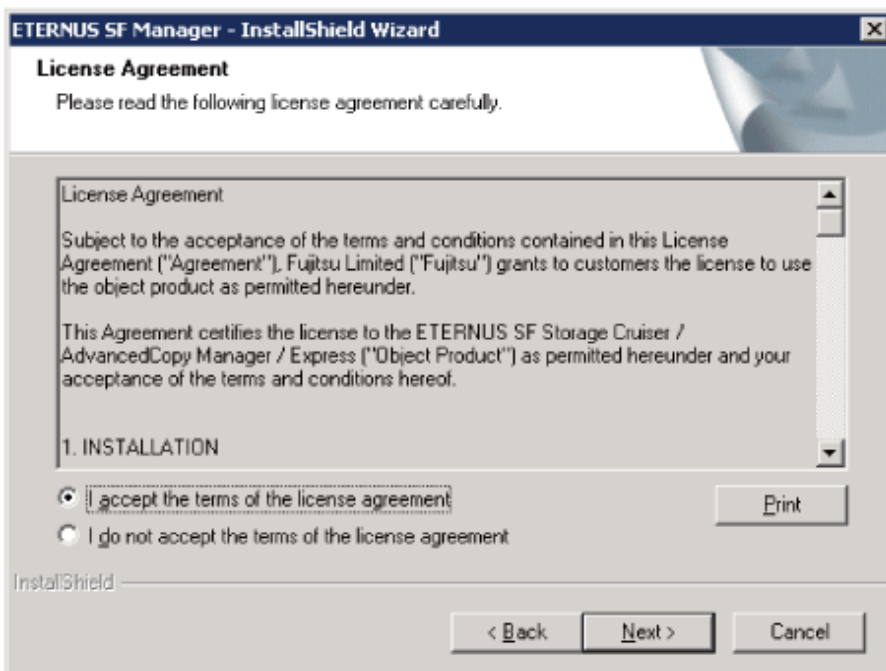


6. The installation wizard page will be displayed. Click **Next**.

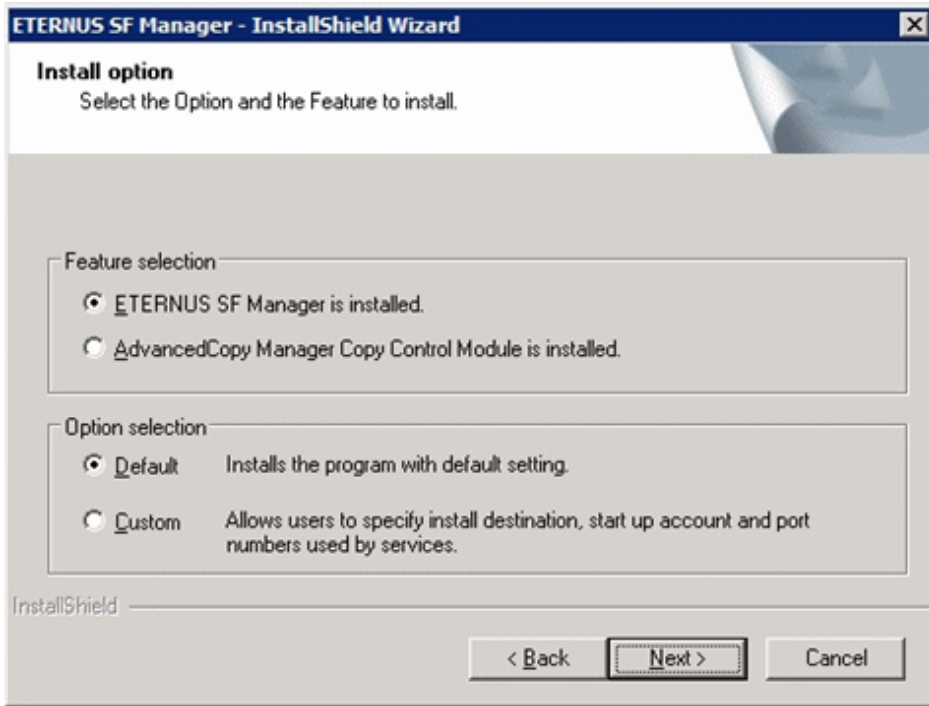


7. Read the terms and conditions of the **License Agreement** page.

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



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



Feature selection

Select [ETERNUS SF Manager is installed.].

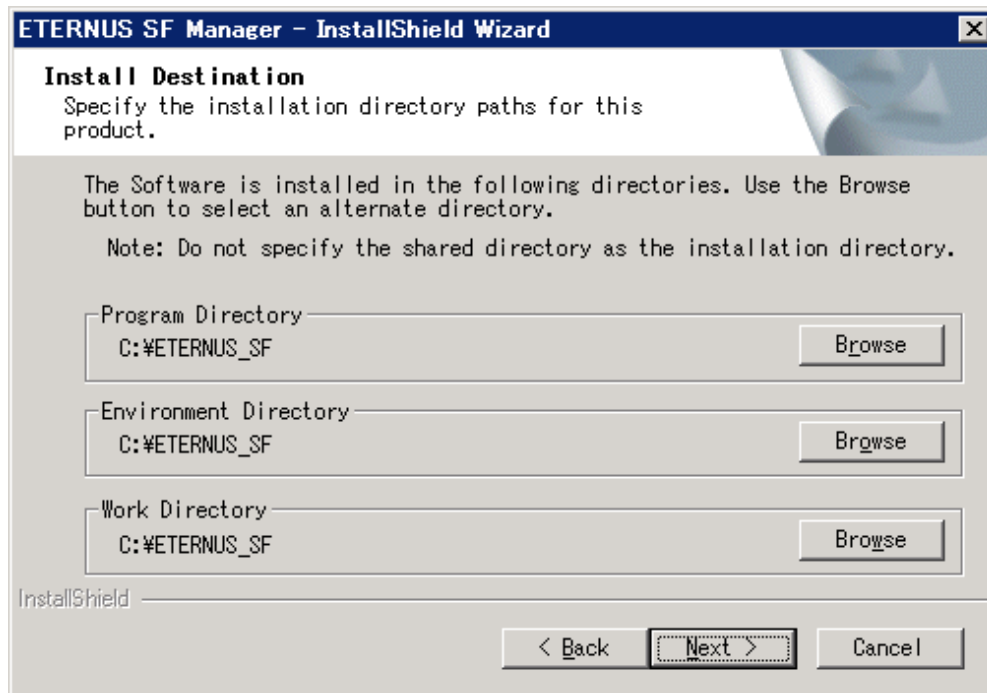
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	<p>Changing values in the Installation Destination page and Port Registration page is optional. In this case, steps 9 and 10 can be skipped.</p> <p>For this installation method, the following checks are automatically performed relating to the information provided by default:</p> <ul style="list-style-type: none"> - Is there enough disk space for the installation in the default directory? - Are the default port numbers available? <p>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.</p>
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 **Browse** and change the install destination. After designating all of the directories, click **Next**.



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 screenshot shows a dialog box titled "ETERNUS SF Manager - InstallShield Wizard" with a close button (X) in the top right corner. The main heading is "Port Registration". Below the heading, there is a sub-heading "Specify the port number to be assigned to each service." followed by a paragraph: "To operate the storage management server, the port number is needed. Please specify the port number used in the following services." Below this text is a list of services with corresponding input fields for port numbers:

ETERNUS SF Manager Apache service	9855
Communications service 1	1226
Communications service 2	4917
Repository service 1	2004
Repository service 2	15432
Remote access service	9851
Exclusive control service	9852

Below the list is a section titled "For Internal Use" containing four input fields:

Internal Port 1	28005	Internal Port 2	28009
Internal Port 3	28443	Internal Port 4	24916

At the bottom of the dialog box, there are three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

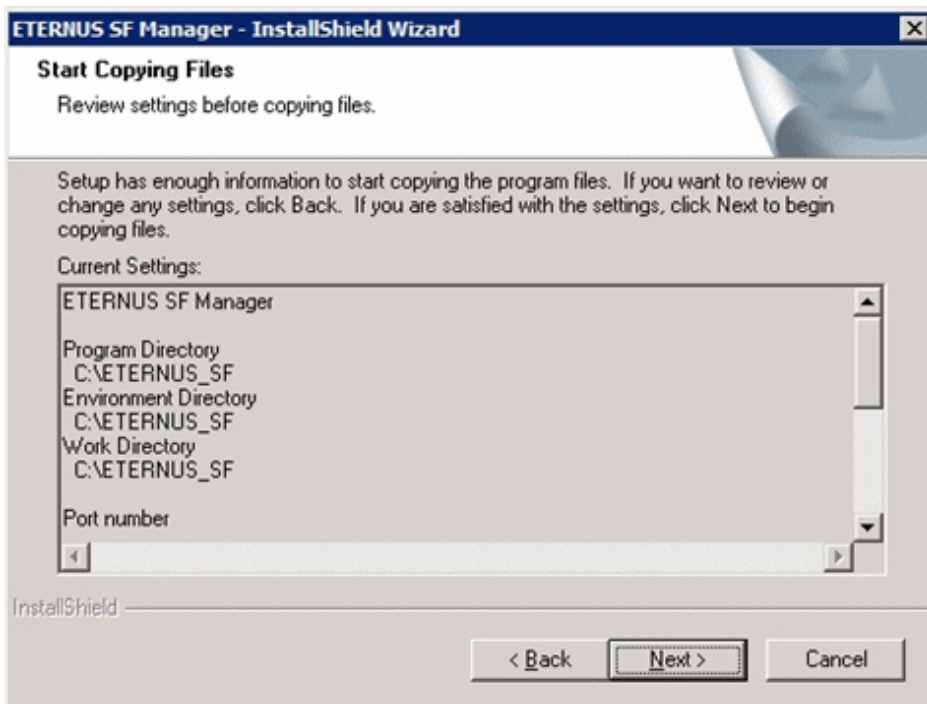
The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 5001 and 32767 are valid.

Then, click **Next**. If an entered value is already being used, the page will be displayed again.

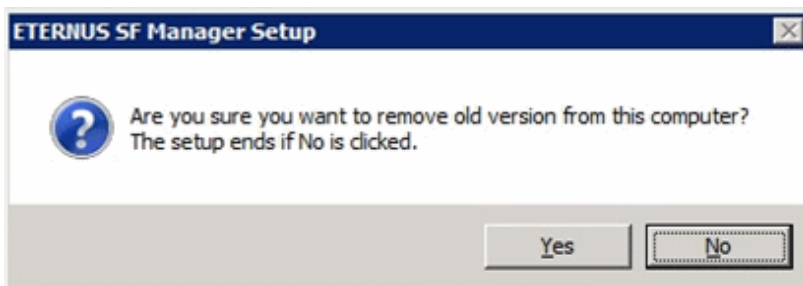
11. Check the settings information in the **Start Copying Files** page.

If the settings are correct, click **Next**.

To change a setting, click **Back**.



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



13. The uninstallation is started.

The uninstallation is executed.

Answer any questions to proceed as the uninstallation executes.

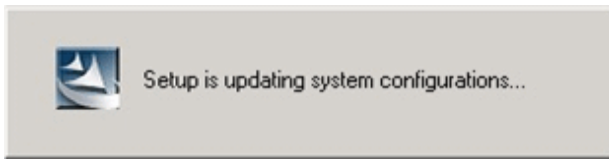
Point

- When requested to restart the computer, click **No**.
If **Yes** 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 **Continue**.

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 "[2.1.5 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 **Settings**.

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.

Refer to "Installation procedure" in the *Software Release Guide* for the default user name and password.

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).

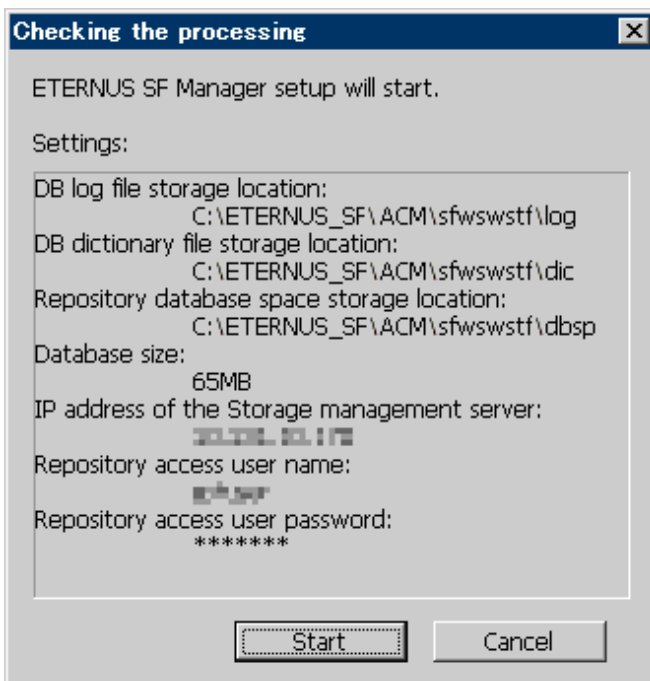


- If the user name specified here has not been registered to the system, perform the registration, and add either local login or domain login permissions. Refer to the table below and specify a user that corresponds to the server type being used.

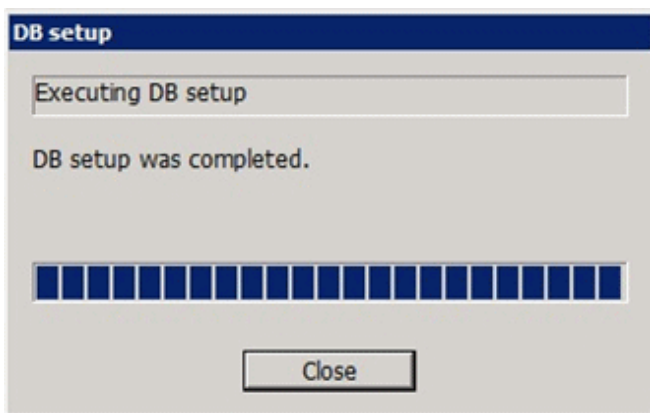
Server type	User type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

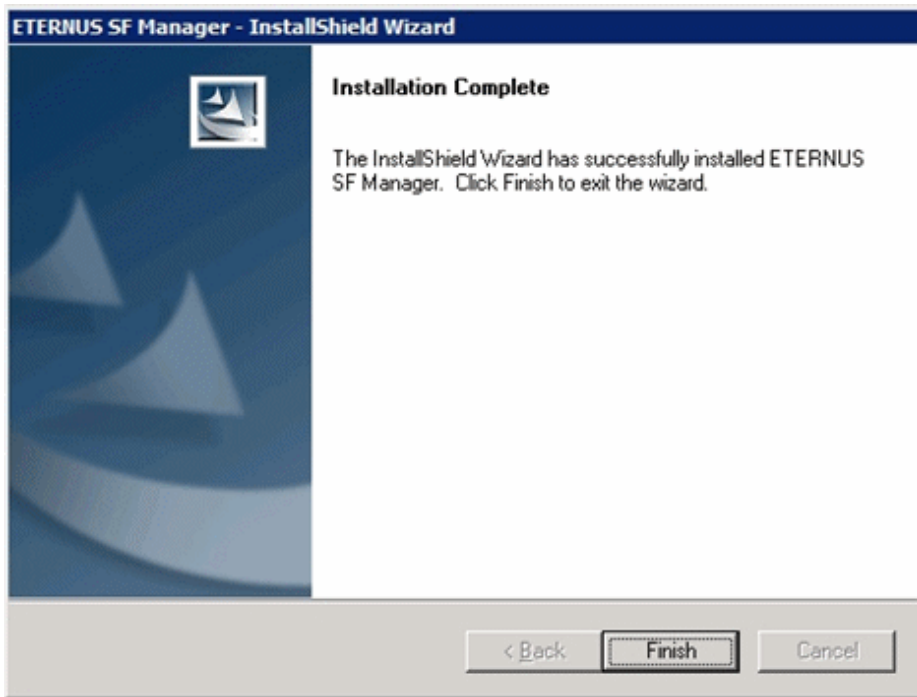
18. The following page will be displayed. Check the contents and click **Start**.



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



20. The following installation wizard page will be displayed. The upgrade process is completed. Click **Finish**.



21. Eject the DVD-ROM.

2.3 Tasks to be performed after the upgrade

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

2.3.1 Restoring the environment from the previous version

Restore the operational environment of Express that was backed up in "[2.1.1 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	<i>backupDir</i> \ESC\	<i>backupDir</i> \Storage Cruiser\
Essential files	<i>backupDir</i> \ESC\	<i>backupDir</i> \Storage Cruiser\
Files related to the performance management function	<i>backupDir</i> \ESC\	<i>backupDir</i> \Storage Cruiser\
Customizable files	<i>backupDir</i> \ESC\	<i>backupDir</i> \Storage Cruiser\
Files associated with definition of copy group and copy pair	<i>backupDir</i> \CCM\	<i>backupDir</i> \AdvancedCopy Manager Copy Control Module\

The *backupDir* refers to the backup destination directory.

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, restore the operational environment that was backed up in "[2.1.1 Backing up the operational environment of the previous version](#)".



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



Refer to the following table to restore the operational environment.

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: <ol style="list-style-type: none">A.9 Restoring the repository data (for Windows)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 "[2.1.1 Backing up the operational environment of the previous version](#)".



Refer to "[A.14 Restoring the environment setting files](#)" for information on performing a restore.

2.3.2 Importing the configuration information

Import the configuration information from the previous version by executing the `esfimportdevconf` command using Administrator permissions.

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

```
programDir\Common\bin\esfimportdevconf
```

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



Refer to "[9.2 Command references](#)" for information on each import command.

2.3.3 Setting up a user account

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



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

2.3.4 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.



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



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.

2.3.5 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.



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 for information on setup.

2.3.6 Registering the license

Register the appropriate licenses.



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

2.3.7 Redefining missing information

- Administrator information

Enter the Administrator information.



.....
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.



.....
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.



.....
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:



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

1. Confirm the registered ETERNUS Disk storage system by executing the acarray list 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 the acarray detail 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 the `acarray remove` 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 the `acarray add` 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

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

2.3.8 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 the `stguserset` command.

See

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 for information on the procedure to change the password.

2.3.9 Resuming operation

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

Chapter 3 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.

3.1 Upgrading Express (for Windows)

This section describes the upgrade of Express for Windows.



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 **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.

3.1.1 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.



Refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for this version for details.

2. Stopping the service of ETERNUS SF Manager

Execute the following batch file:

```
programDir\Common\bin\Stop_ESFservice.bat
```

The *programDir* is the program directory specified at the ETERNUS SF Manager installation.

3. Backing up the Windows system



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

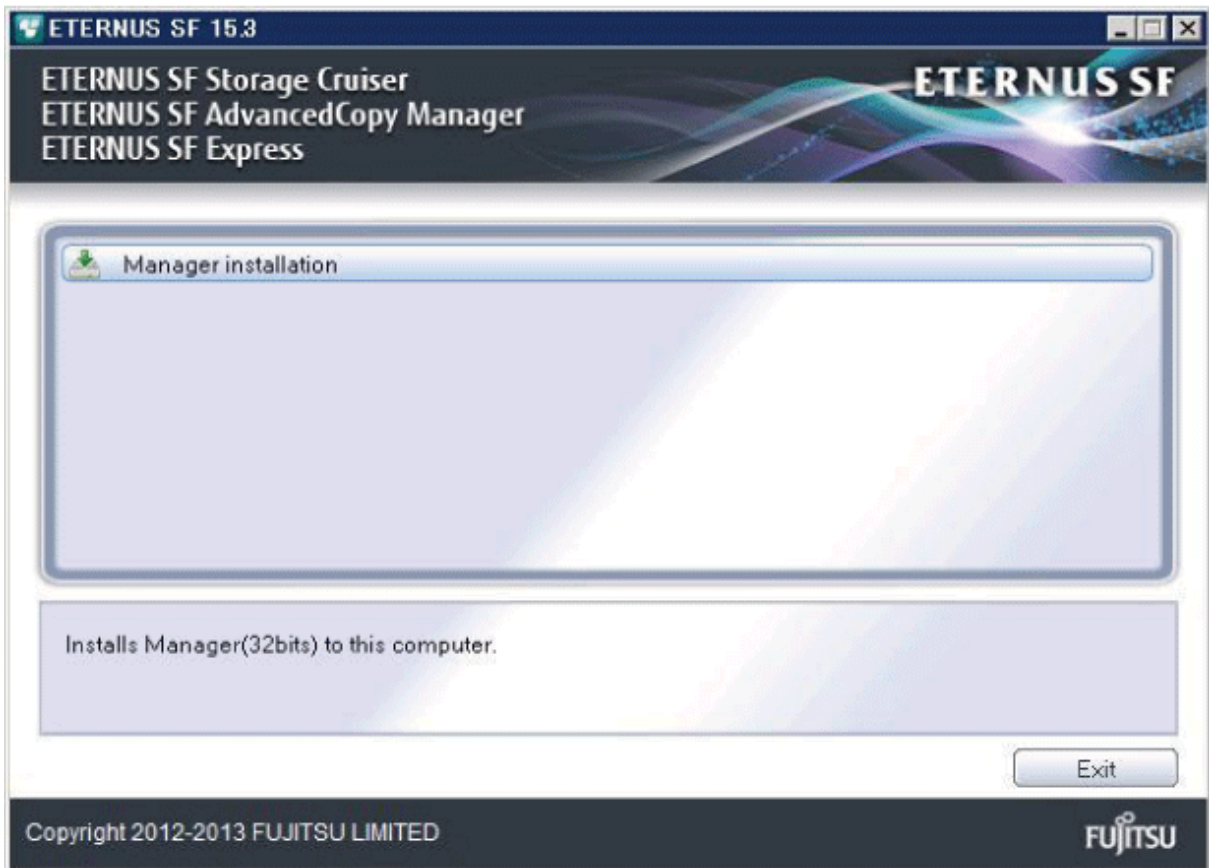
If the Windows system cannot be backed up, the upgrade procedure described in the section below cannot be performed. In this case, perform the following procedure:

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

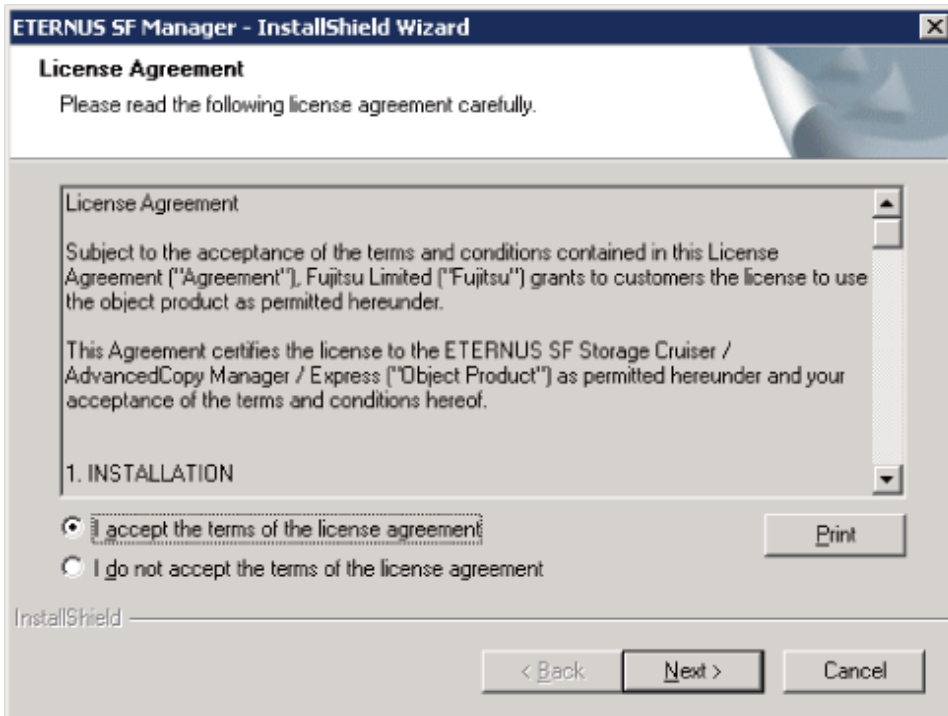
3.1.2 Performing the upgrade

The upgrade is performed as follows:

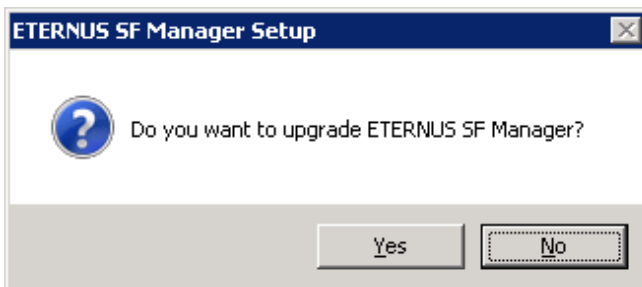
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.
Refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the DVD-ROM structure and detailed contents.
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



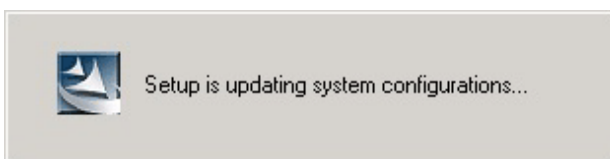
4. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, select [I accept the terms of the license agreement] and then click **Next**.



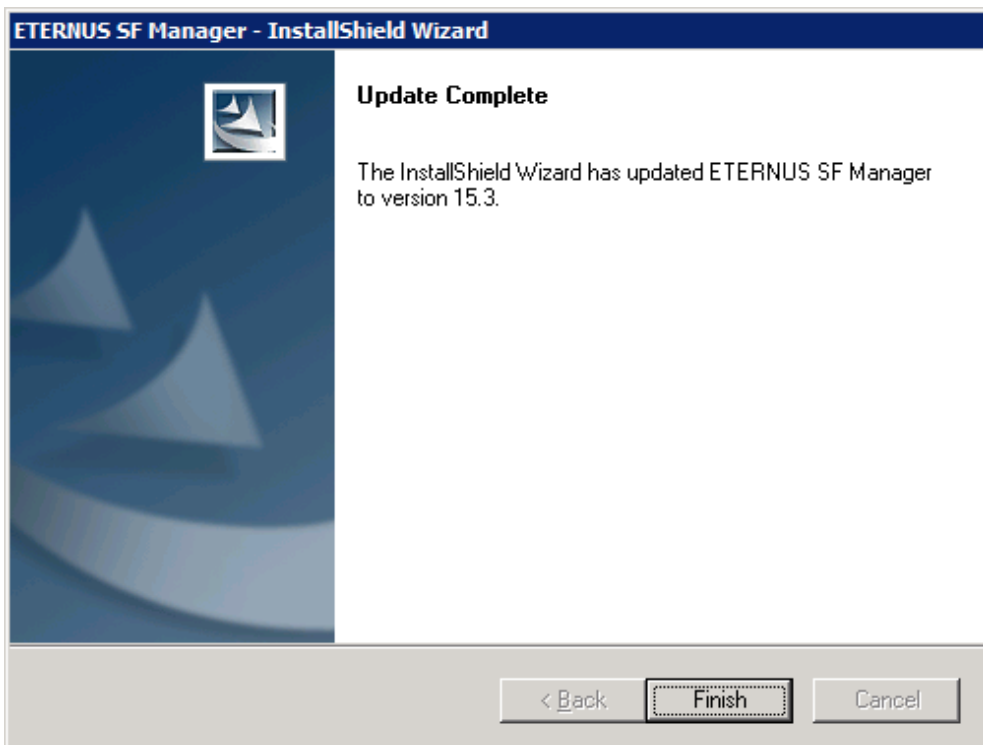
5. The following dialog box will be displayed. Click **Yes**.
To cancel the upgrade, click **No**.



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 **Finish**.



8. Eject the DVD-ROM.

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 ETERNUS SF Manager

Execute the following batch file:

```
programDir\Common\bin\Start_ESFservice.bat
```

The *programDir* is the program directory specified at the ETERNUS SF Manager installation.

2. Resetting the password for the repository access user

Execute the `stguserset` 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

.....
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 for information on the procedure.
.....

3. Changing the server information

To ensure data consistency, execute the `stgxfcmmodsrv` command to change the server information.
When executing the `stgxfcmmodsrv` command, 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

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

Note

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

3.2 Upgrading Express (for Linux)

This section describes the upgrade of Express for Linux.

3.2.1 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/FJVSesfcm/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, it is recommended to back up the operating system before performing the upgrade.

If a failure occurs during the upgrade and you want to restore the environment to the pre-installation status, restore the system from the backup.

.....

3.2.2 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.

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

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".

```
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 object product as permitted hereunder.
```

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

```
1. INSTALLATION
```

```
You are allowed to install and use manager module and agent module of the Object Product on any computer connected to the Storage Device directly or through network and you are also 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 procedure described in the applicable documentation.

4. NO ASSIGNMENT

You may not rent, lease, sublicense, assign, transfer or create lien against the Object Product.

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, and 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 will be corrected. However, if within ninety (90) days following your acquisition of the Object Product you notify the reseller from which you have acquired the Object Product of physical defects of the media containing the Object Product, Fujitsu will, at its sole discretion, correct the non-conformance or provide you with information necessary to correct the non-conformance, or replace the defective media with a new media. Only if you inform such reseller of your problem with the Object Product during the above mentioned warranty period and provide satisfactory evidence of the date you acquired the Object Product will Fujitsu be obligated to honor this warranty.

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(d) The above states the entire liability of Fujitsu in connection with the use, performance 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 license between the parties and supersede all prior or contemporaneous oral and written communications 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.



If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the Software Release Guide, recover the system to the normal state.

3.2.3 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 the stguserset command to reset the password for the repository access user.



Even if the password has not changed, ensure that you reset 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 Linux)* for this version for information on the procedure.

3. Change the server information.

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



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



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

3.2.4 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



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

Chapter 4 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. Refer to "[4.2 Upgrading the Storage Cruiser's agent](#)" for details.
- 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.

4.1 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.

4.1.1 Preparing for the upgrade

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

4.1.1.1 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.
- Performance management information is not backed up. If performance monitoring is being performed, take a note of current settings.
Refer to the following information on an earlier-version GUI client:
 - Settings for performance monitoring
 - Interval before obtaining performance information (in seconds)

- Performance monitoring target (only for ETERNUS Disk storage system. Minimum LUN_V, Maximum LUN_V)
- Settings for threshold monitoring (if threshold monitoring is performed)
 - Settings for the Threshold Monitoring time
Threshold Monitoring time (Start Time/Stop Time), Alarm Display time (Start Time/Stop Time), Alarm Display frequency
 - Settings for the Threshold Monitoring
Threshold Monitoring target, Threshold, Unit of the Threshold Monitoring time, Alarm allowable range, Alarm allowable time, Lower limit

1. Stop the Storage Cruiser's manager.

- For Windows:

From the **Services** screen, stop the *ETERNUS SF Storage Cruiser Manager*.

- For Solaris or Linux:

Execute the following command:

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



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

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".



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.



The following information cannot continue to be used.

- User account for the GUI client



See

Refer to the following table to back up the operational environment.

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: <ol style="list-style-type: none">A.1 Backing up the repository data (for Windows)A.3 Backing up the management information (for Windows)
	Solaris, Linux	Perform the steps in the following order: <ol style="list-style-type: none">A.2 Backing up the repository data (for Solaris, Linux)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

Refer to "[A.6 Backing up the the environment setting files](#)" for information on performing a backup.

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 the `esflm backup` command. Refer to the *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide* for the previous version for information on the command.

Example of executing the command is shown below. The file specified for `backupFileName` will be created as a backup file.

```
> esflm backup backupFileName
Backup of license database was performed successfully
```

4.1.1.2 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.

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

Required disk space for the previous version

The space required to install the previous version of the Storage Cruiser's manager.

Refer to the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version for information on the required disk space.

4.1.1.3 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

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

4.1.1.4 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

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

4.1.1.5 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

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

4.1.1.6 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

Refer to "Installation procedure" in the *Software Release Guide* for information on registering a user name and password.

4.1.1.7 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

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

4.1.1.8 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

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

4.1.1.9 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:\> programDir\bin\alias -u
```

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

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 **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

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

4.1.2 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 "*systemDrive*:\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	28005
	Internal Port 2	28009
	Internal Port 3	28443
	Internal Port 4	24916

- Custom installation

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

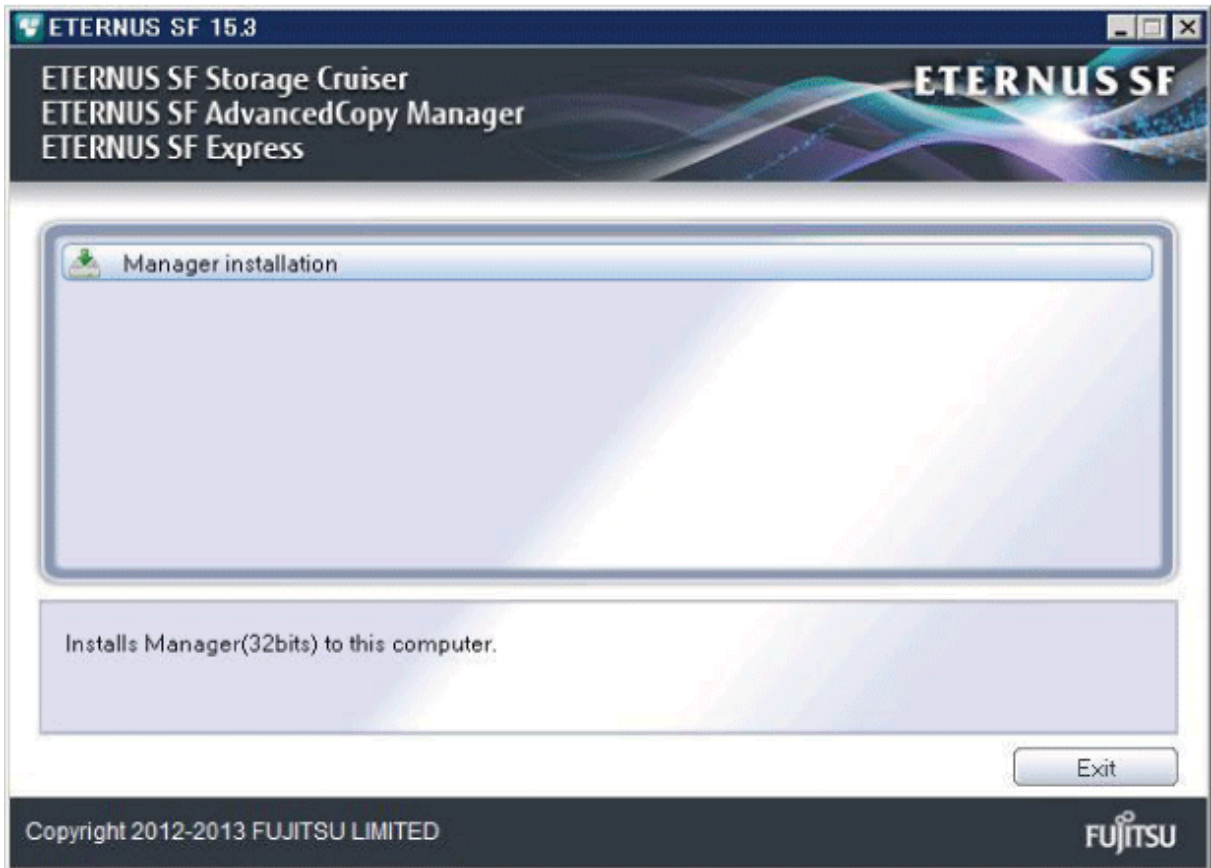
The upgrade is performed as follows:

1. Log on to the server using Administrator privileges.

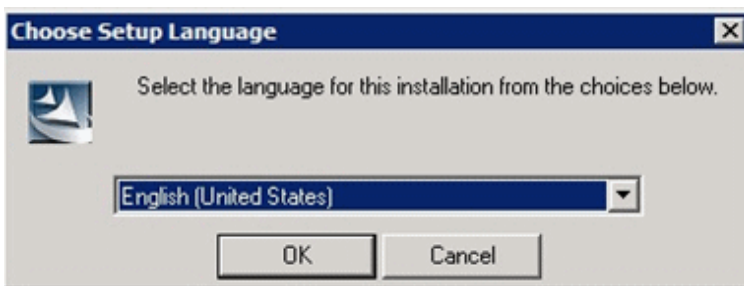
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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

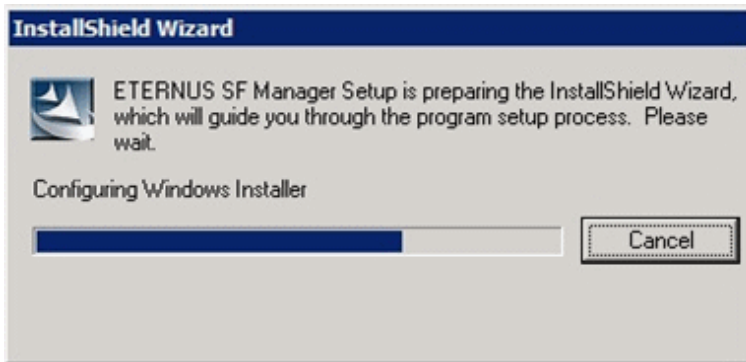
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



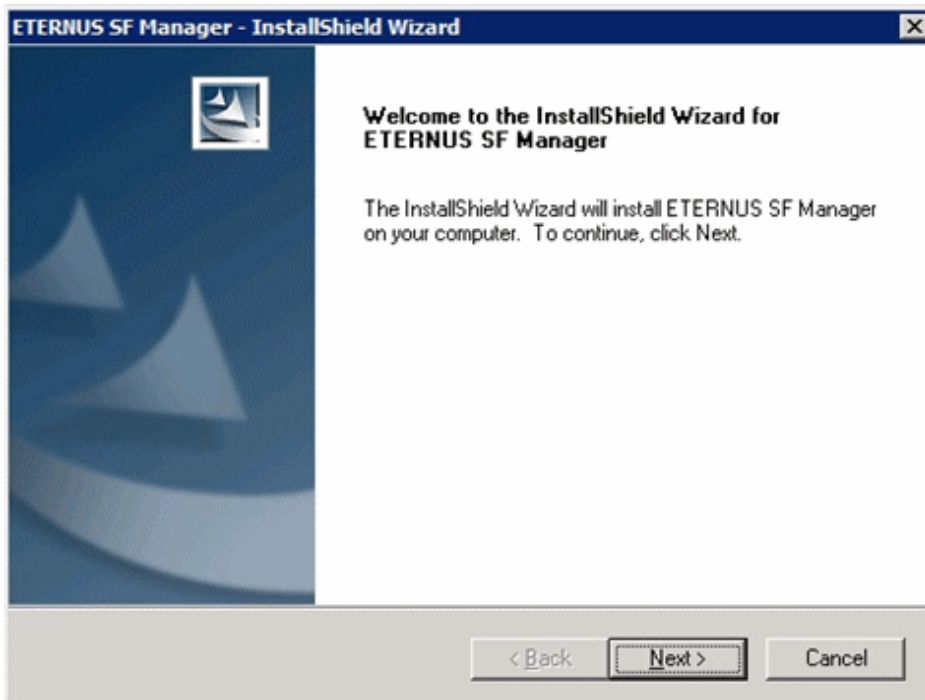
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

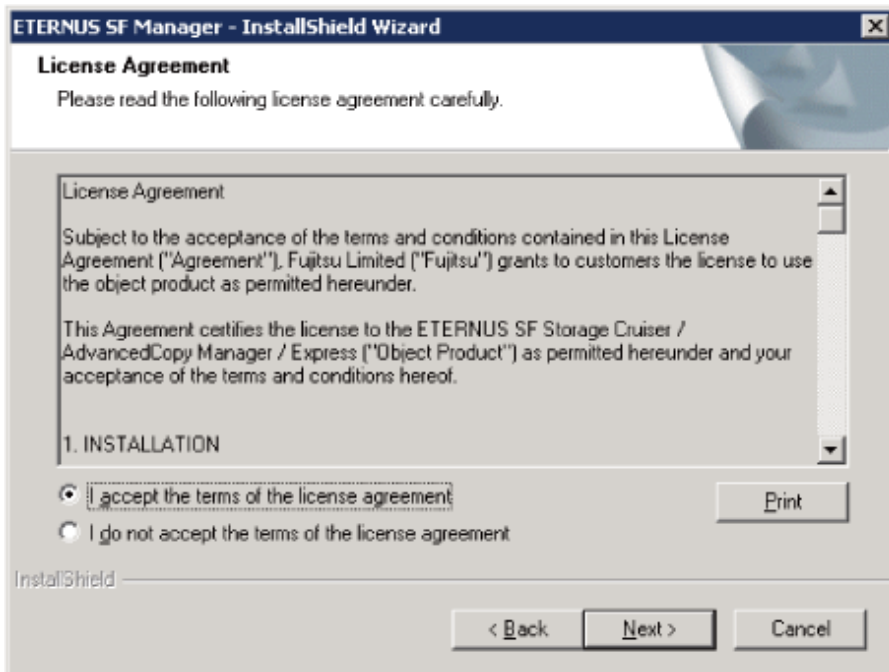


6. The installation wizard page will be displayed. Click **Next**.

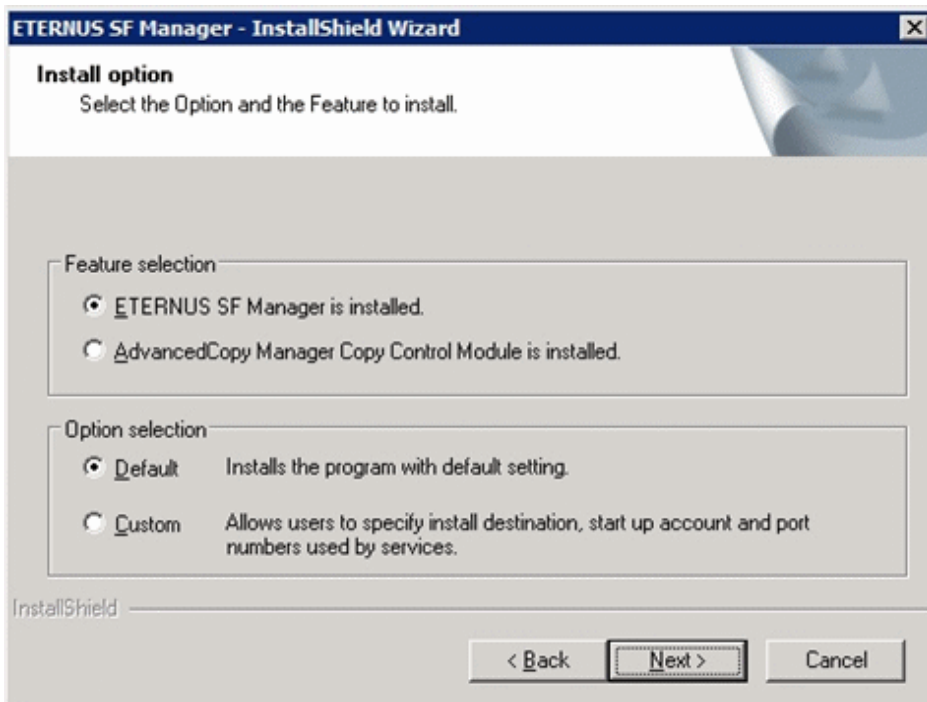


7. Read the terms and conditions of the **License Agreement** page.

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



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



Feature selection

Select [ETERNUS SF Manager is installed.].

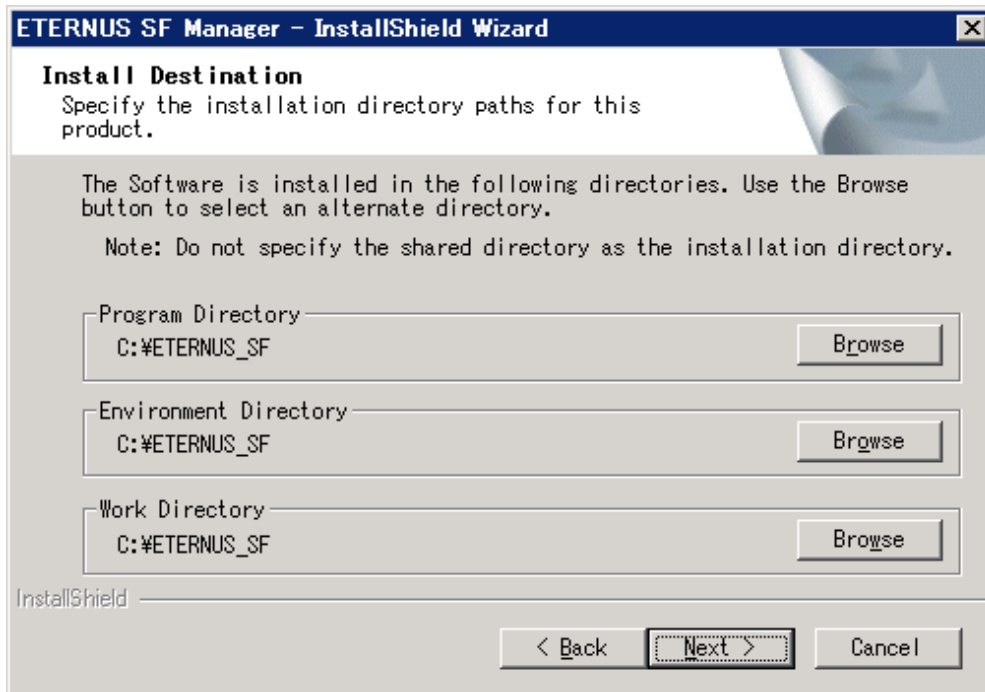
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	<p>Changing values in the Installation Destination page and Port Registration page is optional. In this case, steps 9 and 10 can be skipped.</p> <p>For this installation method, the following checks are automatically performed relating to the information provided by default:</p> <ul style="list-style-type: none"> - Is there enough disk space for the installation in the default directory? - Are the default port numbers available? <p>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.</p>
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 **Browse** and change the install destination. After designating all of the directories, click **Next**.



 **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 screenshot shows a dialog box titled "ETERNUS SF Manager - InstallShield Wizard" with a close button (X) in the top right corner. The main heading is "Port Registration". Below the heading, there is a sub-heading "Specify the port number to be assigned to each service." followed by a paragraph: "To operate the storage management server, the port number is needed. Please specify the port number used in the following services." Below this text is a list of services with corresponding port number input fields:

ETERNUS SF Manager Apache service	9855
Communications service 1	1226
Communications service 2	4917
Repository service 1	2004
Repository service 2	15432
Remote access service	9851
Exclusive control service	9852

Below the list is a section titled "For Internal Use" containing four input fields for internal ports:

Internal Port 1	28005	Internal Port 2	28009
Internal Port 3	28443	Internal Port 4	24916

At the bottom of the dialog box, there are three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

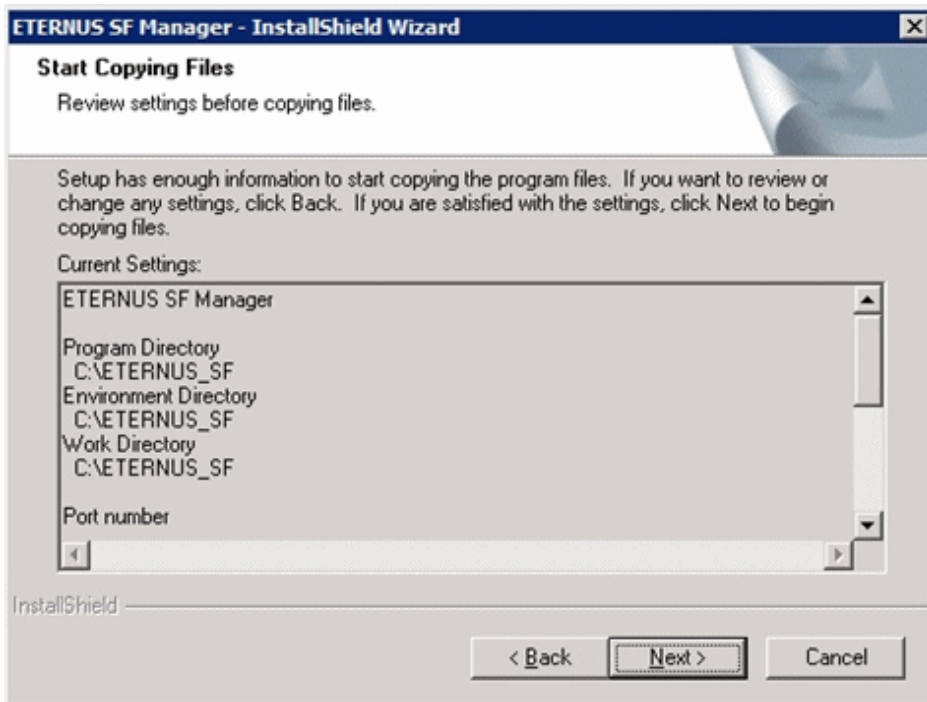
The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 5001 and 32767 are valid.

Then, click **Next**. If an entered value is already being used, the page will be displayed again.

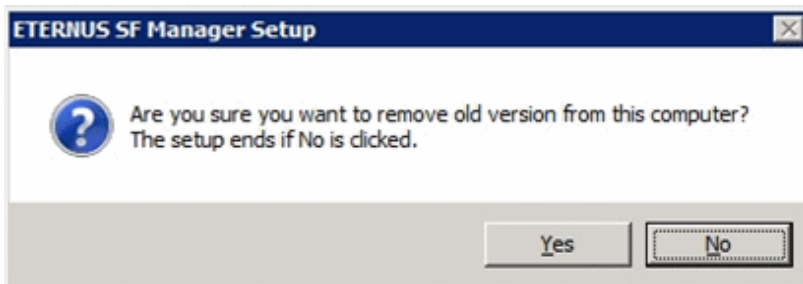
11. Check the settings information in the **Start Copying Files** page.

If the settings are correct, click **Next**.

To change a setting, click **Back**.



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



13. The uninstallation is started.

The uninstallation is executed.

Answer any questions to proceed as the uninstallation executes.

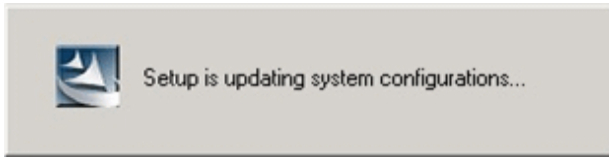
Point

- When requested to restart the computer, click **No**.
If **Yes** 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.

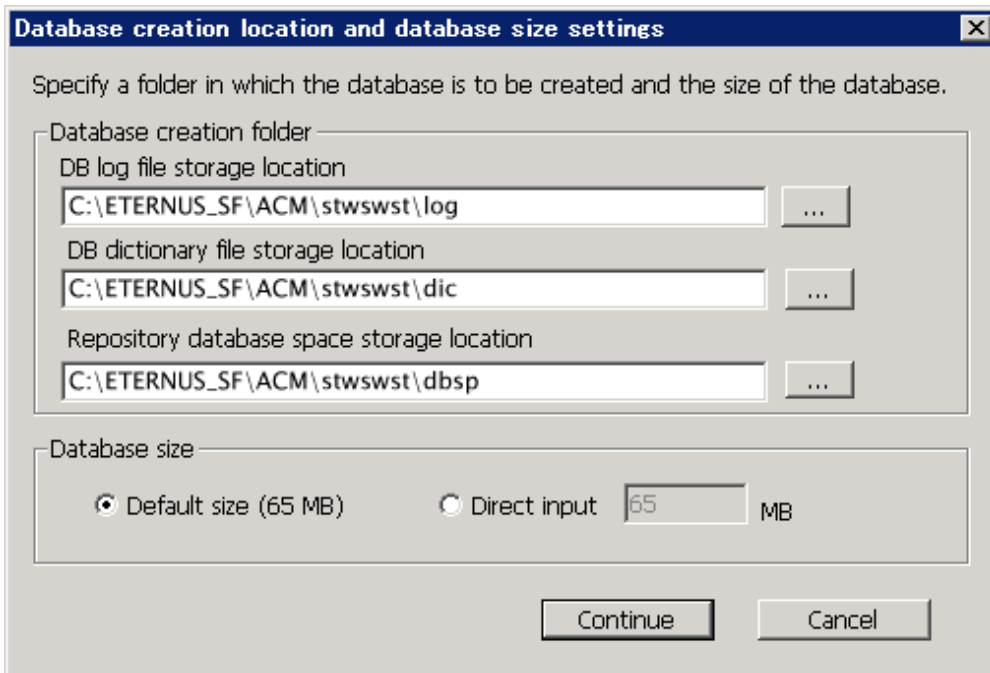
14. When the uninstallation is completed, the copying of the files for the new version will be started.

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 **Continue**.



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.

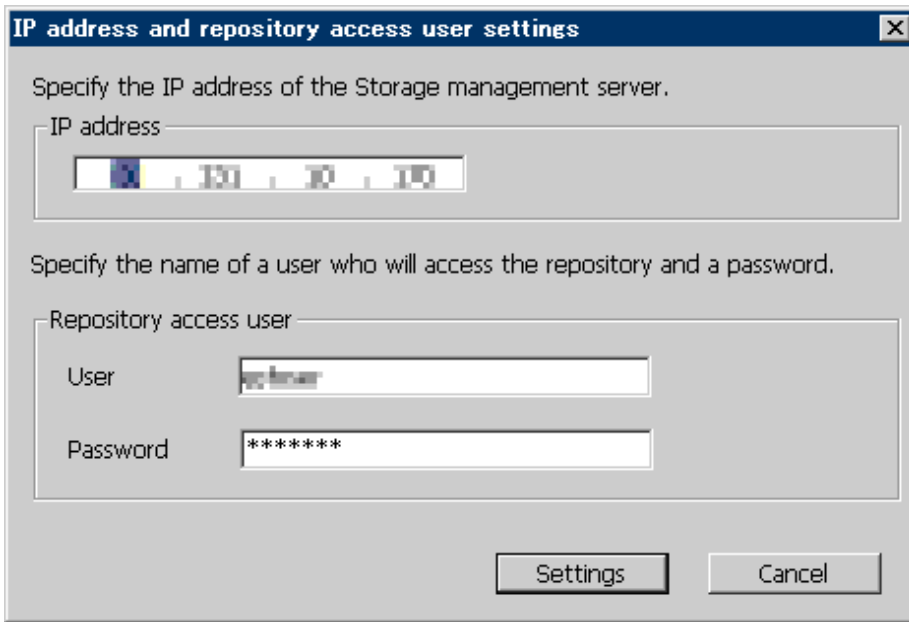
- Do not check the [Compress or Encrypt Attributes] in the **Advanced Attributes** section of the **Properties** or **Advanced** part of the **General** tab.
Load is increased for a compressed and/or encrypted drive. Access errors may occur in an OS with insufficient resources. If the encryption property 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 "4.1.1.5 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 **Settings**.



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.
Refer to "Installation procedure" in the *Software Release Guide* for the default user name and password.
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).



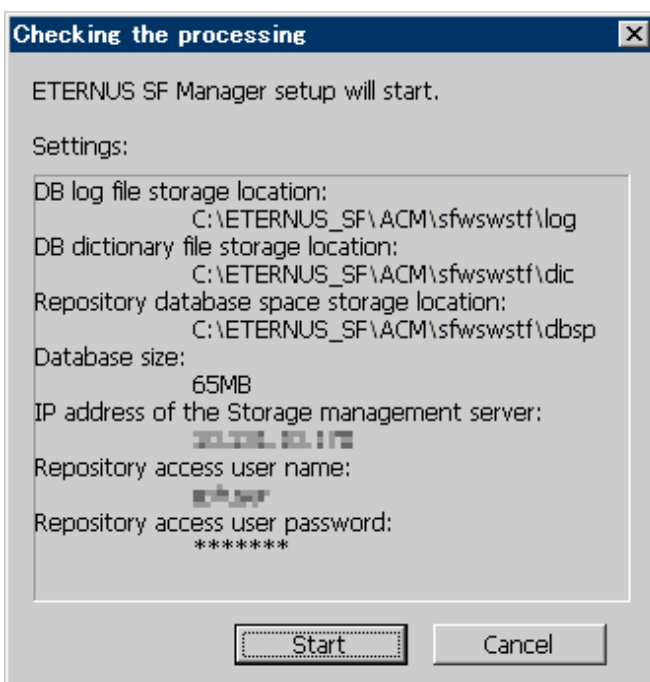
See

- 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.

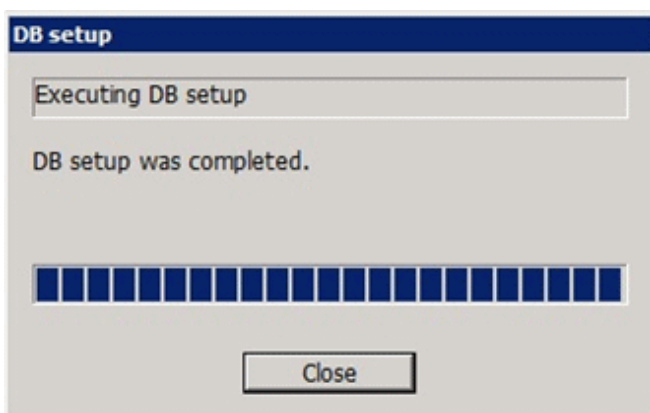
Server type	User type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

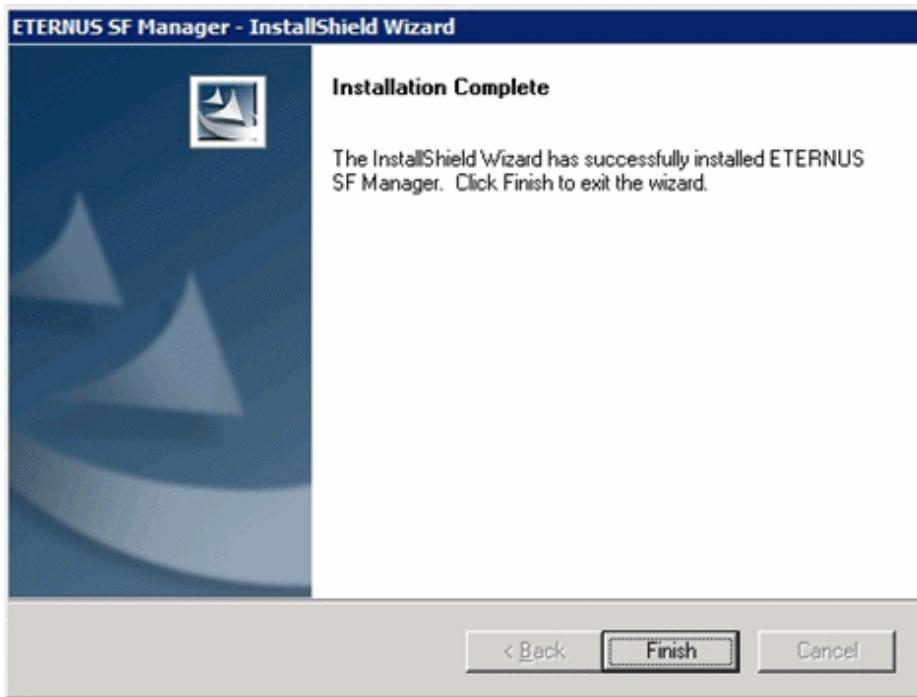
18. The following page will be displayed. Check the contents and click **Start**.



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



20. The following installation wizard page will be displayed. The upgrade process is completed. Click **Finish**.



21. Eject the DVD-ROM.

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

For non-clustered systems, perform "[4.1.4 Tasks to be performed after the upgrade](#)" afterwards.

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 for clustered system. Then, perform "[4.1.4 Tasks to be performed after the upgrade](#)" afterwards.

4.1.3 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.

Refer to "[B.1 Install parameter file \(for ETERNUS SF Manager\)](#)" for information on the install parameter file.

 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. 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 for information on changing the IP address.

 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.

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

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 installParamFile
```

Specify the full path name of the install parameter file edited in advance for *installParamFile*.

6. The license agreement information will be displayed. Display example is mentioned below.

If the conditions are agreeable, enter "y".

```
+-----+
|                                     |
|               ETERNUS SF V15.3     |
|                                     |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012-2013 |
+-----+

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

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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/sfswstf/db
  RDB_dictionary_directory:       /var/opt/FJSVswstf/sfswstf/dic
  RDB_log_file_directory:         /var/opt/FJSVswstf/sfswstf/log
  Repository_DB_space_directory:  /var/opt/FJSVswstf/sfswstf/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 "[4.1.4 Tasks to be performed after the upgrade](#)" afterwards.

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 for clustered systems. Then, perform "[4.1.4 Tasks to be performed after the upgrade](#)" afterwards.

4.1.4 Tasks to be performed after the upgrade

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

4.1.4.1 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 "[4.1.1.1 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:

```
installDir\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:

```
installDir\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/FJVSesfcm/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/FJVSesfcm/bin/startesf.sh
```

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, restore the operational environment that was backed up in "[4.1.1.1 Backing up the operational environment of the previous version](#)".



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



See

Refer to the following table to restore the operational environment.

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 "[4.1.1.1 Backing up the operational environment of the previous version](#)".



See

Refer to "[A.14 Restoring the environment setting files](#)" for information on performing a restore.

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 the `esflm restore` command. Refer to the *ETERNUS SF Installation and Setup Guide* for this version for information on the command.

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

```
> esflm restore backupFileName
Restoration of license database was performed successfully
```

4.1.4.2 Importing the configuration information

Import the configuration information from the previous version by executing the `esfimportdevconf` command using Administrator permissions.

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

- For Windows (DOS prompt):

```
programDir\Common\bin\esfimportdevconf
```

- For Solaris or Linux:

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

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



See

Refer to "9.2 Command references" for information on each import command.

4.1.4.3 Setting up a user account

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



See

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

4.1.4.4 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

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

4.1.4.5 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

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 information on setup.

4.1.4.6 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.

4.1.4.7 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 then 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:



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

1. Confirm the registered ETERNUS Disk storage system by executing the acarray list 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 the acarray detail 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 the acarray remove 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 the acarray add command.

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



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

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

4.1.4.8 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 the `stguser` command.



See

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 for information on the procedure to change the password.

4.1.5 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.



Note

- When upgrading as well as changing the setting in SELinux to "enforcing" in the Linux environment, install the SELinux policy module for `snmptrapd` and then restart the operation.
Refer to "SNMP Trap setting (for Linux)" in the *ETERNUS SF Installation and Setup Guide* for this version for more information.
- If performance monitoring is being performed, take the following procedure to restart performance monitoring:
 1. Based on the settings for performance monitoring recorded in "[4.1.1.1 Backing up the operational environment of the previous version](#)", start performance monitoring.
Refer to "Instruction for performance management" and "Setting monitoring intervals" in the *ETERNUS SF Storage Cruiser Operation Guide* for more information.
 2. If threshold monitoring is being performed, based on the settings for threshold monitoring recorded in "[4.1.1.1 Backing up the operational environment of the previous version](#)", start threshold monitoring.
Refer to "Instruction for threshold management", "Setting the threshold monitoring hours" and "Setting the threshold monitoring information" in the *ETERNUS SF Storage Cruiser Operation Guide* for more information.

4.2 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.

Refer to the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version for information on uninstallation.

3. Install this version of the Storage Cruiser's agent.

Refer to "Installation of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for this version for information on installation.

4. Set up the Storage Cruiser's agent.

Refer to "Setup of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for this version for information on setup.

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

.....
Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.
.....

Chapter 5 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.

5.1 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 **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.

5.1.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

5.1.1.1 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

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

2. Stopping the service of ETERNUS SF Manager

Execute the following batch file.

```
programDir\Common\bin\Stop_ESFservice.bat
```

The *programDir* 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 the **Services** screen, stop the "ETERNUS SF Storage Cruiser Optimization option".
4. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, stop the Provider function.
From the **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 **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.
-

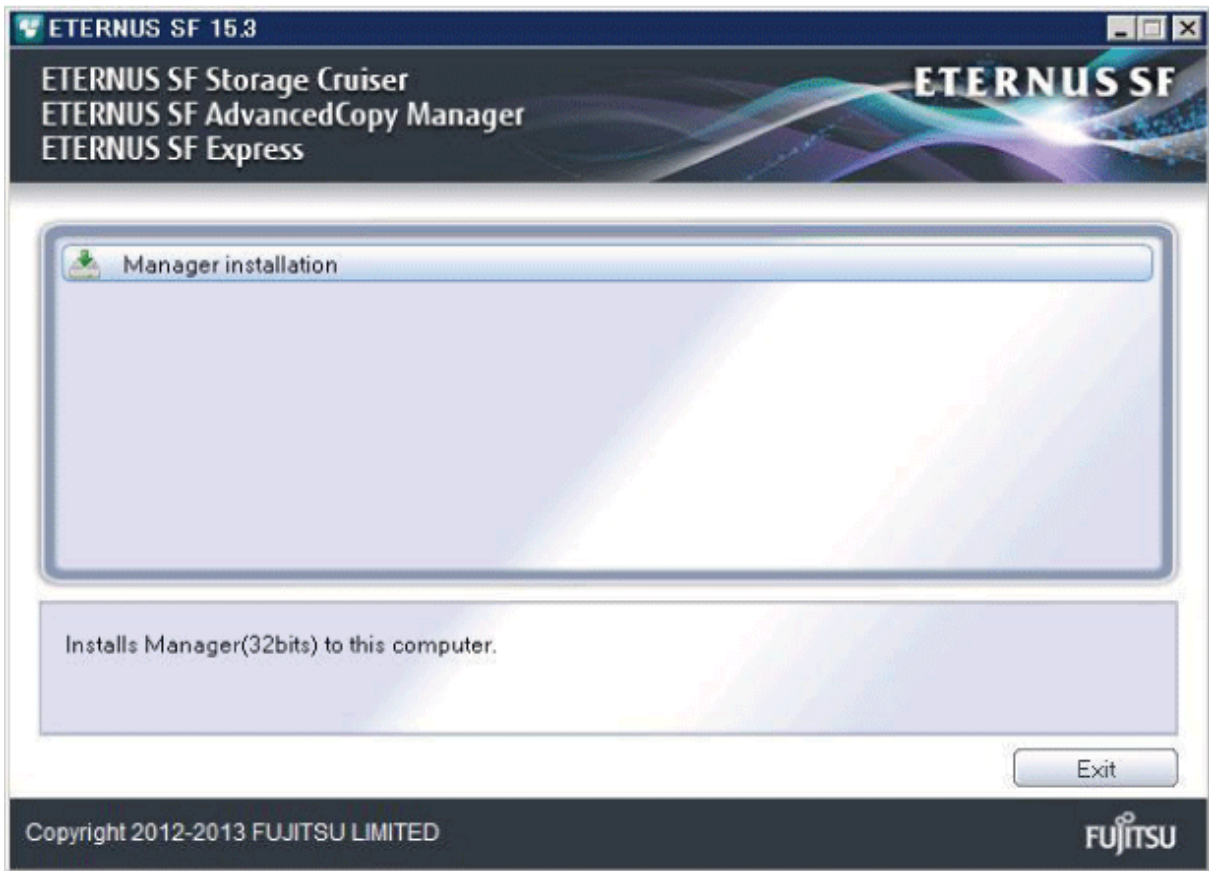
5.1.1.2 Performing the upgrade

The upgrade is performed as follows:

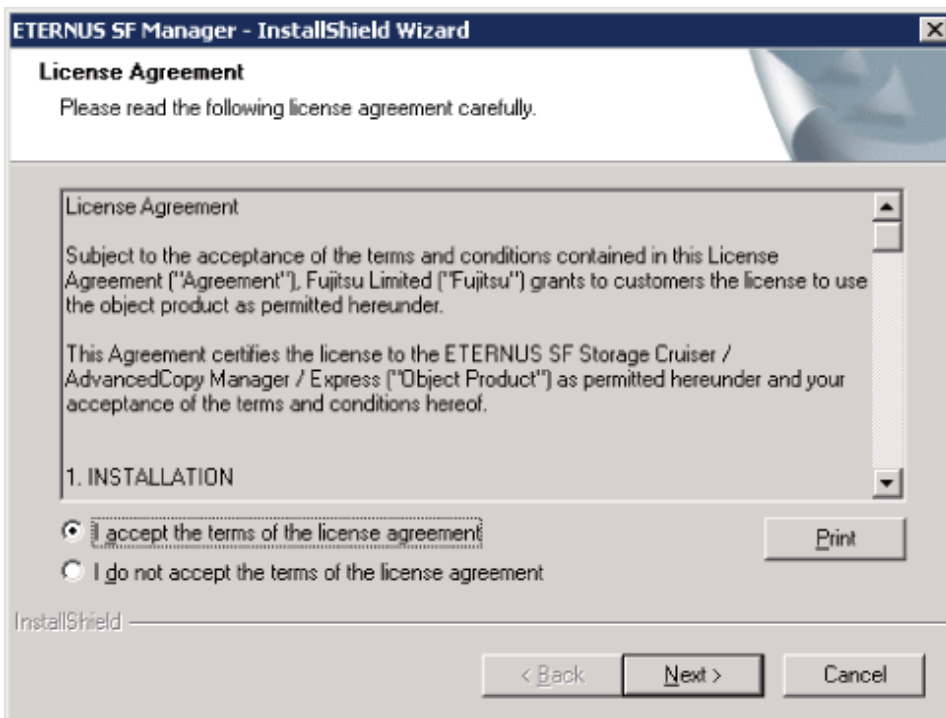
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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

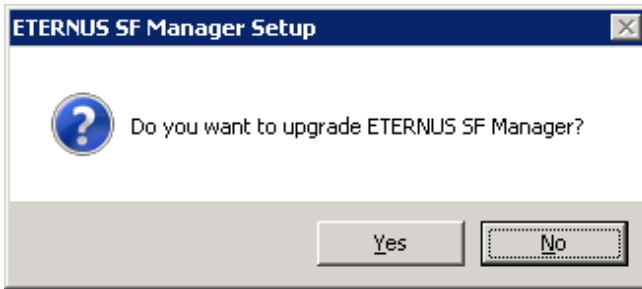
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



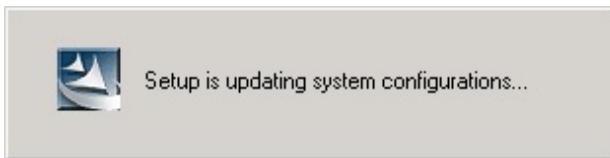
4. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, select [I accept the terms of the license agreement] and then click **Next**.



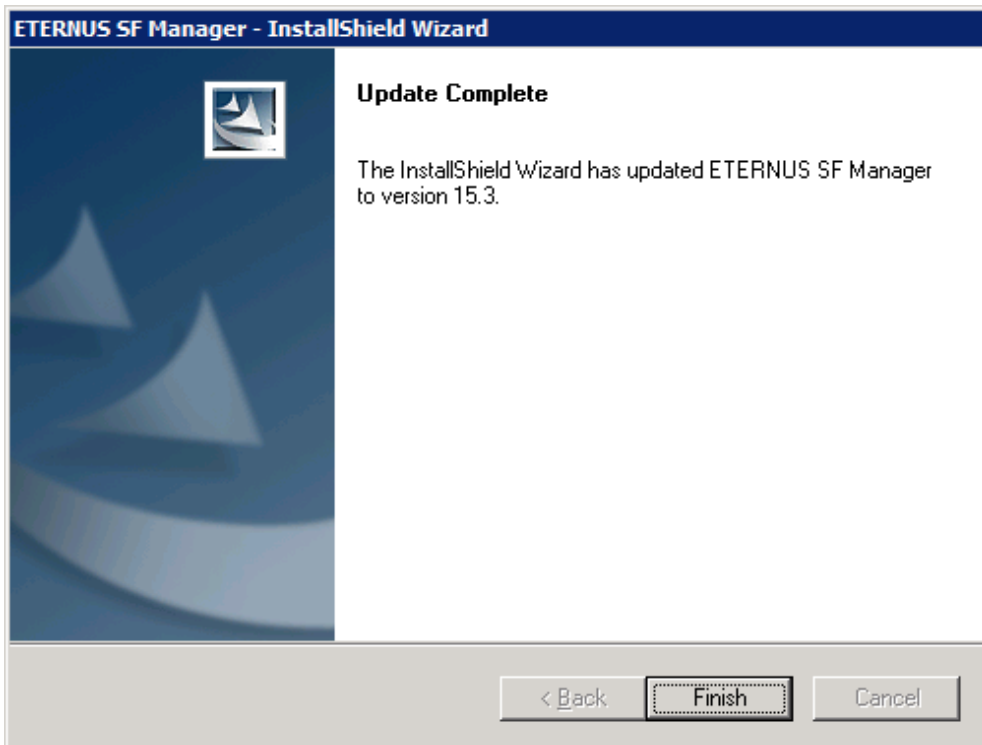
5. The following dialog box will be displayed. Click **Yes**.
To cancel the upgrade, click **No**.



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 **Finish**.



8. Eject the DVD-ROM.

5.1.1.3 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

.....
Refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on customizing the SNMP Trap XML definition file.
.....

2. Starting the service of ETERNUS SF Manager

Execute the following batch file:

```
programDir\Common\bin\Start_ESFservice.bat
```

The *programDir* is the program directory specified at the ETERNUS SF Manager installation.

3. Starting the service of Symfoware

Refer to "Starting Services" in "Starting and Stopping Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version to start the SymfoWARE RDA RDBSWSTF services and the SymfoWARE RDB RDBSWSTF services.

4. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, start the Provider function.

From the **Services** screen, start the "ETERNUS Information Provider".

5. When using the ETERNUS SF Storage Cruiser Optimization option, start the Optimization option.

From the **Services** screen, start the "ETERNUS SF Storage Cruiser Optimization option".

6. Resetting the password for the repository access user

Execute the stguserset 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

.....
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 for information on the procedure.
.....

7. Changing the server information

To ensure data consistency, execute the stgxfwcmmodsrv command to change the server information.

When executing the stgxfwcmmodsrv command, 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

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



Note

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

5.1.2 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.

5.1.2.1 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

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

2. Check that the ETERNUS SF Manager services are stopped on the secondary node.

If not stopped, use the 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 the 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 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.

5. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, stop the ETERNUS Information Provider service on the primary node.

Use the 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 then click **Stop**.

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 **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.

5.1.2.2 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.

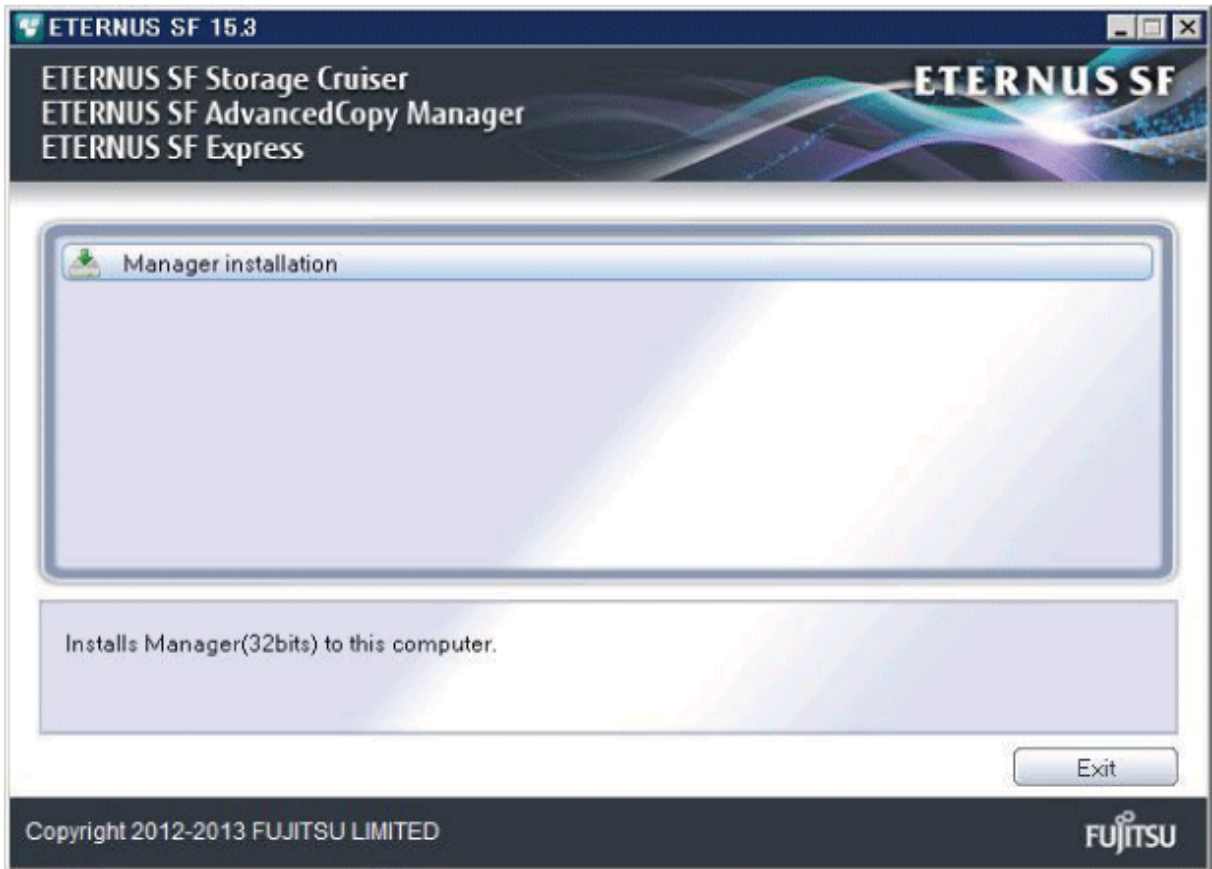
The saved file is required for post-Upgrade Installation.

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.

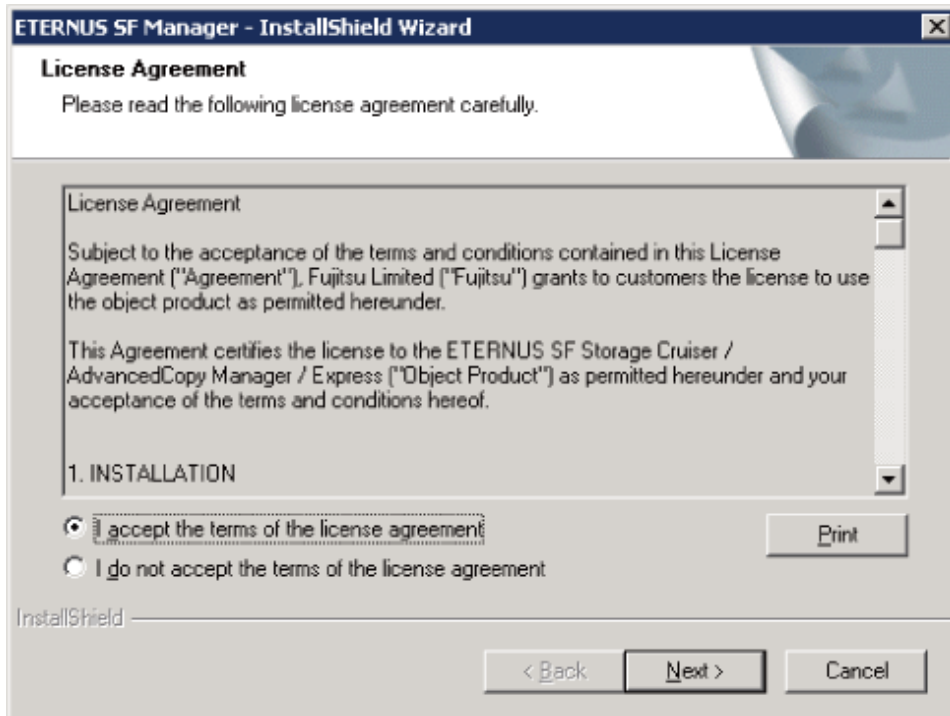
Refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the DVD-ROM structure and detailed contents.

6. The following window will be displayed. Click **Manager installation**.

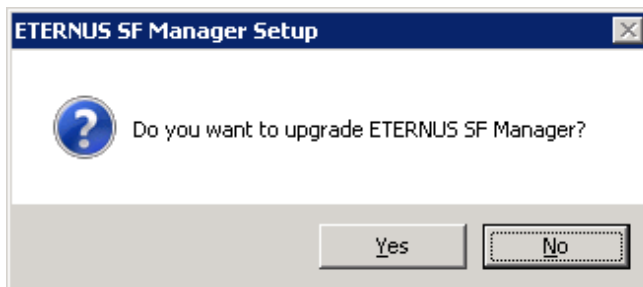
To cancel the upgrade at this point, click **Exit**.



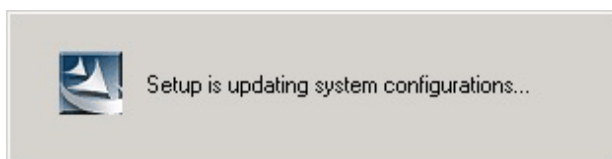
7. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, select [I accept the terms of the license agreement] and then click **Next**.



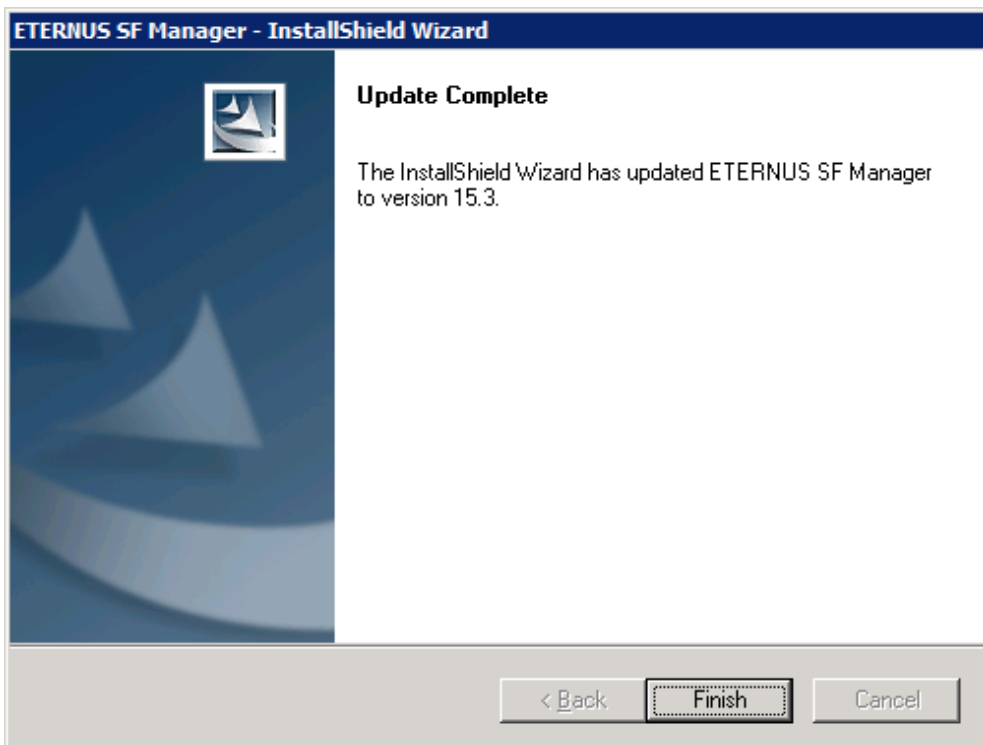
8. The following dialog box will be displayed. Click **Yes**.
To cancel the upgrade, click **No**.



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



- The following installation wizard page will be displayed. The upgrade is completed. Click **Finish**.



- Eject the DVD-ROM.

5.1.2.3 Tasks to be performed after the upgrade (Primary node)

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

- 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)*.
- 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 "5.1.2.2 Performing the upgrade (Primary node)" with the file after the upgrade.
- Edit the stxs_etcdirc information within the AdvancedCopy Manager CCM environment setting file (\$INS_DIR\CCM\micc\sys\install.sys) as follows:

Before	After
stxs_etcdirc= <i>previousDir</i>	stxs_etcdirc= <i>upgradedDir</i> (*1)

*1: Specify the value of stxs_etcdirc set to the \$INS_DIR\CCM\noncluster\micc\sys\install.sys file for *upgradedDir*.

Note

- Do not change anything other than the stxs_etcdirc 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.

- Restore the generic script for AdvancedCopy Manager CCM.

If the generic script is saved in step 4 of "5.1.2.2 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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	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**

Refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on customizing the SNMP Trap XML definition file.

5.1.2.4 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 "5.1.2.2 Performing the upgrade (Primary node)".

5.1.2.5 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 "5.1.2.2 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= <i>previousDir</i>	stxs_etcdir= <i>upgradedDir</i> (*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.

5.1.2.6 Starting ETERNUS SF Manager

After performing "5.1.2.3 Tasks to be performed after the upgrade (Primary node)" and "5.1.2.5 Tasks to be performed after the upgrade (Secondary node)", perform the following procedure:

1. Start ETERNUS SF Manager services on the primary node.

Use the 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 the 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 the 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 then click **Start**.

5. Reset the password for the repository access user in the primary node.

Execute the stguserset 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

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 for information on the procedure.

6. Change the server information in the primary node.

To ensure data consistency, execute the `stgxfwcmmodsrv` command to change the server information. When executing the `stgxfwcmmodsrv` command, 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

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

7. If Managed Server transactions exist in the clustered system, change the server information.

To ensure data consistency, execute the `stgxfwcmmodsrv` command to change the server information. When executing the `stgxfwcmmodsrv` command, 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

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 the command.



Note

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

5.2 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.

5.2.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

5.2.1.1 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
```



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/FJVSesfcm/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.



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

If a failure occurs during the upgrade and you want to restore the environment to the pre-installation status, restore the system from the backup.

5.2.1.2 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.

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

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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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 procedure described in the applicable documentation.

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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 Storage Cruiser's manager is complete.

Point

.....

If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal state.

.....

5.2.1.3 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 the stguserset 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

.....

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 for information on the procedure.

.....

4. Change the server information.

To ensure data consistency, execute the stgxfwcmmodsrv command to change the server information.

When executing the stgxfwcmmodsrv command, 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

.....

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 for information on the command.

.....

5.2.2 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.

5.2.2.1 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).

Refer to the relevant cluster software manuals for information on stopping the cluster application (transaction).

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.

Refer to the relevant cluster software manuals for information on stopping the cluster application (transaction).

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.

Refer to the relevant cluster software manuals for information on stopping the Managed Server transactions.

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.

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 for information on stopping the daemon.

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, it is recommended to 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 and you want to restore the environment to the pre-installation status, 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 the RDB daemon is to be monitored in a clustered system, cancel the monitoring temporarily to perform the upgrade.

5.2.2.2 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.

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

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

1. INSTALLATION

You are allowed to install and use manager module and agent module of the Object Product on any computer connected to the Storage Device directly or through network and you are also 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.

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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.



.....
If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal status.
.....

5.2.2.3 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.
Refer to "Starting and stopping the RDB daemon" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for the corresponding operating system to stop the RDB daemon.

Note

If you have temporarily cancelled monitoring setting of the RDB daemon using "5.2.2.1 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= <i>previousDir</i>	stxs_etcdir= <i>upgradedDir</i> (*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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	Version=V15.2	

 **Note**

Do not change anything other than the version information.

- 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=".

- 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**

Refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on customizing the SNMP Trap XML definition file.

5.2.2.4 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 "5.2.2.2 Performing the upgrade (Primary node)".

5.2.2.5 Tasks to be performed after the upgrade (Secondary node)

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

- 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= <i>previousDir</i>	stxs_etcdir= <i>upgradedDir</i> (*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=".

5.2.2.6 Starting the Managed Server transactions

After performing "5.2.2.3 Tasks to be performed after the upgrade (Primary node)" and "5.2.2.5 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.
Refer to the relevant cluster software manuals for information on starting the cluster application (transaction).
2. If Managed Server transactions exist in a clustered system, start the Managed Server transactions on the primary node for the target transactions.
Refer to the relevant cluster software manuals to start the Managed Server transactions.
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.
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 for information on starting the daemon.
4. Reset the password of the repository access user.
Execute the stguserset 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

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 for information on the procedure.

5. Change the server information.

To ensure data consistency, execute the stgxfcmmodsrv command to change the server information.
When executing the stgxfcmmodsrv command, 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

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 for information on the command.

6. If Managed Server transactions exist in a clustered system, change the server information of the Managed Server transactions.

To ensure data consistency, execute the stgxfwcmmodsrv command to change the server information.

When executing the stgxfwcmmodsrv command, 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

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 for information on the command.

5.2.3 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 snmpttrapd.

- "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.

5.3 Upgrading the Storage Cruiser's agent (for Windows)

This section describes the upgrade procedure for Storage Cruiser's agent for Windows.

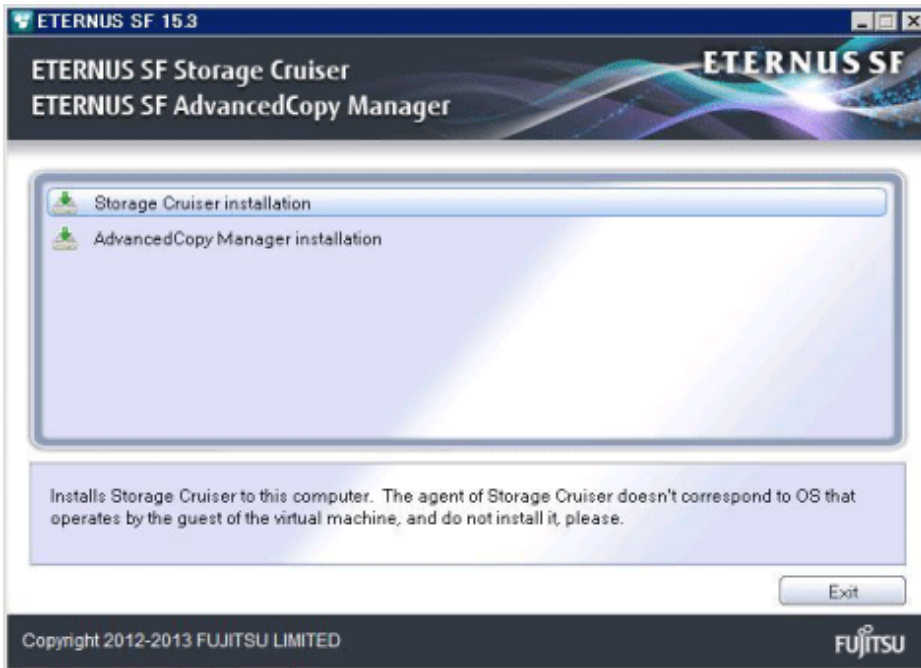
The upgrade is performed as follows:

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

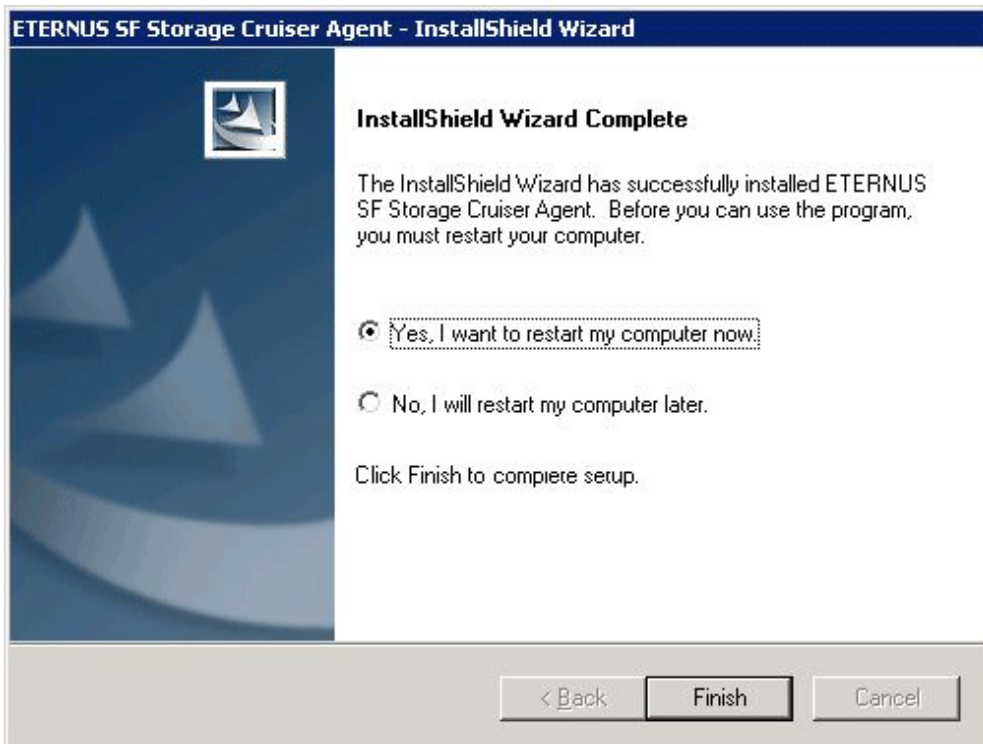
If customization is not performed on "Correlation.ini Parameter" in the *ETERNUS SF Storage Cruiser Operation Guide*, backing up is not required.

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 **Storage Cruiser installation**.



- When the upgrade is completed, the following installation wizard page will be displayed. Click **Finish**, and then eject the DVD-ROM.



- Reload the server information using the Web Console.



Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.

- 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.



Refer to "Correlation.ini Parameter" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on customizing Correlation.ini parameters.



If you want to change the IP address after upgrading, refer to "Changing the IP address of a server node (host)" in "[Windows Version] Maintenance of Agent" in the *ETERNUS SF Storage Cruiser Operation Guide*.

5.4 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:



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 daemonProcID
```

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 dvdromMountPoint
```

5. Execute the following command:

```
# cd dvdromMountPoint/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 15.3
Copyright FUJITSU LIMITED 2012-2013
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.



Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.

The upgrade of Storage Cruiser's agent for Solaris is completed.



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

If a failure occurs during the upgrade and you want to restore the environment to the pre-installation status, restore the system from the backup.

If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal status.



If you want to change the IP address after upgrading, refer to "Changing the IP address of a server node (host)" in "[Solaris OS Version] Maintenance of Agent" in the *ETERNUS SF Storage Cruiser Operation Guide*.

5.5 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 daemonProcID
```

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 dvdromMountPoint
```

6. Execute the following command:

```
# cd dvdromMountPoint/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 15.3
Copyright FUJITSU LIMITED 2012-2013
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.



See

Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.

The upgrade of Storage Cruiser's agent for SUSE Linux Enterprise Server 11, RHEL5/RHEL6 is completed.

Point

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

If a failure occurs during the upgrade and you want to restore the environment to the pre-installation status, restore the system from the backup.

If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal status.

See

If you want to change the IP address after upgrading, refer to "Changing the IP address of a server node (host)" in "[Linux Version] Maintenance of Agent" in the *ETERNUS SF Storage Cruiser Operation Guide*.

5.6 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.

Refer to "Uninstallation of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for details.

3. Install this version of the Storage Cruiser's agent.

Refer to "Installation of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for this version for details.

4. Set up the Storage Cruiser's agent.

Refer to "Setup of Storage Cruiser's agent" in the *ETERNUS SF Installation and Setup Guide* for this version for details.

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.



.....
Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.
.....

The upgrade of Storage Cruiser's agent for RHEL-AS4/RHEL-ES4, HP-UX, or AIX is completed.



.....
If you want to change the IP address after upgrading, refer to the following sections in the *ETERNUS SF Storage Cruiser Operation Guide*:

- For RHEL-AS4/RHELES4, see "Changing the IP address of a server node (host)" in "[Linux Version] Maintenance of Agent"
 - For HP-UX, see "Changing the IP address of a server node (host)" in "[HP-UX Version] Maintenance of Agent"
 - For AIX, see "Changing the IP address of a server node (host)" in "[AIX Version] Maintenance of Agent"
-

Chapter 6 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.

Refer to "6.2 Upgrading the AdvancedCopy Manager's agent" for details.

- 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.

6.1 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.

6.1.1 Preparing for the upgrade

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

6.1.1.1 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

Refer to the following table to back up the operational environment.

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: <ol style="list-style-type: none">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: <ol style="list-style-type: none">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

Refer to "[A.6 Backing up the the environment setting files](#)" for information on performing a backup.

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 the `esflm backup` command. Refer to the *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide* for the previous version for information on the command.

Example of executing the command is shown below. The file specified for `backupFileName` will be created as a backup file.

```
> esflm backup backupFileName
Backup of license database was performed successfully
```

6.1.1.2 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.

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

Required disk space for the previous version

The space required to install the previous version of the AdvancedCopy Manager's manager.

Refer to the relevant *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide* for the previous version for information on the required disk space.

6.1.1.3 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

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

6.1.1.4 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

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

6.1.1.5 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.



See

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

6.1.1.6 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

Refer to "Installation procedure" in the *Software Release Guide* for information on registering a user name and password.

6.1.1.7 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

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

6.1.1.8 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

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

6.1.1.9 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:\> programDir\bin\alias -u
```

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

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 **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

.....
 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 for information on the cluster unsetup procedure.

6.1.2 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 "*systemDrive*:\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	28005
	Internal Port 2	28009
	Internal Port 3	28443
	Internal Port 4	24916

- Custom installation

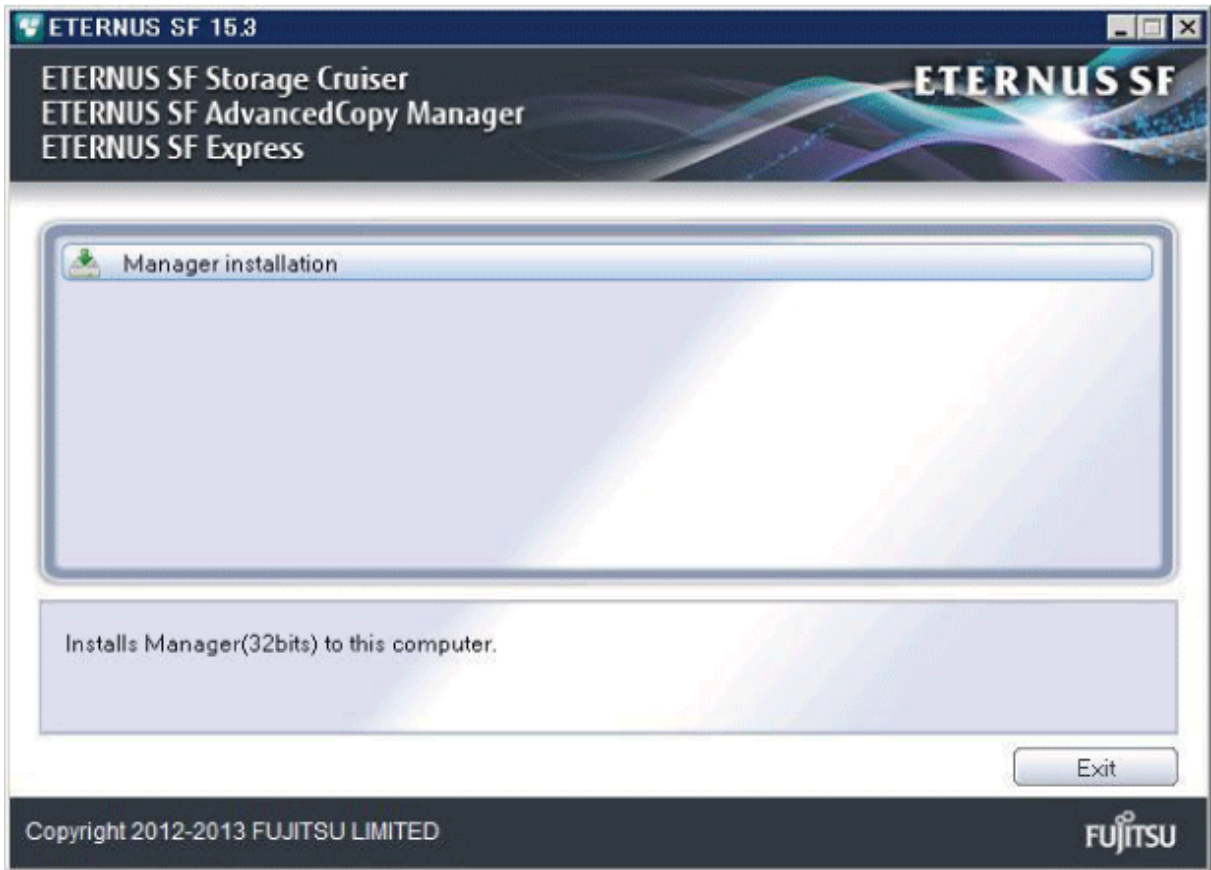
The upgrade is performed by manually entering the configuration information into the interface (installation destination and communication service port numbers).

The upgrade is performed as follows:

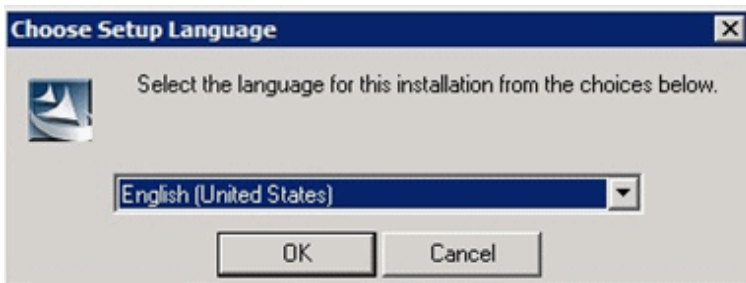
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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

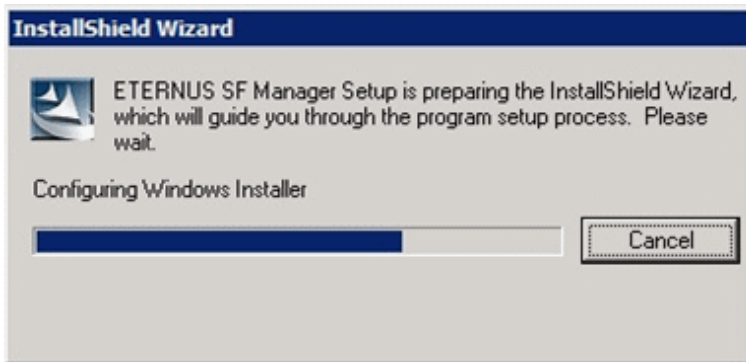
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



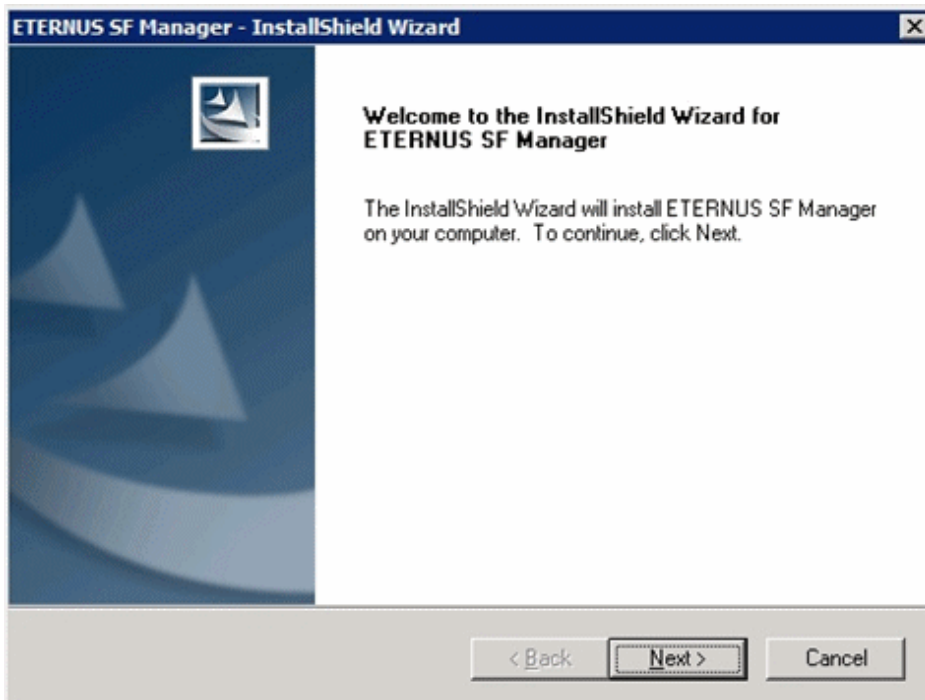
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

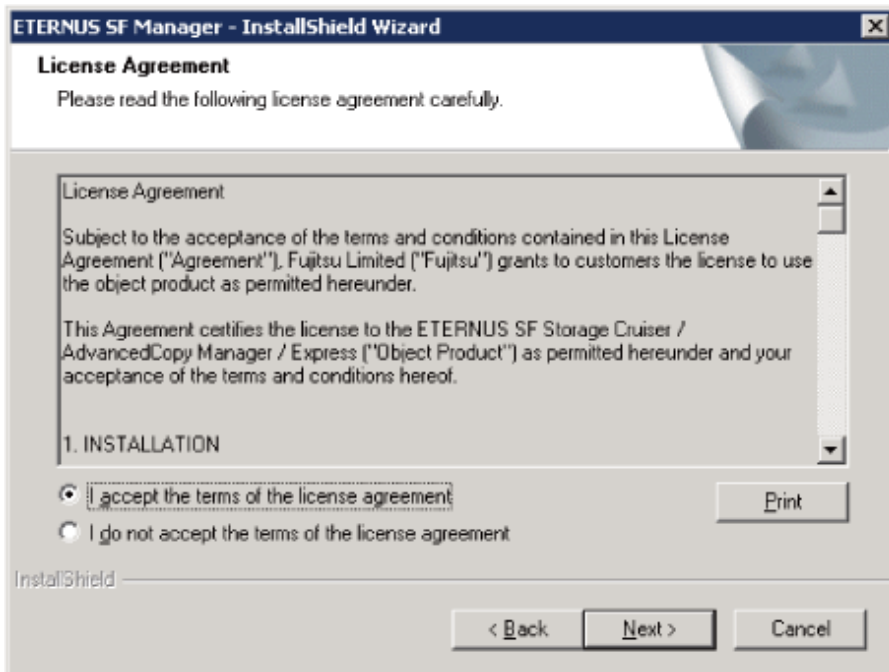


6. The installation wizard page will be displayed. Click **Next**.

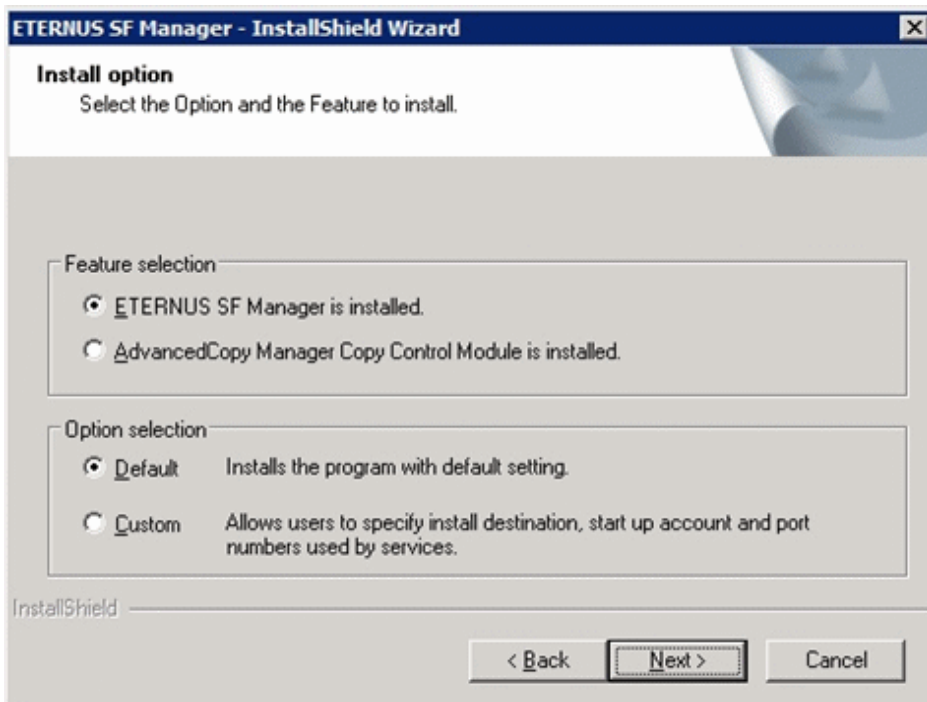


7. Read the terms and conditions of the **License Agreement** page.

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



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



Feature selection

Select [ETERNUS SF Manager is installed.].

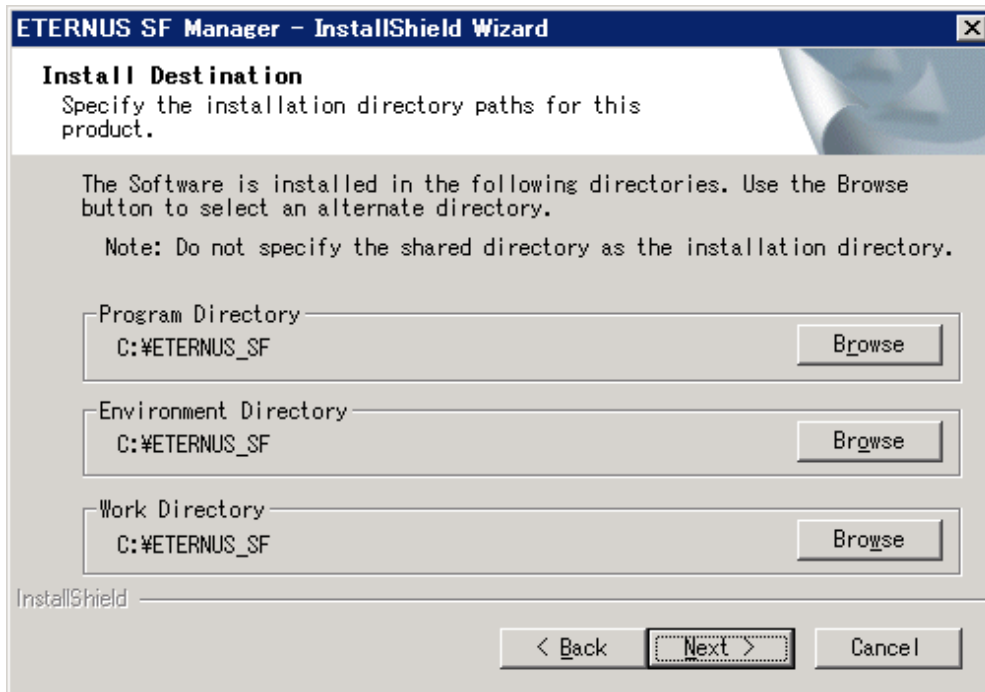
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	<p>Changing values in the Installation Destination page and Port Registration page is optional. In this case, steps 9 and 10 can be skipped.</p> <p>For this installation method, the following checks are automatically performed relating to the information provided by default:</p> <ul style="list-style-type: none"> - Is there enough disk space for the installation in the default directory? - Are the default port numbers available? <p>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.</p>
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 **Browse** and change the install destination. After designating all of the directories, click **Next**.



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 screenshot shows a dialog box titled "ETERNUS SF Manager - InstallShield Wizard" with a close button (X) in the top right corner. The main heading is "Port Registration". Below the heading, there is a sub-heading "Specify the port number to be assigned to each service." followed by a paragraph: "To operate the storage management server, the port number is needed. Please specify the port number used in the following services." Below this text is a list of services with corresponding input fields for port numbers:

ETERNUS SF Manager Apache service	9855
Communications service 1	1226
Communications service 2	4917
Repository service 1	2004
Repository service 2	15432
Remote access service	9851
Exclusive control service	9852

Below the list of services is a section titled "For Internal Use" containing four input fields:

Internal Port 1	28005	Internal Port 2	28009
Internal Port 3	28443	Internal Port 4	24916

At the bottom of the dialog box, there are three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

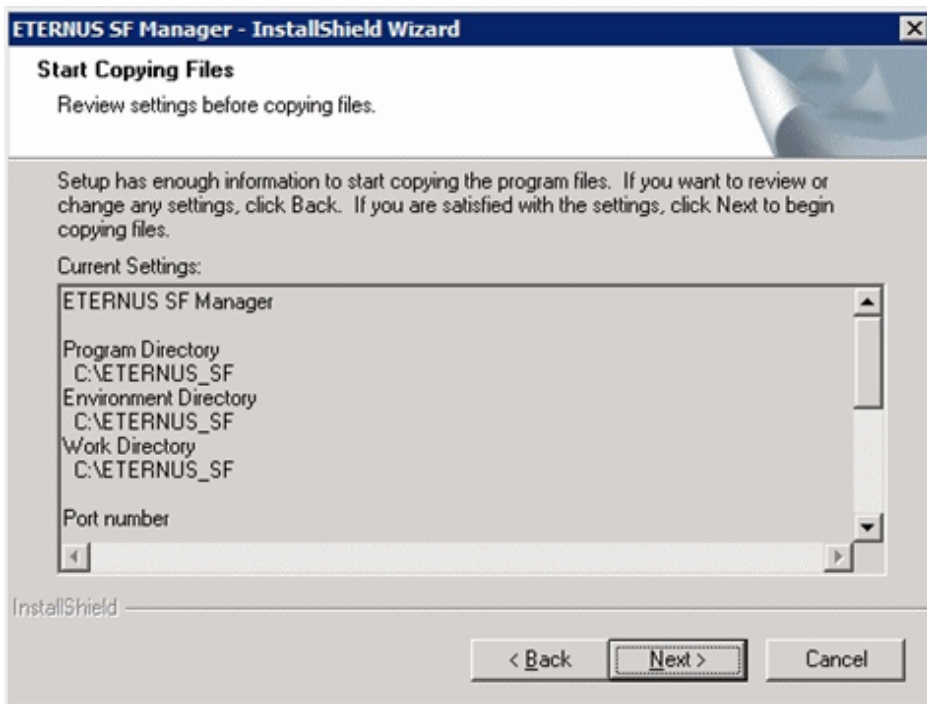
The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 5001 and 32767 are valid.

Then, click **Next**. If an entered value is already being used, the page will be displayed again.

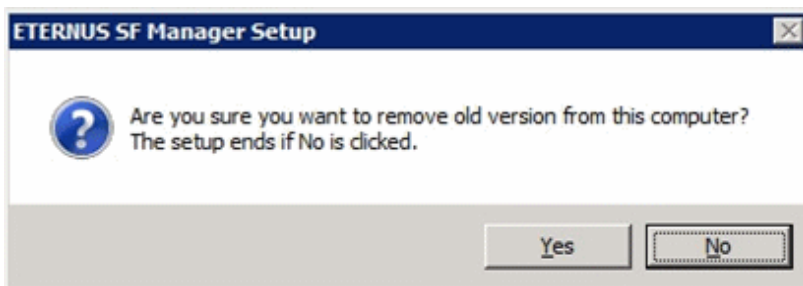
11. Check the settings information in the **Start Copying Files** page.

If the settings are correct, click **Next**.

To change a setting, click **Back**.



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



13. The uninstallation is started.

The uninstallation is executed.

Answer any questions to proceed as the uninstallation executes.

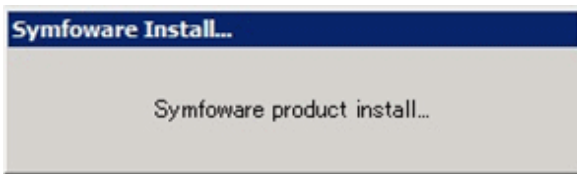
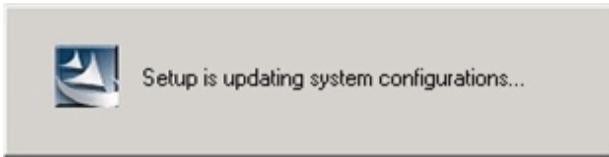
Point

- When requested to restart the computer, click **No**.
If **Yes** 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.

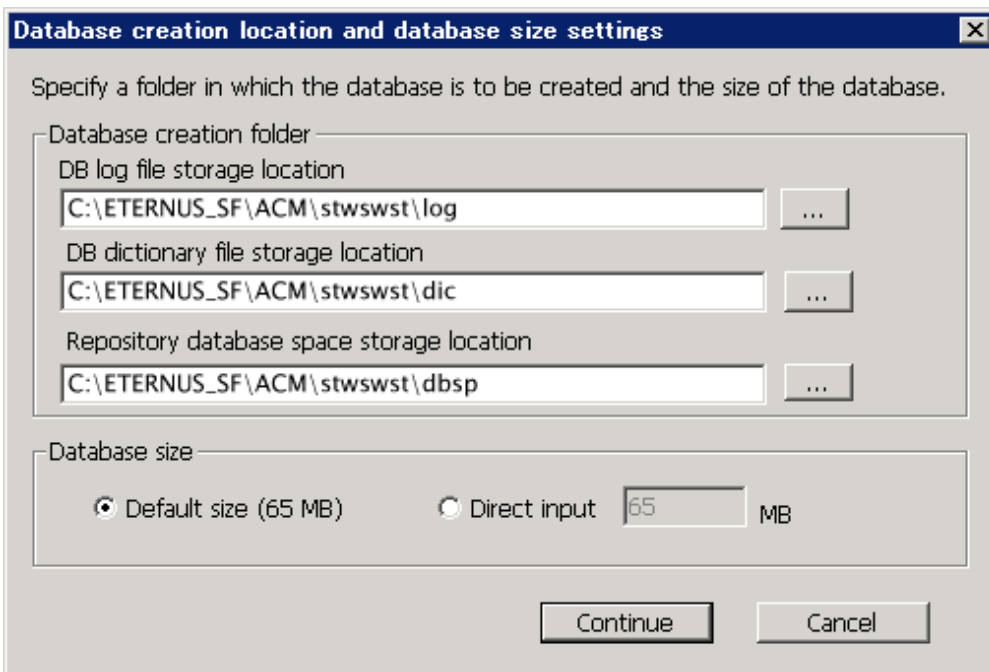
14. When the uninstallation is completed, the copying of the files for the new version will be started.

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 **Continue**.



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 "[6.1.1.5 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 **Settings**.

IP address and repository access user settings

Specify the IP address of the Storage management server.

IP address

192.168.10.100

Specify the name of a user who will access the repository and a password.

Repository access user

User admin

Password *****

Settings Cancel

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.
Refer to "Installation procedure" in the *Software Release Guide* for the default user name and password.
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.

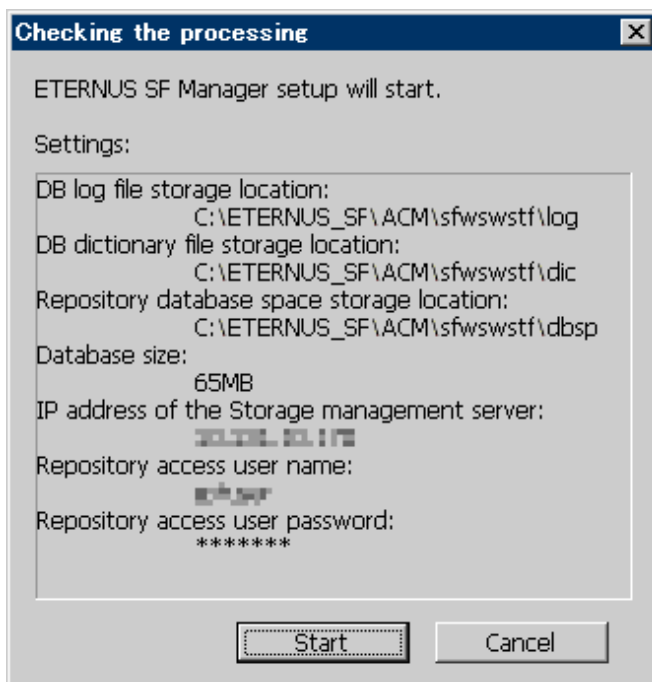
Server type	User type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

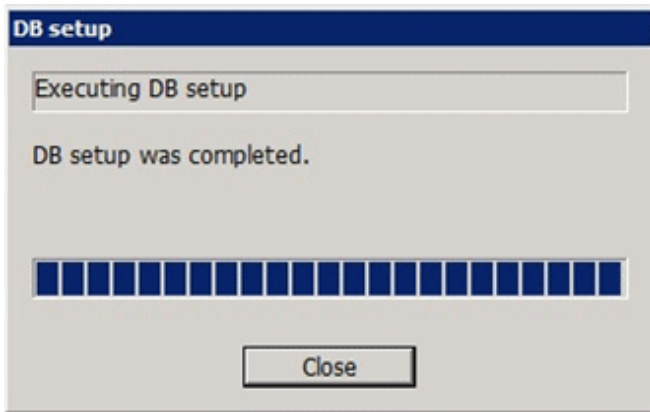
 Note

When the user who belongs to Administrators of the domain installs the ETERNUS SF Manager in Windows Server 2008 or later, the Windows "Computer Browser service" must be started. If the installation is performed when the Computer Browser service is not started, the database setup processing might fail and the "Machine information cannot be obtained" message will be displayed.

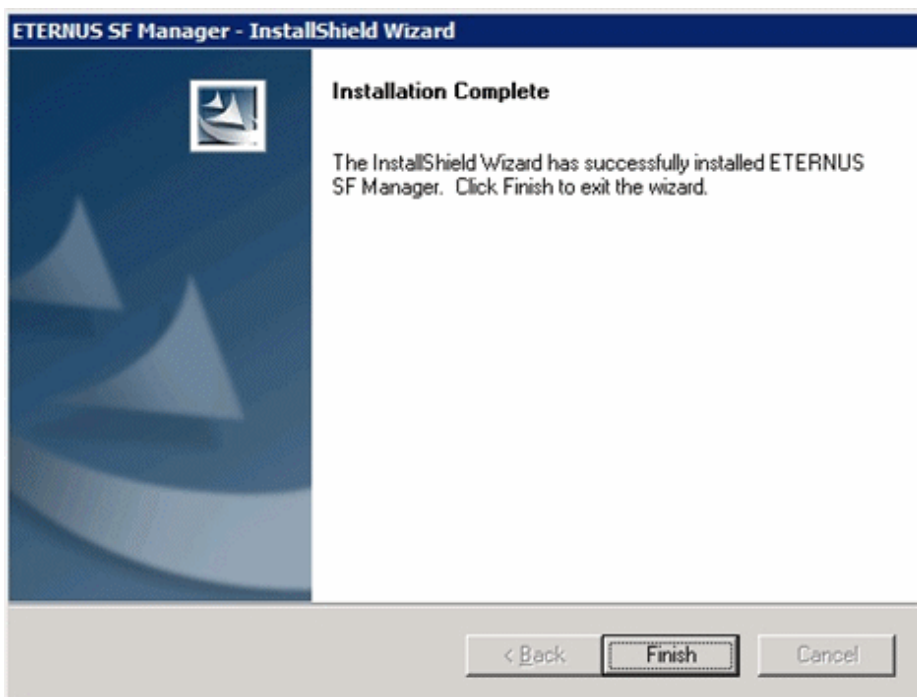
18. The following page will be displayed. Check the contents and click **Start**.



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



20. The following installation wizard page will be displayed. The upgrade process is completed. Click **Finish**.



21. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager's manager is complete.

For non-clustered systems, perform "[6.1.4 Tasks to be performed after the upgrade](#)" afterwards.

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 for clustered systems. Then, perform "[6.1.4 Tasks to be performed after the upgrade](#)" afterwards.

6.1.3 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
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.

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

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 into the DVD-ROM drive and mount it.
 2. Execute the following command.

```
dvdromMountPoint/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.



.....
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. 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 for information on changing the IP address.
.....

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.

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

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:

```
# ./esinstall.sh
```

Example of a custom installation:

```
# ./esinstall.sh -s installParamFile
```

Specify the full path name of the install parameter file edited in advance for *installParamFile*.

6. The license agreement information will be displayed. Display example is mentioned below.

If the conditions are agreeable, enter "y".

```
+-----+
|                                     |
|               ETERNUS SF V15.3     |
|                                     |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012-2013 |
+-----+

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 procedure described in the applicable documentation.

4. NO ASSIGNMENT

You may not rent, lease, sublicense, assign, transfer or create lien against the Object Product.

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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/sfswstf/db

RDB_dictionary_directory: /var/opt/FJSVswstf/sfswstf/dic

RDB_log_file_directory: /var/opt/FJSVswstf/sfswstf/log

Repository_DB_space_directory: /var/opt/FJSVswstf/sfswstf/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]:



.....
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 "6.1.4 Tasks to be performed after the upgrade" afterwards.

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 for clustered systems. Then, perform "6.1.4 Tasks to be performed after the upgrade" afterwards.

6.1.4 Tasks to be performed after the upgrade

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

6.1.4.1 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 "6.1.1.1 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

Refer to the following table to restore the operational environment.

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: <ol style="list-style-type: none"> A.9 Restoring the repository data (for Windows) A.11 Restoring the management information (for Windows)

Server type	OS	Reference
	Solaris, Linux	Perform the steps in the following order: <ol style="list-style-type: none"> 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 "[6.1.1.1 Backing up the operational environment of the previous version](#)".



See

Refer to "[A.14 Restoring the environment setting files](#)" for information on performing a restore.

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 the `esflm restore` command. Refer to the *ETERNUS SF Installation and Setup Guide* for this version for information on the command.

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

```
> esflm restore backupFileName
Restoration of license database was performed successfully
```

6.1.4.2 Importing the configuration information

Import the configuration information from the previous version by executing the `esfimportdevconf` 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 the `esfimportdevconf` command.

- For Windows (DOS prompt):

```
programDir\Common\bin\esfimportdevconf
```

- For Solaris or Linux:

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

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



See

Refer to "[9.2 Command references](#)" for information on each import command.

6.1.4.3 Setting up a user account

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



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

6.1.4.4 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.



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

6.1.4.5 Registering the license

Register the appropriate licenses.



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

6.1.4.6 Redefining missing information

- Server information

When the Management Server serves as a Managed Server, the Management Server is registered in the server.



.....
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:



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

1. Confirm the registered ETERNUS Disk storage system by executing the `acarray list` 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 the `acarray detail` 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 the `acarray remove` 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 the `acarray add` 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.

6.1.4.7 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 the `stguserset` command.

See

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 for information on the procedure to change the password.

6.1.5 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.

6.2 Upgrading the AdvancedCopy Manager's agent

The upgrade is performed as follows:

1. [6.2.1 Backing up the repository data](#)
2. [6.2.2 Backing up the management information](#)

3. [6.2.3 Releasing the backup and restore in Exchange database \(for Windows\)](#)
4. [6.2.4 Uninstalling the previous version](#)
5. [6.2.5 Installing this version](#)
6. [6.2.6 Restoring the repository data](#)
7. [6.2.7 Changing server information](#)
8. [6.2.8 Restoring the management information](#)
9. [6.2.9 Setting the backup and restore in Exchange database \(for Windows\)](#)
10. [6.2.10 Updating the version information](#)

6.2.1 Backing up the repository data

Refer to the following sections to back up the repository data 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)

6.2.2 Backing up the management information

Refer to the following sections to back up the management information on the Managed Server.

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)

6.2.3 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

6.2.4 Uninstalling the previous version

Uninstall the previous version in reference to the relevant previous version manual.

For non-clustered systems



.....
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.



.....
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 for information on the procedures for the un-setup of cluster settings.
.....

6.2.5 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 to 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 to 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 to setup the AdvancedCopy Manager's agent.

Afterwards, start the AdvancedCopy Manager's agent on the Managed Server. 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 information on the start procedure.

- For clustered systems:

Refer to "Customization of Managed Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for this version to setup the AdvancedCopy Manager's agent.

6.2.6 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 the `stgrepocnv` command to restore the repository data and then convert it for use with the current version of the repository.



For restoration of the repository data, start a new window for command execution, and then perform the procedure on the window.



Refer to "stgrepocnv (Repository data migration command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for information on the command.

6.2.7 Changing server information

To ensure data consistency, use the Web Console or `stgxfwcmmodsrv` command to perform the server information change processing.

If executing the `stgxfwcmmodsrv` command, 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

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 the command.

6.2.8 Restoring the management information

Refer to the following sections to restore the management information on the Managed Server.

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)

6.2.9 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

6.2.10 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 `stgxfwcmmosrv` command to update the version information for the Managed Server.

If executing the `stgxfwcmmosrv` command, 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

- Refer to "stgxfwcmmosrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for information on the command.
- Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for information on reloading the server information using the Web Console.

6.3 Upgrading the AdvancedCopy Manager Copy Control Module

This section describes the upgrade procedures for the AdvancedCopy Manager Copy Control Module.

6.3.1 Preparing for the upgrade

The operational environment must be prepared prior to upgrading the AdvancedCopy Manager Copy Control Module, as described below.

6.3.1.1 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.

6.3.1.2 Backing up the environment setting files

Back up the operational environment for the previous version.



See

Refer to "[A.6 Backing up the the environment setting files](#)" for information on the backup method.

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 the esflm backup command. Refer to the *ETERNUS SF AdvancedCopy Manager Installation and Setup Guide* for the previous version for information on the command.

Example of executing the command is shown below. The file specified with *backupFileName* will be created as a backup file.

```
> esflm backup backupFileName
Backup of license database was performed successfully
```

6.3.1.3 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. Refer to the following locations in the *ETERNUS SF Installation and Setup Guide* for this version for information on the required disk space.

- 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.

Refer to "Operating Environment" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module* for the relevant previous version for information on the required disk space.

6.3.1.4 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

Refer to "Operating Environment" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the incompatible software.

6.3.1.5 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.



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

6.3.1.6 Estimating the database size

For installing the ETERNUS SF Manager, a database is necessary. The database size must be estimated before starting the upgrade.



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

6.3.2 Performing the upgrade (for Windows)

If use the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager

Refer to "[6.1.2 Performing the upgrade \(for Windows\)](#)" to perform the upgrade.

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 "*systemDrive*:\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).

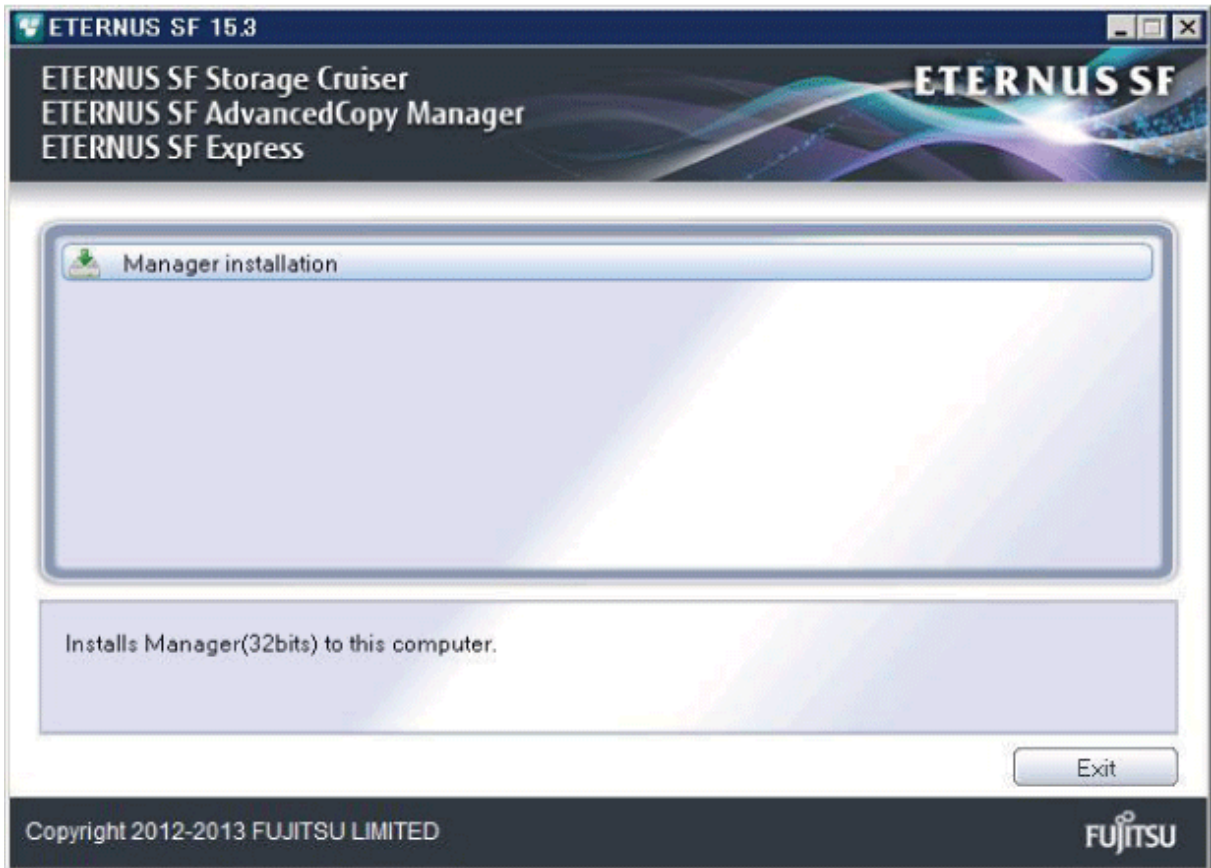
The upgrade is performed as follows:

1. Log on to the server using Administrator privileges.

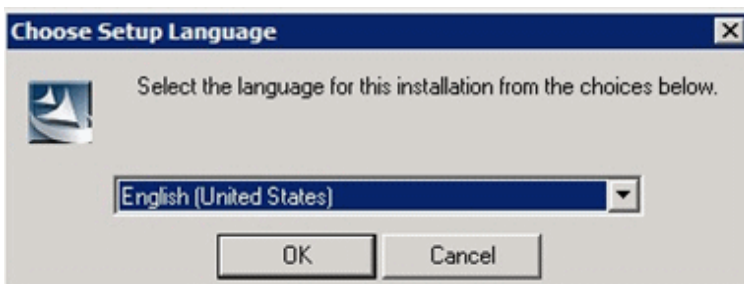
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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

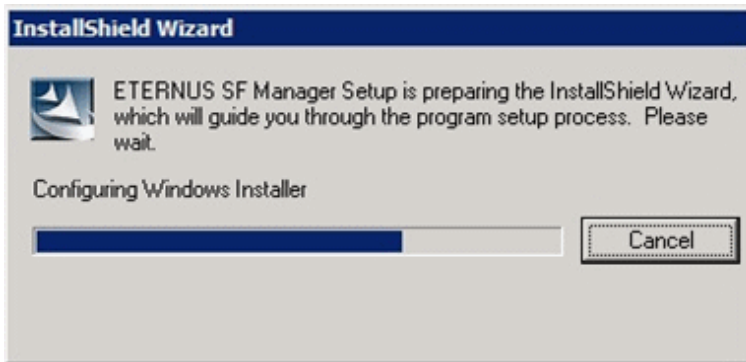
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



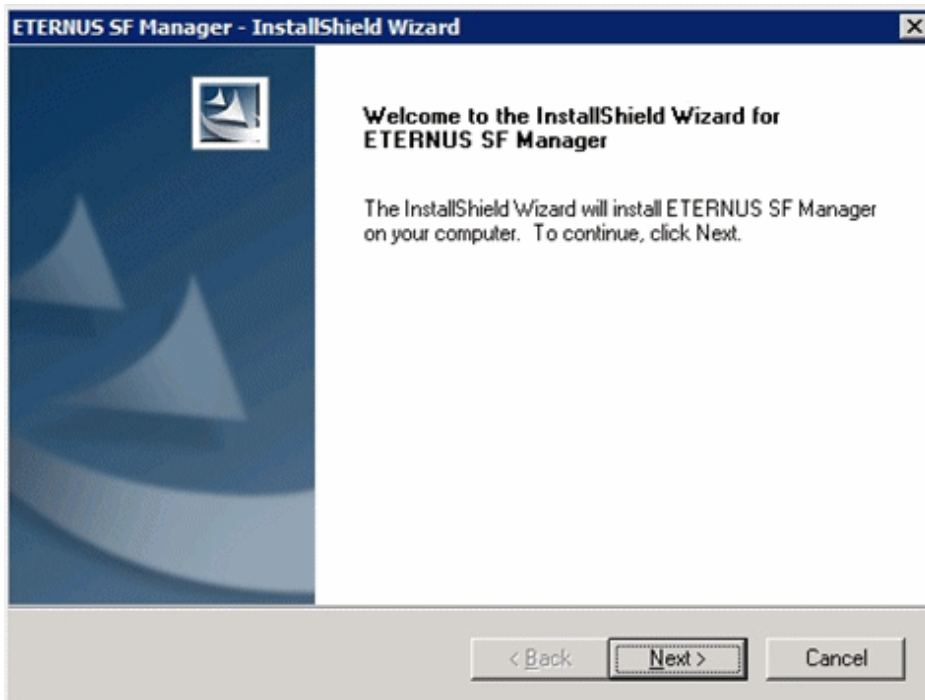
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

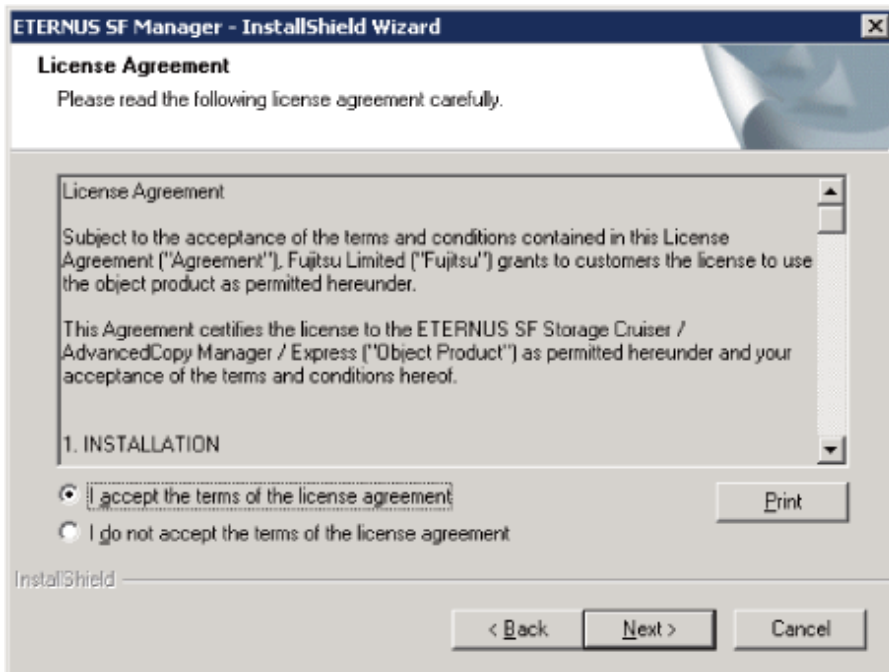


6. The installation wizard page will be displayed. Click **Next**.

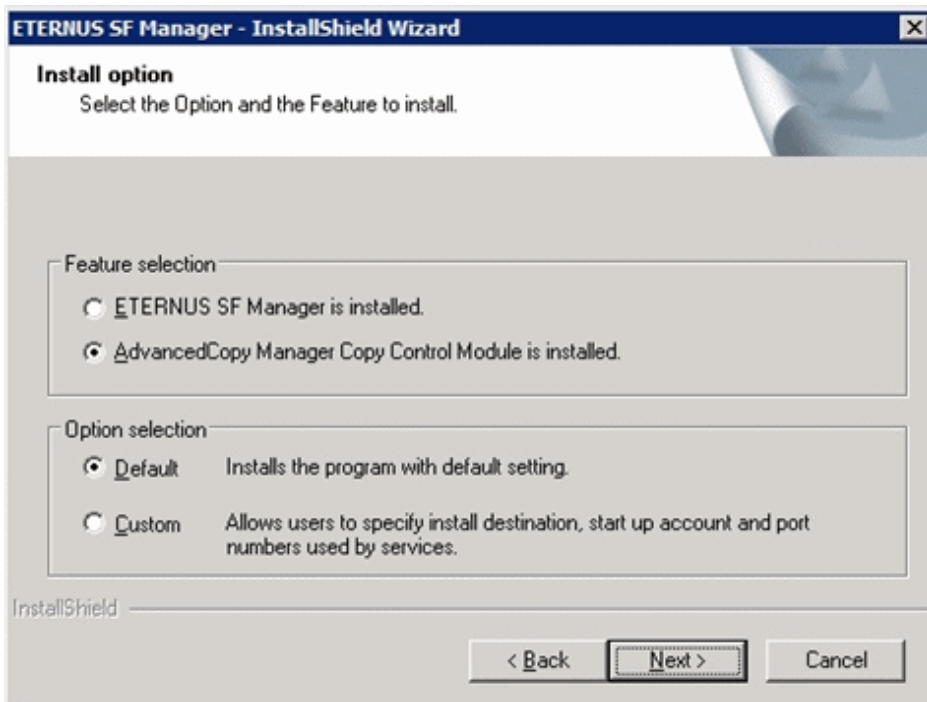


7. Read the terms and conditions of the **License Agreement** page.

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



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



Feature selection

Select [AdvancedCopy Manager Copy Control Module is installed.].

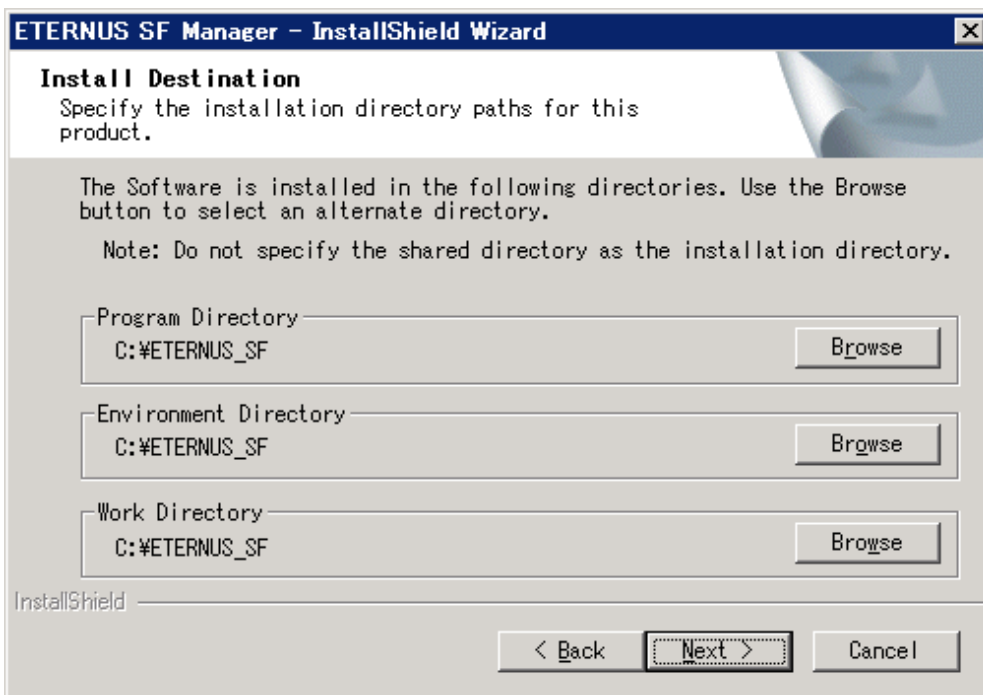
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	<p>Changing values in the Installation Destination page is optional. In this case, step 9 can be skipped.</p> <p>For this installation method, the following checks are automatically performed relating to the information provided by default:</p> <ul style="list-style-type: none"> - Is there enough disk space for the installation in the default directory? <p>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.</p>
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 **Browse** and change the install destination. After designating all of the directories, click **Next**.



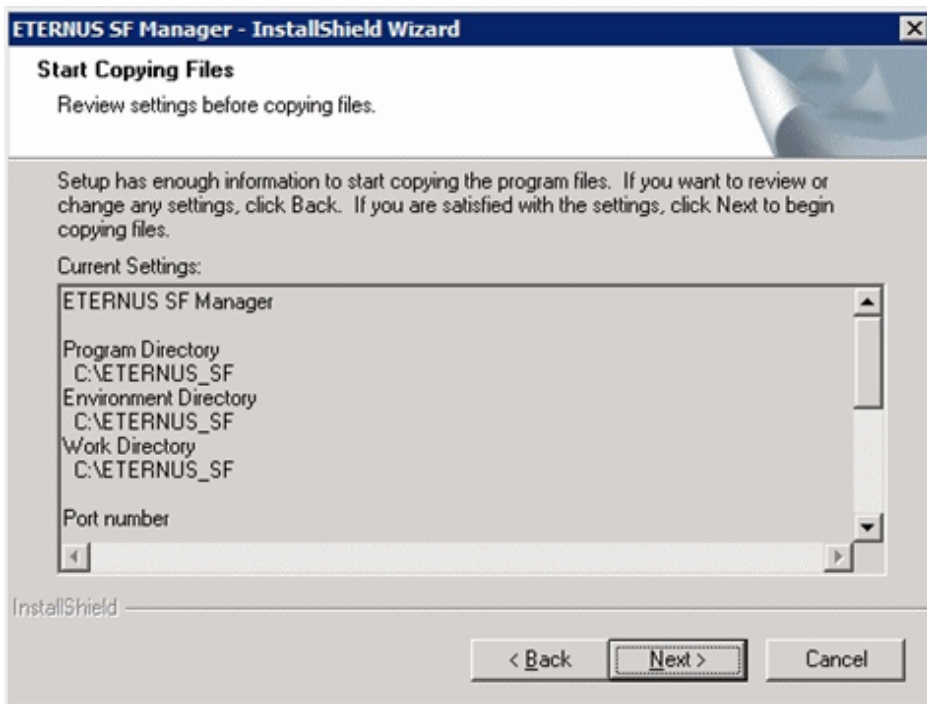
 **Note**

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

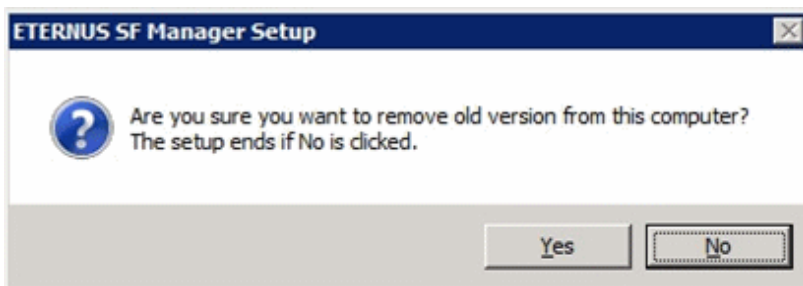
10. Check the settings information in the **Start Copying Files** page.

If the settings are correct, click **Next**.

To change a setting, click **Back**.



11. The following dialog box will be displayed. To proceed with the uninstallation, click **Yes**.



12. The uninstallation is started.

The uninstallation is executed.

Answer any questions to proceed as the uninstallation executes.

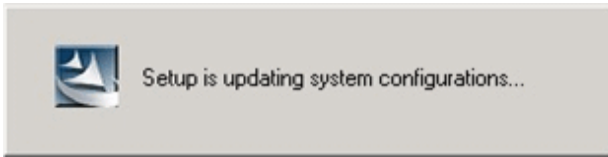
Point

- When requested to restart the computer, click **No**.
If **Yes** 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.

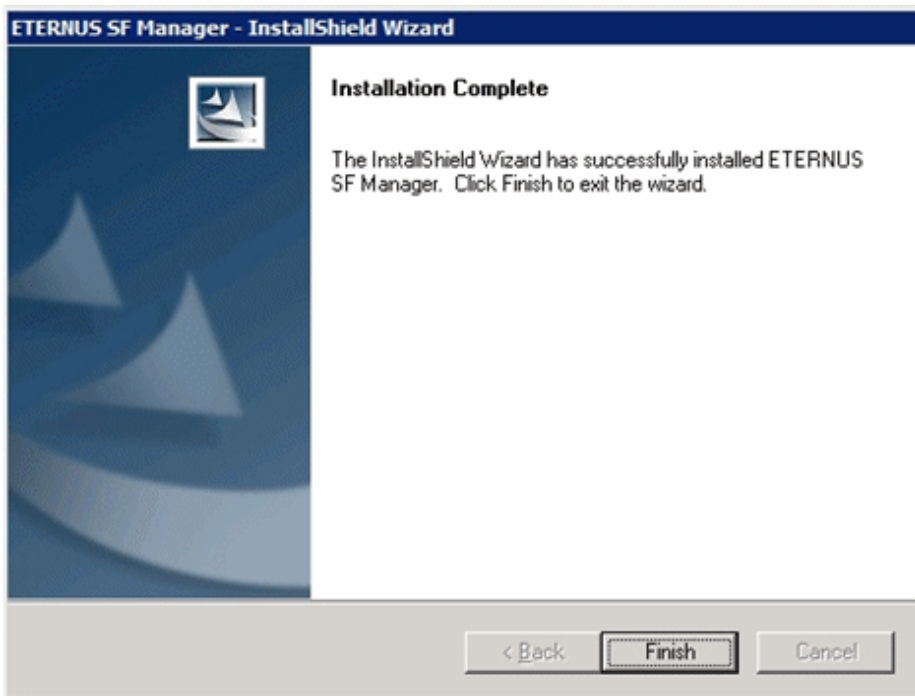
13. When the uninstallation is completed, the copying of the files for the new version will be started.

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 **Finish**.



16. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager Copy Control Module is complete. Perform "[6.3.4 Tasks to be performed after the upgrade](#)" afterwards.

6.3.3 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.

Refer to "[B.3 Install parameter file \(for AdvancedCopy Manager Copy Control Module\)](#)" for information on the install parameter file.

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.

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

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 V15.3     |
|                                     |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012-2013 |
+-----+

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
```

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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 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 "[6.3.4 Tasks to be performed after the upgrade](#)" afterwards.

6.3.4 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.

6.3.4.1 Restoring the environment setting files

Restore the environment setup file that was backed up in "[6.3.1.2 Backing up the environment setting files](#)".

See

Refer to "[A.14 Restoring the environment setting files](#)" for information on performing a restore.

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 the `esflm restore` command. Refer to the *ETERNUS SF Installation and Setup Guide* for this version for information on the command.

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

```
> esflm restore backupFileName
Restoration of license database was performed successfully
```

6.3.4.2 Reconfiguring device information

The following procedure is required to reconfigure the ETERNUS Disk storage system information.

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

1. Confirm the registered ETERNUS Disk storage system by executing the `acarray list` 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 the `acarray detail` 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 the `acarray remove` 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 the `acarray add` 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.
```



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.

6.3.4.3 Registering the license

Register the appropriate licenses.



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

6.3.5 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 7 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.

7.1 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 **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.

7.1.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

7.1.1.1 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

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

2. Stopping the service of ETERNUS SF Manager

Execute the following batch file.

```
programDir\Common\bin\Stop_ESFservice.bat
```

The *programDir* 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 the **Services** screen, 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 **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.

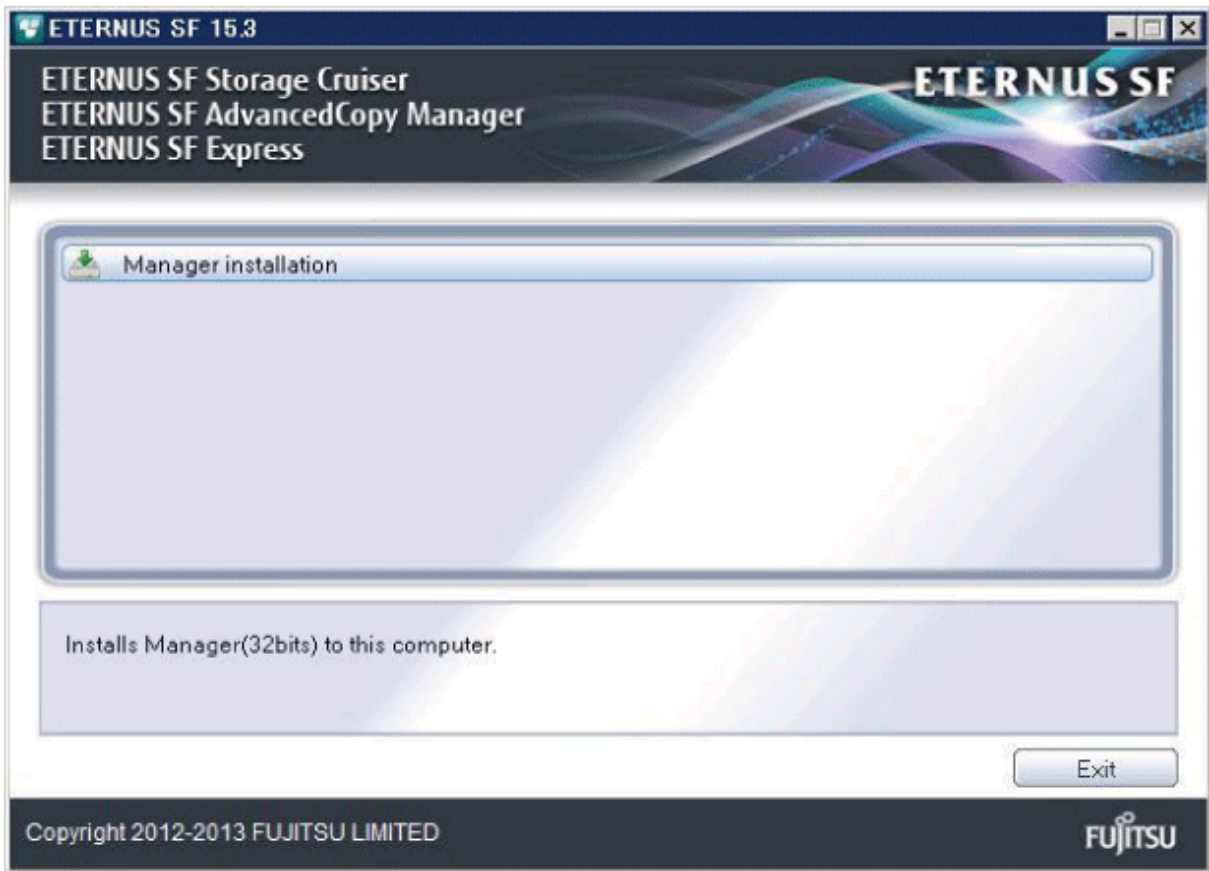
7.1.1.2 Performing the upgrade

The upgrade is performed as follows:

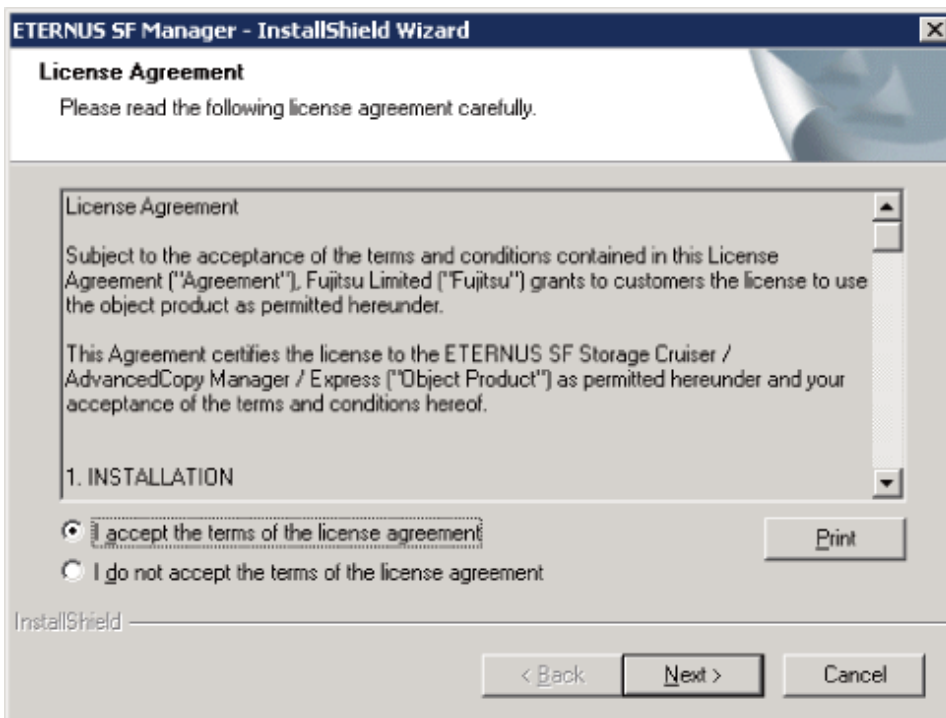
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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

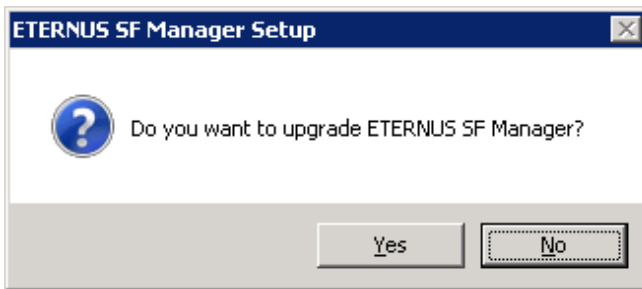
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



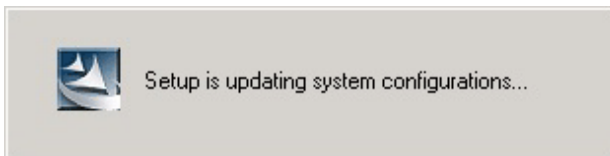
4. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, select [I accept the terms of the license agreement] and then click **Next**.



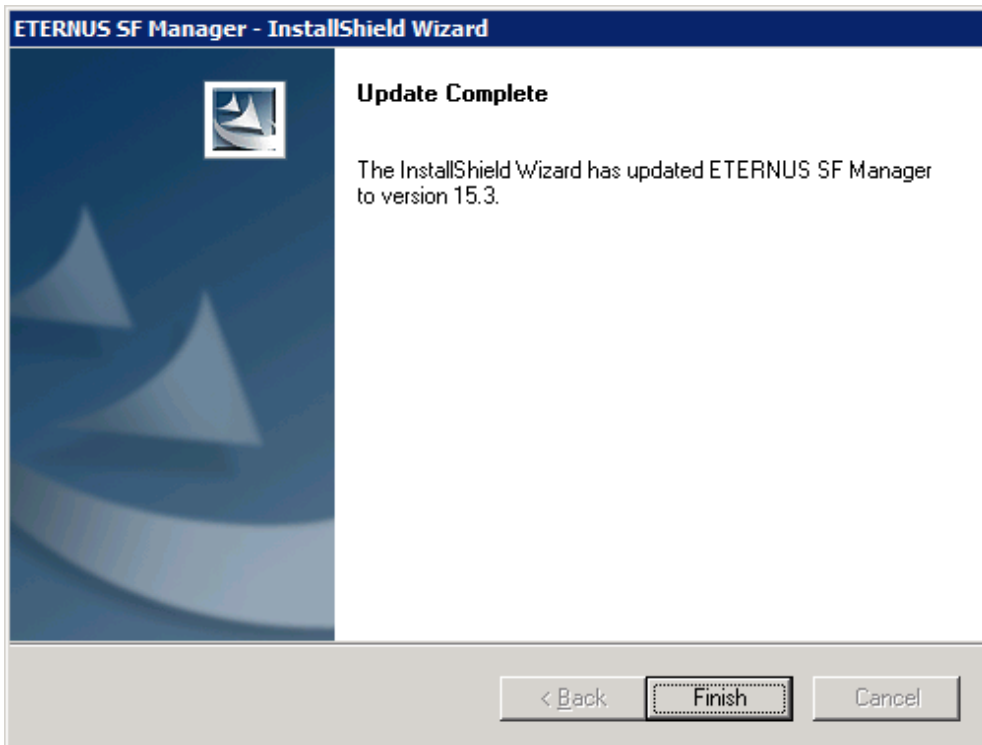
- The following dialog box will be displayed. Click **Yes**.
To cancel the upgrade, click **No**.



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



- The following installation wizard page will be displayed. The upgrade is completed. Click **Finish**.



- Eject the DVD-ROM.

7.1.1.3 Tasks to be performed after the upgrade

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

- Starting the service of ETERNUS SF Manager

Execute the following batch file:

```
programDir\Common\bin\Start_ESFservice.bat
```

The *programDir* is the program directory specified at the ETERNUS SF Manager installation.

- When using the ETERNUS SF Storage Cruiser Optimization option, start the Optimization option.

From the **Services** screen, start the "ETERNUS SF Storage Cruiser Optimization option".

- Starting the service of Symfoware

Refer to "Starting Services" in "Starting and Stopping Services" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version to start the SymfoWARE RDA RDBSWSTF services and the SymfoWARE RDB RDBSWSTF services.

- Resetting the password for the repository access user

Execute the stguserset command to reset the password for the repository access user.



Even if the password has not changed, ensure that you reset 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 Windows)* for this version for information on the procedure.

- Changing the server information

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



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



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



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

7.1.2 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.

7.1.2.1 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

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

2. Check that the ETERNUS SF Manager services are stopped on the secondary node.

If not stopped, use the 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 the 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 then click **Stop**.

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 **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.

7.1.2.2 Performing the upgrade (Primary node)

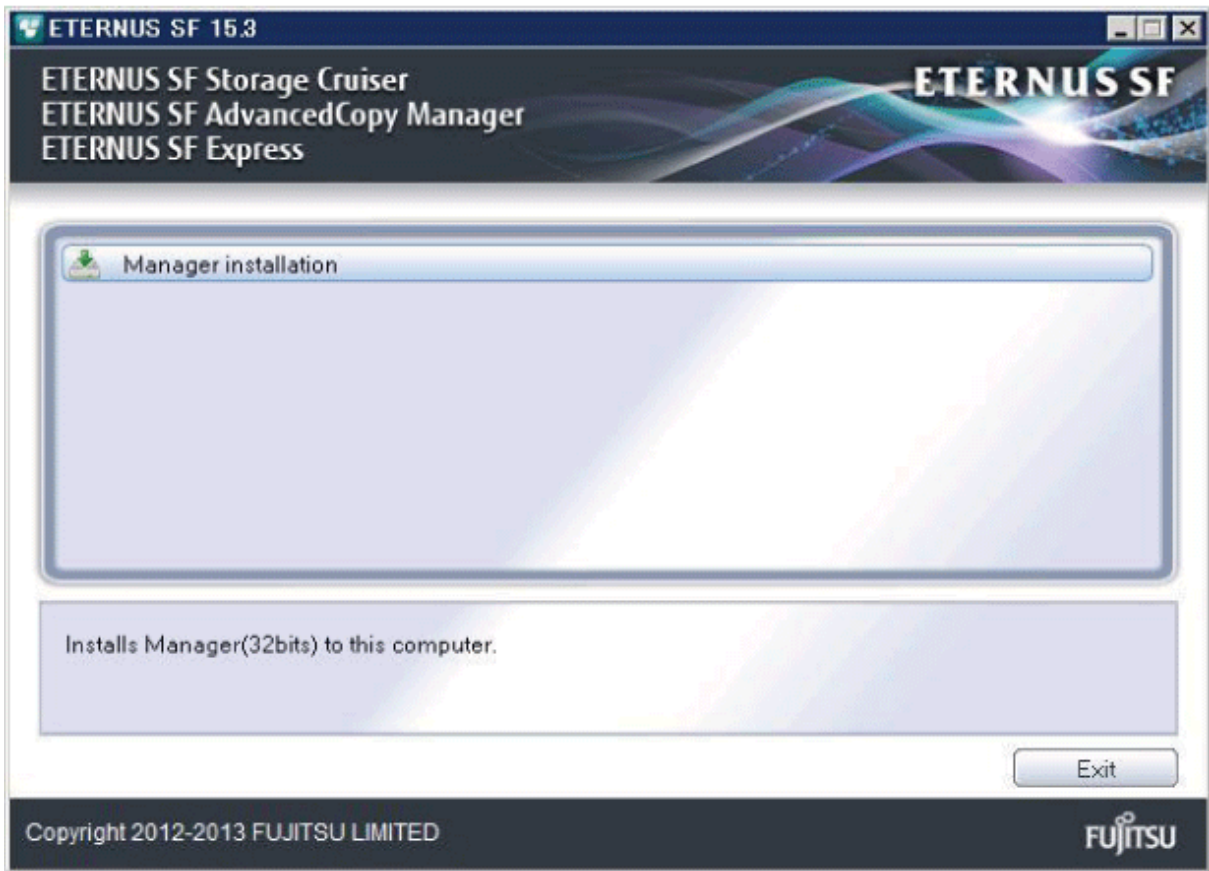
The following describes the upgrade procedure for the primary node.

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.

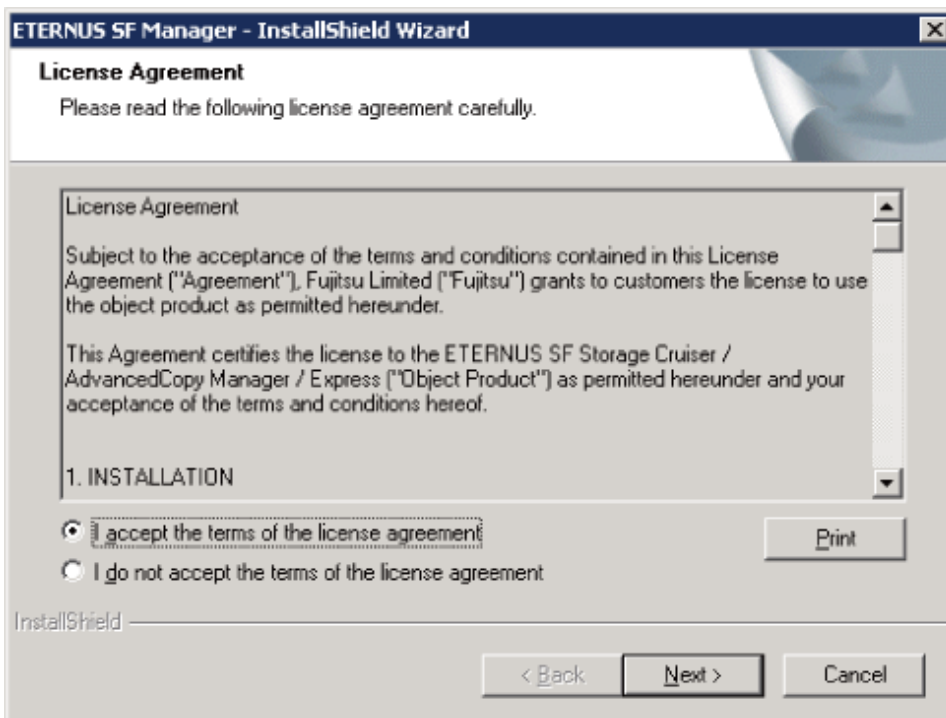
Original environment setting file	Copy destination file
\$INS_DIR\CCM\noncluster\sys\sys.properties	\$INS_DIR\CCM\sys\sys.properties

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

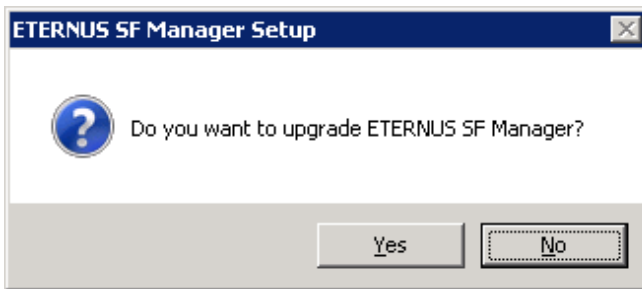
6. The window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



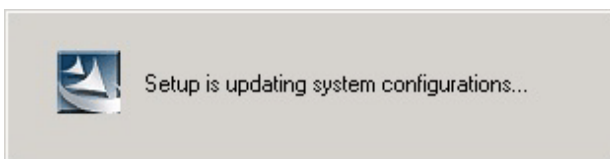
7. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, select [I accept the terms of the license agreement] and then click **Next**.



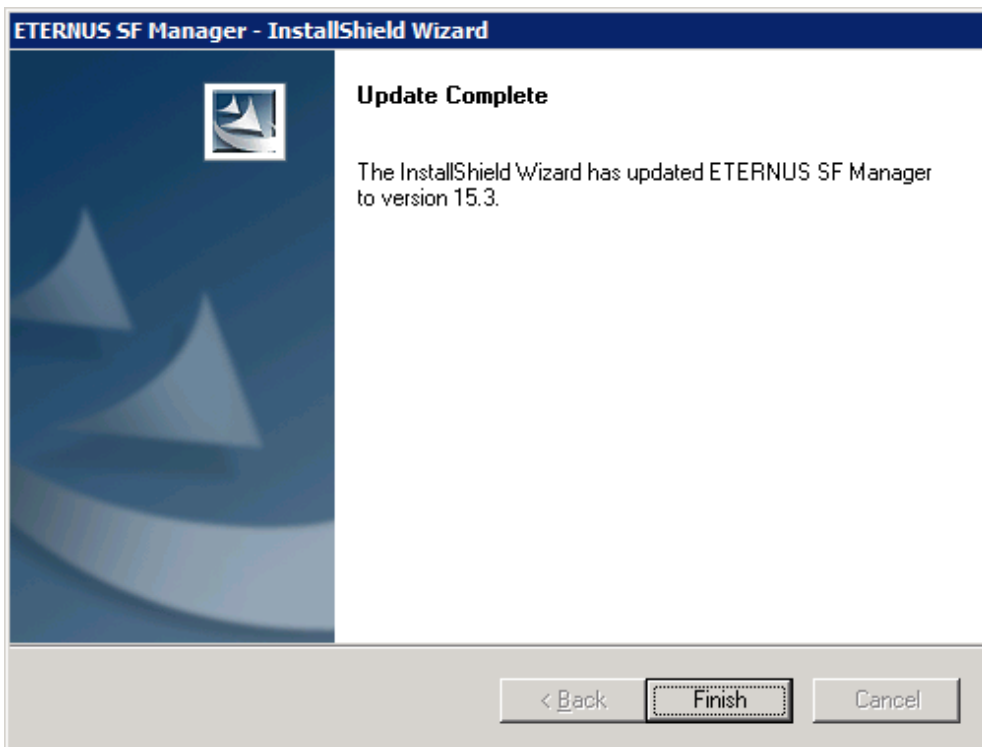
8. The following dialog box will be displayed. Click **Yes**.
To cancel the upgrade, click **No**.



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 **Finish**.



11. Eject the DVD-ROM.

7.1.2.3 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 "[7.1.2.2 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= <i>previousDir</i>	stxs_etcdir= <i>upgradedDir</i> (*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 "7.1.2.2 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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	Version=V15.2	

Note

Do not change anything other than the version information.

7.1.2.4 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 "7.1.2.2 Performing the upgrade (Primary node)".

7.1.2.5 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 "7.1.2.2 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= <i>previousDir</i>	stxs_etcdir= <i>upgradedDir</i> (*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.

7.1.2.6 Starting ETERNUS SF Manager

After performing "7.1.2.3 Tasks to be performed after the upgrade (Primary node)" and "7.1.2.5 Tasks to be performed after the upgrade (Secondary node)", perform the following procedure:

1. Start ETERNUS SF Manager services on the primary node.

Use the 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 the 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 then click **Start**.

4. Reset the password for the repository access user in the primary node.

Execute the stguserset 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

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 for information on the procedure.

5. Change the server information in the primary node.

To ensure data consistency, execute the `stgxfwcmmodsrv` command to change the server information.
When executing the `stgxfwcmmodsrv` command, 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

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

6. If Managed Server transactions exist in a clustered system, change the server information for Managed Server transactions.

To ensure data consistency, execute the `stgxfwcmmodsrv` command to change the server information.
When executing the `stgxfwcmmodsrv` command, 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

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 the command.



Note

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

7.2 Upgrading the AdvancedCopy Manager (for Solaris, Linux)

This section describes the upgrade procedure for the AdvancedCopy Manager's manager for Solaris and Linux.

7.2.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

7.2.1.1 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
```



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/FJVSesfcm/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.



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

If a failure occurs during the upgrade and you want to restore the environment to the pre-installation status, restore the system from the backup.

7.2.1.2 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.

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

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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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.

 **Point**

.....
If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal state.
.....

7.2.1.3 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 the stguserset 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**

.....
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 for information on the procedure of changing password.
.....

4. Change the server information.

To ensure data consistency, execute the stgxfwcmmodsrv command to change the server information.
When executing the stgxfwcmmodsrv command, 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**

.....
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 for information on the command.
.....

7.2.2 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.

7.2.2.1 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).

Refer to the relevant cluster software manuals for information on stopping the cluster application (transaction).

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.

Refer to the relevant cluster software manuals for information on stopping the cluster application (transaction).

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.

Refer to the relevant cluster software manuals for information on stopping the Managed Server transactions.

2. On the primary node for the target transactions, stop the Managed Server transactions.

Refer to the relevant cluster software manuals to stop the Managed Server transactions.

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.

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 for information on stopping the daemon.

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, it is recommended to 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 and you want to restore the environment to the pre-installation status, 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 the RDB daemon is to be monitored in a clustered system, cancel the monitoring temporarily to perform the upgrade.

7.2.2.2 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.

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

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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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.



.....
If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal state.
.....

7.2.2.3 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 "7.2.2.1 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= <i>previousDir</i>	stxs_etcdir= <i>upgradedDir</i> (*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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	Version=V15.2	

 **Note**

Do not change anything other than the version information.

- 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=".

- 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**

Refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on customizing the SNMP Trap XML definition file.

7.2.2.4 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 "[7.2.2.2 Performing the upgrade \(Primary node\)](#)".

7.2.2.5 Tasks to be performed after the upgrade (Secondary node)

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

- 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= <i>previousDir</i>	stxs_etcdir= <i>upgradedDir</i> (*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=".

7.2.2.6 Starting ETERNUS SF Manager

After performing "7.2.2.3 Tasks to be performed after the upgrade (Primary node)" and "7.2.2.5 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.
Refer to the relevant cluster software manuals for information on starting the cluster application (transaction).
2. If Managed Server transactions exist in a clustered system, start the Managed Server transactions on the primary node for the target transactions.
Refer to the relevant cluster software manuals to start the Managed Server transactions.
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.
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 for information on starting the daemon.
4. Reset the password of the repository access user.
Execute the stguserset 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

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 for information on the procedure.

5. Change the server information.

To ensure data consistency, execute the stgxfcmmodsrv command to change the server information.
When executing the stgxfcmmodsrv command, 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

Refer to "stgxfwcmmosrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version for information on the command.

6. If Managed Server transactions exist in a clustered system, change the server information of the Managed Server transactions.

To ensure data consistency, execute the stgxfwcmmosrv command to change the server information.

When executing the stgxfwcmmosrv command, 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

Refer to "stgxfwcmmosrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for this version for information on the command.

7.2.3 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.

7.3 Upgrading the AdvancedCopy Manager's agent (for Windows Server 2008 or later)

This section explains the upgrade procedures for the AdvancedCopy Manager's agent for Windows Server 2008 or later.

7.3.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

7.3.1.1 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 then click **Stop**.
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.

.....

Note

.....

When the Storage Cruiser's agent has been installed, it is necessary to perform the Upgrade Installation according to the following procedures. Refer to "Starting and Stopping the Agent" in "Command reference" in the *ETERNUS SF Storage Cruiser Operation Guide* for the how to stop of the service of the Storage Cruiser's agent.

1. Stop the service of Storage Cruiser's agent.
 2. Stop the service of AdvancedCopy Manager's agent.
 3. Upgrade the AdvancedCopy Manager's agent.
 4. Start the service of Storage Cruiser's agent.
-

7.3.1.2 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.

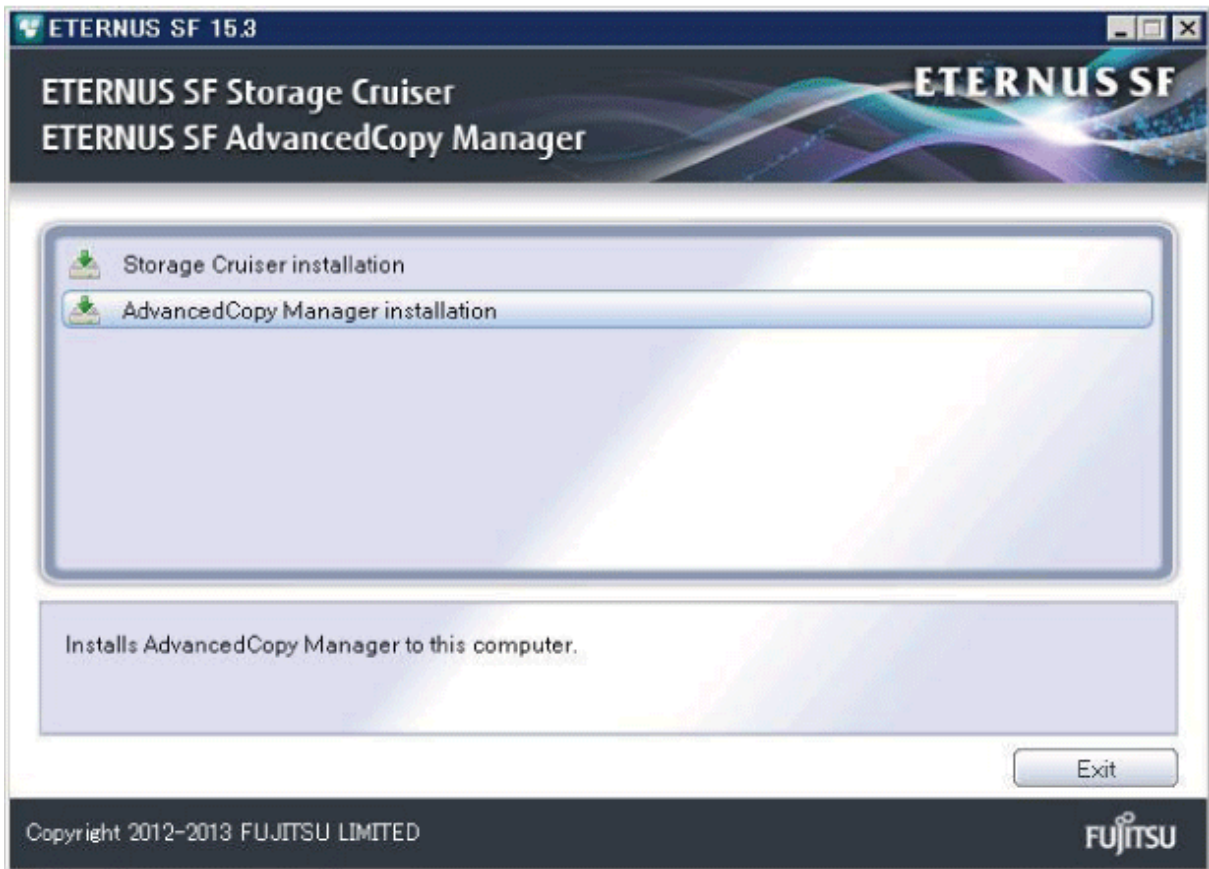
Select **Control Panel > Add or Remove Programs** to check the architecture of the AdvancedCopy Manager's agent.

- 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.

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

4. The following window will be displayed.
For the upgrade installation, this window is not used. Click **Exit**.



5. Start the following installation wizard corresponding to the architecture of AdvancedCopy Manager's agent checked in step 2:

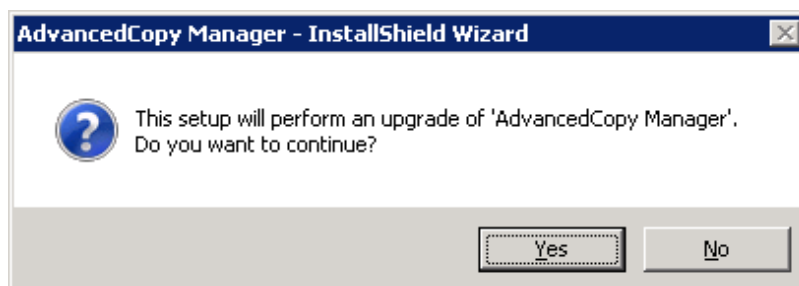
- For 32-bit version:

dvdromDrive: \Agent_windows\AdvancedCopy_Manager\agent\windows_x86\setup.exe

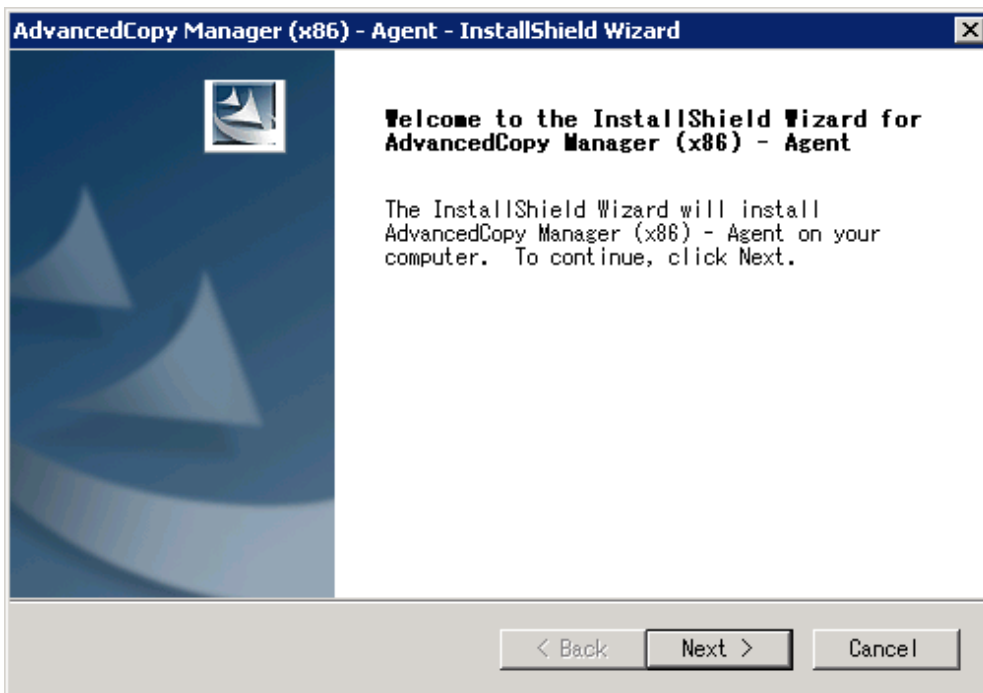
- For 64-bit version:

dvdromDrive: \Agent_windows\AdvancedCopy_Manager\agent\windows_x64\setup.exe

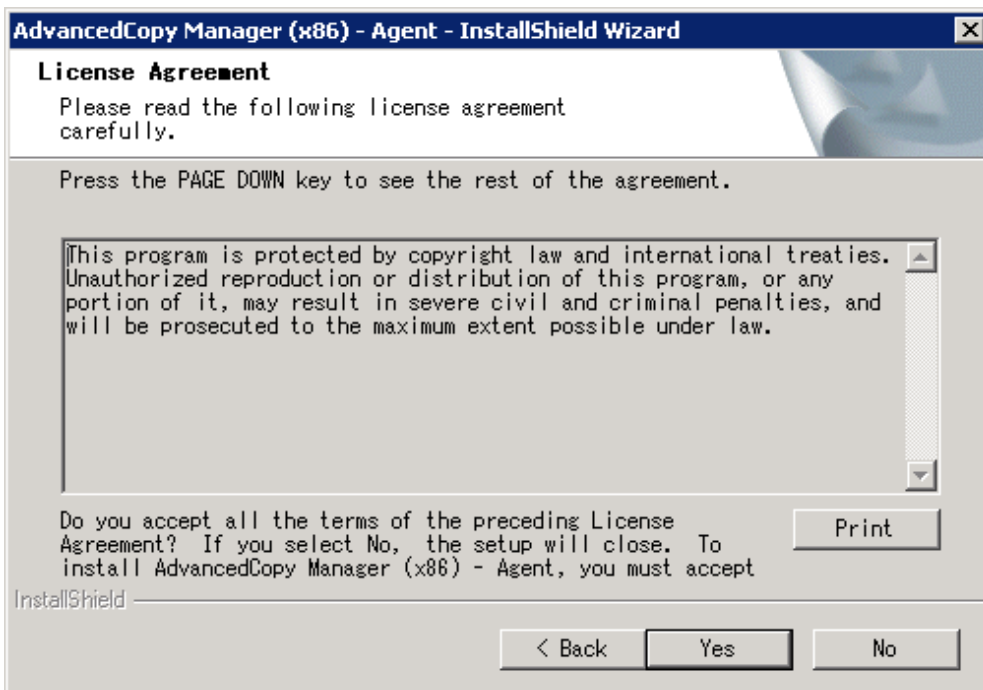
6. The following dialog box will be displayed. Click **Yes**.



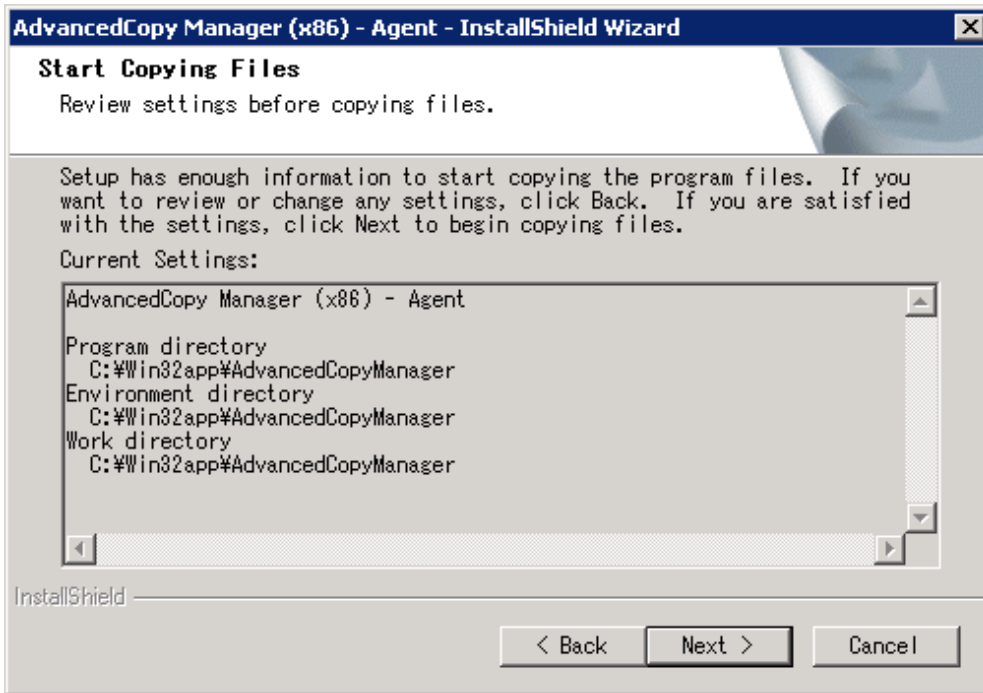
7. The installation wizard page will be displayed. Click **Next**.



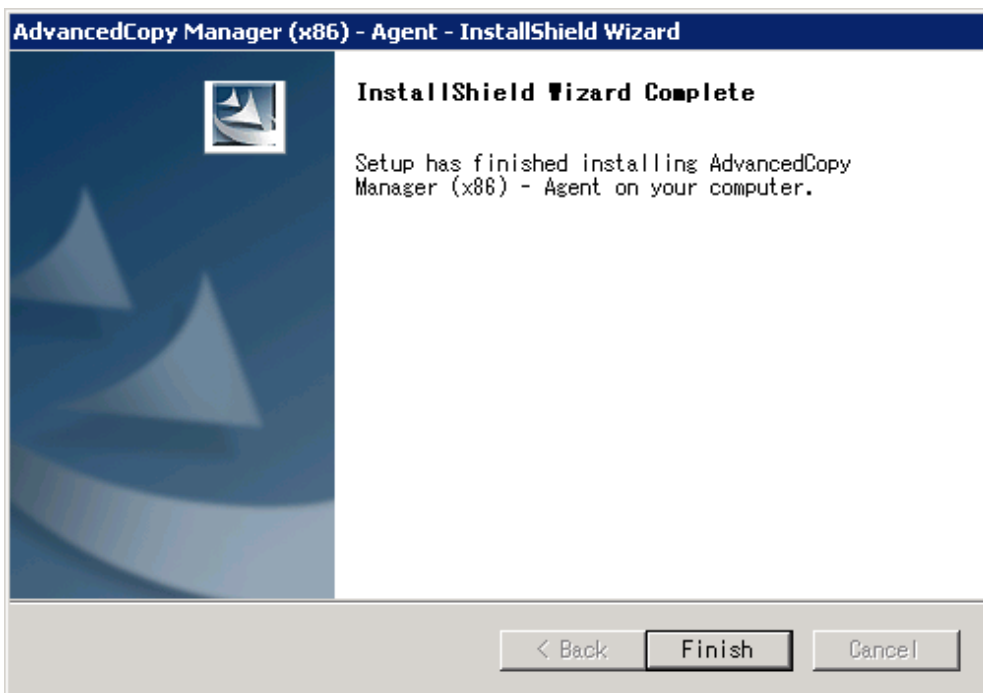
8. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, click **Yes**.



9. Check the settings information in the **Start Copying Files** page. If the settings are correct, click **Next**. To change a setting, click **Back**.



10. Copying of the program is started.
The following installation wizard page will be displayed. The upgrade process is completed. Click **Finish**.



11. Eject the DVD-ROM.

7.3.1.3 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 then click **Start**.
2. Changing the server information

To ensure data consistency, execute the stgxfwcmmosrv command to change the server information. When executing the stgxfwcmmosrv command, 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

Refer to "stgxfwcmmosrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for information on the command.

3. Reload the server information using the Web Console.

See

Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.

7.3.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

7.3.2.1 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 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. Stop the Managed Server transaction on the primary node.
 - Use the 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 then click **Stop**.
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.

Note

When the Storage Cruiser's agent has been installed, it is necessary to perform the Upgrade Installation according to the following procedures. Refer to "Starting and Stopping the Agent" in "Command reference" in the *ETERNUS SF Storage Cruiser Operation Guide* for the how to stop of the service of the Storage Cruiser's agent.

1. Stop the service of Storage Cruiser's agent.
2. Stop the service of AdvancedCopy Manager's agent.
3. Upgrade the AdvancedCopy Manager's agent.
4. Start the service of Storage Cruiser's agent.

7.3.2.2 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.

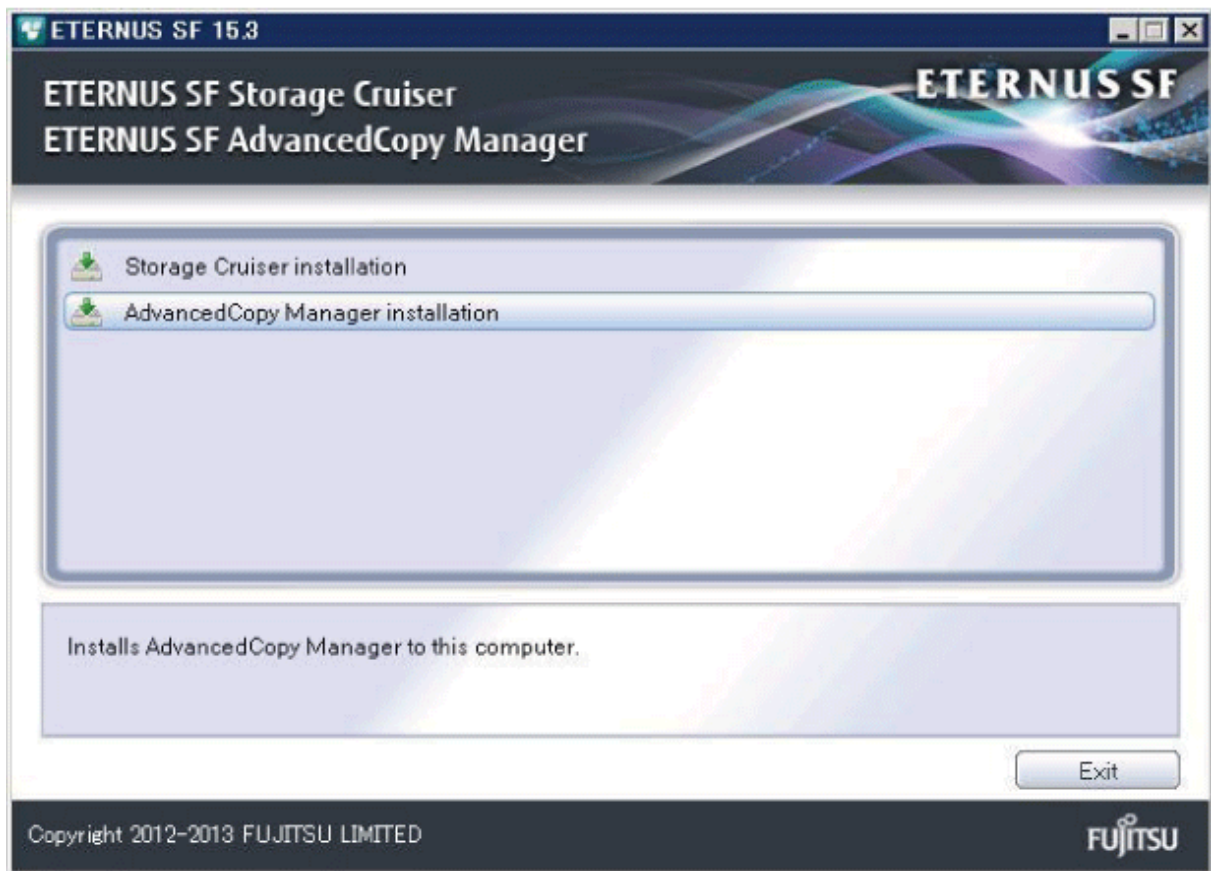
Select **Control Panel > Add or Remove Programs** to check the architecture of AdvancedCopy Manager's agent.

- 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.

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

4. The following window will be displayed.
For the upgrade installation, this window is not used. Click **Exit**.



5. Start the following installation wizard corresponding to the architecture of AdvancedCopy Manager's agent checked in step 2.

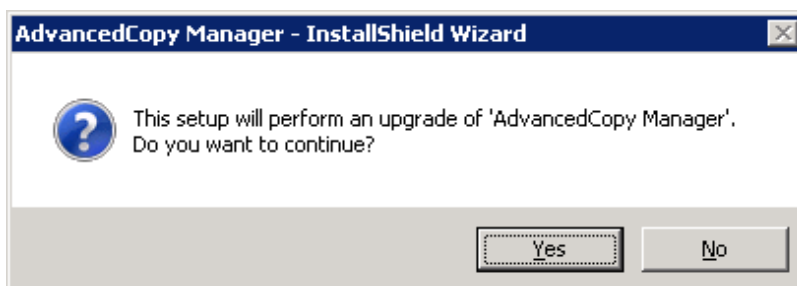
- For 32-bit version:

`dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x86\setup.exe`

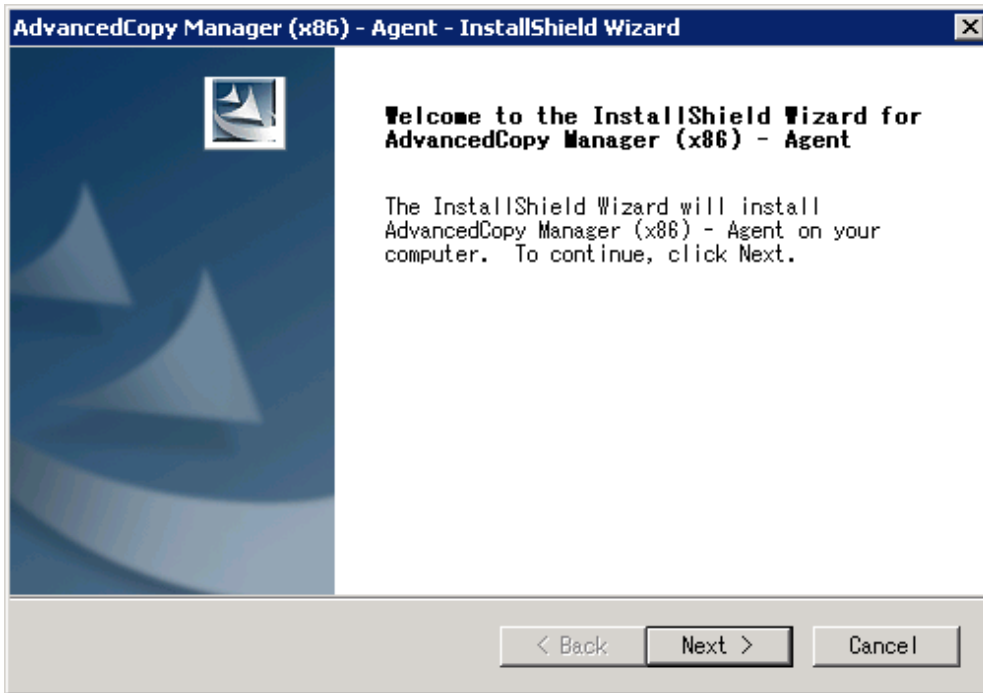
- For 64-bit version:

`dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x64\setup.exe`

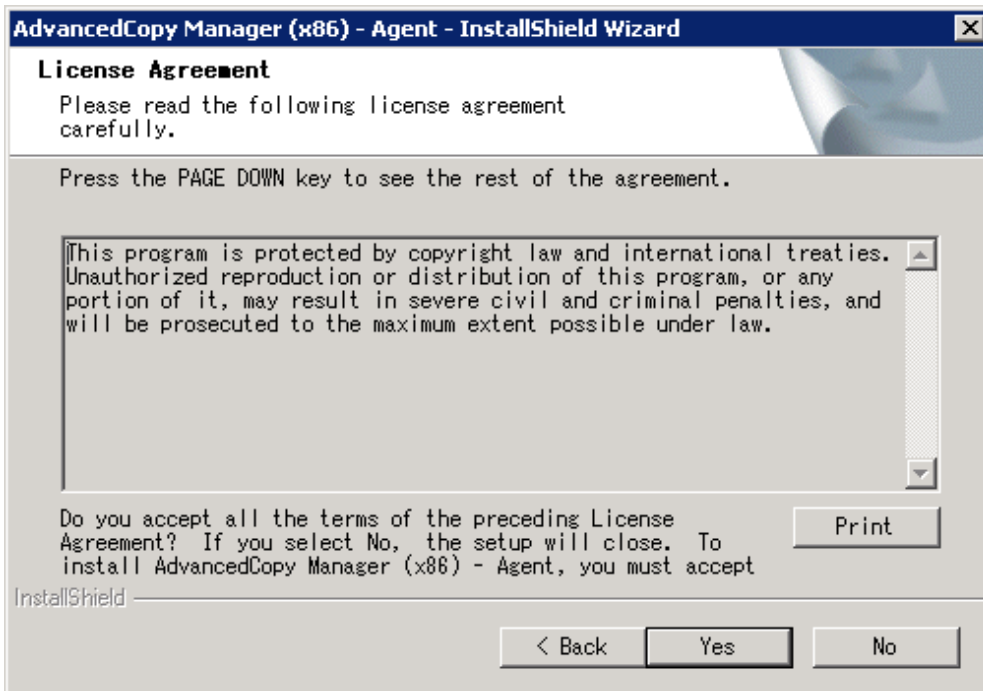
6. The following dialog box will be displayed. Click **Yes**.



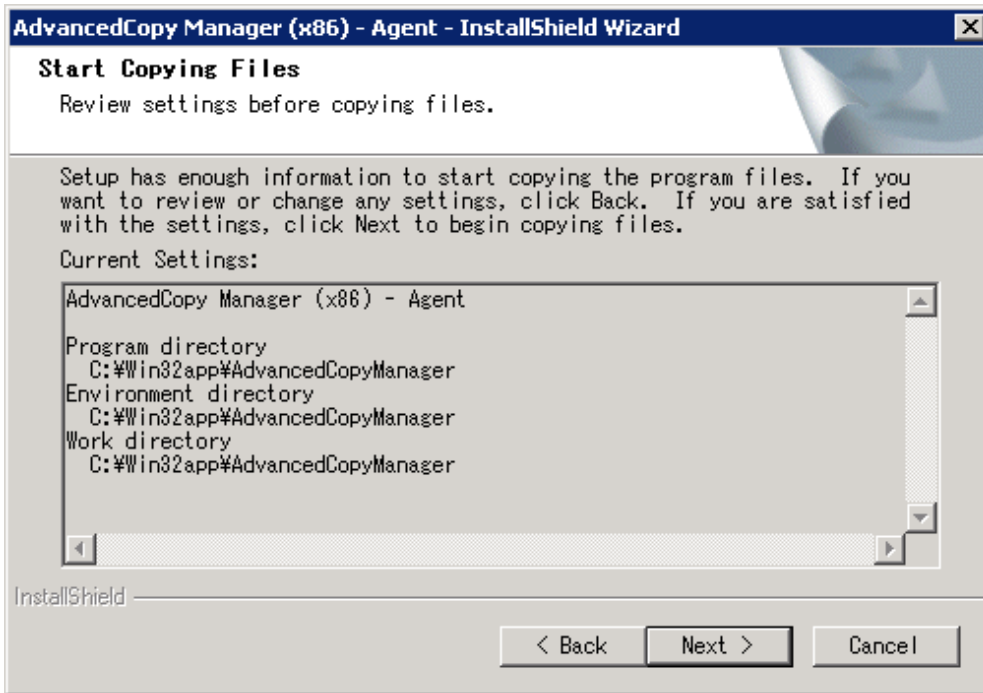
7. The following installation wizard page will be displayed. Click **Next**.



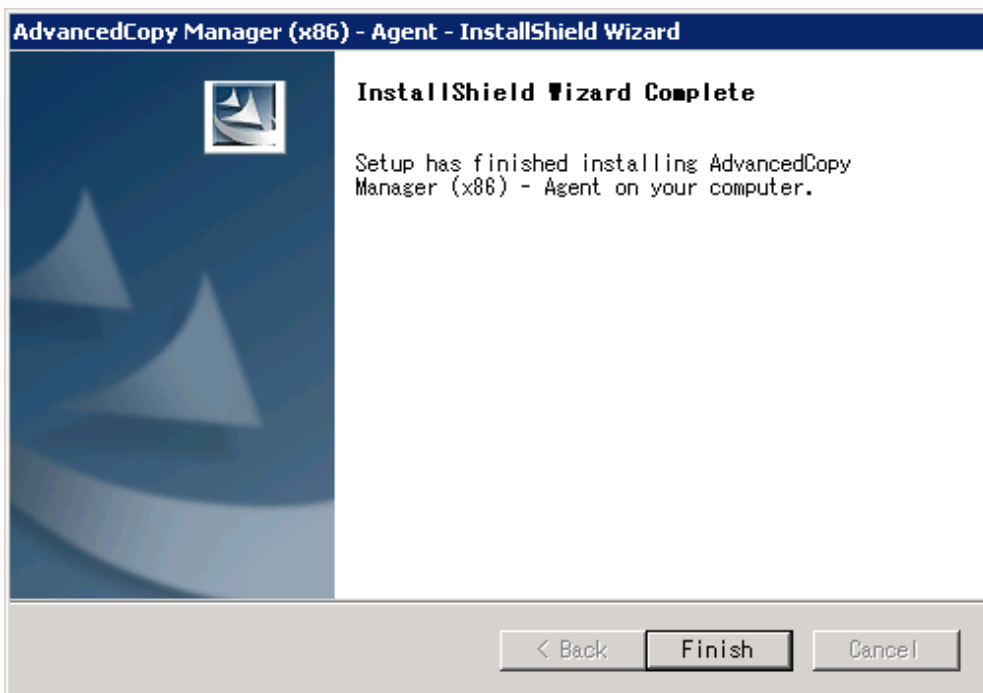
8. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, click **Yes**.



9. Check the settings information in the **Start Copying Files** page. If the settings are correct, click **Next**. To change a setting, click **Back**.



10. Copying of the program is started. The following installation wizard page will be displayed. The upgrade process is completed. Click **Finish**.



11. Eject the DVD-ROM.

7.3.2.3 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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	Version=V15.2	

Note

Do not change anything other than the version information.

7.3.2.4 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 "[7.3.2.2 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.

7.3.2.5 Tasks to be performed after the upgrade (Secondary node)

There is no further action required after the upgrade for the secondary node.

7.3.2.6 Starting the Managed Server transactions

After the upgrade, perform the following procedure:

1. Start the Managed Server transactions on the primary node.
 - Use the 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 then click **Start**.
3. Change the server information for Managed Server transactions.

To ensure data consistency, execute the stgxfwcmmodsrv command to change the server information.

When executing the stgxfwcmmodsrv command, 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

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 the command.

4. Reload the server information using the Web Console.



See

Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.

7.4 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.

7.4.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

7.4.1.1 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, it is recommended to back up the operating system before performing the upgrade.

If a failure occurs during the upgrade and you want to restore the environment to the pre-installation status, restore the system from the backup.

7.4.1.2 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 dvdromMountPoint
```

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 dvdromMountPoint
```

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 environmentDir
# ./swsetup
```

The *environmentDir* is as follows:

OS type	Directory
Solaris	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/Solaris</i>
Red Hat Enterprise Linux 5 (for x86)	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel5_x86</i>
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	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel5_x64</i>
Red Hat Enterprise Linux 6 (for x86) Red Hat Enterprise Linux 6 (for Intel64)	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel6_x86</i>
SUSE Linux Enterprise Server 11 for x86 SUSE Linux Enterprise Server 11 for EM64T	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/sles11_x86</i>

5. The installation information is displayed.

```
swsetup: Installer is preparing for installation...

+-----+
|                ETERNUS SF AdvancedCopy Manager                |
|                        15.3                                    |
|                Copyright FUJITSU LIMITED 2012-2013            |
+-----+

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>
```

Point

.....
If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal status.
.....

7.4.1.3 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 the `stgxfwcmmodsrv` command to change the server information.
When executing the `stgxfwcmmodsrv` command, 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

.....
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 the command.
.....

3. Reload the server information using the Web Console.

See

.....
Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.
.....

7.4.2 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.
.....

7.4.2.1 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 primary node for Managed Server transactions.



If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback). Therefore, it is recommended to 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 and you want to restore the environment to the pre-installation status, restore the system from the backup.

7.4.2.2 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 dvdromMountPoint
```

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 dvdromMountPoint
```

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 environmentDir
# ./swsetup
```

The *environmentDir* is as follows:

OS type	Directory
Solaris	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/Solaris</i>
Red Hat Enterprise Linux 5 (for x86)	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel5_x86</i>
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	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel5_x64</i>
Red Hat Enterprise Linux 6 (for x86) Red Hat Enterprise Linux 6 (for Intel64)	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel6_x86</i>
SUSE Linux Enterprise Server 11 for x86 SUSE Linux Enterprise Server 11 for EM64T	<i>dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/sles11_x86</i>

5. The installation information is displayed.

```
swsetup: Installer is preparing for installation...

+-----+
|               ETERNUS SF AdvancedCopy Manager               |
|                   15.3                                       |
|               Copyright FUJITSU LIMITED 2012-2013           |
+-----+

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>
```



.....
 If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal status.

7.4.2.3 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:

Upgrade patterns	Descriptive contents of the version information	
	Before	After
Version 15.0B to 15.3	Version=V15.0	Version=V15.3
Version 15.1 to 15.3	Version=V15.1	
Version 15.2 to 15.3	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=".

7.4.2.4 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 "[7.4.2.2 Performing the upgrade \(Primary node\)](#)".

7.4.2.5 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=".

7.4.2.6 Starting the Managed Server transactions

After the upgrade, perform the following procedure:

1. Start the Managed Server transactions on the primary node.

Refer to the relevant cluster software manuals to start the Managed Server transactions.

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 the `stgxfwcmmodsrv` command to change the server information.

When executing the `stgxfwcmmodsrv` command, 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.



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



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 the command.

4. Reload the server information using the Web Console.



Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for this version for information on reloading server information.

7.5 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. [7.5.1 Backing up the repository data](#)
2. [7.5.2 Backing up the management information](#)
3. [7.5.3 Releasing the backup and restore in Exchange database \(for Windows Server 2003\)](#)
4. [7.5.4 Uninstalling the previous version](#)
5. [7.5.5 Installing this version](#)
6. [7.5.6 Restoring the repository data](#)
7. [7.5.7 Changing server information](#)
8. [7.5.8 Restoring the management information](#)
9. [7.5.9 Setting the backup and restore in Exchange database \(for Windows Server 2003\)](#)
10. [7.5.10 Updating the version information](#)

7.5.1 Backing up the repository data

Refer to the following sections to back up the repository data 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)

7.5.2 Backing up the management information

Refer to the following sections to back up the management information on the Managed Server.

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)

7.5.3 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

7.5.4 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.



See

.....
Refer to "Deletion of Cluster Environment for Managed Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for the previous version for information on the unsetup of cluster settings.
.....

7.5.5 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 to 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 to 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 to setup the AdvancedCopy Manager's agent.

Afterwards, start the AdvancedCopy Manager's agent on the Managed Server. 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 the start procedure.

- For clustered systems:

Refer to "Customization of Managed Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for this version to setup the AdvancedCopy Manager's agent.

7.5.6 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 the stgrecpncv 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

Refer to "stgrepcnv (Repository data migration command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* relevant to the OS of the Management Server for information on the command.

7.5.7 Changing server information

To ensure data consistency, execute the Web Console or stgxfwcmmodsrv command to change the server information.

When executing the stgxfwcmmodsrv command, 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

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 the command.

7.5.8 Restoring the management information

Refer to the following sections to restore the management information on the Managed Server.

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)

7.5.9 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

7.5.10 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` command to update the version information for the Managed Server.

When executing the `stgxfwcmmodsrv` command, 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

- 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 the command.
- Refer to "Reload the server configuration information" in the *ETERNUS SF Web Console Guide* for information on reloading the server information using Web Console.

7.6 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 "[7.1 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 **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.

7.6.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

7.6.1.1 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 **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.
-

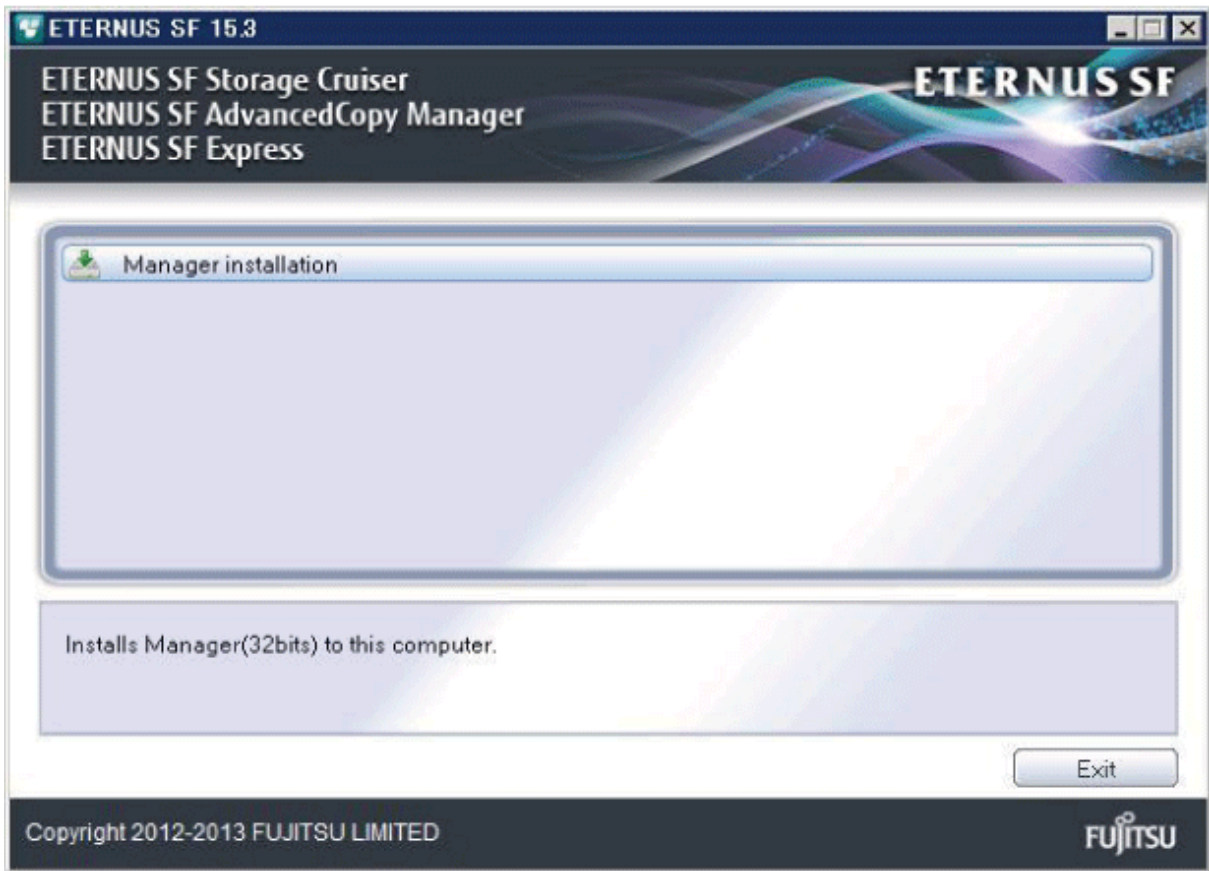
7.6.1.2 Performing the upgrade

The upgrade is performed as follows:

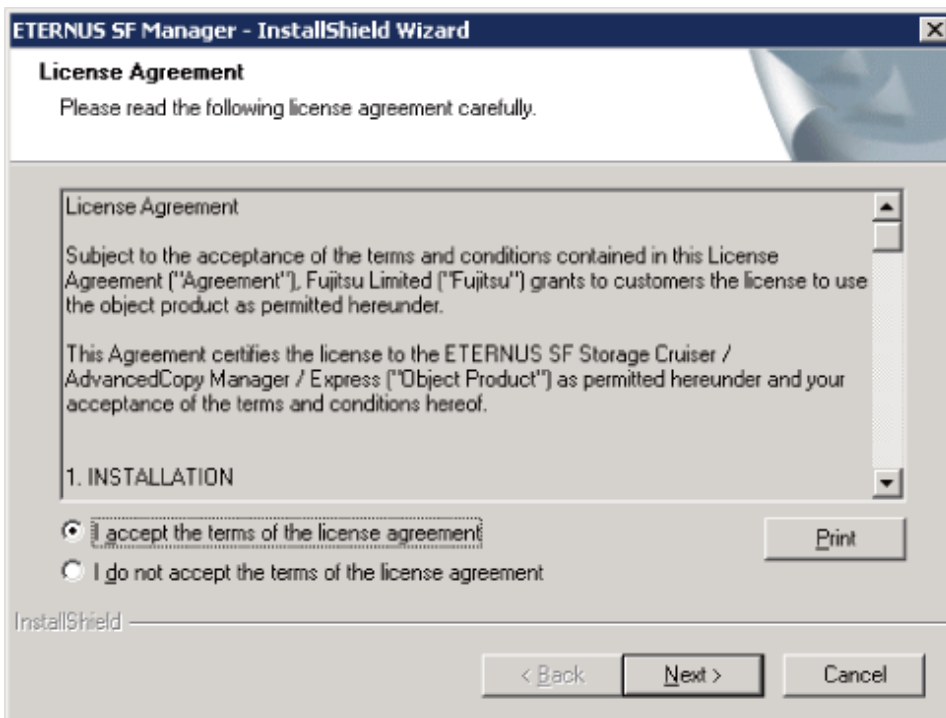
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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

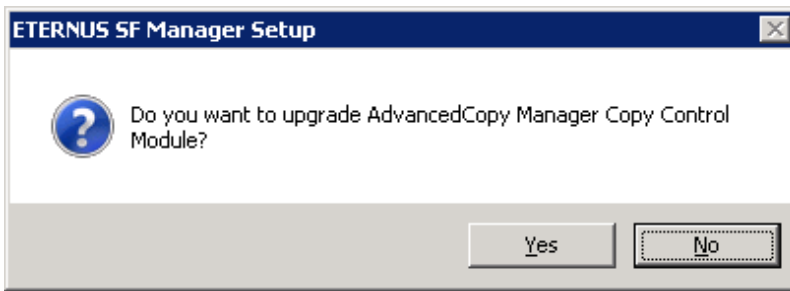
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



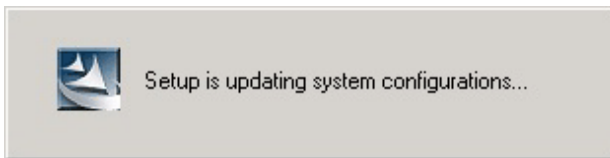
4. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, select [I accept the terms of the license agreement] and then click **Next**.



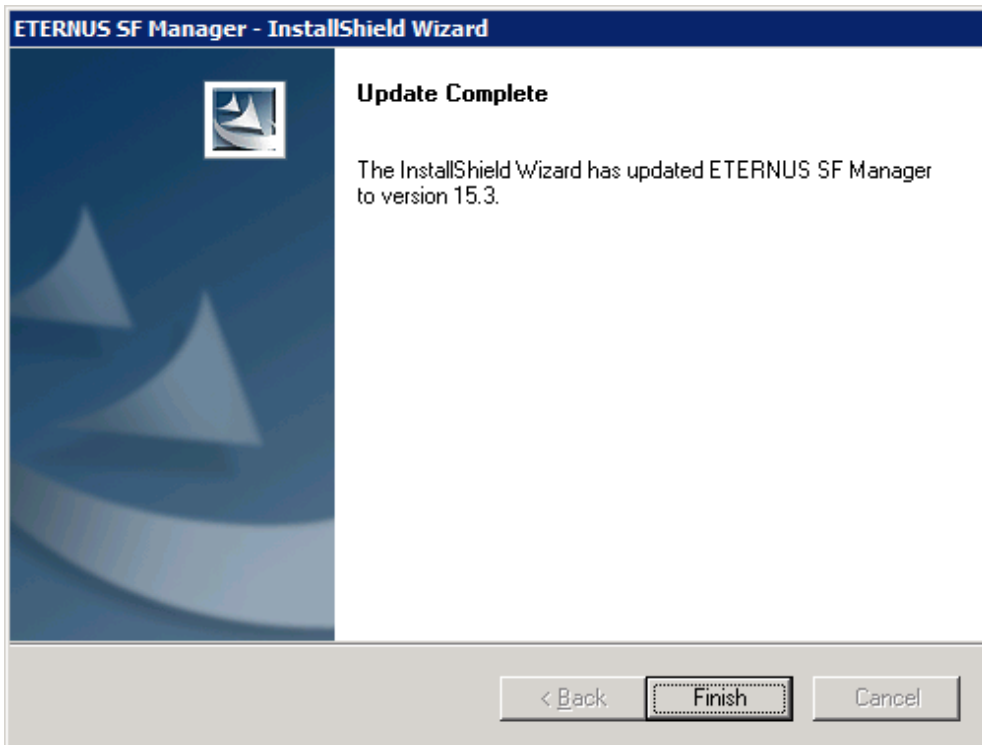
- The following dialog box will be displayed. Click **Yes**.
To cancel the upgrade, click **No**.



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



- The following installation wizard page will be displayed. The upgrade is completed. Click **Finish**.



- Eject the DVD-ROM.

7.6.2 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.

7.6.2.1 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 the 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 the 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 **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.
-

7.6.2.2 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.

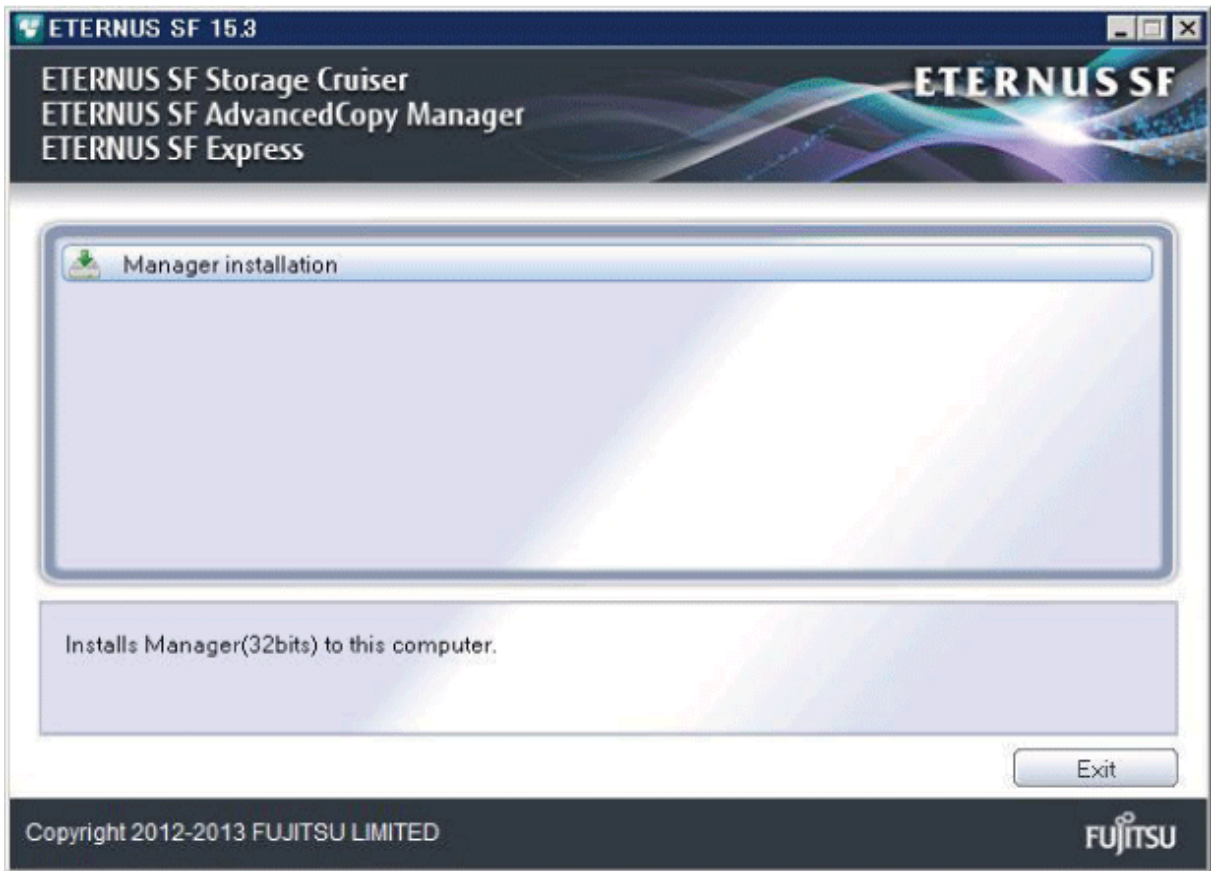
The saved file is required for post-Upgrade Installation.

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.

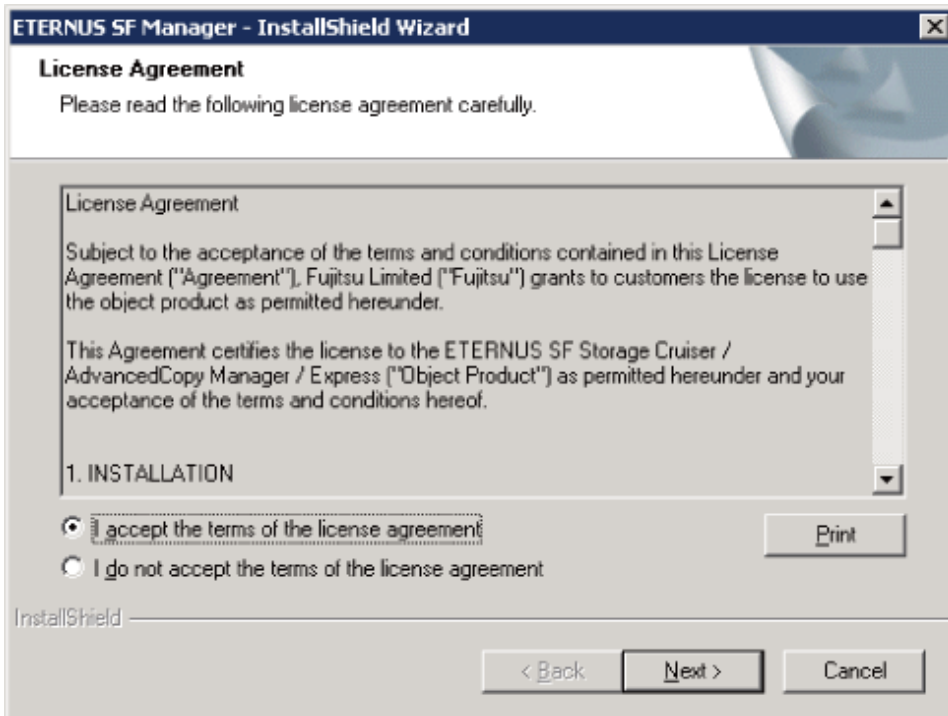
Refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the DVD-ROM structure and detailed contents.

6. The following window will be displayed. Click **Manager installation**.

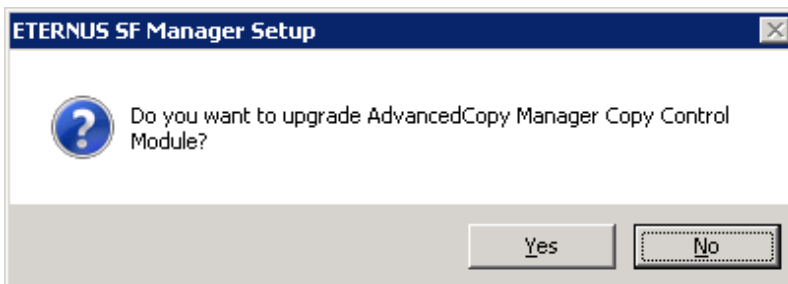
To cancel the upgrade at this point, click **Exit**.



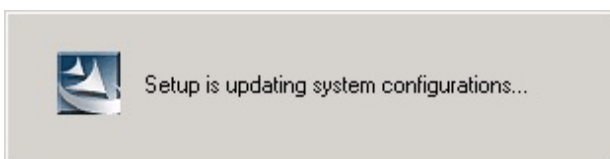
7. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, select [I accept the terms of the license agreement] and then click **Next**.



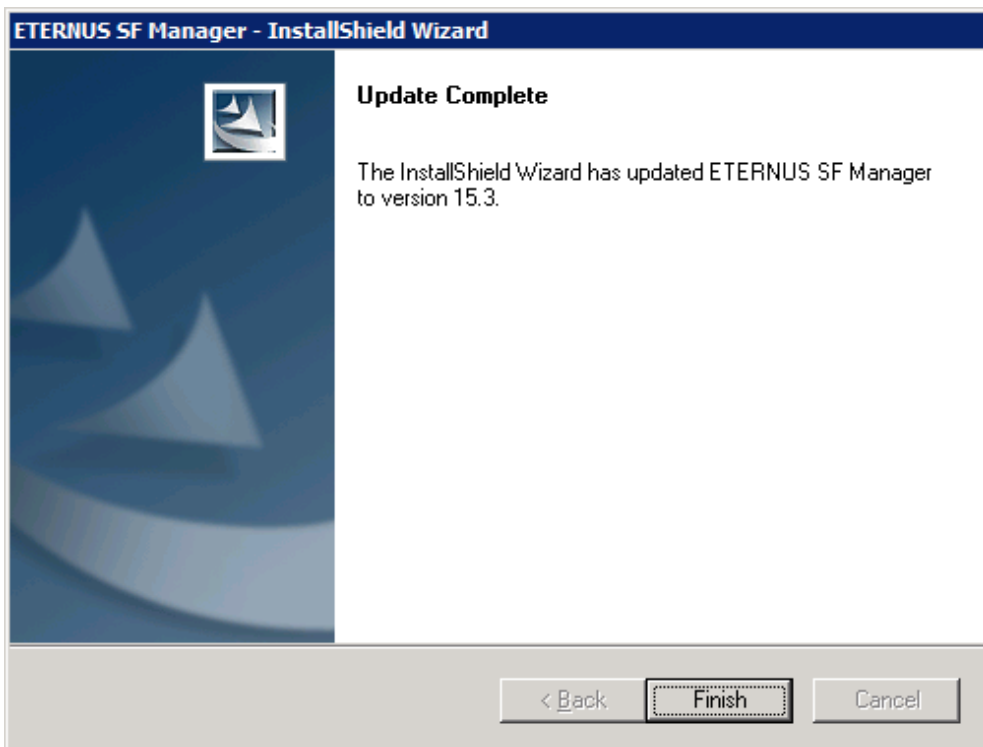
8. The following dialog box will be displayed. Click **Yes**.
To cancel the upgrade, click **No**.



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 **Finish**.



11. Eject the DVD-ROM.

7.6.2.3 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 "[7.6.2.2 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= <i>previousDir</i>	stxs_etcdir= <i>upgradedDir</i> (*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 "[7.6.2.2 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.

7.6.2.4 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 "[7.6.2.2 Performing the upgrade \(Primary node\)](#)".

7.6.2.5 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 "[7.6.2.3 Tasks to be performed after the upgrade \(Primary node\)](#)".

7.6.2.6 Start the CCM Server transactions

When the upgrade is complete, start the CCM Server transactions.

Use the Failover Cluster Manager on the primary node to start the transactions included in AdvancedCopy Manager CCM.

7.7 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 "[7.2 Upgrading the AdvancedCopy Manager \(for Solaris, Linux\)](#)" to perform the upgrade.

7.7.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

7.7.1.1 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, it is recommended to back up the operating system before performing the upgrade.

If a failure occurs during the upgrade and you want to restore the environment to the pre-installation status, restore the system from the backup.

7.7.1.2 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.

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

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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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 Copy Control Module is complete.

Point

.....
If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal status.
.....

7.7.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

7.7.2.1 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.
Refer to the relevant cluster software manuals for stopping the CCM Server transaction.

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.
Refer to the relevant cluster software manuals for stopping the CCM Server transaction.

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, it is recommended to 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 and you want to restore the environment to the pre-installation status, restore the system from the backup.
.....

7.7.2.2 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.

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

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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(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 license between the parties and supersede all prior or contemporaneous oral and written communications 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-Restricted 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 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.

Point

If the upgrade was terminated abnormally, refer to "Corrective actions to be taken when any error occurs in version upgrade from 15.x (for Solaris, Linux)" in the *Software Release Guide*, recover the system to the normal status.

7.7.2.3 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
<code>stxs_etcdir=<i>previousDir</i></code>	<code>stxs_etcdir=<i>upgradedDir</i> (*1)</code>

*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.

7.7.2.4 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 "[7.7.2.2 Performing the upgrade \(Primary node\)](#)".

7.7.2.5 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 "[7.7.2.3 Tasks to be performed after the upgrade \(Primary node\)](#)".

7.7.2.6 Start the CCM Server transactions

When the upgrade is complete, start the CCM Server transactions.

Refer to the relevant cluster software manuals for starting the CCM Server transaction.

7.7.3 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 8 Troubleshooting

This chapter describes the method for troubleshooting if a problem occurs during the upgrade 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 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 <i>ETERNUS SF Express User's Guide</i>
Storage Cruiser	<i>ETERNUS SF Storage Cruiser Message Guide</i>
AdvancedCopy Manager	<i>ETERNUS SF AdvancedCopy Manager Message Guide</i>
AdvancedCopy Manager Copy Control Module	"Messages for AdvancedCopy Manager CCM" in the <i>ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module</i>

- For the previous version is Version 15.x:

Target for upgrade	Reference
Express	<i>ETERNUS SF Messages</i>
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 <i>ETERNUS SF Express User's Guide</i> for the previous version
Storage Cruiser	"Troubleshooting information" in the <i>ETERNUS SF Storage Cruiser User's Guide</i> for the previous version
AdvancedCopy Manager	"Collecting maintenance information" in the <i>ETERNUS SF AdvancedCopy Manager Operator's Guide</i> for the previous version
AdvancedCopy Manager Copy Control Module	"How to Collect Data" in the <i>ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module</i> for the previous version

- For the previous version is Version 15.x:

Target for upgrade	Reference
Express	"Trouble analysis" in the <i>ETERNUS SF Express Operation Guide</i>

Target for upgrade	Reference
Storage Cruiser	"Troubleshooting information" in the <i>ETERNUS SF Storage Cruiser Operation Guide</i>
AdvancedCopy Manager	"Collecting maintenance information" in the <i>ETERNUS SF AdvancedCopy Manager Operation Guide</i>
AdvancedCopy Manager Copy Control Module	"How to collect data" in the <i>ETERNUS SF Operation Guide for Copy Control Module</i>

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, refer to the *ETERNUS SF Installation and Setup Guide* for this version to install 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	<i>ETERNUS SF Messages</i>
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 <i>ETERNUS SF Express Operation Guide</i>
Storage Cruiser	"Troubleshooting information" in the <i>ETERNUS SF Storage Cruiser Operation Guide</i>
AdvancedCopy Manager	"Collecting maintenance information" in the <i>ETERNUS SF AdvancedCopy Manager Operation Guide</i>
AdvancedCopy Manager Copy Control Module	"How to collect data" in the <i>ETERNUS SF Operation Guide for Copy Control Module</i>

Chapter 9 Configuration import

This chapter describes the configuration import.



Point

The configuration import is required only for Version 13.x and 14.x.

9.1 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.

9.2 Command references

This section explains the command used for importing configuration information from a previous version.

9.2.1 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  
escs90000 Operation is accepted.
```

Solaris or Linux environment

```
# /opt/FJSVesfcm/bin/esfimportdevconf  
escs90000 Operation is accepted.
```

NOTES

- Check that the targeted devices can be accessed from this product before executing the import command.
Refer to ["9.1 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 ["9.3 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 "escs90010 Operation has already been accepted." is output and the command cannot be executed.

9.2.2 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: Refer to the Web Console Operation History for details.

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  
-----
```

9.3 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: <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 1. Delete the existing registered information with the <code>acarray remove</code> command.

No.	Information that cannot be imported	Action
		<ol style="list-style-type: none"> 2. Register the ETERNUS Disk storage system in AdvancedCopy Manager Copy Control Module with the acarrray 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. operation in the Action pane.
3	iSCSI HBA information	Register the iSCSI HBA information with the following procedure. <ol style="list-style-type: none"> 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

- Refer to "Web Console Operation Method" in the *ETERNUS SF Web Console Guide* for this version for information on the instructions regarding the Web Console operations.
- Refer to "Commands" in the *ETERNUS SF Operation Guide for Copy Control Module* for this version for information on the acarrray remove command and acarrray add command.

9.4 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:

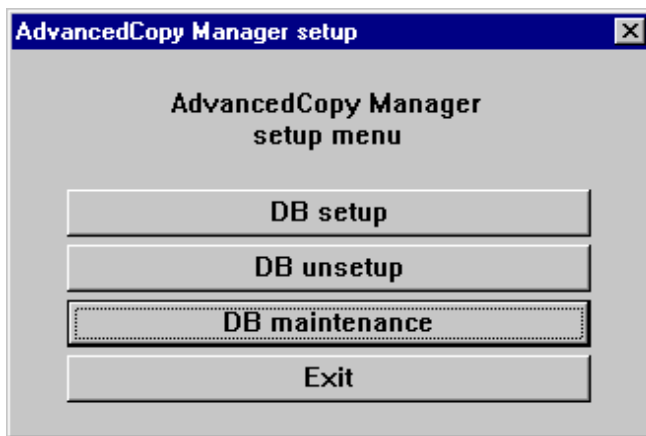
<http://support.microsoft.com/kb/947723>

<http://support.microsoft.com/kb/278845>

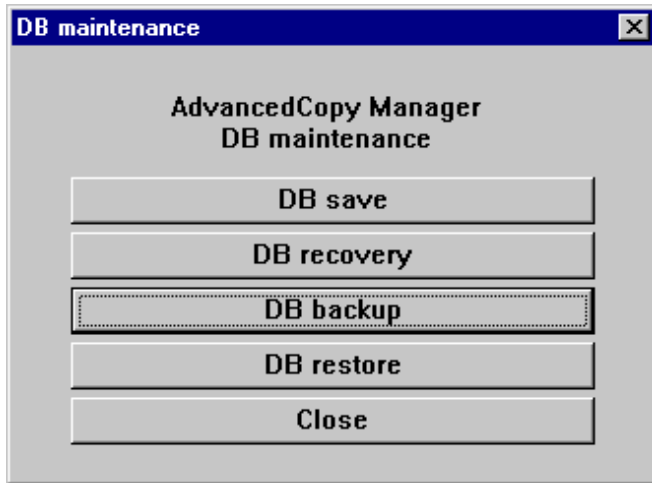
- Do not use the telnet server service.
This operation will fail when issued from the telnet server service.

The procedure is shown below:

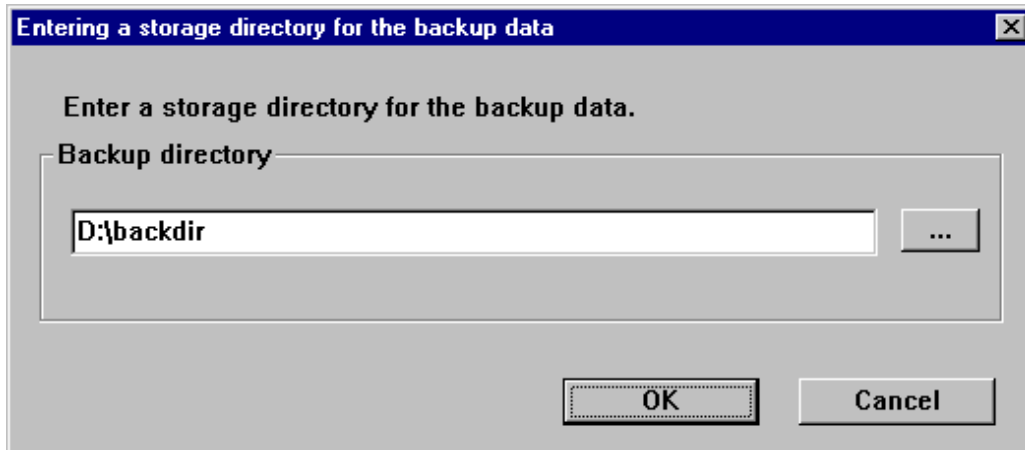
1. Click **Start > Programs -> AdvancedCopy Manager** or **ETERNUS SF Manager > DB Setup**.
2. The following screen is displayed.
Click **DB maintenance**.



- The following screen is displayed.
Click **DB backup**.



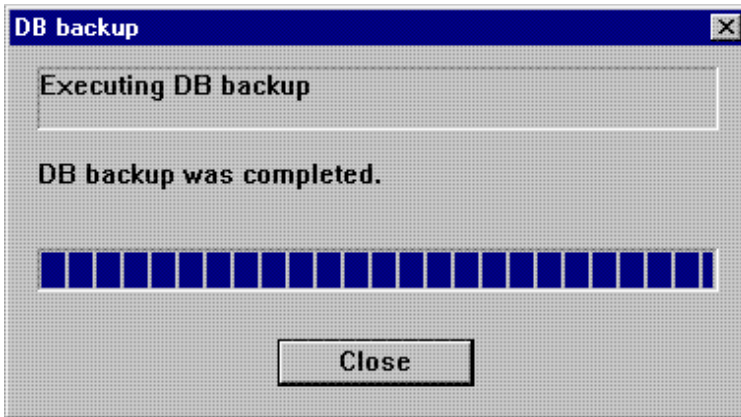
- The following screen is displayed.
Enter a backup directory and click **OK**.



- The following screen is displayed.
Check that the displayed information is correct and click **Start**.



- The following screen is displayed after the process is completed.
Click **Close**.



- Click **Close** displayed in step 3 to complete the DB maintenance.
- Click **Exit** displayed in step 2 to complete the DB backup.
- 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:

- Execute the following command.

```
# /opt/swstorage/bin/stgdbbackup
```

- 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
```

- 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.

- 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
```

- 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.  
  
#
```

- 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:

environmentDir\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:

For non-clustered systems

File for save	File name
device.ini	<i>environmentDir</i> \etc\device.ini

For clustered systems

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:\> programDir\bin\swstresback saveDir
```



Refer to the manuals according to the previous operating environment's version for information on the command.

- In the case of Version 14.2 or earlier

"swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide*.

- In the case of Version 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



The volume locking specification files might not exist according to the environment. In this case, it is unnecessary to save them.

For non-clustered systems

File for save	File name
Pre-processing and post-processing scripts for backup management function	<i>environmentDir</i> \etc\backup\scripts\OpcBackupPre.js <i>environmentDir</i> \etc\backup\scripts\OpcBackupPost.js <i>environmentDir</i> \etc\backup\scripts\OpcRestorePre.js <i>environmentDir</i> \etc\backup\scripts\OpcRestorePost.js
Transaction volume locking specification file for backups	<i>environmentDir</i> \etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	<i>environmentDir</i> \etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	<i>environmentDir</i> \etc\backup\data\RDSTLOCK.INI

For clustered systems

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:

For non-clustered systems

File for save	File name
device.ini	<i>environmentDir</i> \etc\device.ini

For clustered systems

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.

For non-clustered systems

File for save	File name
Pre-processing and post-processing scripts for replication management function	<i>environmentDir</i> \etc\repl\scripts\RepSrcPre.js <i>environmentDir</i> \etc\repl\scripts\RepDstPre.js <i>environmentDir</i> \etc\repl\scripts\RepSrcPost.js <i>environmentDir</i> \etc\repl\scripts\RepDstPost.js
Copy source volume locking specification file	<i>environmentDir</i> \etc\repl\data\SRLOCK.INI
Copy destination volume locking specification file	<i>environmentDir</i> \etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<i>environmentDir</i> \etc\repl\data\DEFAULT\check.ini

For clustered systems

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\SRLOCK.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 "Swsrpmake command and swsrpcancel comamnd processing (for Windows)" in the *ETERNUS SF Release Notes*, 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	<i>environmentDir</i> \etc\repl\data\EXDMAP.INI
Device definition file	<i>environmentDir</i> \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/*logicalNodeName*/data

If you were backing up Symfaware 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 saveDir
```

See

Refer to the manuals according to the previous operating environment's version for information on the command.

- In the case of Version 14.2 or earlier
"swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide*.
- In the case of Version 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

For non-clustered systems

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

For clustered systems

File for save	File name
Pre-processing and post-processing scripts for backup management function	/etc/opt/FJSVswsts/ <i>logicalNodeName</i> /sh/OpcBackup.pre /etc/opt/FJSVswsts/ <i>logicalNodeName</i> /sh/OpcBackup.post /etc/opt/FJSVswsts/ <i>logicalNodeName</i> /sh/OpcRestore.pre /etc/opt/FJSVswsts/ <i>logicalNodeName</i> /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)

For non-clustered systems

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

For clustered systems

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /sh/RepSrc.pre /etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /sh/RepDst.pre /etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /sh/RepSrc.post /etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /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/*logicalNodeName*/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 saveDir
```



Refer to the manuals according to the previous operating environment's version for information on the command.

- In the case of Version 14.2 or earlier
"swstresback (Resource backup command)" in the *ETERNUS SF AdvancedCopy Manager Operator's Guide*.
- In the case of Version 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

For non-clustered systems

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

For clustered systems

File for save	File name
Pre-processing and post-processing scripts for backup management function	/etc/opt/FJSVswsts/ <i>logicalNodeName</i> /sh/OpcBackup.pre
	/etc/opt/FJSVswsts/ <i>logicalNodeName</i> /sh/OpcBackup.post
	/etc/opt/FJSVswsts/ <i>logicalNodeName</i> /sh/OpcRestore.pre
	/etc/opt/FJSVswsts/ <i>logicalNodeName</i> /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)

For non-clustered systems

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

For clustered systems

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /sh/RepSrc.pre /etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /sh/RepDst.pre /etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /sh/RepSrc.post /etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /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.

For non-clustered systems

Copy the following files to any directory.

For Windows:

[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 or Linux:

[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	

For clustered systems

Copy the following files to any directory.

For Windows:

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 <i>ETERNUS SF Operation Guide for Copy Control Module</i> .

\$\$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 or Linux:

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/acc/et/stxc.alias - \$\$SHARE_MNT/etc/opt/FJSVccm/acc/et/stxc_ext.alias - \$\$SHARE_MNT/etc/opt/FJSVccm/acc/et/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 <i>ETERNUS SF Operation Guide for Copy Control Module</i> .

\$\$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.



- 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.
-

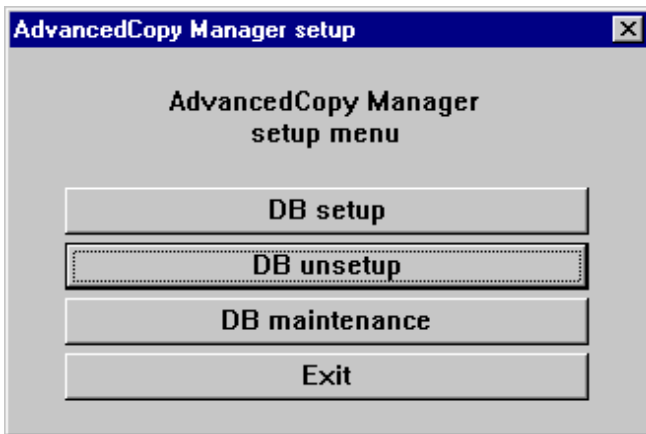
The procedure is shown below:

1. Login to the server where the database unsetup will be performed.

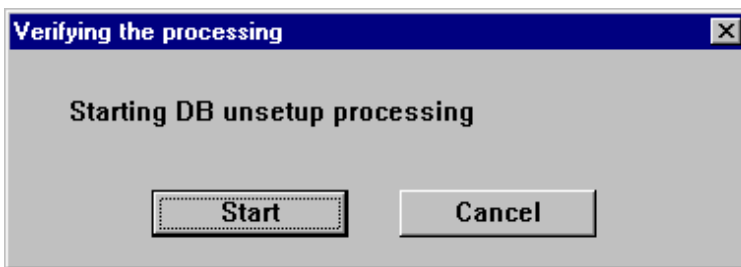
For installing AdvancedCopy Manager of the previous version, login to the server as the user that has been specified when setting the database information.

If you login to the server with another user, this operation may fail.

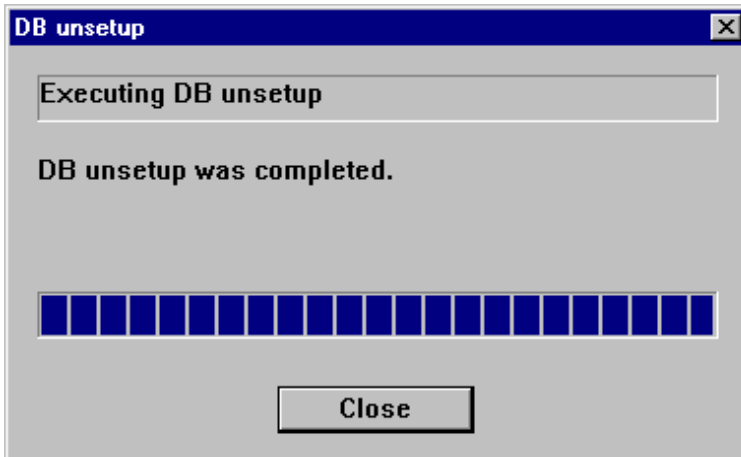
2. Click **Start > Programs > AdvancedCopy Manager** or **ETERNUS SF Manager > DB Setup**.
3. The following screen is displayed.
Click **DB unsetup**.



4. The following screen is displayed.
Click **Start**.



- When the processing is completed, the following screen is displayed.
Click **Close**.



- Finish the database unsetup by clicking **Exit** 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:

- Execute the following command:

```
# /opt/swstorage/bin/stgdbunset
```

- 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 the stgrepcnv command to recover the migration target repository data to the current version repository.

```
C:\> programDir\ACM\bin\stgrepcnv -d saveDir
```




Refer to "stgrepcnv (Repository data migration command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for information on the command.

2. Change the server information.

To ensure data consistency, execute the stgxfwcmmodsrv command to perform the server information change processing. Specify the Management Server name to the -n option and execute the stgxfwcmmodsrv command. Check **Server** column of the stgxfwcdispsrv command execution result for the Management Server name specified to the -n option.

```
C:\> programDir\ACM\bin\stgxfwcmmodsrv -n ManagementServerName
```



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

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 the stgrepcnv command to recover the migration target repository data to the current version repository.

```
# /opt/FJSVswstf/bin/stgrepcnv -d saveDir
```



Refer to "stgrepcnv (Repository data migration command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for information on the command.

2. Change the server information.

To ensure data consistency, execute the stgxfwcmmodsrv command to perform the server information change processing. Specify the Management Server name to the -n option and execute the stgxfwcmmodsrv command. Check **Server** column of the stgxfwcdispsrv command execution result for the Management Server name specified to the -n option.

```
# /opt/FJSVswstf/bin/stgxfwcmmodsrv -n ManagementServerName
```



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

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 executing the copy command.

For non-clustered systems on Management Server which also serves as a Managed Server

File for restoration	Full path name for restoration destination
device.ini	<i>environmentDir</i> \ACM\etc\device.ini

For non-clustered systems on Managed Server

File for restoration	Full path name for restoration destination
device.ini	<i>environmentDir</i> \etc\device.ini

For clustered systems

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:

For Management Server which also serves as a Managed Server

```
C:\> programDir\ACM\bin\swstresrst saveDir
```

For Managed Server

```
C:\> programDir\bin\swstresrst saveDir
```



Refer to "swstresrst (Resource restore command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for information on the command.

3. Restore specification files.



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 executing the copy command:

- Transaction volume locking specification file for backups
- Backup volume locking specification file for backups
- Backup-restored volume locking specification file

For non-clustered systems 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	<i>environmentDir</i> \ACM\etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	<i>environmentDir</i> \ACM\etc\backup\data\BBACKLOCK.INI

File for restoration	Full path name for restoration destination
Backup-restored volume locking specification file	<i>environmentDir</i> \ACM\etc\backup\data\RDSTLOCK.INI

For non-clustered systems on Managed Server

File for restoration	Full path name for restoration destination
Transaction volume locking specification file for backups	<i>environmentDir</i> \etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	<i>environmentDir</i> \etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	<i>environmentDir</i> \etc\backup\data\RDSTLOCK.INI

For clustered systems

File for restoration	Full path name for restoration destination
Transaction volume locking specification file for backups	< <i>shared disk</i> >:\etc\opt\swstorage\etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	< <i>shared disk</i> >:\etc\opt\swstorage\etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	< <i>shared disk</i> >:\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 executing the copy command.

For non-clustered systems on Management Server which also serves as a Managed Server

File for restoration	Full path name for restoration destination
device.ini	<i>environmentDir</i> \ACM\etc\device.ini

For non-clustered systems on Managed Server

File for restoration	Full path name for restoration destination
device.ini	<i>environmentDir</i> \etc\device.ini

For clustered systems

File for restoration	Full path name for restoration destination
device.ini	< <i>shared disk</i> >:\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:

For Management Server which also serves as a Managed Server

```
C:\> programDir\ACM\bin\swsrprecoverres -r
```

For Managed Server

```
C:\> programDir\bin\swsrprecoverres -r
```



Refer to "swsrprecoverres (Resource adjustment command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for information on the command.

3. Restore specification files.

Restore the following files saved in "[A.3 Backing up the management information \(for Windows\)](#)" by executing 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)



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.

For non-clustered systems 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	<i>environmentDir</i> \ACM\etc\repl\data\SRLOCK.INI
Copy destination volume locking specification file	<i>environmentDir</i> \ACM\etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<i>environmentDir</i> \ACM\etc\repl\data\DEFAULT\check.ini

For non-clustered systems on Managed Server

File for restoration	Full path name for restoration destination
Copy source volume locking specification file	<i>environmentDir</i> \etc\repl\data\SRLOCK.INI
Copy destination volume locking specification file	<i>environmentDir</i> \etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<i>environmentDir</i> \etc\repl\data\DEFAULT\check.ini

For clustered systems

File for restoration	Full path name for restoration destination
Copy source volume locking specification file	<shared disk>:\etc\opt\swstorage\etc\repl\data\SRLOCK.INI
Copy destination volume locking specification file	<shared disk>:\etc\opt\swstorage\etc\repl\data\DSTLOCK.INI

File for restoration	Full path name for restoration destination
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	<i>environmentDir</i> \etc\repl\data\EXDMAP.INI
Device definition file	<i>environmentDir</i> \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)

Refer to "Managing a Device on AdvancedCopy Manager" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)* for information on udev device names.

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:

Execute the `stgxfwcmsetmode` command to change the information collection mode such that udev device names are not used.

Refer to "Managing a Device on AdvancedCopy Manager" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)* for information on changing the information collection mode.

- 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.

Refer to "Changing the device configuration" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)* for the procedures.

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 saveDir
```



Refer to "swstresrst (Resource restore command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for information on the command.

2. Restore pre-processing and post-processing scripts.



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
```



Refer to "swsrprecoverres (Resource adjustment command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for information on the command.

2. Restore specification files.

Restore the following files saved in "A.4 Backing up the management information (for Solaris, Linux)" by executing the copy command:

- Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

For non-clustered systems

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

For clustered systems

File for restoration	Full path name for restoration destination
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /data/DEFAULT/check.ini



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.



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. Refer to "Fetching device information on a Managed Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)* for information on how to fetch device information.

- 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. Refer to "Managing a Device on AdvancedCopy Manager" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)* for information on device names. 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 executing the `stgxfwcmsetmode` command, and then delete the definition for the backup management and replication management. After that, set the device format used after upgrading executing the `stgxfwcmsetmode` command, and then fetch the device information and redefine the backup management and replication management.

Refer to "Configuration Management Commands" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)* for information on setting the information collection mode.

Refer to "Changing the device configuration" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)* for information on backup management and replication management.

- 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` command.

Refer to "Configuration Management Commands" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)* for information on setting the information collection mode.

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 saveDir
```



Refer to "swstresrst (Resource restore command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for information on the command.

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

Refer to "swsrprecoverres (Resource adjustment command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for this version for information on the command.

2. Restore specification files.

Restore the following files saved in "[A.5 Backing up the management information \(for HP-UX, AIX\)](#)" by executing the cp command:

- Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

For non-clustered systems

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

For clustered systems

File for restoration	Full path name for restoration destination
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/ <i>logicalNodeName</i> /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](#)".

For non-clustered systems

Restore the environment setting files according to the following procedure.

1. Delete the following files.

- For Windows:

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 or Linux:

File name	Remarks
- All files under /etc/opt/FJSVccm/db/cg directory	
- /etc/opt/FJSVccm/prop/user.properties - /etc/opt/FJSVccm/acc/et/stxc.alias - /etc/opt/FJSVccm/acc/et/stxc_ext.alias - /etc/opt/FJSVccm/acc/et/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:

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 were 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 or Linux:

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/acc/et/stxc.alias - /etc/opt/FJSVccm/acc/et/stxc_ext.alias - /etc/opt/FJSVccm/acc/et/stxcvolinf	Only when files were backed up.
- /var/opt/FJSVccm/micc/database/DeviceRegList.xml	

The restoration for the environment setting files is completed.

For clustered systems

Restore the environment setting files according to the following procedure.

1. Delete the following files.

- For Windows:

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 or Linux:

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:

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 were 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 or Linux:

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 were 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 *portNumber*. If you did change the port number, specify the changed port number for *portNumber*.

The file name of the created backup data is *backupFileName*.

```
$INS_DIR\Common\sys\postgres\bin\pg_dump -U esfpostgres -C --attribute-inserts -p
portNumber -f $BAK_DIR\Common\backupFileName 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.



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 *portNumber*. If you did change the port number, specify the changed port number for *portNumber*.

The file name of the created backup data is *backupFileName*.

```
/opt/FJSVesfcm/postgres/bin/pg_dump -U esfpostgres -C --attribute-inserts -p portNumber -f $BAK_DIR/Common/backupFileName 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.



About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.
\$INS_DIR	"Program Directory" specified at the ETERNUS SF Manager installation.

- Using Explorer, create the following backup directories:
 - \$BAK_DIR\LM
- From a user with OS Administrator privilege, execute the following command to create backup data. The file name of the created backup data is *backupFileName*.

```
$INS_DIR\LM\bin\esflm backup $BAK_DIR\LM\ backupFileName
```

A.18 Backing up the license management database (for Solaris, Linux)

Save the license management database.



About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.

- Create the following backup directories:


```
mkdir -p $BAK_DIR/LM
```
- From a user with OS Administrator privilege, execute the following command to create backup data. The file name of the created backup data is *backupFileName*.

```
/opt/FJSVesflm/bin/esflm backup $BAK_DIR/LM/backupFileName
```

A.19 Restoring the common control repository (for Windows)

Restore the common control repository.



About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.
\$INS_DIR	"Program Directory" specified at the ETERNUS SF Manager installation.

- 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 *portNumber*. If you did change the port number, specify the changed port number for *portNumber*.

```
$INS_DIR\Common\sys\postgres\bin\psql -U esfpostgres -p portNumber 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 *portNumber*. If you did change the port number, specify the changed port number for *portNumber*.

The *backupFileName* is the file name specified when the backup data was created.

```
$INS_DIR\Common\sys\postgres\bin\psql -U esfpostgres -p portNumber -f $BAK_DIR\Common  
\backupFileName 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 *portNumber*. If you did change the port number, specify the changed port number for *<port number>*.

```
/opt/FJSVesfcm/postgres/bin/psql -U esfpostgres -p portNumber 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 *portNumber*. If you did change the port number, specify the changed port number for *portNumber*.

The *backupFileName* is the file name specified when the backup data was created.

```
/opt/FJSVesfcm/postgres/bin/psql -U esfpostgres -p portNumber -f $BAK_DIR/Common/  
backupFileName 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 *backupFileName* is the file name specified when the backup data was created.

```
$INS_DIR\LM\bin\esflm restore $BAK_DIR\LM\backupFileName
```

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 *backupFileName* is the file name specified when the backup data was created.

```
/opt/FJSVesflm/bin/esflm restore $BAK_DIR/LM/backupFileName
```


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

```
dvdromMountPoint/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.

Refer to "[B.2 Install parameters \(for ETERNUS SF Manager\)](#)" for the description of each parameter.

```
#-----#
# 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/sfswstf/db
RDB_dictionary_directory: /var/opt/FJSVswstf/sfswstf/dic
RDB_log_file_directory: /var/opt/FJSVswstf/sfswstf/log
Repository_DB_space_directory: /var/opt/FJSVswstf/sfswstf/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/sfswstf/db
RDB_dictionary_directory	RDB dictionary directory	/var/opt/FJSVswstf/sfswstf/dic
RDB_log_file_directory	RDB log file directory	/var/opt/FJSVswstf/sfswstf/log
Repository_DB_space_directory	Repository DB space directory	/var/opt/FJSVswstf/sfswstf/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

```
dvdromMountPoint/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
```