

FUJITSU Storage

ETERNUS SF

**Express V16.0 / Storage Cruiser V16.0 /
AdvancedCopy Manager V16.0**

Migration Guide

Preface

Purpose

This manual describes how to upgrade to this version from the previous version for the following FUJITSU Storage ETERNUS SF products:

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

Intended Readers

This manual is intended for users 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 14.x](#)

This chapter describes the upgrade procedure for Storage Cruiser Version 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 14.x](#)

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

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

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

[Chapter 8 Collecting the troubleshooting information](#)

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 Server(R) 2012 R2 Standard Microsoft(R) Windows Server(R) 2012 R2 Datacenter	Windows Server 2012 R2	
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	
Windows(R) 8.1 Windows(R) 8.1 Pro	Windows 8.1	
Solaris(TM) 9 Operating System	Solaris 9	Solaris or Solaris OS
Oracle Solaris 10	Solaris 10	
Oracle Solaris 11	Solaris 11	
Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T)	RHEL-AS4	Linux

Formal Name	Abbreviation	
Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T)	RHEL-ES4	
Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64)	RHEL5	
Red Hat(R) Enterprise Linux(R) 6 (for x86) Red Hat(R) Enterprise Linux(R) 6 (for Intel64)	RHEL6	
SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T	SUSE Linux Enterprise Server 11	
HP-UX 11i v1 HP-UX 11i v2 HP-UX 11i v3	HP-UX	
AIX(R) V6.1 AIX(R) V7.1	AIX	
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
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.

FUJITSU Storage ETERNUS

Formal Name	Abbreviation		
FUJITSU Storage ETERNUS DX60/DX60 S2 FUJITSU Storage ETERNUS DX80/DX80 S2 FUJITSU Storage ETERNUS DX90/DX90 S2	-		ETERNUS DX series or ETERNUS Disk storage system
FUJITSU Storage ETERNUS DX100 S3 FUJITSU Storage ETERNUS DX200 S3			
FUJITSU Storage ETERNUS DX410 FUJITSU Storage ETERNUS DX440	ETERNUS DX400 series	ETERNUS DX400/DX400 S2 series	
FUJITSU Storage ETERNUS DX410 S2 FUJITSU Storage ETERNUS DX440 S2	ETERNUS DX400 S2 series		
FUJITSU Storage ETERNUS DX500 S3 FUJITSU Storage ETERNUS DX600 S3	-		
FUJITSU Storage ETERNUS DX8100 FUJITSU Storage ETERNUS DX8400 FUJITSU Storage ETERNUS DX8700	ETERNUS DX8000 series	ETERNUS DX8000/DX8000 S2 series	
FUJITSU Storage ETERNUS DX8100 S2 FUJITSU Storage ETERNUS DX8700 S2	ETERNUS DX8000 S2 series		
FUJITSU Storage ETERNUS DX200F	-		

Each individual device name in this document is listed with "FUJITSU Storage" omitted from it.

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(R)	SQL Server
VMware(R) ESX(R)	VMware ESX
VMware(R) ESXi(TM)	VMware ESXi
VMware(R) vCenter(TM) Server	VMware vCenter Server or vCenter Server
FUJITSU Software PRIMECLUSTER Global Disk Services	GDS
FUJITSU Software PRIMECLUSTER Global File Services	GFS
FUJITSU Software Symfoware Server Enterprise Extended Edition FUJITSU Software Symfoware Server Enterprise Edition	Symfoware

Manuals

Formal Name	Abbreviation
FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Quick Reference	ETERNUS SF Quick Reference
FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Release Notes	ETERNUS SF Release Notes
FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Installation and Setup Guide	ETERNUS SF Installation and Setup Guide
FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Migration Guide	ETERNUS SF Migration Guide
FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Web Console Guide	ETERNUS SF Web Console Guide
FUJITSU Storage ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Cluster Environment Setup Guide	ETERNUS SF Cluster Environment Setup Guide
FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Messages	ETERNUS SF Messages
FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser Event Guide	ETERNUS SF Event Guide
FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Glossary	ETERNUS SF Glossary

Besides the above-mentioned, each individual manual name in this document is listed with "FUJITSU Storage" omitted from it.

Others

- In this document, the following products are collectively described as "Windows Server 2008 or later".
 - Windows Server 2008
 - Windows Server 2008 R2
 - Windows Server 2012
 - Windows Server 2012 R2

- In this document, the following products are collectively described as "Windows Server 2012 or later".
 - Windows Server 2012
 - Windows Server 2012 R2
- In this document, unless there is a special explanatory note, ETERNUS DX200 S3 indicates ETERNUS DX200 S3 and ETERNUS DX200F. In addition, ETERNUS Disk storage system includes ETERNUS DX200F All Flash Arrays. However, the following functions are not supported in ETERNUS DX200F:
 - Energy saving operation for storage device
 - NAS operation for storage device
 - Automated Storage Tiering operation at multiple tiers (two or more)

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Notes

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Update History

Content of Update	Updated Section	Revision
The information related to ETERNUS DX200F was described.	"Others" in Preface	1.1

Manual Organization and Reading Suggestions

Manual Organization

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

When to Read	Related Manuals (Abbreviated)	Related Products (*1)			Explanation
		EXP	SC	ACM	
Before installation	Quick Reference	Yes	Yes	Yes	This manual is common for all products.
	Release Notes	Yes	Yes	Yes	This manual is common for all products.
	Overview	-	-	Yes	This manual is unique for the 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 Function - 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 Operation Guide for Copy Control Module
	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	Manual	Main Contents	How to Read
Acquiring a product overview and basic operation knowledge	Quick Reference	<ul style="list-style-type: none"> - Product overview - Installation decision - Overview of the necessary tasks from installation to first use 	Please read if you want to acquire a fundamental knowledge of the product and its operation in order to decide to install it or not.
	AdvancedCopy Manager Overview	<ul style="list-style-type: none"> - Main functions - Linkable applications - Procedure overview for Advanced Copy of ETERNUS Disk storage system 	
Confirming the updated contents	Release Notes	<ul style="list-style-type: none"> - 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	Migration Guide	<ul style="list-style-type: none"> - 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	Installation and Setup Guide	<ul style="list-style-type: none"> - Operating environment - Installation procedure - Setup procedure - Uninstallation procedure 	Please read if you want to install and setup the product.
	Cluster Environment Setup Guide	<ul style="list-style-type: none"> - Supported cluster software - Installation procedure for a clustered system - Setup procedure for a clustered system - Uninstallation procedure for a clustered system 	Please read if you want to install and setup the product on a clustered system.
Administration and operation of the installed system	Express Operation Guide	<ul style="list-style-type: none"> - 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.

Purpose	Manual	Main Contents	How to Read
	Storage Cruiser Operation Guide	<ul style="list-style-type: none"> - 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 Function	<ul style="list-style-type: none"> - Operating environment construction - Operating status monitoring - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference 	
	AdvancedCopy Manager Operation Guide (for Windows)	<ul style="list-style-type: none"> - Starting and stopping the software 	
	AdvancedCopy Manager Operation Guide (for Solaris)	<ul style="list-style-type: none"> - Data backup/restore inside the storage system 	
	AdvancedCopy Manager Operation Guide (for Linux)	<ul style="list-style-type: none"> - Necessary tasks after an architectural modification of the system as well as product maintenance 	
	AdvancedCopy Manager Operation Guide (for HP-UX)	<ul style="list-style-type: none"> - Command reference 	
	AdvancedCopy Manager Operation Guide (for AIX)		
	AdvancedCopy Manager Operation Guide for Copy Control Module		
	Web Console Guide	<ul style="list-style-type: none"> - Operating environment - Screen layout description 	Please read if you want to understand the ETERNUS SF Web Console.
Dealing with messages issued by the software	Messages	<ul style="list-style-type: none"> - 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	Event Guide	<ul style="list-style-type: none"> - 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	Glossary	<ul style="list-style-type: none"> - Product specific terminology explanation - Explanation of important terminology appearing in the manual 	Please read if you want to learn the meaning of important terms, product specific terms or

Purpose	Manual	Main Contents	How to Read
other important terms		<ul style="list-style-type: none">- Synonyms and related terms- Proper form of abbreviated terms	abbreviations used in the manuals.

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Chapter 1 Overview

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

1.1 Upgrade patterns

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

Point

This version product combinations obey to the following rules:

- Express cannot be combined with Storage Cruiser in a same system environment.
- Express can be combined with AdvancedCopy Manager in a same system environment. And also, 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 14.x: "Chapter 4 Upgrading Storage Cruiser Version 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 14.x: "Chapter 6 Upgrading AdvancedCopy Manager Version 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 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	ETERNUS SF Express Version 16.0
ETERNUS SF Storage Cruiser Version 14.x (*1) ETERNUS SF Storage Cruiser Version 15.x	ETERNUS SF Storage Cruiser Version 16.0
ETERNUS SF AdvancedCopy Manager Version 14.x (*2) ETERNUS SF AdvancedCopy Manager Version 15.x	ETERNUS SF AdvancedCopy Manager Version 16.0

*1: The Upgrade Installation can be used for the Storage Cruiser's manager only.

*2: The Upgrade Installation can be used for AdvancedCopy Manager's manager and AdvancedCopy Manager Copy Control Module.

For Solaris

Products which can use Upgrade Installation	Product after the upgrade
ETERNUS SF Storage Cruiser Version 14.x (*1) ETERNUS SF Storage Cruiser Version 15.x (*2)	ETERNUS SF Storage Cruiser Version 16.0
ETERNUS SF AdvancedCopy Manager Version 14.x (*3) ETERNUS SF AdvancedCopy Manager Version 15.x (*4)	ETERNUS SF AdvancedCopy Manager Version 16.0

*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 16.0
ETERNUS SF Storage Cruiser Version 14.x (*1) ETERNUS SF Storage Cruiser Version 15.x (*2)	ETERNUS SF Storage Cruiser Version 16.0
ETERNUS SF AdvancedCopy Manager Version 14.x (*3) ETERNUS SF AdvancedCopy Manager Version 15.x (*4)	ETERNUS SF AdvancedCopy Manager Version 16.0

*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.

Concerning Configuration of Version 15.x Session Timeout

When a time longer than the screen refresh interval is configured for the session timeout value, in Version 15.x, the session timeout function was disabled. In this version, the session timeout function has been enabled. When the session timeout value is exceeded without the Web Console being operated, a session timeout will occur.

Upgrade Installation passes the values configured for the session timeout value and the screen update interval to this version. For this reason, even if session timeout was disabled before performing the update, it will be enabled after performing the update.

In order to disable session timeout, login to the Web Console after upgrading to this version, and configure the session timeout value to be 0 (minutes).



Information

Refer to "Change Value for Session Timeout" in the *ETERNUS SF Web Console Guide* for information on how to change the session timeout value.

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 Technical Support.

Configuration information for Version 14.x

The following configuration information of Storage Cruiser Version 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 14.x

The following configuration information of AdvancedCopy Manager Version 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:
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 "[A.23 Backup of Express operational environment](#)" 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 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 Symfaware

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

2.1.5 Estimating the database size

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



See

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

2.1.6 Preparing for uninstallation

If AdvancedCopy Manager is installed, in order to start the upgrade, perform the DB unsetup before uninstalling the previous version.



See

Refer to "[A.7 Unsetting up the database](#)" for information on the DB unsetup procedure.

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

12 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
	Internal Port 5 (No screen display)	24917

- Custom installation

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

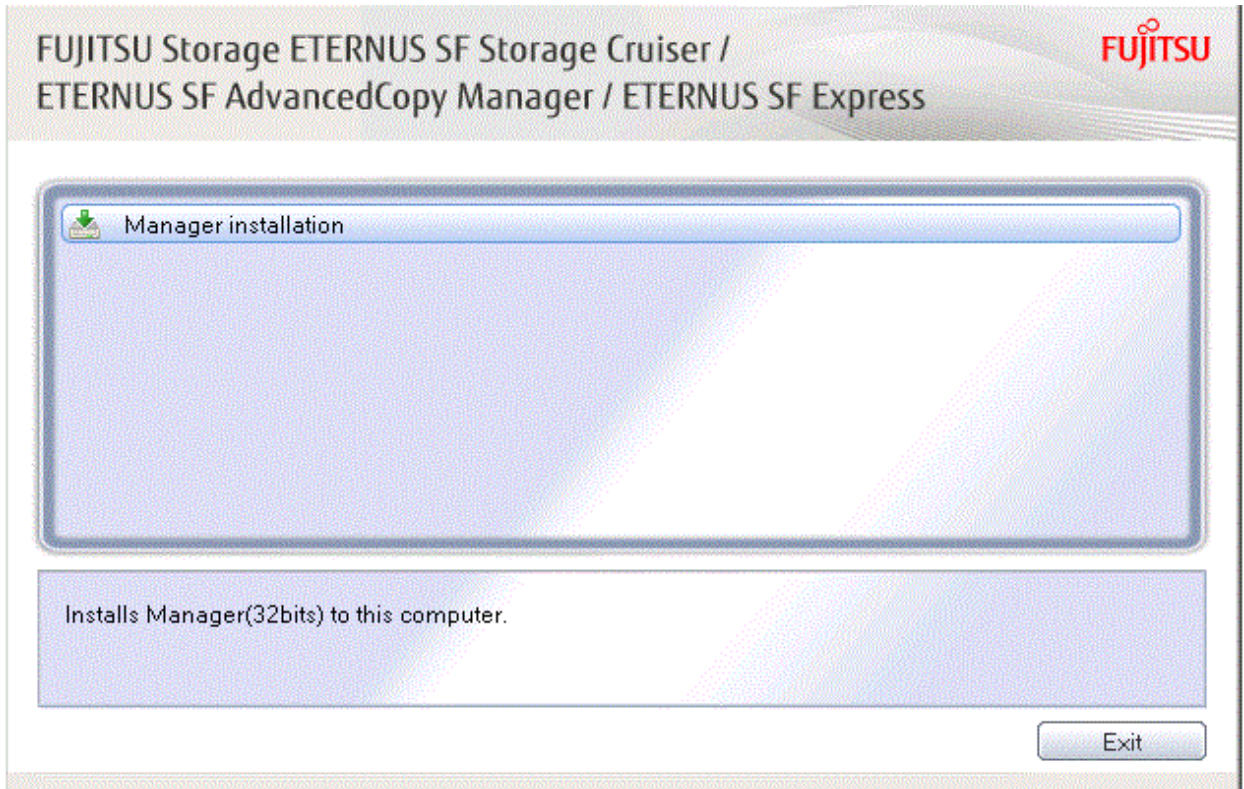
The upgrade is performed as follows:

1. Log on to the server using Administrator privileges.

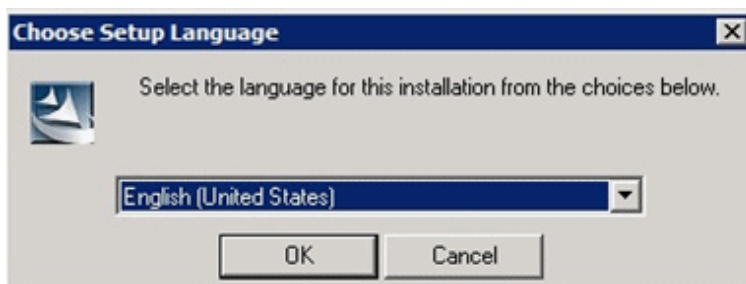
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

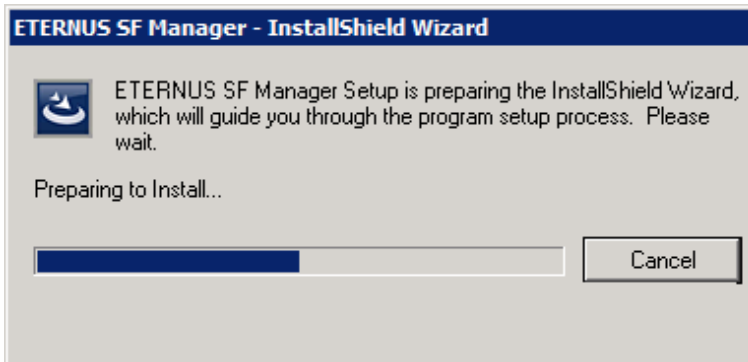
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



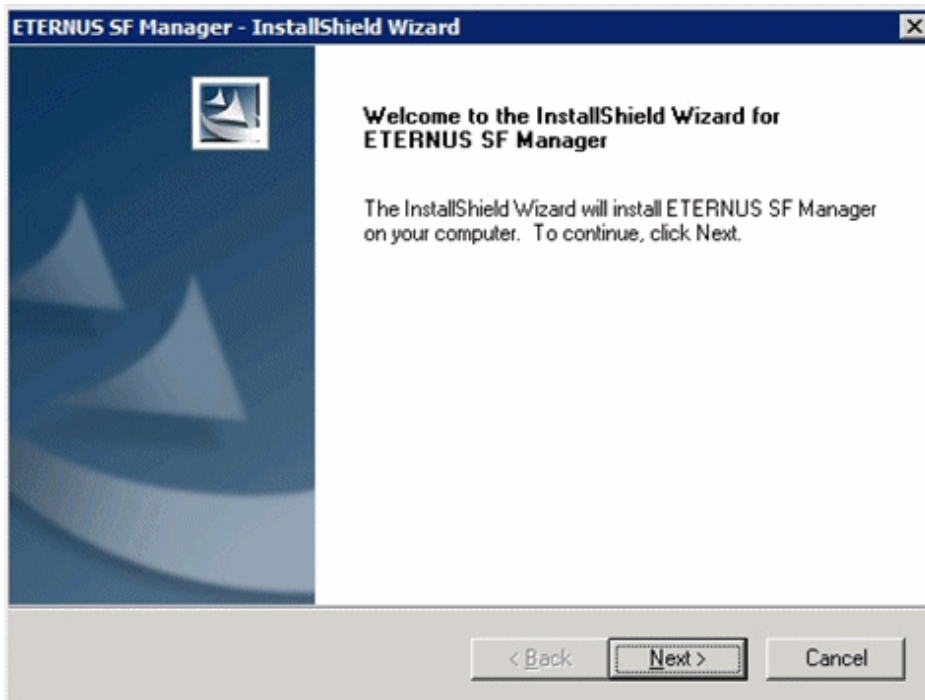
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

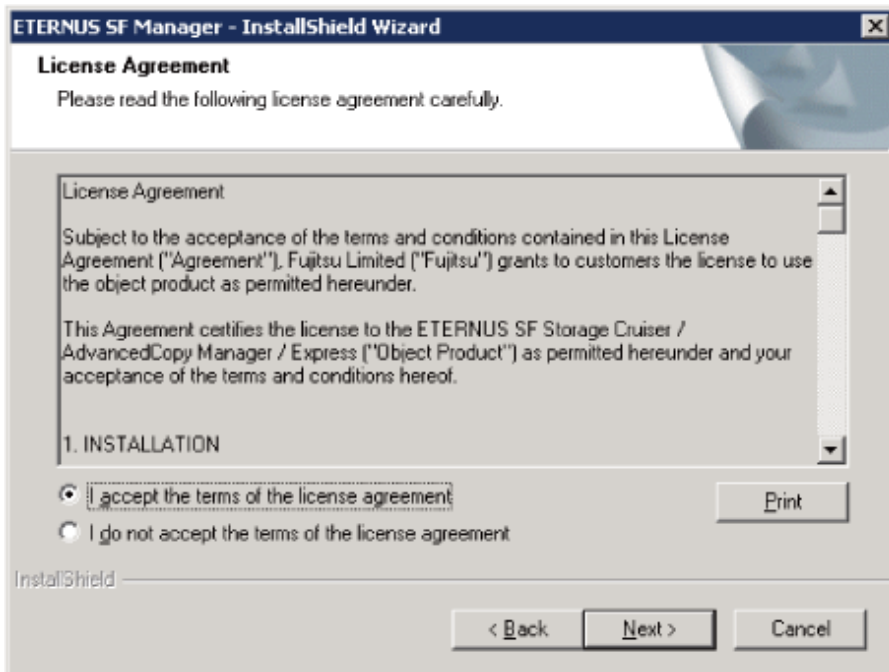


6. The installation wizard page will be displayed. Click **Next**.

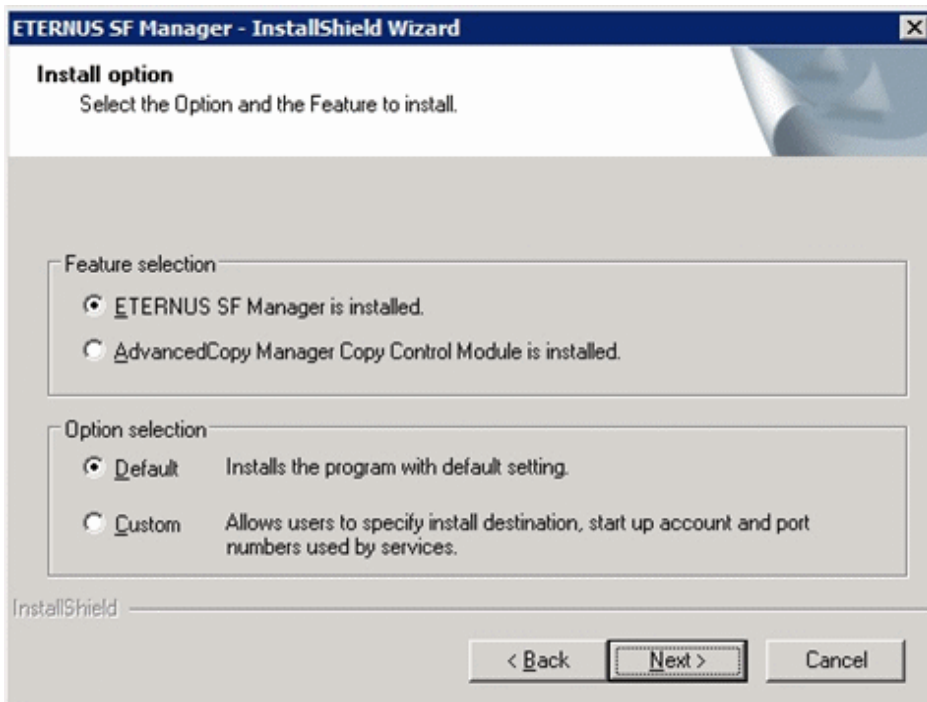


7. Read the terms and conditions of the **License Agreement** page.

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.].

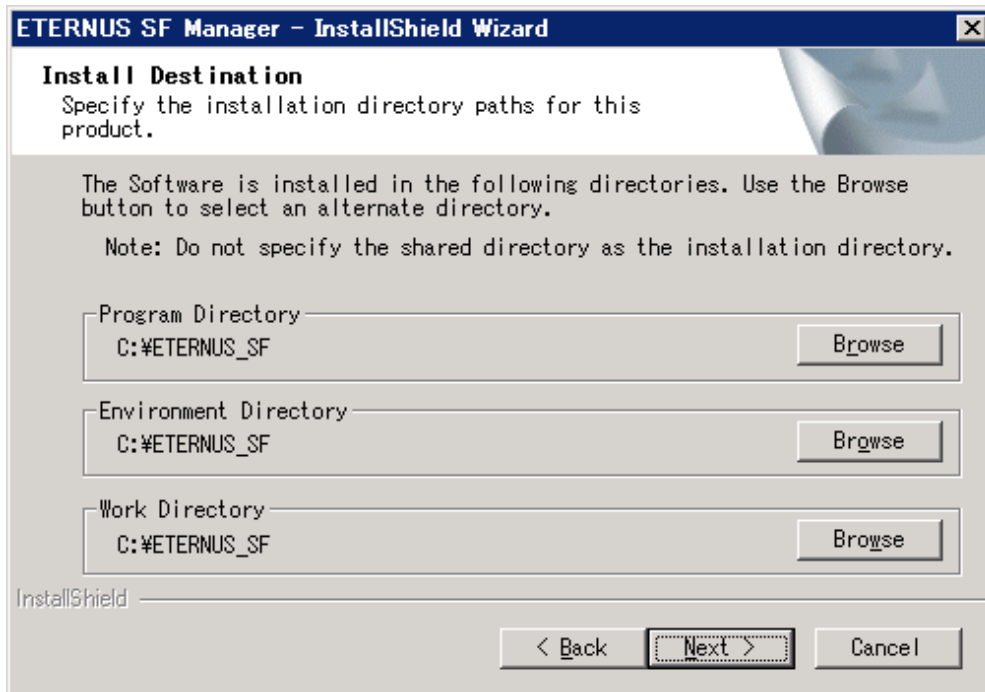
Option selection

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**.



 **Point**

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

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

The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 1024 and 65535 are valid.

To change the port number of Internal Port 5, edit the %SystemRoot%\system32\drivers\etc\services file by manual and define the unused port number under the following service name and in the range of 1024-65535:

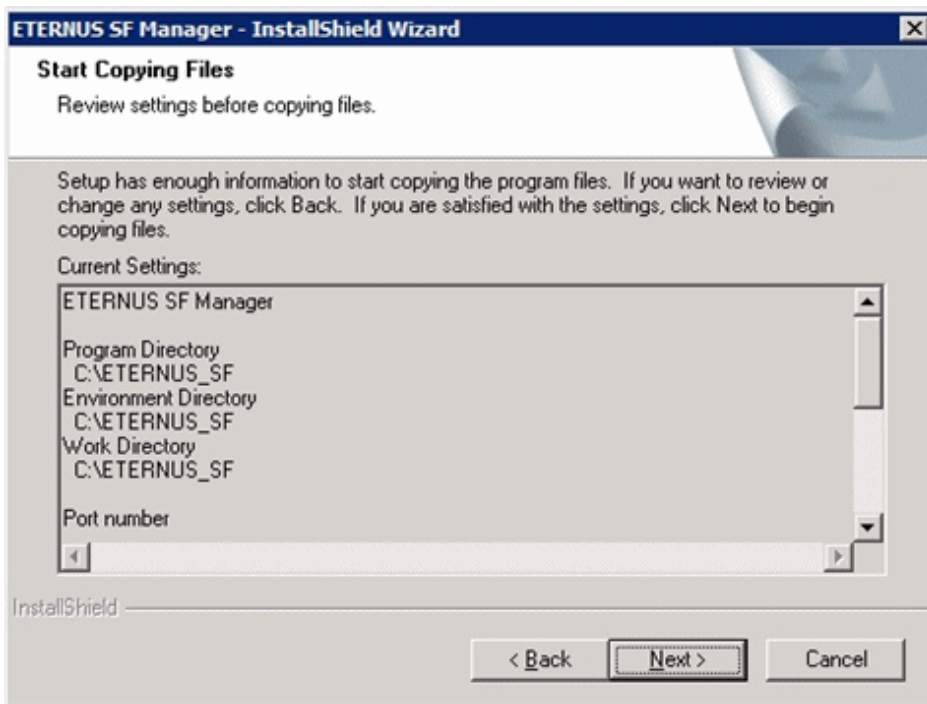
Service Name	Receive Port	Purpose
astm	24917/tcp	Use for internal communication.

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

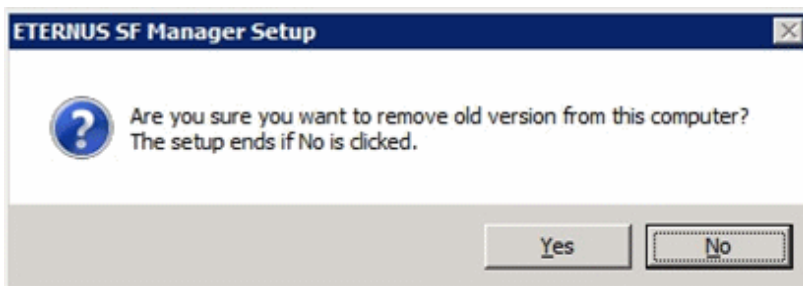
11. Check the settings information in the **Start Copying Files** page.

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.

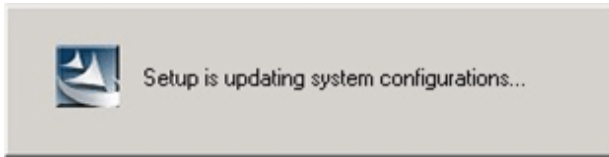
Point

- 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

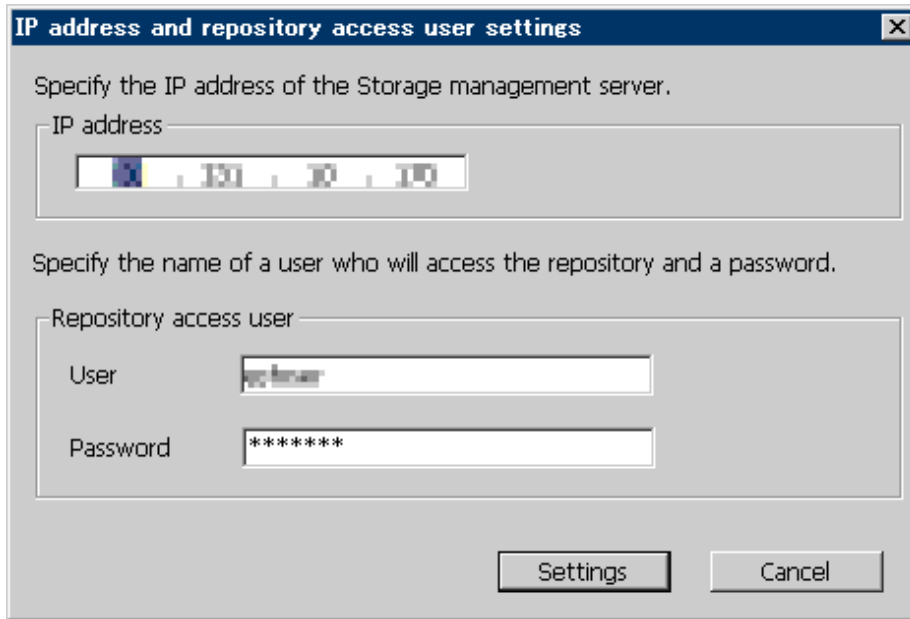
- Do not specify a shared folder in which to create the database.
- The number of characters in a folder name must be between 4 and 80. Spaces and the characters " | : * ? / . < > , % & ^ = ! ; # ' @ () + are not supported for file names.
- Do not select the option [Compress drive to save disk space] 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.



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).



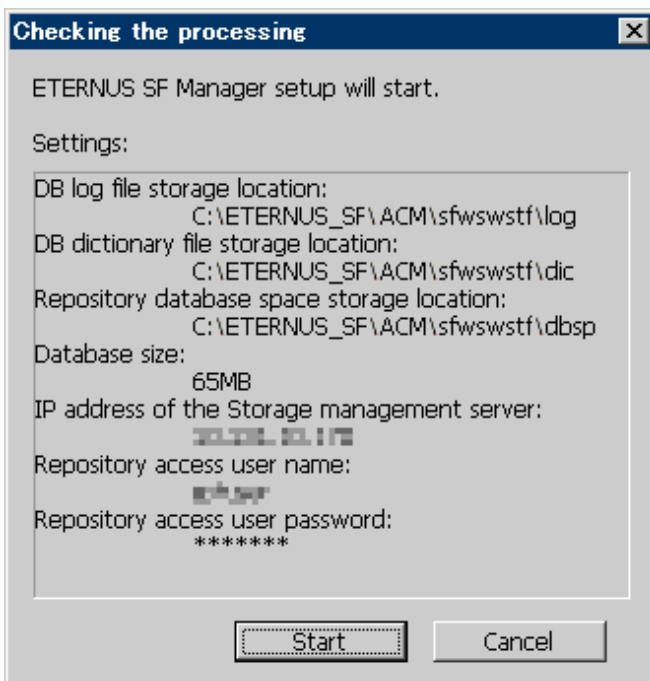
See

- 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.

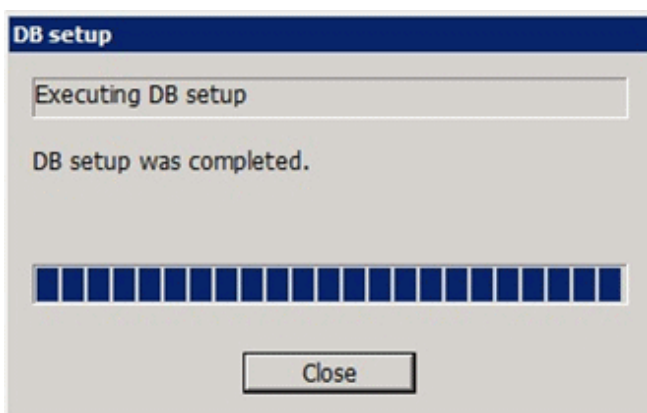
Server Type	User Type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

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

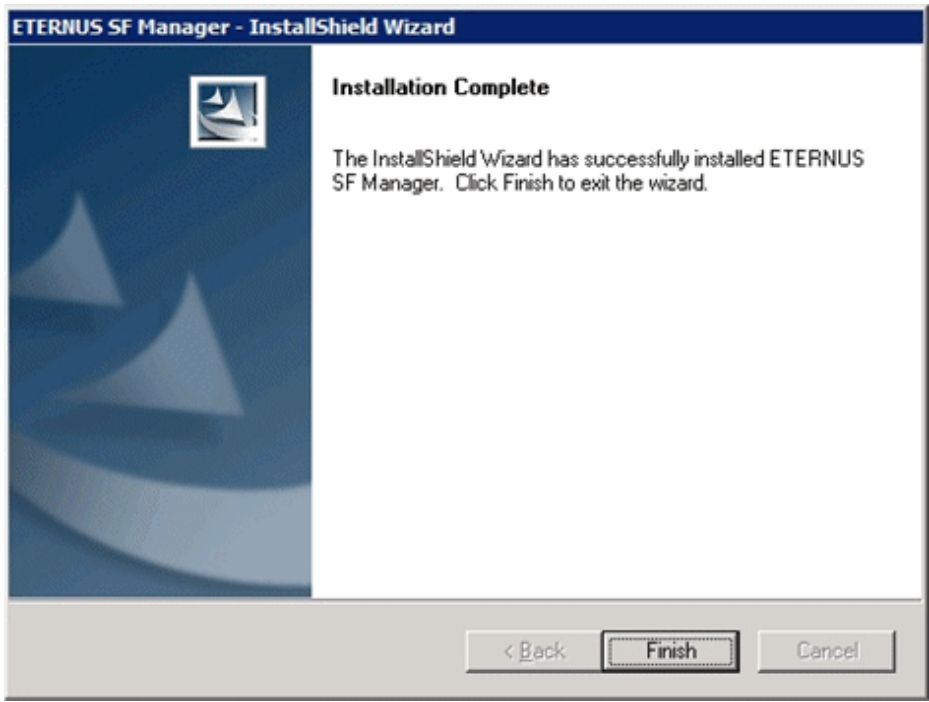
18. The following page will be displayed. Check the contents and click **Start**.



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](#)".



See

Refer to "[A.24 Restoring of Express operational environment](#)" for information on performing a restore.

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](#)".



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	Reference
Management Server	A.9 Restoring the repository data (for Windows)

Server Type	Reference
Management Server which also serves as a Managed Server	Perform in the following order: <ol style="list-style-type: none"> 1. A.9 Restoring the repository data (for Windows) 2. A.11 Restoring the management information (for Windows)

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, restore the operational environment backed up in "[2.1.1 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.

2.3.2 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.

1. Execute the `stguserset` command.

```
programDi r\ACM\bin\stguserset userName password
```



Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the service (AdvancedCopy Manager GUI Service).
3. Start the service (AdvancedCopy Manager GUI Service and ETERNUS SF Manager Tomcat Service).



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.

2.3.3 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
programDi r\Common\bin\esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "[9.4 What to do when an error occurs](#)" to take the corrective action.

Note

When executing the `esfadm devconf import command`, if a managed device or server is not accessible, the `esfadm devconf import command` should be re-executed since the device configuration information is not imported.

2.3.4 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.

2.3.5 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.

Note

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

2.3.6 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/Change Information of Account That Can Access ETERNUS Disk Storage System" in the *ETERNUS SF Web Console Guide* for this version for information on setup.

2.3.7 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.

2.3.8 Redefining missing information

- Administrator information

Enter the Administrator information.



Refer to "Display/Change 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 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 "Command References" in the *ETERNUS SF AdvancedCopy Manager 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. Perform the following operations with the Web Console to reload the server information.
 - a. On the global navigation tab, click **Storage**.
The registered ETERNUS Disk storage systems are displayed on the Main pane.
 - b. On the Main pane, check the target ETERNUS Disk storage system checkbox.
 - c. On the Action pane, click **Reload Conf.** under **Storage**.

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.

2.3.9 Resuming operation

When the tasks described above have been performed, the upgrade of Express is complete. Restart the Express 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.
- If performance monitoring had been performed, restart the performance monitoring.
Refer to "Instruction for performance management" in the *ETERNUS SF Express Operation Guide* for information on how to start the performance monitoring.

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.

3.1.1 Preparing for the upgrade

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

Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

3.1.1.1 Backing up the operational environment of the previous version

With the following procedures, backup the operation environment of Express of the previous version.

Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.

Note

Performance management information is not backed up. If performance monitoring is performed, record the current configuration details. In the previous version Web Console, refer to the following information.

- Settings for performance monitoring
 - Performance monitoring target (only for ETERNUS Disk storage system. Minimum LUN_V, Maximum LUN_V)

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. Stopping the service of ETERNUS SF Manager
Execute the following batch file:

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

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

4. Implement backup of the previous version
Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpreinst.bat backupDir [tmpDir]
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
 - The number of characters in a directory name must be up to 220.
 - Move the files (*tmpDir*) related to the performance management function to the same logical drive as the drive on which the product of the previous version is installed. In the case of backup to a different logical drive, it may take time to perform backup and restore.
-

3.1.1.2 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 Express.

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

3.1.1.3 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.

3.1.1.4 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.

3.1.1.5 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.

3.1.1.6 Preparing for uninstallation

Refer to "[A.7 Unsetting up the database](#)" to perform the repository database unsetup of the previous version:

3.1.2 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

12 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
	Internal Port 5 (No screen display)	24917

- 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:

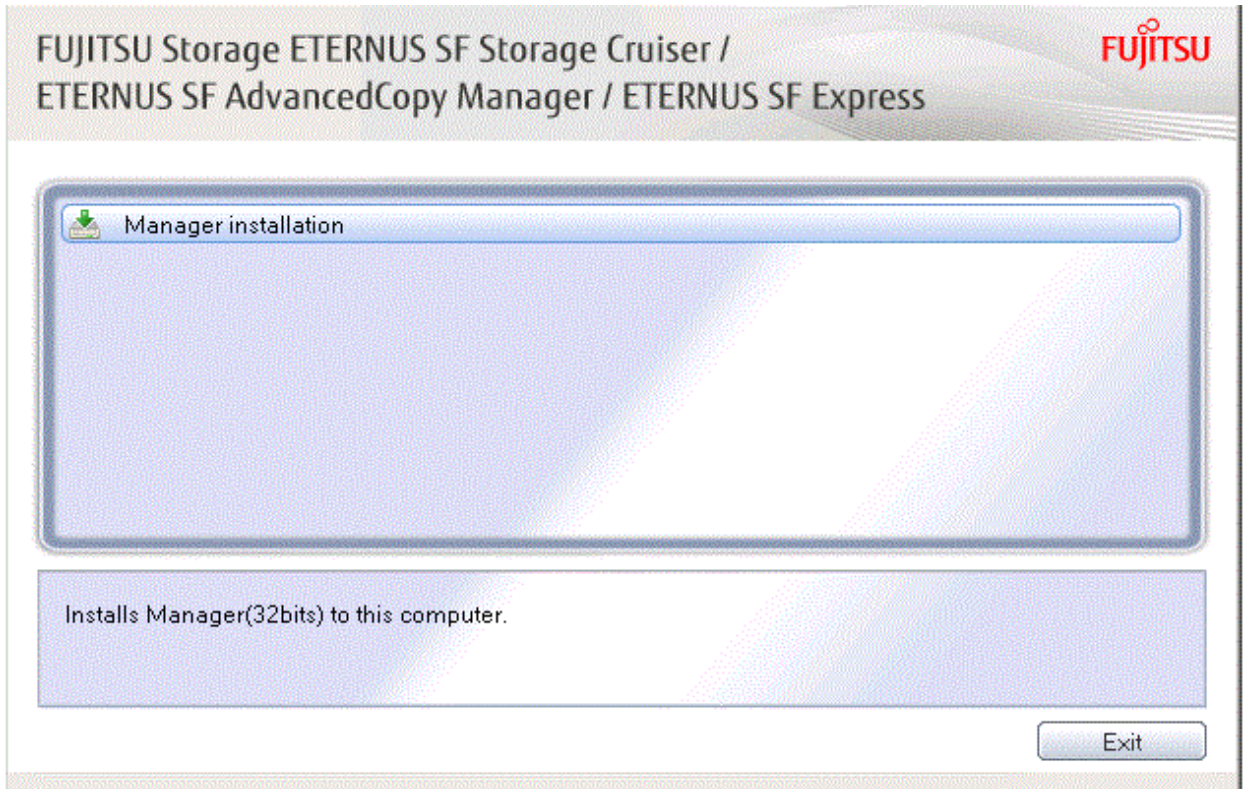
Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

1. Log on to the server using Administrator privileges.

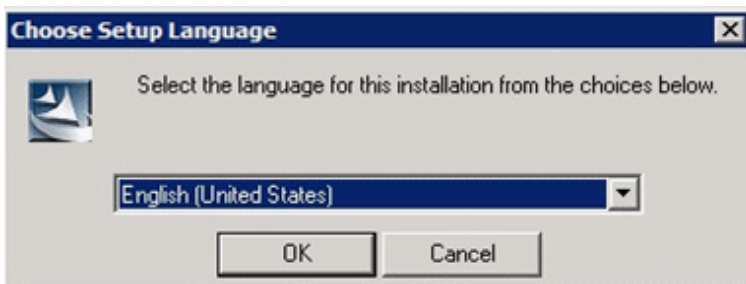
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

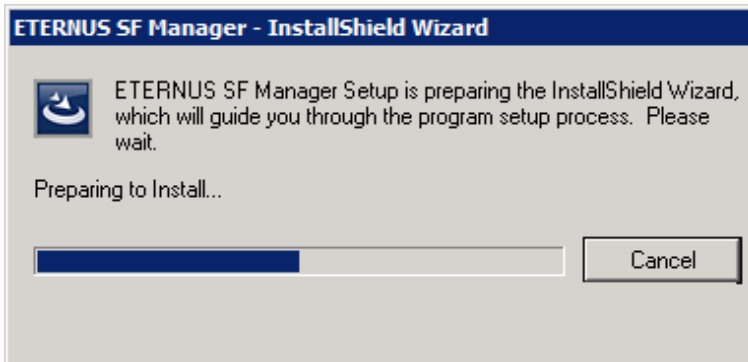
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



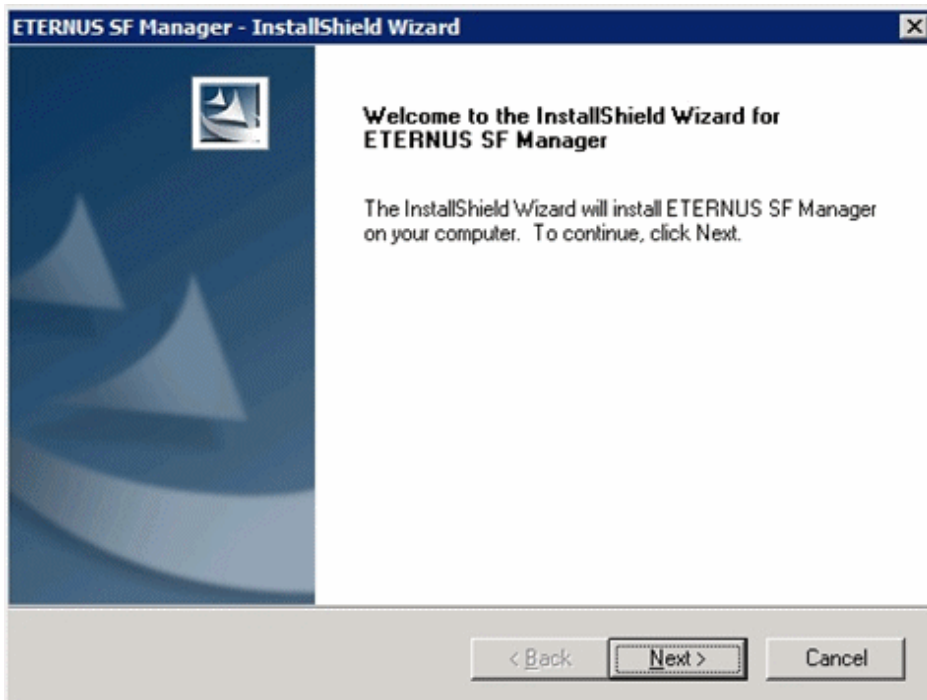
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

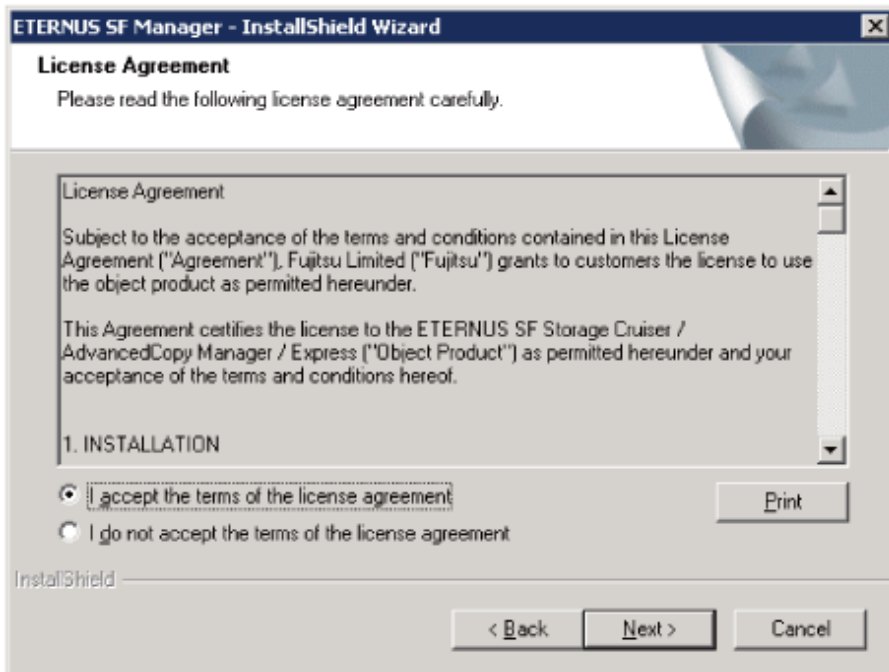


6. The installation wizard page will be displayed. Click **Next**.

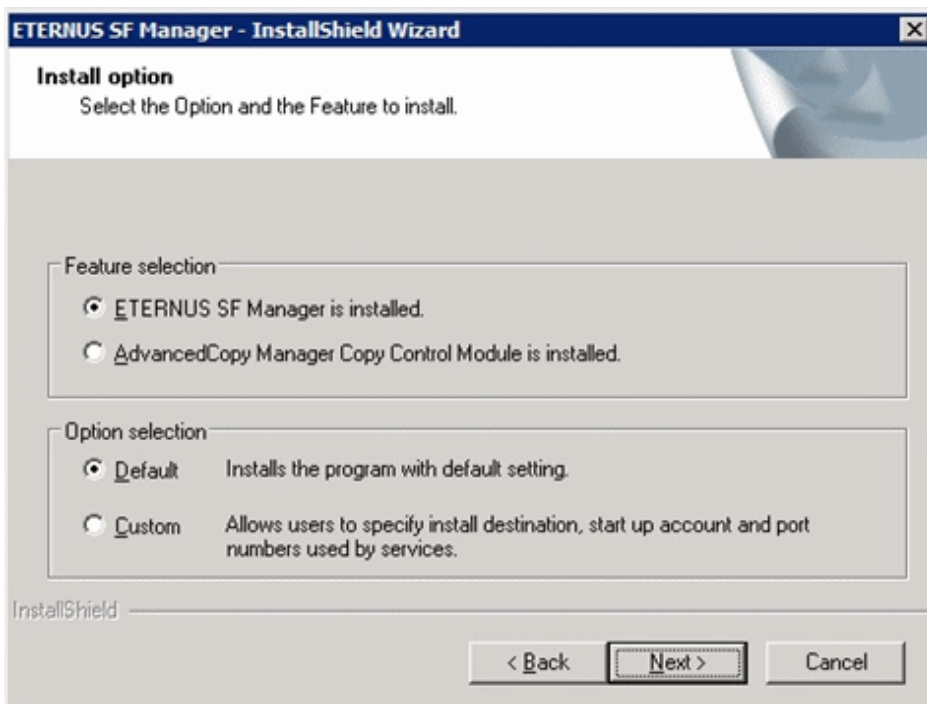


7. Read the terms and conditions of the **License Agreement** page.

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.].

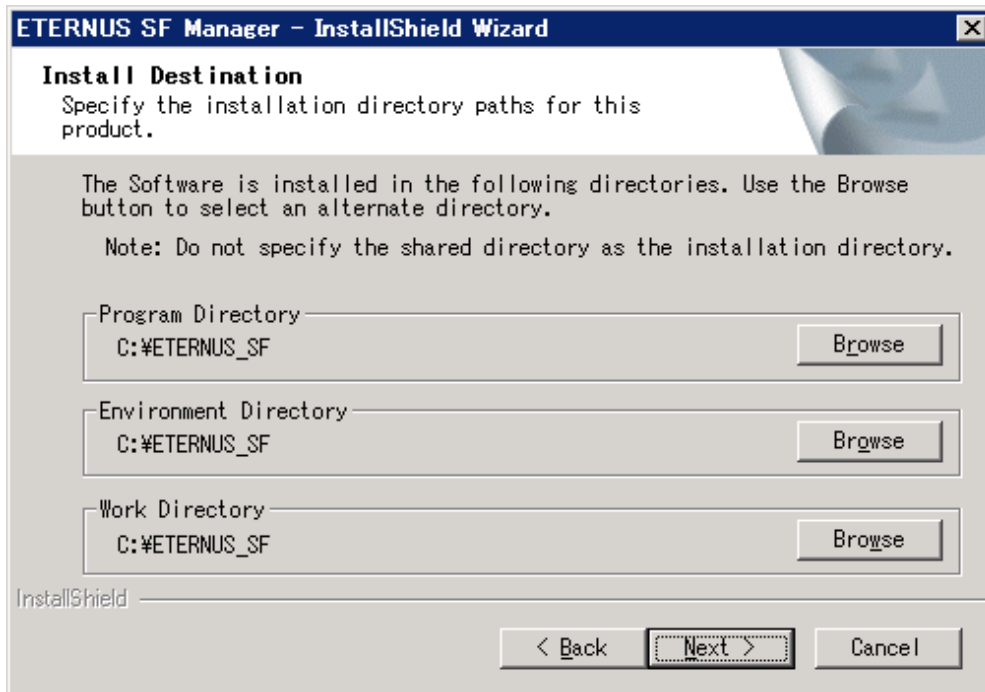
Option selection

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**.



Point

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

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

The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 1024 and 65535 are valid.

To change the port number of Internal Port 5, edit the %SystemRoot%\system32\drivers\etc\services file by manual and define the unused port number under the following service name and in the range of 1024-65535:

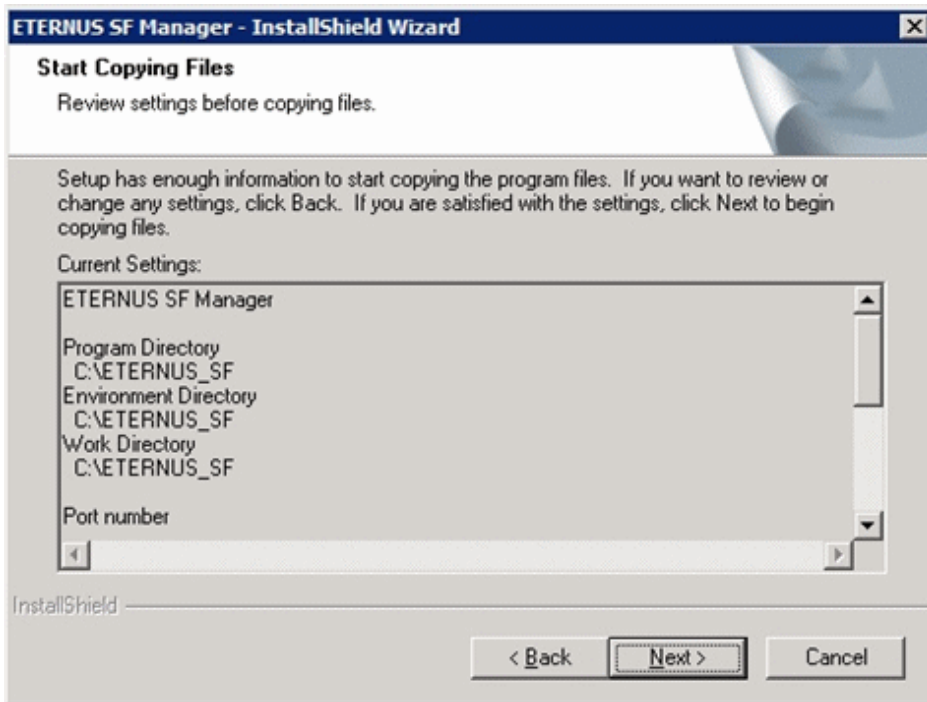
Service Name	Receive Port	Purpose
astm	24917/tcp	Use for internal communication.

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

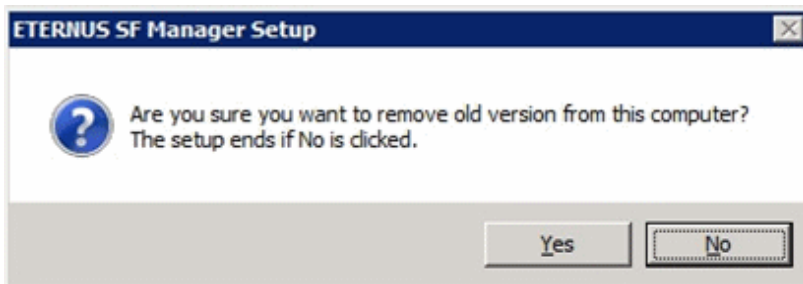
11. Check the settings information in the **Start Copying Files** page.

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

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



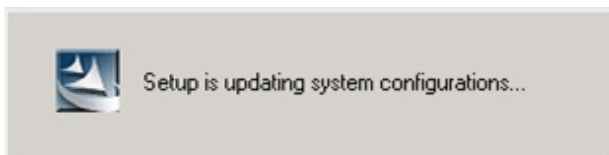
12. The following dialog box will be displayed. To proceed with the uninstallation, click **Yes**.



13. 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. 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.

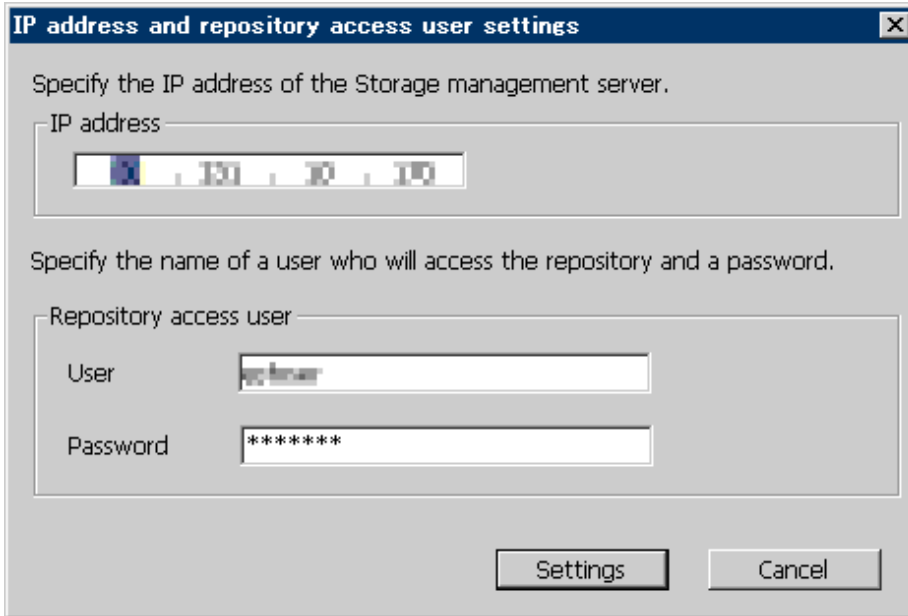
Note

- 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 "[3.1.1.5 Estimating the database size](#)". To use the default value, select the **Default size (65 MB)** checkbox.

16. 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). Specify Internet Protocol address referring to the following.

- When you use only the IPv4 address with the Management Server:
Set the IPv4 address used.
- When you use only the IPv6 address with the Management Server:
Set a temporary IPv4 address (127.0.0.1 for instance).
The following operations are executed after the Upgrade Installation is completed and the IP address version of the Management Server is changed to IPv6.
 - a. Create a server information change instruction file on the Management Server. Describe only the IPv6 address as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

- When you use both the IPv4 and IPv6 addresses with the Management Server:
Set the IPv4 address used.
The following operations are executed after the Upgrade Installation is completed and the IPv6 address is added as the IP address of the Management Server.
 - a. Create a server information change instruction file on the Management Server. Describe both the IPv4 and the IPv6 addresses as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

Information

- Refer to "Changing the IP address of Management Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version for the update procedure of IP address information.
- 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.

Point

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).

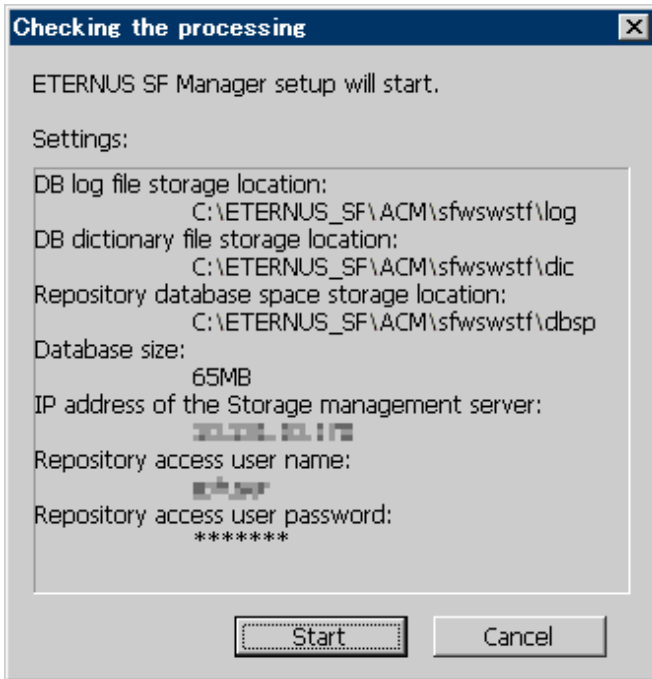
Information

- 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.

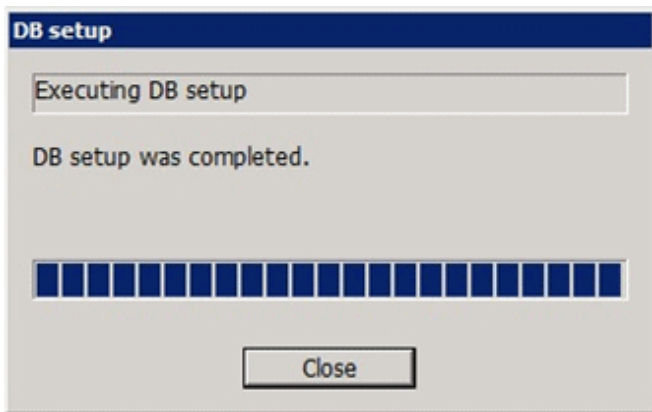
Server Type	User Type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

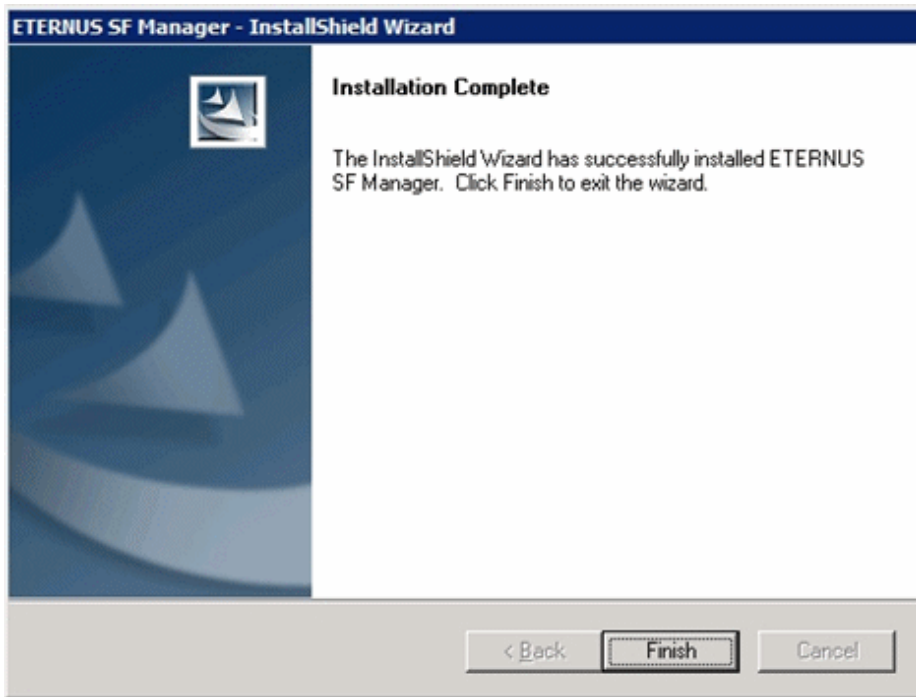
17. The following page will be displayed. Check the contents and click **Start**.



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



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



The above completes the process of the upgrade of the Express in a Windows environment.

Subsequently, go to "3.1.3 Tasks to be performed after the upgrade".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

- a. Install the target version.
- b. If the installation is successfully completed, continue from "3.1.3 Tasks to be performed after the upgrade".

3.1.3 Tasks to be performed after the upgrade

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

3.1.3.1 Restoring the environment from the previous version

With the following procedures, restore the Express operation environment of the previous version.

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

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. Implement restoration of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the files related to the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpostinst.bat backupDir [ tmpDir ]
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.

4. Eject the DVD-ROM.
5. Restart the service of ETERNUS SF Manager
Execute the following batch file:

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

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

6. Start the SymfoWARE RDB RDBSWSTF services
The method for activation is as follows:
 - a. Click on **Start > Administrative Tools > Services** to open the Windows Services screen.
 - b. As a list of the services registered on the system will be displayed, select SymfoWARE RDB RDBSWSTF and click **Start**.

3.1.3.2 Changing the server information

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.

```
programDir\ACM\bin\stgxfwcmmodsrv -n serverName
```

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.

3.1.3.3 Changing the access user password for the repository database

Reconfigure the repository access user information by executing the stguserset command.
Even if the password has not changed, ensure that you reset the password.

1. Execute the stguserset command.

```
programDir\ACM\bin\stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the service (AdvancedCopy Manager GUI Service).
3. Start the service (AdvancedCopy Manager GUI Service and ETERNUS SF Manager Tomcat Service).



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.

3.1.3.4 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
programDi r\Common\bin\esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.



Note

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



Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

3.1.3.5 Deleting the Backup Data

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 4 of "3.1.1.1 Backing up the operational environment of the previous version" maybe deleted.

3.1.4 Resuming operation

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



Note

- If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.
- If performance monitoring had been performed, restart the performance monitoring.
Refer to "Instruction for performance management" in the *ETERNUS SF Express Operation Guide* for information on how to start the performance monitoring.

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.



.....

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

.....

3.2.1.1 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
```



.....

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.

.....

3.2.1.2 Backing up the operational environment of the previous version

With the following procedures, backup the operation environment of Express of the previous version.

Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.



.....

Performance management information is not backed up. If performance monitoring is performed, record the current configuration details. In the previous version Web Console, refer to the following information.

- Settings for performance monitoring
 - Performance monitoring target (only for ETERNUS Disk storage system. Minimum LUN_V, Maximum LUN_V)
-

1. Log in to the server as a superuser.
2. 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.

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).

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

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

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

5. Implement backup of the previous version.

Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpreinst.sh backupDir [ tmpDir ]
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters " / ^ * ? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (*tmpDir*) related to the performance management function to under /var/opt. In the case of backup to a different location from that under /var/opt, it may take time to perform backup and restore.

3.2.1.3 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 "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

3.2.1.4 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.

3.2.1.5 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.

3.2.1.6 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.

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

Ensure the new ports are available 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 information on port numbers.

3.2.1.8 Preparing for uninstallation

The DB unsetup must be executed.
Refer to "[A.8 Cancelling the repository settings](#)" to unsetup the repository database of the previous version.

3.2.2 Performing the upgrade

This section describes the upgrade procedure for Express.



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:

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

1. Log in to the server as a superuser.
2. 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.

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.

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

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

If the conditions are agreeable, enter "y".

```
+-----+
|                ETERNUS SF V16.0                |
|                                                  |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 2013 |
+-----+
```

Notes

Thank you for purchasing media which contains Fujitsu software program (hereafter referred to as "Media"). Fujitsu provides the Media to you subject to agreement to "Conditions of Use" below.

This document will not be reissued and please keep it in a secure place.

Conditions of Use

1. Using programs

In order to use the software program contained in the Media (hereafter referred to as "Software"), in addition to the Media itself, you shall purchase a license which grants you a right to use the Software.

2. Backup

(1) You may duplicate a Media for backup purpose.

(2) When you duplicate the Media for backup purpose in accordance with Section 2. (1), you must copy the copyright notice that appears on the original Media on the duplication thereof.

(3) The duplication of the Media shall be treated as the Media under this Condition of Use

3. Transfer to a third party

You may not transfer, loan, sublicense the Media to third parties, or provide it as collateral to a third party.

4. Warranty range

Fujitsu warrants that the Media will be free from defects in materials and manufacture under normal use for a period of 90 days from the date of delivery to you. Your sole and exclusive remedy and the entire liability of Fujitsu under this Condition of Use will be, at F

```
ujitsu's option, replacement of the Media or refund of the money paid by you for the Media.
```

```
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
```

The upgrade for Express is complete.

Subsequently, go to "[3.2.3 Tasks to be performed after the upgrade](#)".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "[3.2.3 Tasks to be performed after the upgrade](#)".

3.2.3 Tasks to be performed after the upgrade

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

3.2.3.1 Restoring the environment from the previous version

With the following procedures, restore the Express operation environment of the previous version.

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

1. Log in to the server as a superuser.
2. 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.
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. Implement restoration of the previous version.
Execute the following command. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the files related to the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpostinst.sh backupDir [tmpDir]
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters "/`* ? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.

5. Unmount the DVD-ROM.

Example:

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

6. Eject the DVD-ROM.
7. Restart the daemon of ETERNUS SF Manager.

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

3.2.3.2 Change the server information

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

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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 Linux)* for this version for information on the command.

3.2.3.3 Changing the access user password for the repository database

Reconfigure the repository access user information by executing the `stguserset` command. Even if the password has not changed, ensure that you reset the password.

1. Execute the `stguserset` command.

```
/opt/swstorage/bin/stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the RMI daemon.
3. Start the RMI daemon

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.

3.2.3.4 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
# /opt/FJSVesfcm/bin/esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.

Note

When executing the `esfadm devconf import command`, if a managed device or server is not accessible, the `esfadm devconf import command` should be re-executed since the device configuration information is not imported.

3.2.3.5 Deleting the Backup Data

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 5 of "3.2.1.2 Backing up the operational environment of the previous version" maybe deleted.

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

Note

- If operating the Web Console from the same web browser as before the upgrade, delete the web browser's cache prior to operation.
- If performance monitoring had been performed, restart performance monitoring.
Refer to "Instruction for performance management" in the *ETERNUS SF Express Operation Guide* for information on how to resume performance monitoring.

Chapter 4 Upgrading Storage Cruiser Version 14.x

This chapter describes the upgrade procedure for Storage Cruiser Version 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.

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



See

Refer to the following sections for information on performing a backup according to OS environment.

- [A.25 Backup of manager operation environment \(for Windows\)](#)
- [A.26 Backup of Windows version manager operation environment \(For the cluster environment\)](#)
- [A.27 Backup of manager operation environment \(for Solaris, Linux\)](#)
- [A.28 Backup of Solaris/Linux version manager operation environment \(For the cluster environment\)](#)

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, back up 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 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.



.....
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.



.....
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.



.....
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.



.....
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. 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
```

2. 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"](#)

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

12 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
	Internal Port 5 (No screen display)	24917

- Custom installation

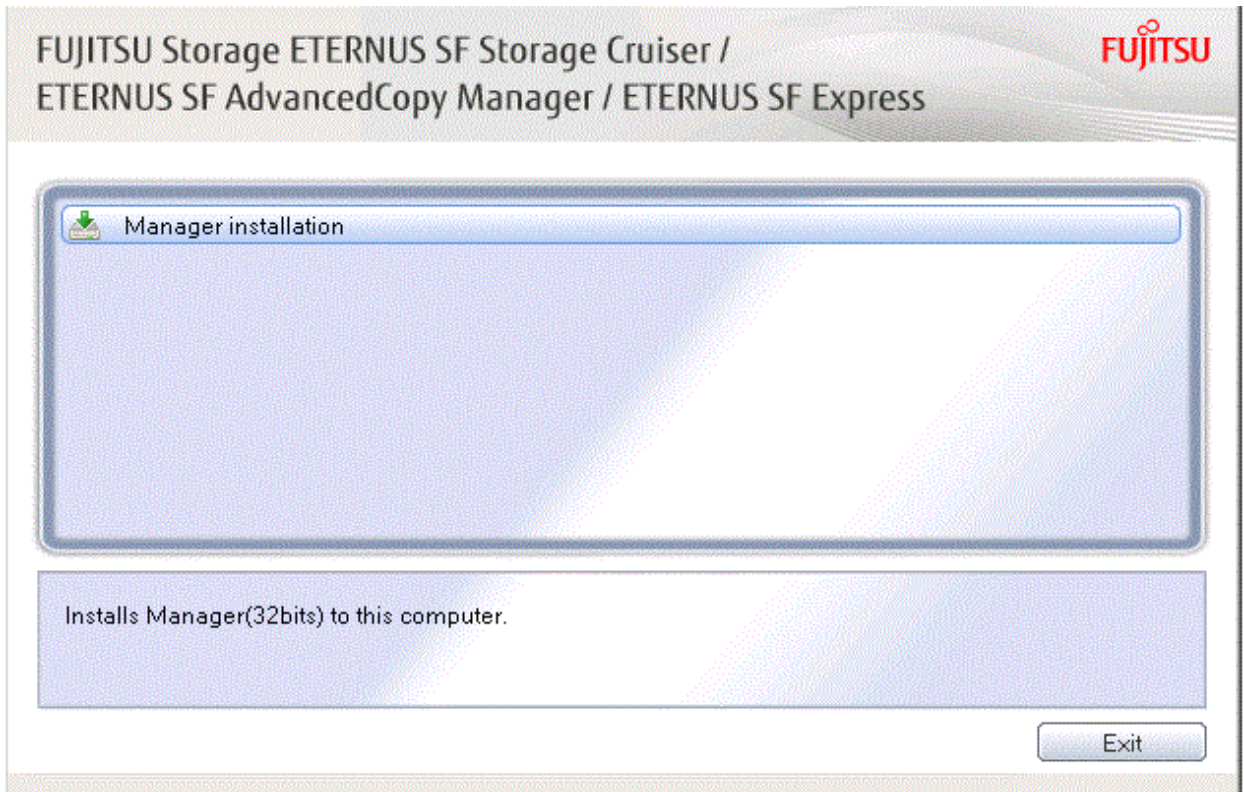
The upgrade is performed by manually entering the configuration information into the interface (installation destination and communication service port numbers).

The upgrade is performed as follows:

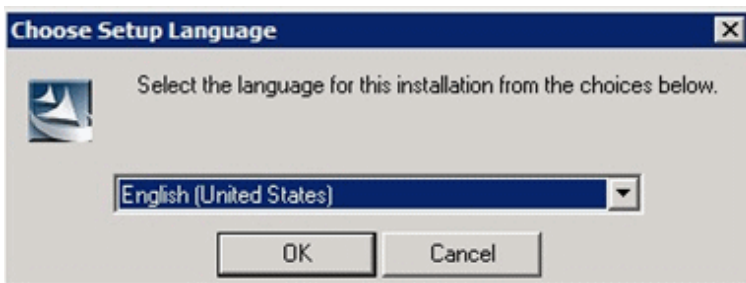
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

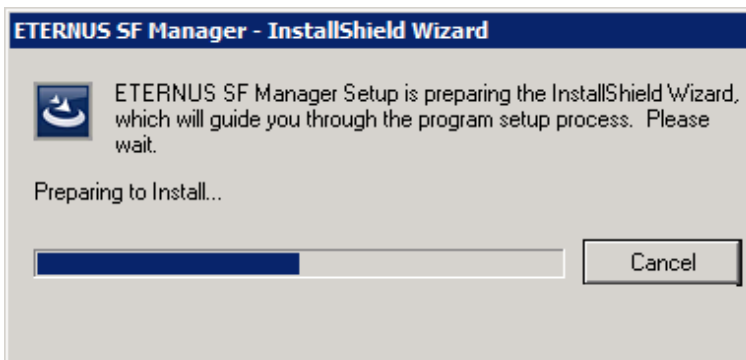
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



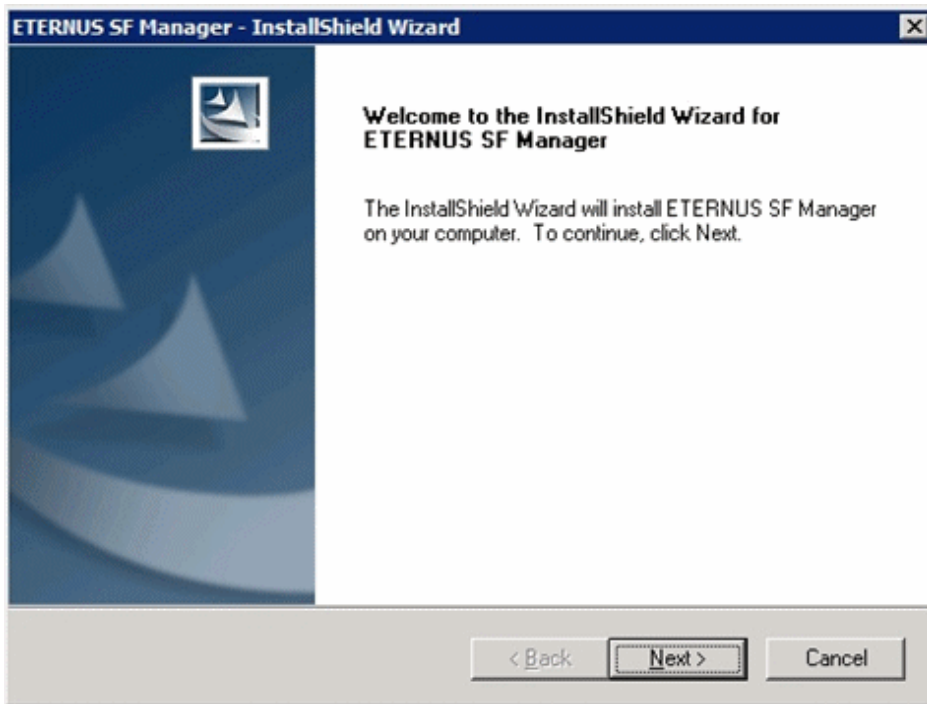
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

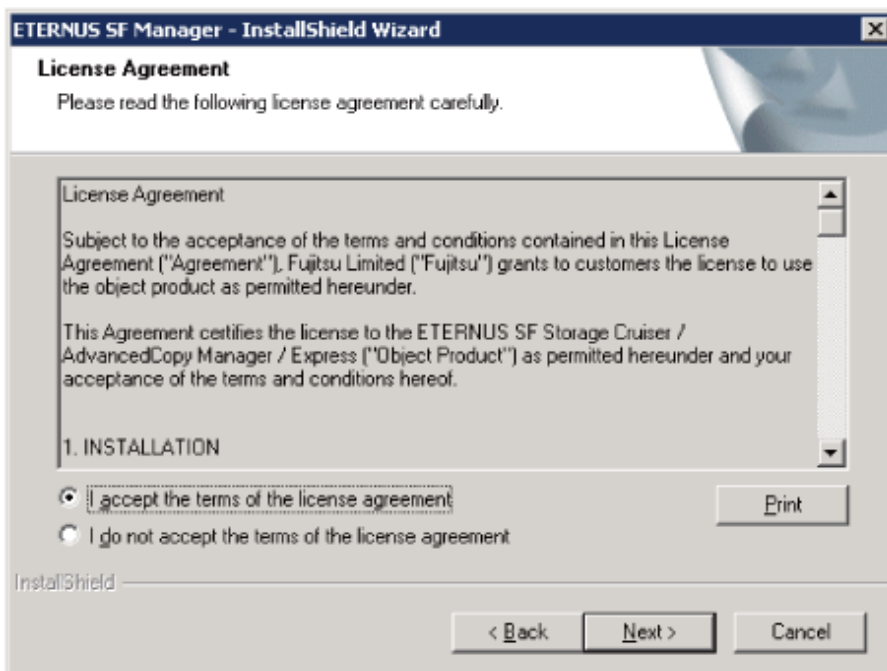


6. The installation wizard page will be displayed. Click **Next**.



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.].

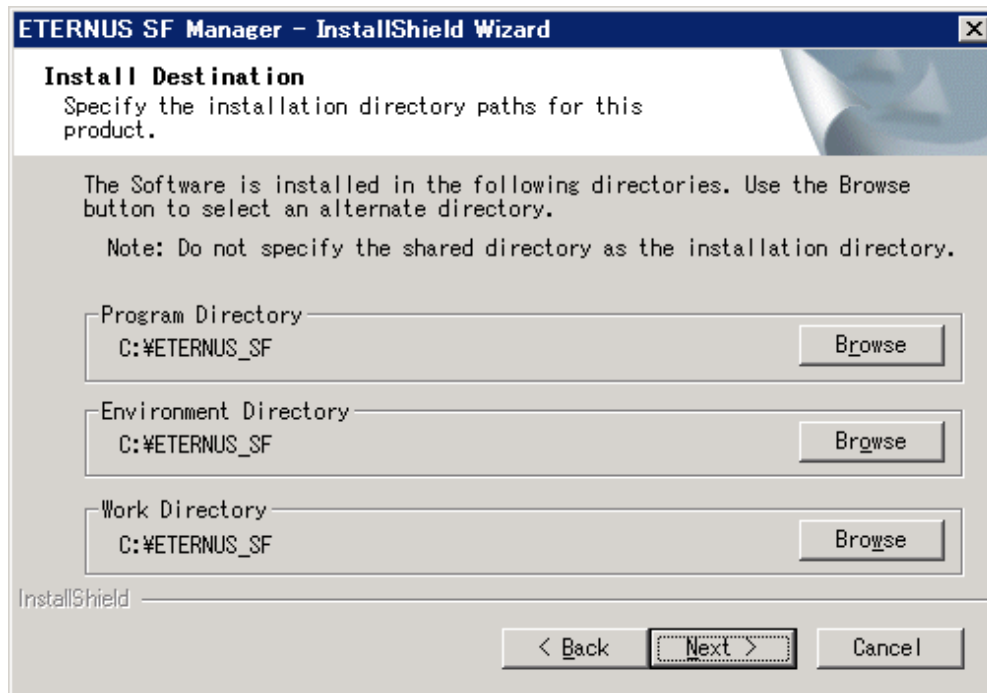
Option selection

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**.



Point

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

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

The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 1024 and 65535 are valid.

To change the port number of Internal Port 5, edit the %SystemRoot%\system32\drivers\etc\services file by manual and define the unused port number under the following service name and in the range of 1024-65535:

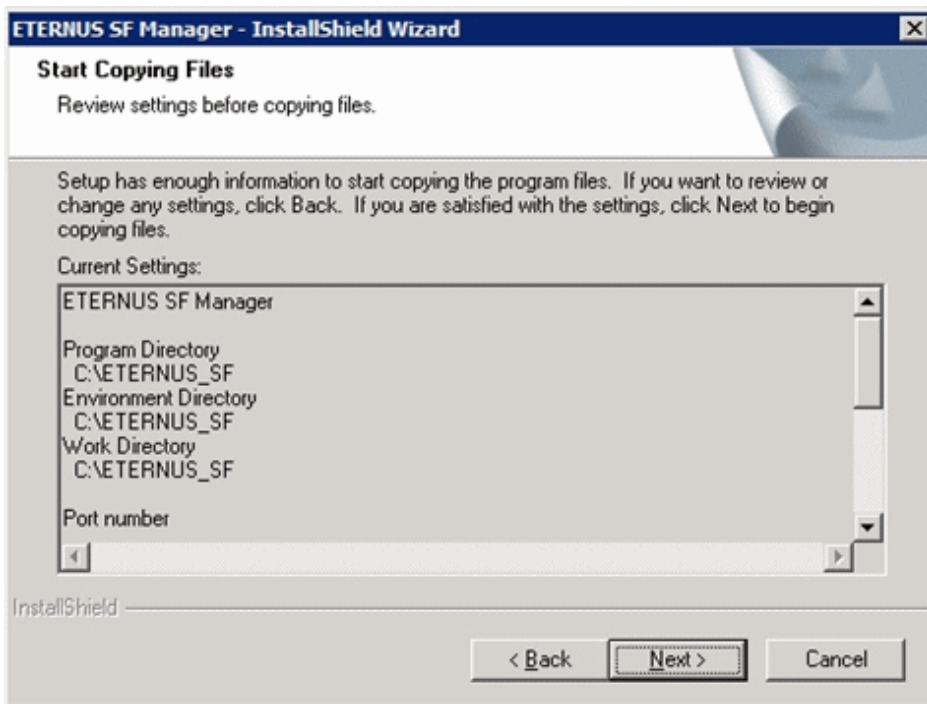
Service Name	Receive Port	Purpose
astm	24917/tcp	Use for internal communication.

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

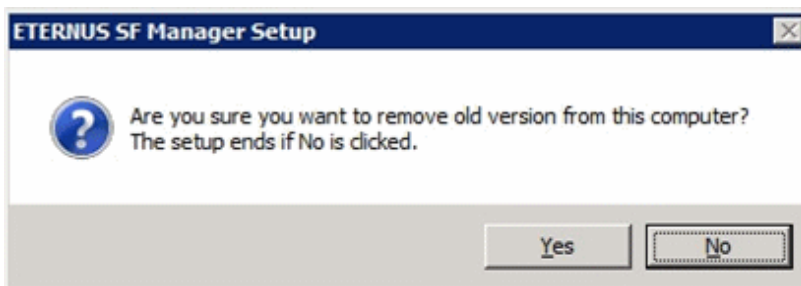
11. Check the settings information in the **Start Copying Files** page.

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.

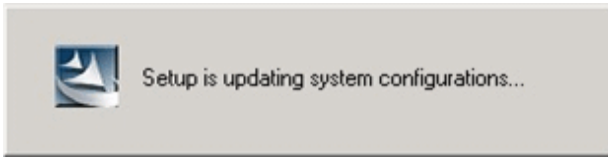
Point

- 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.

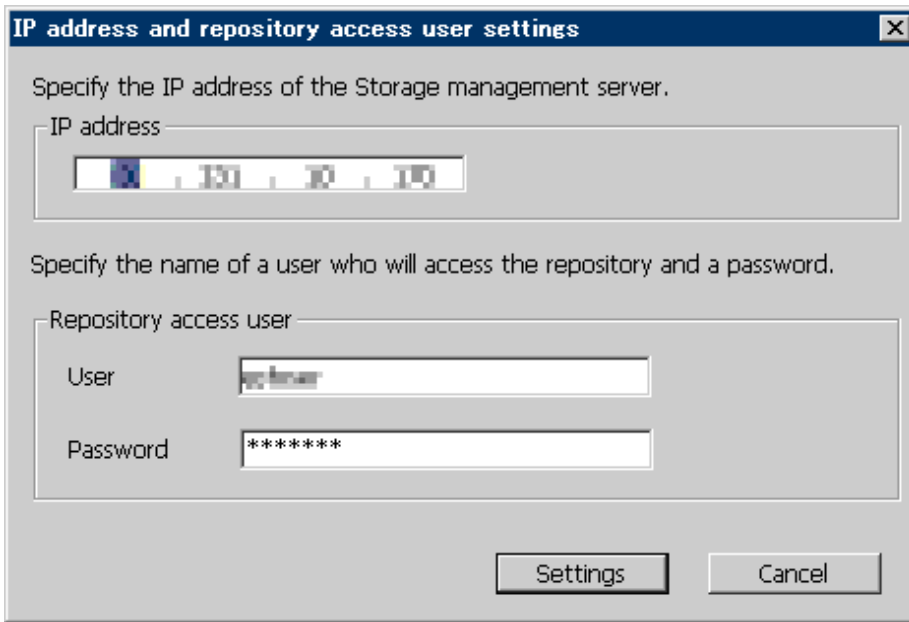
- Do not check the [Compress or Encrypt Attributes] in the **Advanced Attributes** section of the **Properties** or **Advanced** part of the **General** tab.
Load is increased for a compressed and/or encrypted drive. Access errors may occur in an OS with insufficient resources. If the encryption property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



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).

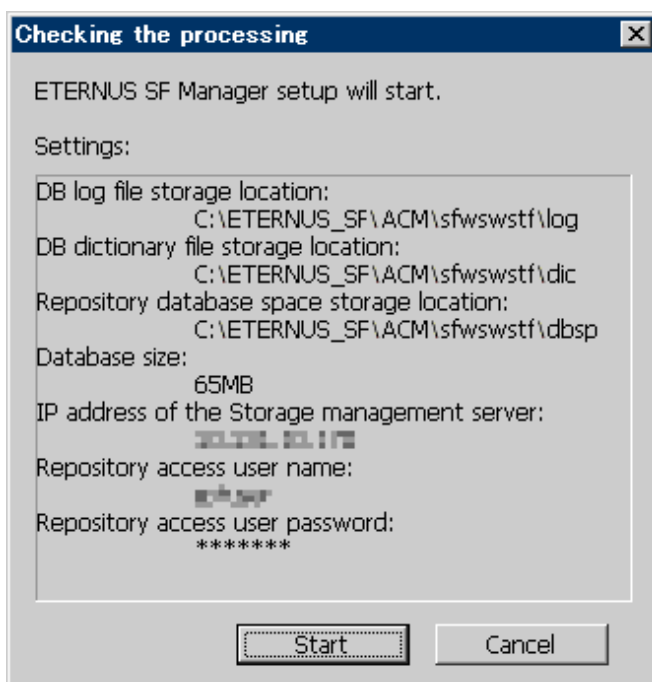
Information

- 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.

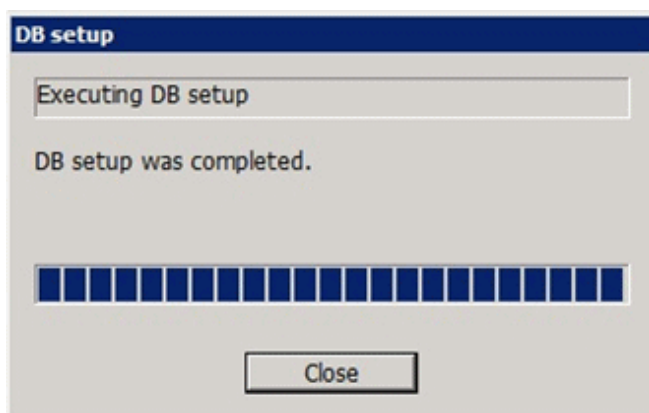
Server Type	User Type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

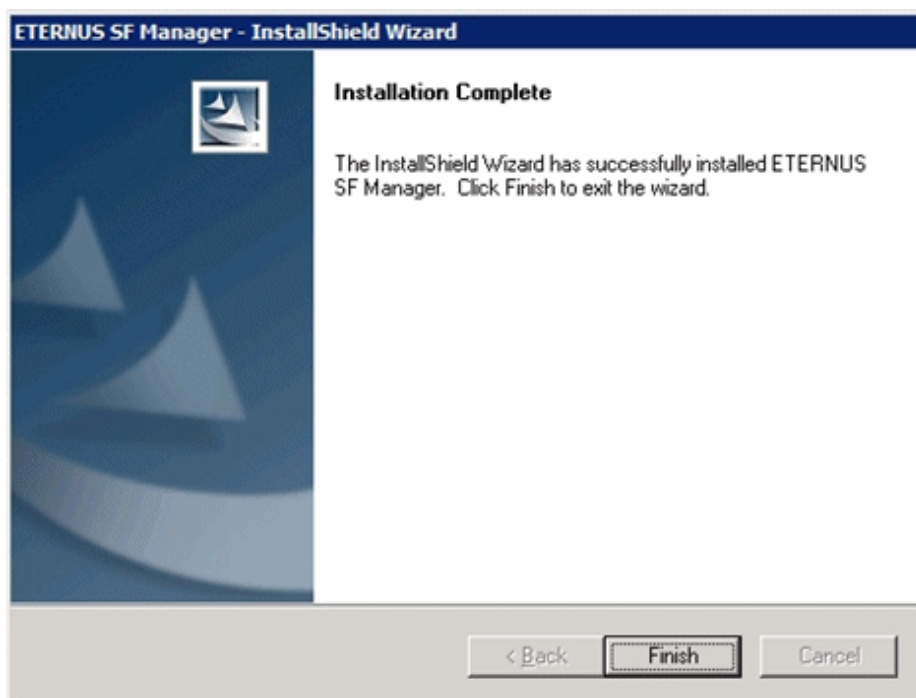
18. The following page will be displayed. Check the contents and click **Start**.



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, /etc/opt/, /var/opt) 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

Service	Service name	Used port number	Install parameter name
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, /etc/opt, /var/opt.
- Perform the custom installation 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.

 Point

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)" 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 V16.0      |
|                                     |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 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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6. LIMITED WARRANTY

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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

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 the following for information on performing a restore according to OS environment.

- [A.29 Restoring of manager operation environment \(for Windows\)](#)
- [A.30 Restoring of Windows version manager operation environment \(For the cluster environment\)](#)
- [A.31 Restoring of manager operation environment \(for Solaris, Linux\)](#)
- [A.32 Restoring of Solaris/Linux version manager operation environment \(For the cluster environment\)](#)

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](#)".



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">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: <ol style="list-style-type: none">1. A.10 Restoring the repository data (for Solaris, Linux)

Server Type	OS	Reference
		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 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.

- For Windows

1. Execute the stguserset command.

```
programDir\ACM\bin\stguserset userName password
```



Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the service (AdvancedCopy Manager GUI Service).
3. Start the service (AdvancedCopy Manager GUI Service and ETERNUS SF Manager Tomcat Service).

- For Solaris or Linux

1. Execute the stguserset command.

```
/opt/swstorage/bin/stguserset userName password
```



Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the RMI daemon
3. Start the RMI daemon.



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.

4.1.4.3 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import`.

- For Windows (DOS prompt):

```
programDir\Common\bin\esfadm devconf import -all
```

- For Solaris or Linux:

```
# /opt/FJSVesfcm/bin/esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.



When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

4.1.4.4 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.

4.1.4.5 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.

4.1.4.6 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/Change Information of Account That Can Access ETERNUS Disk Storage System" in the *ETERNUS SF Web Console Guide* for information on setup.

4.1.4.7 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.

4.1.4.8 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:



See

Refer to "Command References" in the *ETERNUS SF AdvancedCopy Manager 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.

5. Perform the following operations with the Web Console to reload the server information.
 - a. On the global navigation tab, click **Storage**.
The registered ETERNUS Disk storage systems are displayed on the Main pane.
 - b. On the Main pane, check the target ETERNUS Disk storage system checkbox.
 - c. On the Action pane, click **Reload Conf.** under **Storage**.

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.

4.1.5 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.

Point

- 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 details.
- 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 details.
 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 details.

Note

When restarting ETERNUS SF Manager after resuming the operation, if performance monitoring fails to start, use the following procedure for recovery:

1. Confirming the output error message and removing the cause of the failure.
2. On the Action pane, click **Reload Conf.** to reload the device information.

3. If performance monitoring is being performed, stop the performance monitoring once and restart it.
Refer to "Instruction for stopping performance management" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on the performance monitoring stopping.

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. Perform the following operations with the Web Console to reload the server information.

- a. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
- b. On the Main pane, check the target server checkbox.
- c. On the Action pane, click **Reload Conf.** under **Server**.

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.
- When upgrading the Storage Cruiser's manager, there is information that cannot be migrated. Refer to "[9.3 What to do when configuration import is not possible](#)" for information on the information that cannot be migrated and the corrective action.

5.1 Upgrading the Storage Cruiser's manager (for Windows)

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

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.

Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

5.1.1.1.1 Backing up the operational environment of the previous version

With the following procedures, perform a backup of the operation environment of the previous version of the Storage Cruiser's manager.

Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.

Note

Performance management information is not backed up. If performance monitoring is performed, record the current configuration details. In the previous version Web Console, refer to the following information.

- 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)

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. Stopping the service of ETERNUS SF Manager
Execute the following batch file:

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

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

4. Implement backup of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpreinst.bat backupDir [tmpDir]
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (*tmpDir*) related to the performance management function to the same logical drive as the drive on which the product of the previous version is installed. In the case of backup to a different logical drive, it may take time to perform backup and restore.

5.1.1.1.2 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 "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

5.1.1.1.3 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.

5.1.1.1.4 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.



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

5.1.1.1.5 Estimating the database size

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



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

5.1.1.1.6 Preparing for uninstallation

Refer to "[A.7 Unsetting up the database](#)" to unsetup the repository database of the previous version.

5.1.1.2 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

12 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

Service	[Port Registration] display name	Port number
Internal use	Internal Port 1	28005
	Internal Port 2	28009
	Internal Port 3	28443
	Internal Port 4	24916
	Internal Port 5 (No screen display)	24917

- 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:

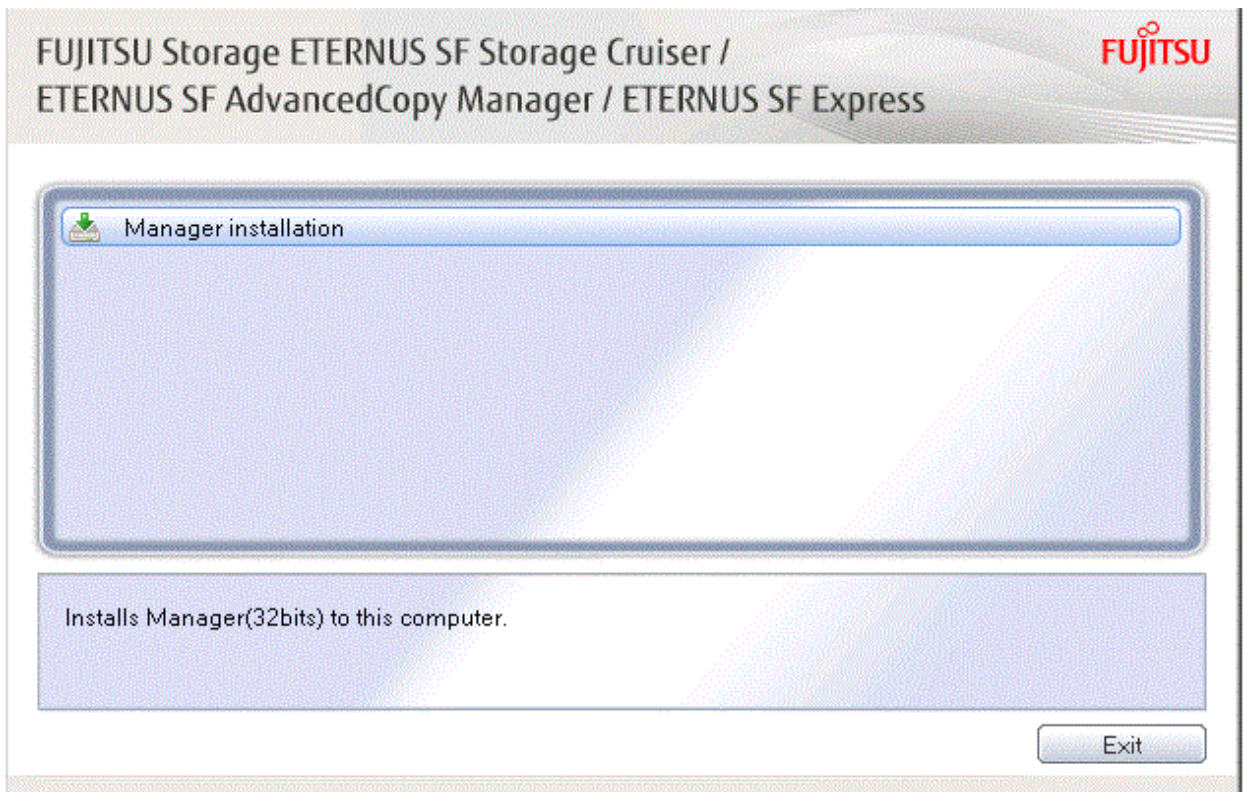
Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

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.

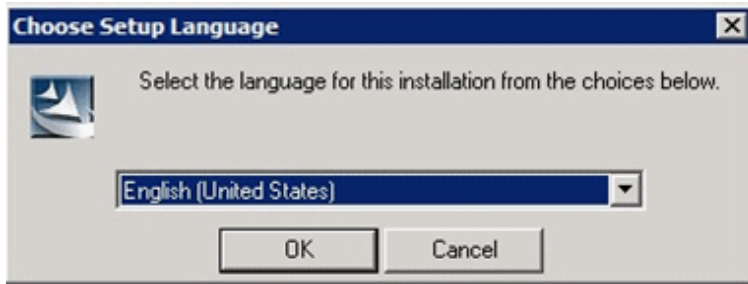
Refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the DVD-ROM structure and detailed contents.

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

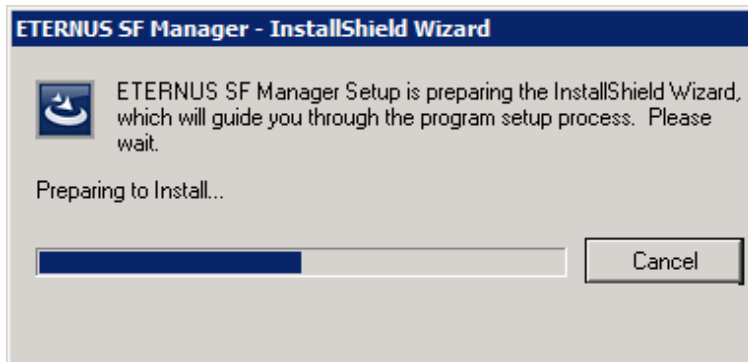
To cancel the upgrade at this point, click **Exit**.



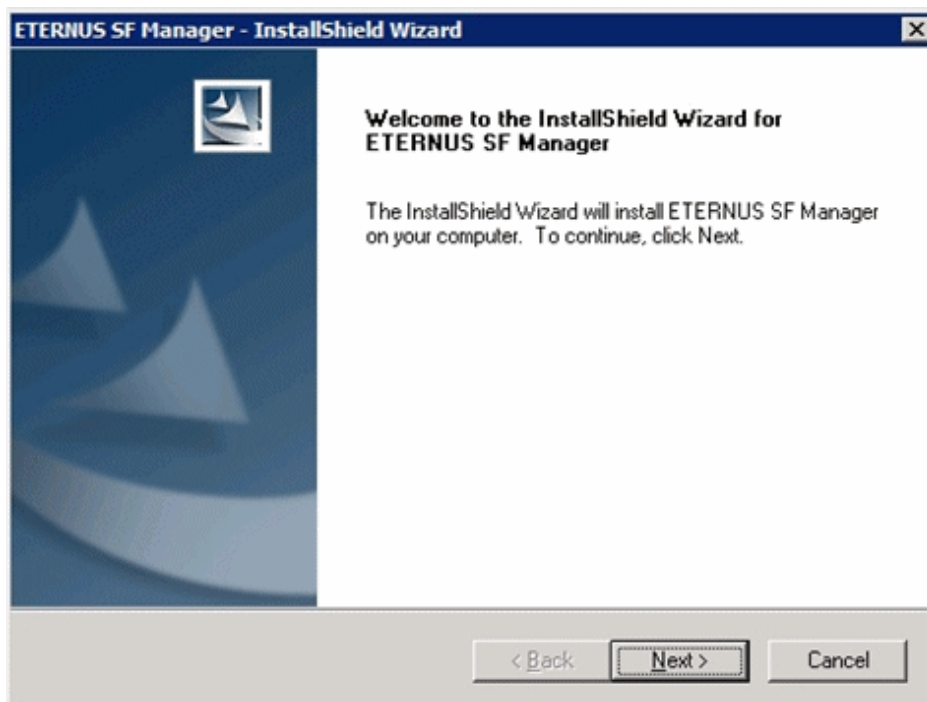
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**. The language selected in this dialog box will be used during installation and uninstallation.



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

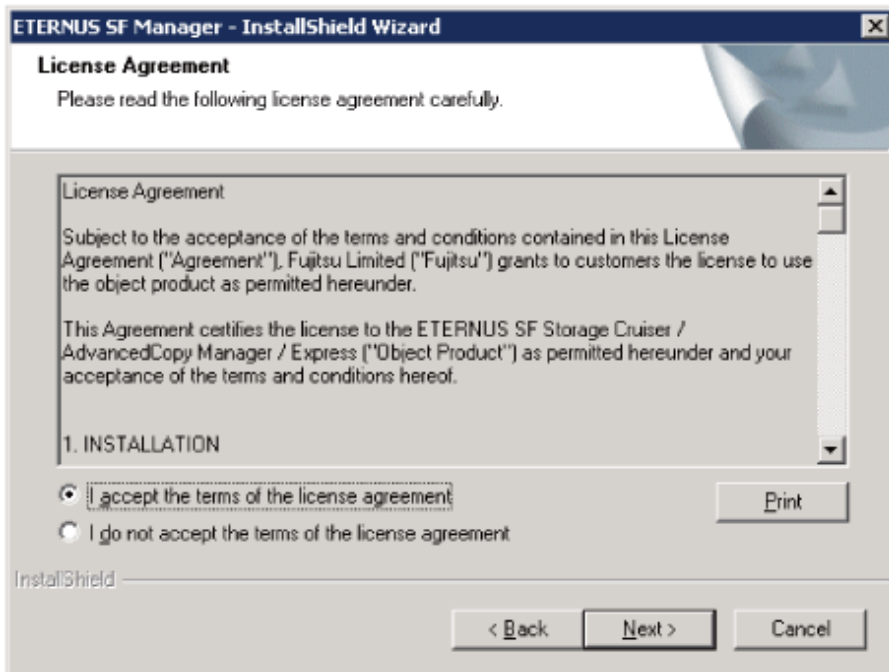


6. The installation wizard page will be displayed. Click **Next**.

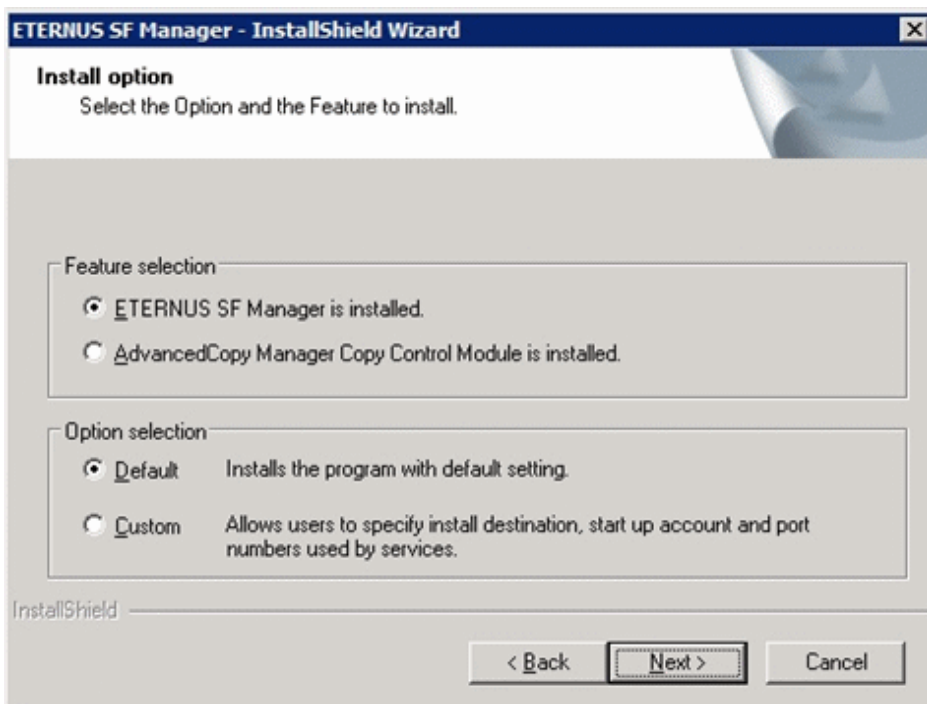


7. Read the terms and conditions of the **License Agreement** page.

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.].

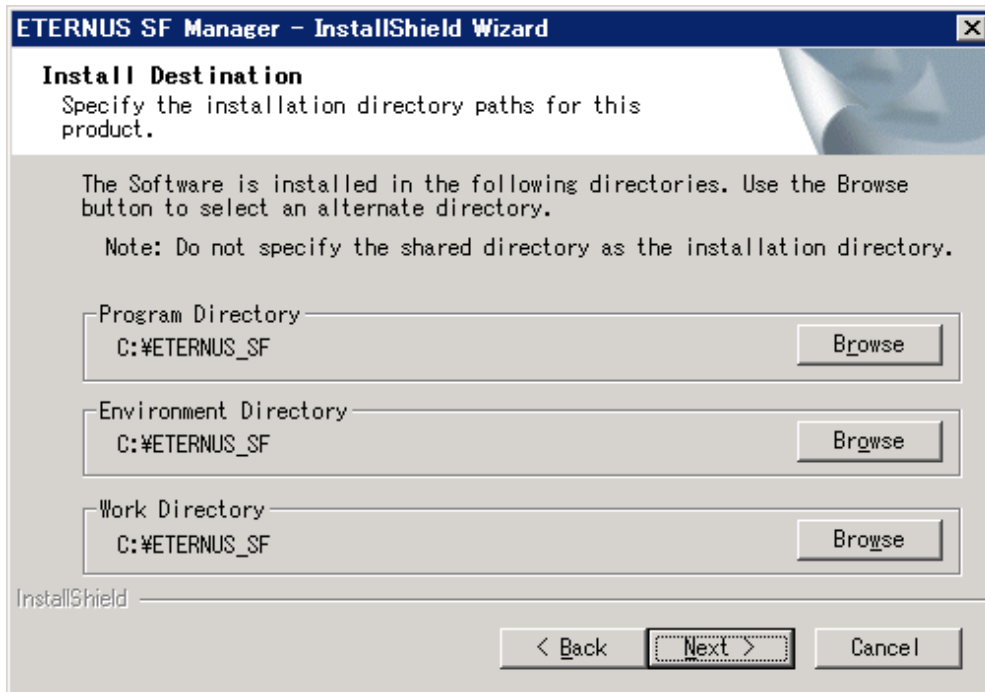
Option selection

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**.



 **Point**

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

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

The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 1024 and 65535 are valid.

To change the port number of Internal Port 5, edit the %SystemRoot%\system32\drivers\etc\services file by manual and define the unused port number under the following service name and in the range of 1024-65535:

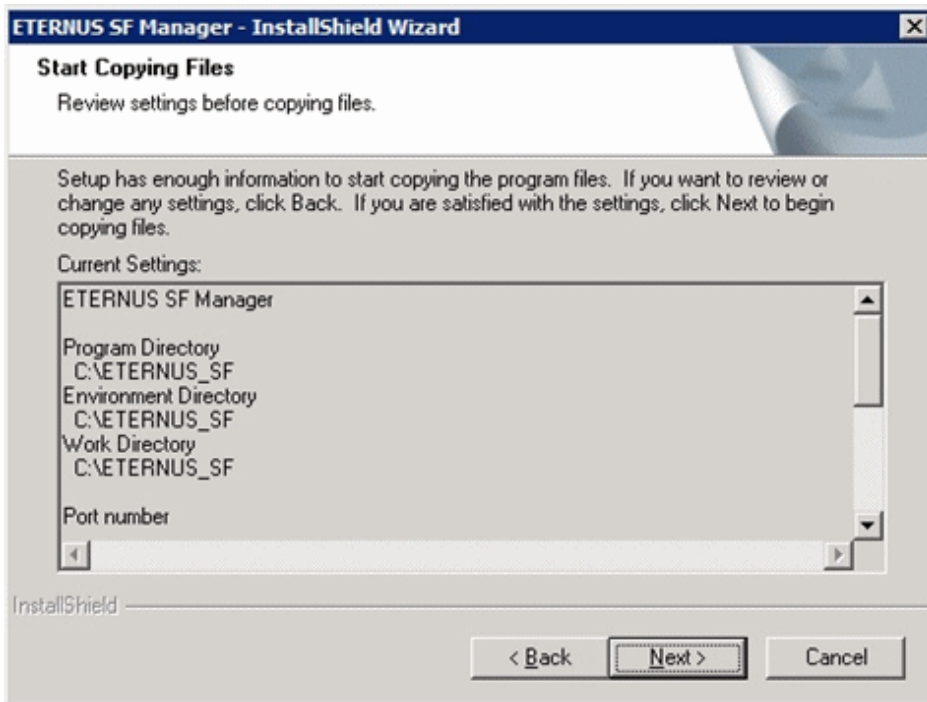
Service Name	Receive Port	Purpose
astm	24917/tcp	Use for internal communication.

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

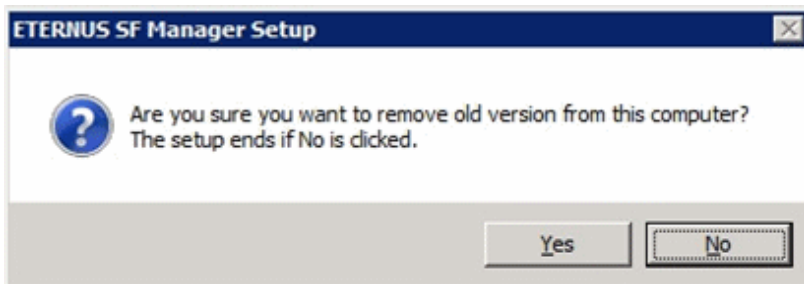
11. Check the settings information in the **Start Copying Files** page.

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

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



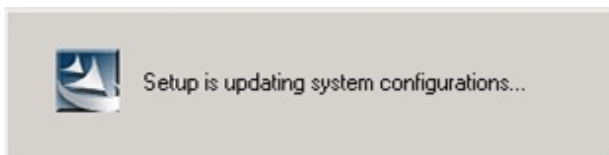
12. The following dialog box will be displayed. To proceed with the uninstallation, click **Yes**.



13. 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. 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 "[5.1.1.1.5 Estimating the database size](#)". To use the default value, select the **Default size (65 MB)** checkbox.

16. 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
127.0.0.1

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

Repository access user

User

Password

Settings Cancel

IP address

Enter the IP address of the Management Server (local system).
Specify Internet Protocol address referring to the following.

- When you use only the IPv4 address with the Management Server:
Set the IPv4 address used.
- When you use only the IPv6 address with the Management Server:
Set a temporary IPv4 address (127.0.0.1 for instance).
The following operations are executed after the Upgrade Installation is completed and the IP address version of the Management Server is changed to IPv6.
 - a. Create a server information change instruction file on the Management Server. Describe only the IPv6 address as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

- When you use both the IPv4 and IPv6 addresses with the Management Server:
Set the IPv4 address used.
The following operations are executed after the Upgrade Installation is completed and the IPv6 address is added as the IP address of the Management Server.
 - a. Create a server information change instruction file on the Management Server. Describe both the IPv4 and the IPv6 addresses as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

Information

- Refer to "Changing the IP address of Management Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version for the update procedure of IP address information.
- 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.

Point

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).

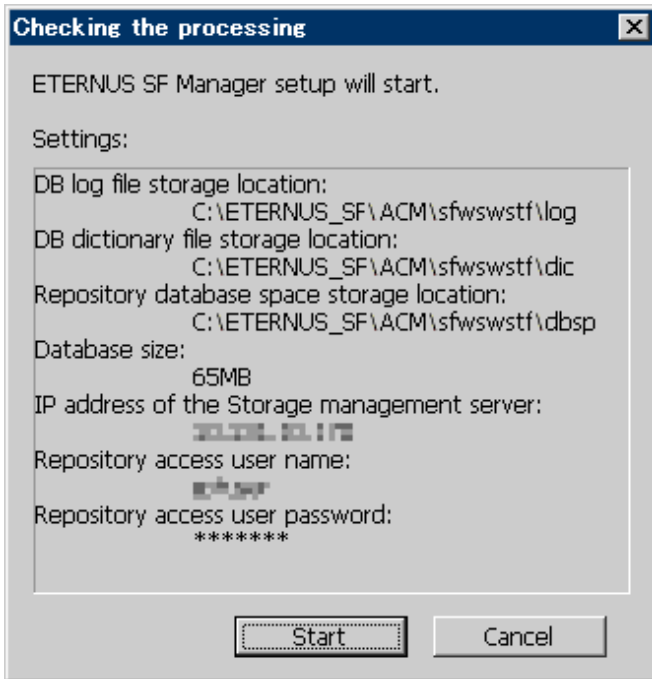
Information

- 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.

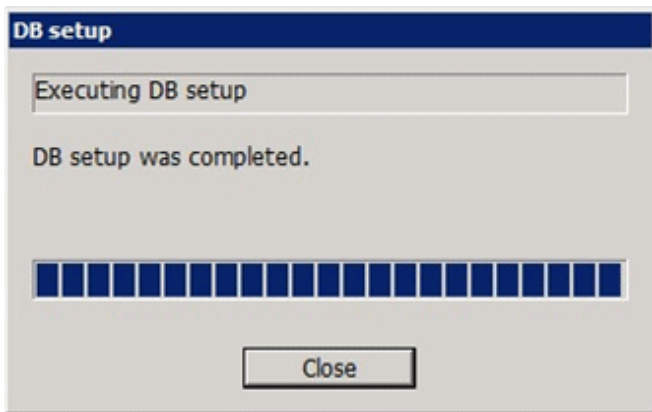
Server Type	User Type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

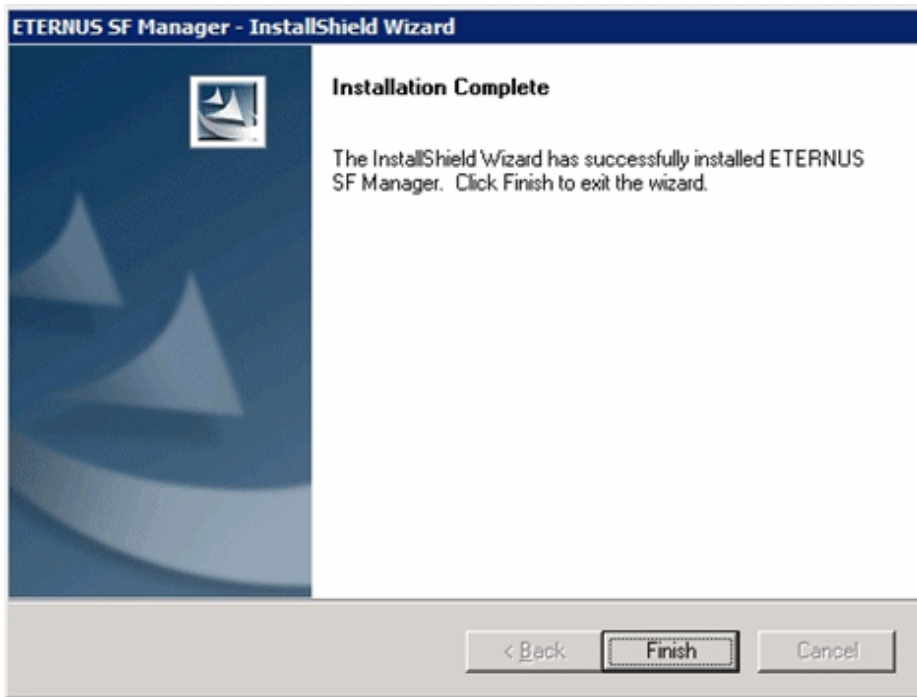
17. The following page will be displayed. Check the contents and click **Start**.



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



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



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

Subsequently, go to "[5.1.1.3 Tasks to be performed after the upgrade](#)".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

- a. Install the target version.
- b. If the installation is successfully completed, continue from "[5.1.1.3 Tasks to be performed after the upgrade](#)".

5.1.1.3 Tasks to be performed after the upgrade

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

5.1.1.3.1 Restoring the environment from the previous version

With the following procedures, restore the operation environment of the previous version of the Storage Cruiser's manager.

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

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. Implement restoration of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For

tmpDir, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpostinst.bat backupDir [ tmpDir ]
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.

4. Eject the DVD-ROM.
5. Restart the service of ETERNUS SF Manager
Execute the following batch file:

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

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

6. Start the SymfoWARE RDB RDBSWSTF services
The method for activation is as follows:
 - a. Click on **Start > Administrative Tools > Services** to open the Windows Services screen.
 - b. As a list of the services registered on the system will be displayed, select SymfoWARE RDB RDBSWSTF and click **Start**.

5.1.1.3.2 Changing the server information

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

```
programDir\ACM\bin\stgxfwcmmosrv -n serverName
```

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 (for Windows)* for this version for information on the command.

5.1.1.3.3 Changing the access user password for the repository database

Reconfigure the repository access user information by executing the stguserset command.
Even if the password has not changed, ensure that you reset the password.

1. Execute the stguserset command.

```
programDir\ACM\bin\stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the service (AdvancedCopy Manager GUI Service).
3. Start the service (AdvancedCopy Manager GUI Service and ETERNUS SF Manager Tomcat Service).



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.

5.1.1.3.4 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
programDi r\Common\bin\esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.



Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

5.1.1.3.5 Change the associated software

If the following related software was being used with the previous version, it is necessary to update these to a version that supports this edition.

- ETERNUS VASA Provider
- Fujitsu ETERNUS Storage Systems Monitoring Pack



Note

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

5.1.1.3.6 Deleting the Backup Data

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 4 of "5.1.1.1.1 Backing up the operational environment of the previous version" may be deleted.

5.1.1.4 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

If performance monitoring had been performed, restart the performance monitoring with the following steps.

1. Start performance monitoring.
Refer to "Instruction for performance management" and "Setting monitoring intervals" in the *ETERNUS SF Storage Cruiser Operation Guide*.
2. If threshold monitoring had been performed, 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*.

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.



Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

1. 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.
2. When using the ETERNUS VASA Provider or the ETERNUS Information Provider, on the secondary node, confirm that the ETERNUS Information Provider service has been stopped.
If not stopped, use the Failover Cluster Manager on the secondary node to stop the transactions of ETERNUS Information Provider.
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. 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.
5. If Managed Server transactions coexist in the clustered system, perform the following procedure:
 - a. 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.
 - b. 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.

6. Stop the local transactions on all the nodes, perform the following procedure:

Perform the following steps.

- a. Select **Control Panel > Administrative Tools > Services** to open the Windows Services screen.
- b. Select "AdvancedCopy Manager COM Service" and then click **Stop**.

7. On the primary node, perform a backup of the operating environment of the previous version of the Storage Cruiser's manager. Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.

Note

Performance management information is not backed up. If performance monitoring is performed, record the current configuration details.

In the previous version Web Console, refer to the following information.

- 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)

- a. Log on to the server using Administrator privileges.
- b. 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.

- c. Implement backup of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpreinst_cluster.bat backupDir [tmpDir] -primary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (*tmpDir*) related to the performance management function to the same logical drive as the drive on which the product of the previous version is installed. In the case of backup to a different logical drive, it may take time to perform backup and restore.

- d. Eject the DVD-ROM.

8. 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 "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

9. 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.



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.

10. 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.

11. Estimating the database size

A database is necessary for this version of Storage Cruiser.

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.

12. On the secondary node, perform a backup of the operating environment of the previous version of the Storage Cruiser's manager. The capacity required for performing this backup is 10MB.

- a. Log on to the server using Administrator privileges.
- b. 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.
- c. Mount the shared disk for shared data of ETERNUS SF Manager.
If it is mounted on the primary node, unmount it to mount on the secondary node.
- d. Implement backup of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpreinst_cluster.bat backupDir [ tmpDir ] -secondary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

 **Point**

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
 - The number of characters in a directory name must be up to 220.
 - Move the files (*tmpDir*) related to the performance management function to the same logical drive as the drive on which the product of the previous version is installed. In the case of backup to a different logical drive, it may take time to perform backup and restore.
-

- e. Unmount the shared disk for shared data of ETERNUS SF Manager.
If it is required for the work on the primary node, mount it on the primary node.
- f. Eject the DVD-ROM.

13. 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 "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

14. 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.

15. 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.

16. Performing the cluster unsetup

Refer to "Uninstallation of ETERNUS SF Manager" in "Deletion of Cluster Environment for Management Server Transactions" in the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version to delete the service resources, the cluster resources and unnecessary resources.

Note

- Do not uninstall the ETERNUS SF Manager.
- Do not delete the ETERNUS SF Manager installation directory of each node.

Note

In cases when Managed Server transactions coexist, do not release the configurations of these Managed Server transactions.

5.1.2.2 Performing the upgrade (Primary node)

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

12 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
	Internal Port 5 (No screen display)	24917

- Custom installation

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

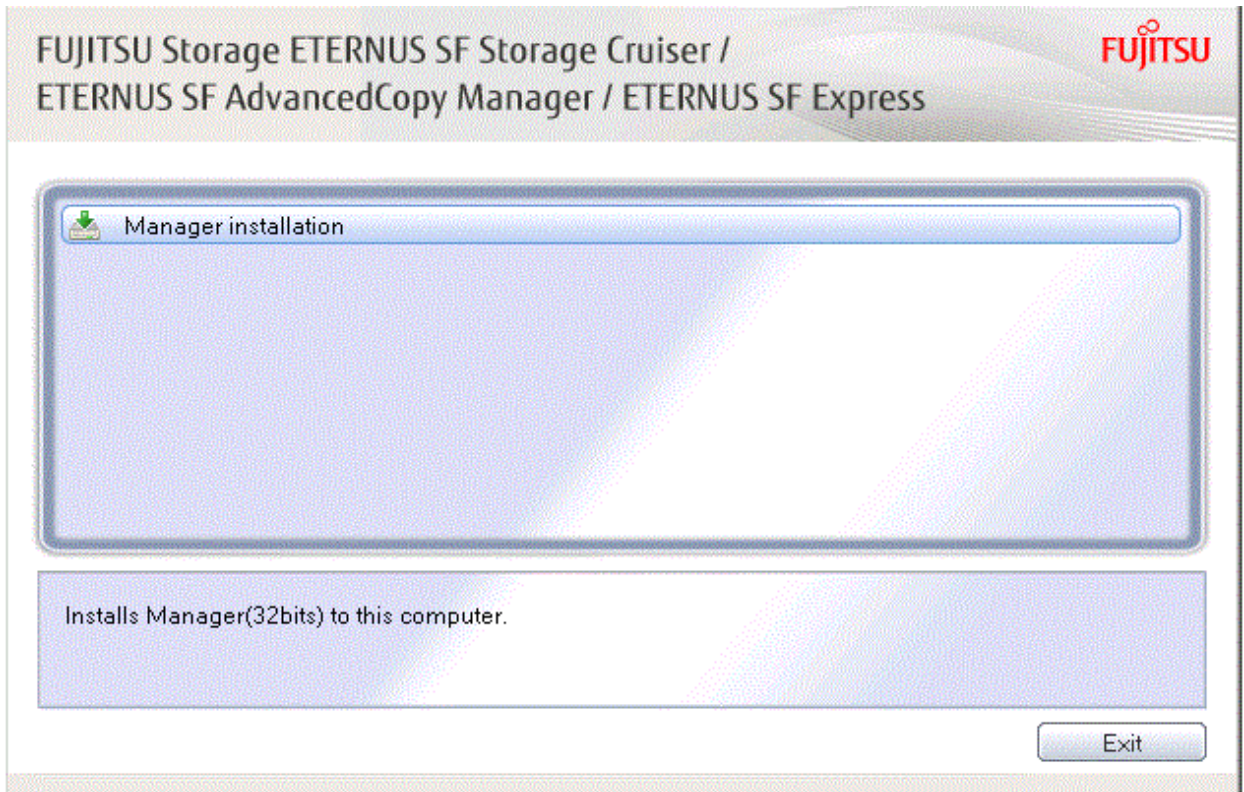
The upgrade is performed as follows:

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

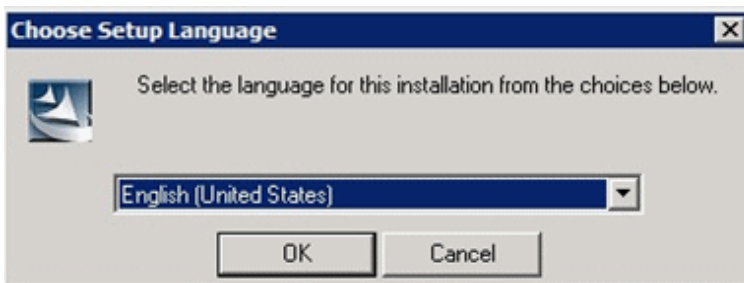
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

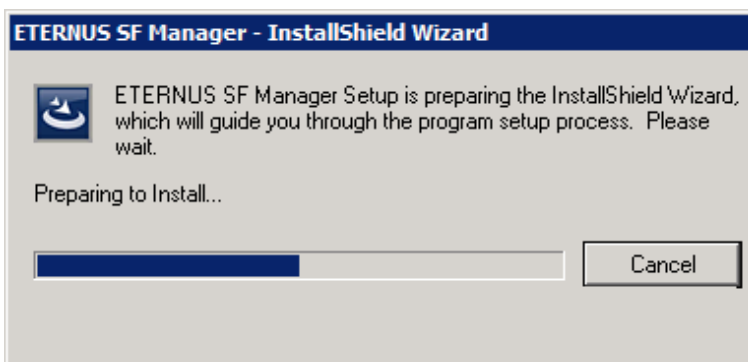
- The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



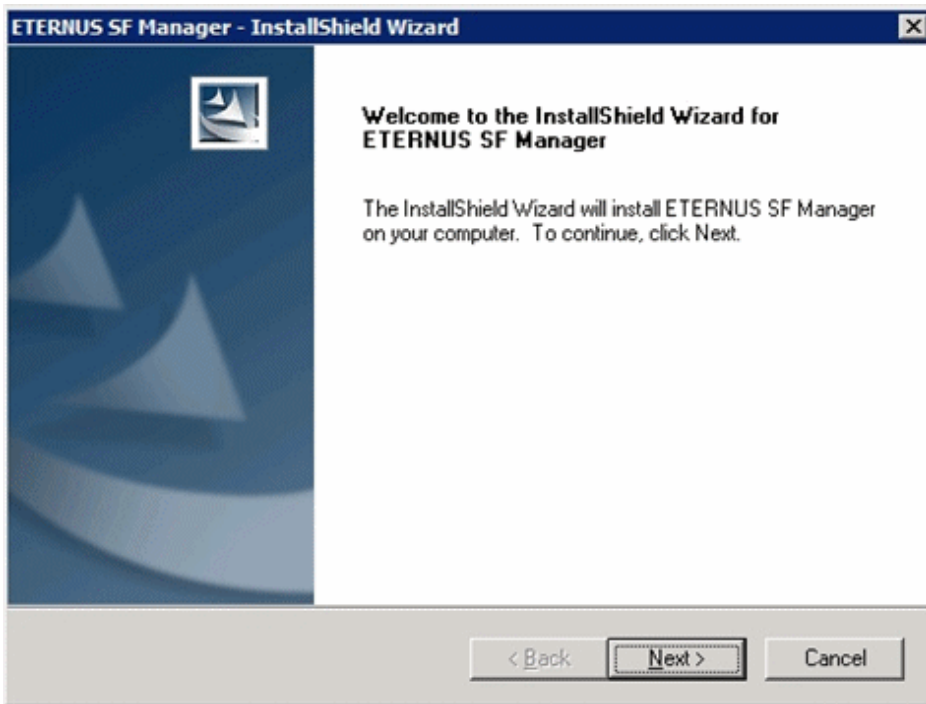
- The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

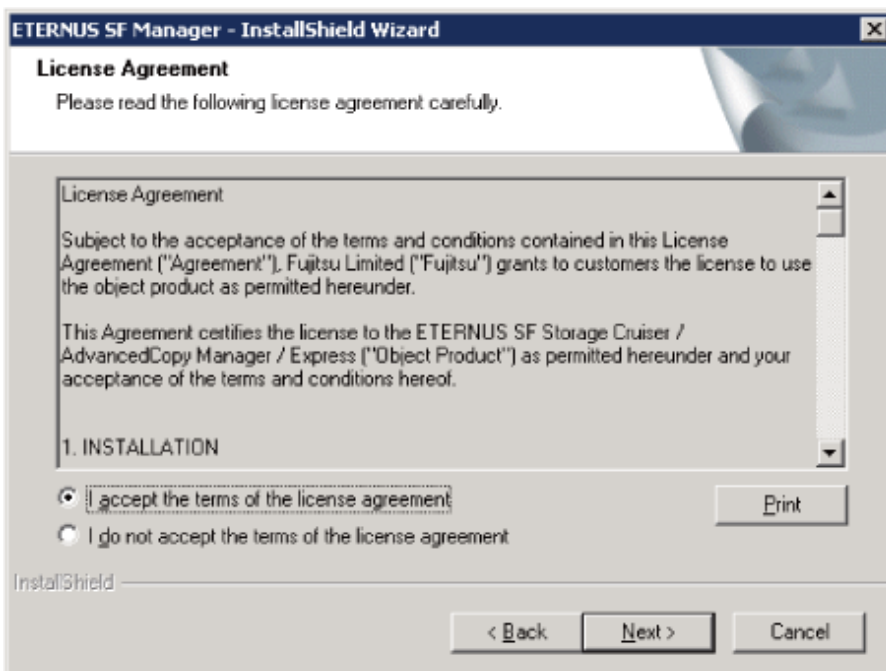


6. The installation wizard page will be displayed. Click **Next**.

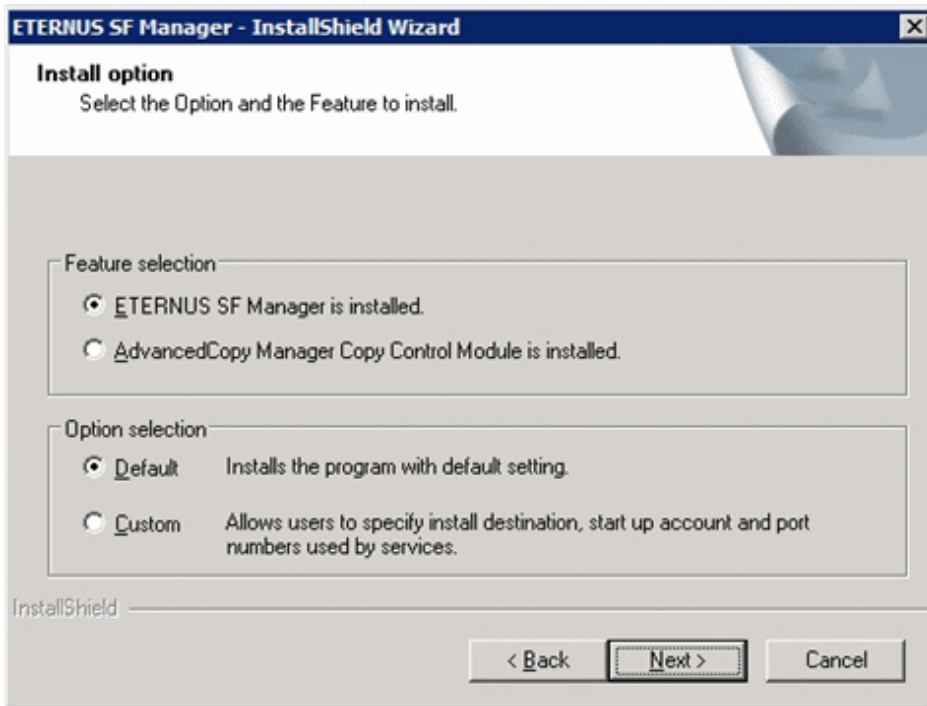


7. Read the terms and conditions of the **License Agreement** page.

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.].

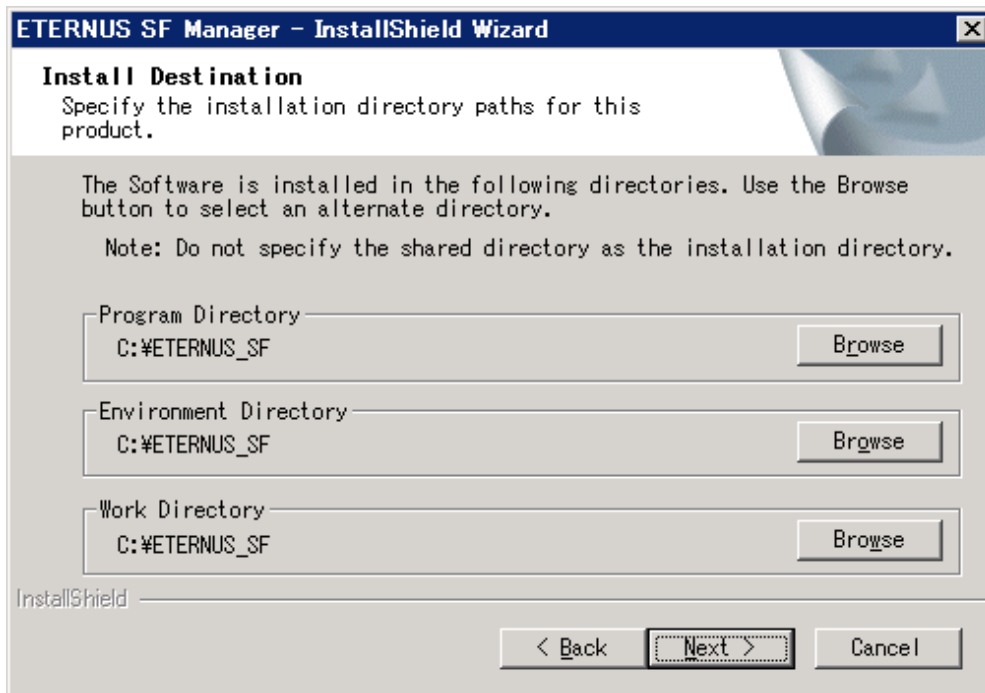
Option selection

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**.



Point

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

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

The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 1024 and 65535 are valid.

To change the port number of Internal Port 5, edit the %SystemRoot%\system32\drivers\etc\services file by manual and define the unused port number under the following service name and in the range of 1024-65535:

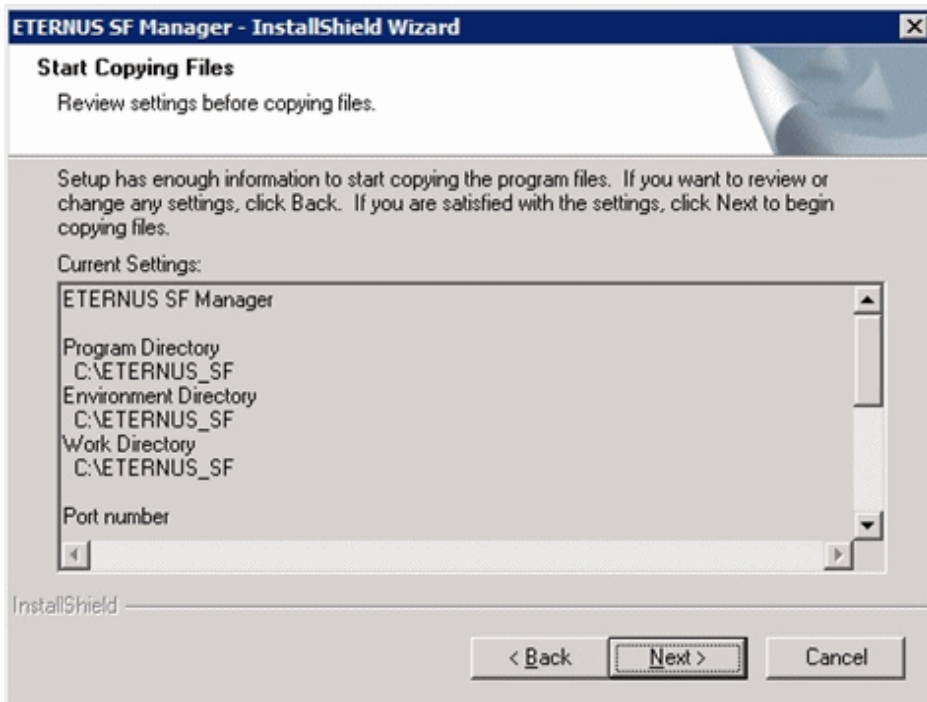
Service Name	Receive Port	Purpose
astm	24917/tcp	Use for internal communication.

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

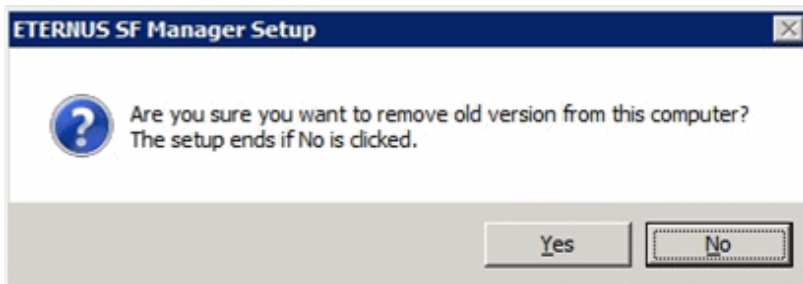
11. Check the settings information in the **Start Copying Files** page.

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

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



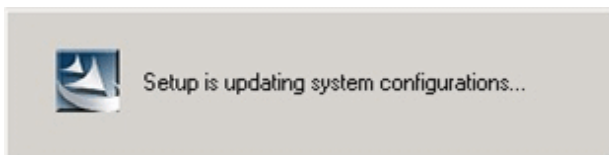
12. The following dialog box will be displayed. To proceed with the uninstallation, click **Yes**.



13. 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. 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.

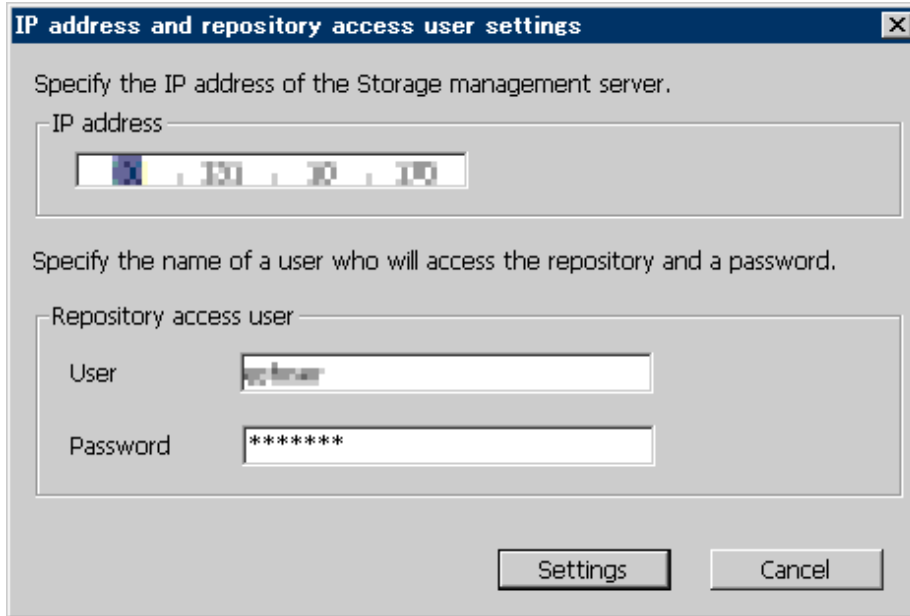
Note

- 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 "[5.1.1.1.5 Estimating the database size](#)". To use the default value, select the **Default size (65 MB)** checkbox.

16. 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).
Specify Internet Protocol address referring to the following.

- When you use only the IPv4 address with the Management Server:
Set the IPv4 address used.
- When you use only the IPv6 address with the Management Server:
Set a temporary IPv4 address (127.0.0.1 for instance).
The following operations are executed after the Upgrade Installation is completed and the IP address version of the Management Server is changed to IPv6.
 - a. Create a server information change instruction file on the Management Server. Describe only the IPv6 address as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

- When you use both the IPv4 and IPv6 addresses with the Management Server:
Set the IPv4 address used.
The following operations are executed after the Upgrade Installation is completed and the IPv6 address is added as the IP address of the Management Server.
 - a. Create a server information change instruction file on the Management Server. Describe both the IPv4 and the IPv6 addresses as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

Information

- Refer to "Changing the IP address of Management Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* at this version for the update procedure of Internet Protocol address information.
- Refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* at this version for details of the command.

Point

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).

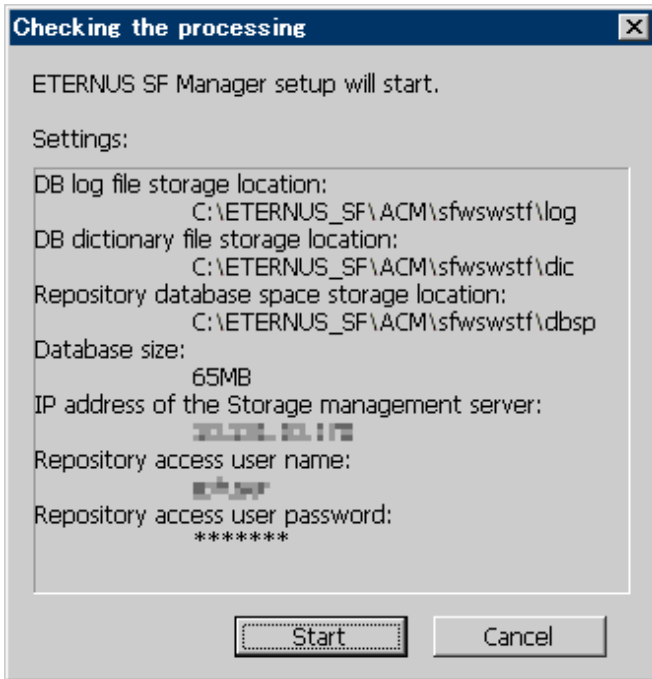
Information

- 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.

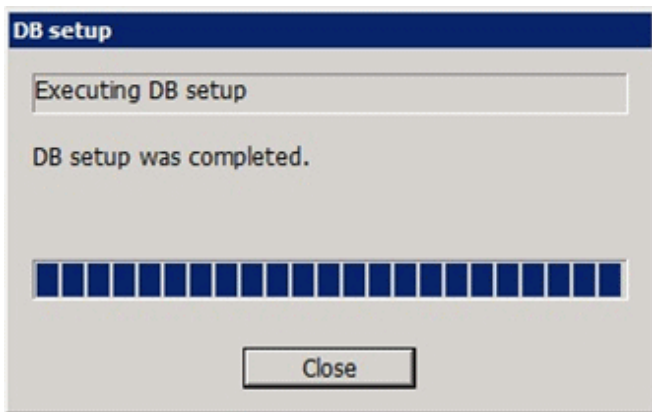
Server Type	User Type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

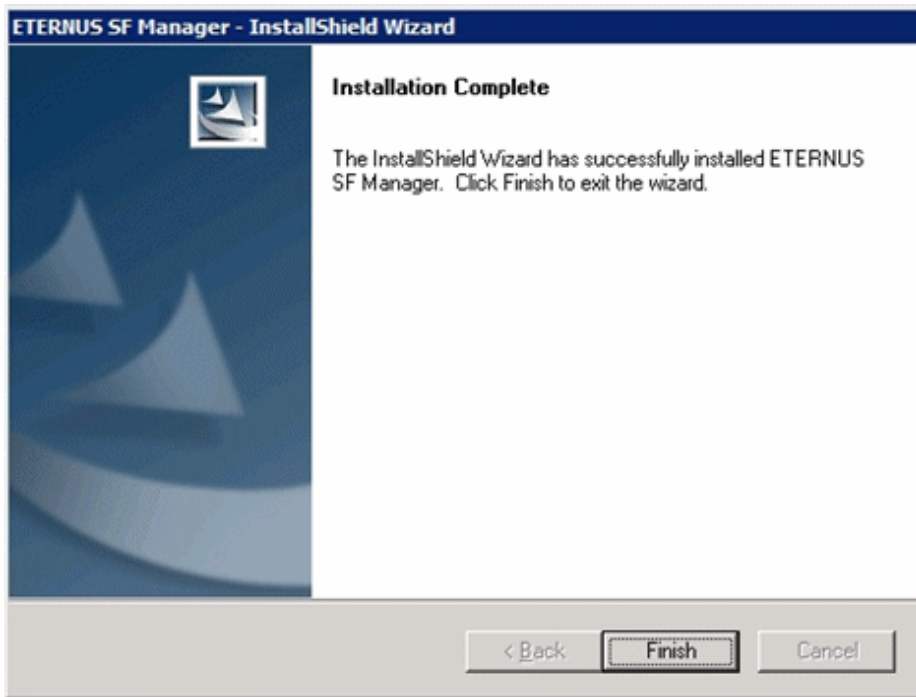
17. The following page will be displayed. Check the contents and click **Start**.



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



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



20. Eject the DVD-ROM.

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

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "[5.1.2.3 Performing the upgrade \(Secondary node\)](#)".

5.1.2.3 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 \(Primary node\)](#)".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from the following tasks.

After upgrading on the primary node and the secondary node, perform the cluster setup. Refer to "[A.7 Unsetting up the database](#)" to perform the repository database unsetup on a primary node and a secondary node, before performing the cluster setup. 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 information on the cluster setup.

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

When the upgrade has been completed, the tasks below need to be performed on the primary node.

1. 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.

2. Implement restoration of the previous version.

With the following procedures, restore the operation environment of the previous version of the Storage Cruiser's manager. Note that if step a and step b have already been performed, it is unnecessary to perform these again.

- a. Log on to the server using Administrator privileges.
- b. 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.
- c. Implement restoration of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpostinst_cluster.bat backupDir [tmpDir] -primary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.



Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.

- d. Eject the DVD-ROM.

3. 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 16.0	Version=V15.0	Version=V16.0
Version 15.1 to 16.0	Version=V15.1	
Version 15.2 to 16.0	Version=V15.2	
Version 15.3 to 16.0	Version=V15.3	



Note

Do not change anything other than the version information.

4. Start the ETERNUS SF Manager services.
Use the Failover Cluster Manager to start the transactions of ETERNUS SF Manager.

5. 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.

```
programDi r\ACM\bin\stgxfwcmmodsrv -n serverName
```

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 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.

```
programDi r\ACM\bin\stgxfwcmmodsrv -n serverName
```

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 (for Windows)* for this version for information on the command.

7. 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.

- a. Execute the `stguserset` command.

```
programDi r\ACM\bin\stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

- b. Stop the service (AdvancedCopy Manager GUI Service)
- c. Start the service (AdvancedCopy Manager GUI Service and ETERNUS SF Manager Tomcat Service)

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.

8. Import the configuration information.

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
programDir\Common\bin\esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf import status` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.

Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

Point

- If the ETERNUS VASA Provider was being used with the previous version:
It is necessary to reinstall a version of the ETERNUS VASA Provider that supports this edition.
- If the Fujitsu ETERNUS Storage Systems Monitoring Pack was being used with the previous version:
It is necessary to reinstall a version of the Fujitsu ETERNUS Storage Systems Monitoring Pack that supports this edition.

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 on the secondary node.

1. Check that the ETERNUS SF Manager services are stopped.
If not stopped, use the Failover Cluster Manager to stop the transactions of ETERNUS SF Manager.
2. Implement restoration of the previous version.
With the following procedures, restore the operation environment of the previous version of the Storage Cruiser's manager.
Note that if step a and step b have already been performed, it is unnecessary to perform these again.
 - a. Log on to the server using Administrator privileges.
 - b. 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.
 - c. Mount the shared disk for shared data of ETERNUS SF Manager.
If it is mounted on the primary node, unmount it to mount on the secondary node.

- d. Implement restoration of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpostinst_cluster.bat backupDir [tmpDir] -secondary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.

- e. Unmount the shared disk for shared data of ETERNUS SF Manager.
If it is required for the work on the primary node, mount it on the primary node.
- f. Eject the DVD-ROM.

Point

- If the ETERNUS VASA Provider was being used with the previous version:
It is necessary to reinstall a version of the ETERNUS VASA Provider that supports this edition.
- If the Fujitsu ETERNUS Storage Systems Monitoring Pack was being used with the previous version:
It is necessary to reinstall a version of the Fujitsu ETERNUS Storage Systems Monitoring Pack that supports this edition.

5.1.2.6 Starting ETERNUS SF Manager

After performing "5.1.2.4 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. Check that start ETERNUS SF Manager services are started on the primary node.
If not started, 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:
 - a. Select **Control Panel > Administrative Tools > Services** to open the Windows Services screen.
 - b. Select "AdvancedCopy Manager COM Service" and then click **Start**.

Note

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

- If performance monitoring had been performed, restart the performance monitoring with the following steps.
 1. Start performance monitoring.
Refer to "Instruction for performance management" and "Setting monitoring intervals" in the *ETERNUS SF Storage Cruiser Operation Guide*.
 2. If threshold monitoring had been performed, 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*.

 **Point**

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 7-c and 12-d of "5.1.2.1 Preparing for the upgrade" maybe deleted.

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.

 **Point**

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

5.2.1.1.1 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
```

 **Information**

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.

5.2.1.1.2 Backing up the operational environment of the previous version

With the following procedures, perform a backup of the operation environment of the previous version of the Storage Cruiser's manager. Refer to "A.33 Capacity necessary for backup of previous version " for information on the capacity required to perform a backup.

Note

Performance management information is not backed up. If performance monitoring is performed, record the current configuration details. In the previous version Web Console, refer to the following information.

- 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)

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

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

5. Implement backup of the previous version.

Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpreinst.sh backupDir [ tmpDir ]
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters " / ` * ? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (tmpDir) related to the performance management function to under /var/opt. In the case of backup to a different location from that under /var/opt, it may take time to perform backup and restore.

5.2.1.1.3 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 "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

5.2.1.1.4 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.

5.2.1.1.5 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.

5.2.1.1.6 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.

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

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.

5.2.1.1.8 Preparing for uninstallation

Refer to "A.8 Cancelling the repository settings" to unsetup the repository database of the previous version.

5.2.1.2 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, /etc/opt, /var/opt) 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, /etc/opt, /var/opt.
- Perform the custom installation when the previous version of AdvancedCopy Manager has been installed and the Management Server has multiple IP addresses.

 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.

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:

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

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)" 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 V16.0      |
|                                     |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 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 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

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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.

7. MISCELLANEOUS

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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
```

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

Perform "[5.2.1.3 Tasks to be performed after the upgrade](#)" afterwards.

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below

1. Install the target version.
2. If the installation is successfully completed, continue from "[5.2.1.3 Tasks to be performed after the upgrade](#)".

5.2.1.3 Tasks to be performed after the upgrade

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

5.2.1.3.1 Restoring the environment from the previous version

With the following procedures, restore the operation environment of the previous version of the Storage Cruiser's manager. Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

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)" 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. Implement restoration of the previous version.

Execute the following command. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the files related to the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpostinst.sh backupDir [tmpDir]
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters " / ^ * ? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.

5. Unmount the DVD-ROM.

Example:

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

6. Eject the DVD-ROM.
7. Restart the daemon of ETERNUS SF Manager.

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

5.2.1.3.2 Change the server information.

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

When executing the `stgxfwcmmodsrv` command, specify the Management Server name for the `-n` option.

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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.

5.2.1.3.3 Changing the access user password for the repository database

Reconfigure the repository access user information by executing the `stguserset` command.

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

1. Execute the `stguserset` command.

```
/opt/swstorage/bin/stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the RMI daemon.
3. Start the RMI daemon.



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.

5.2.1.3.4 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
# /opt/FJSVesfcm/bin/esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.



Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

5.2.1.3.5 Deleting the Backup Data

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 5 of "5.2.1.1.2 Backing up the operational environment of the previous version" maybe deleted.

Subsequently, go to "5.2.3 Resuming operation".

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.



Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

1. Install of essential package.

According to the environment in which Upgrade Installation is executed, the packages required for primary node and secondary node 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
```

 **Information**

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) is 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 it.

3. Stop the cluster application (transaction) on the primary node.

Stop the cluster application (transaction) to which ETERNUS SF Manager belongs. Refer to the relevant cluster software manuals for information on stopping it

However, the shared disk for shared data of ETERNUS SF Manager must be mounted.

4. If Managed Server transactions coexist in the clustered system, perform the following procedure:

- a. On the secondary node for a target transaction, check that the Managed Server transactions are stopped.

If not stopped, 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.

Refer to the relevant cluster software manuals for information on stopping it.

- b. On the primary node for a target transaction, stop the Managed Server transaction.

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

However, the shared disk for shared data of Managed Server transactions must be state of mout.

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:

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. On the primary node, perform a backup of the operating environment of the previous version of the Storage Cruiser's manager.

Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.

 **Note**

Performance management information is not backed up. If performance monitoring is performed, record the current configuration details.

In the previous version Web Console, refer to the following information.

- 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)

-
- a. Log in to the server as a superuser.
 - b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.
 - c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Implement backup of the previous version.
Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpreinst_cluster.sh backupDir [tmpDir] -primary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

-
- Spaces and the characters "/ * ? \ \$ [] , % ! { } are not supported for directory names.
 - The number of characters in a directory name must be up to 220.
 - Move the files (tmpDir) related to the performance management function to under /var/opt. In the case of backup to a different location from that under /var/opt, it may take time to perform backup and restore.
-

- e. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- f. Unmount the DVD-ROM.

Example:

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

- g. Eject the DVD-ROM.

7. 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 "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

8. 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.



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.

9. 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.

10. Estimating the database size

A database is necessary for this version of Storage Cruiser.

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.

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

Therefore, ensure the new ports are available before starting the upgrade.



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

12. On the secondary node, perform a backup of the operating environment of the previous version of the Storage Cruiser's manager.

The capacity required for performing this backup is 10MB.

- a. Log in to the server as a superuser.
- b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.
- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Mount the shared disk for shared data of ETERNUS SF Manager.
If it is mounted on the primary node, unmount it to mount on the secondary node.

- e. Implement backup of the previous version.

Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpreinst_cluster.sh backupDir [ tmpDir ] -secondary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the command again.



- Spaces and the characters "/`*? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (tmpDir) related to the performance management function to under /var/opt. In the case of backup to a different location from that under /var/opt, it may take time to perform backup and restore.

- f. Unmount the shared disk for shared data of ETERNUS SF Manager.
If it is required for the work on the primary node, mount it on the primary node.

- g. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- h. Unmount the DVD-ROM.

Example:

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

- i. Eject the DVD-ROM.

13. 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 "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

14. 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.

15. 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.

16. Confirming the port number for the communication service

Therefore, ensure the new ports are available before starting the upgrade.



See

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

17. In cases when Managed Server transactions coexist in the cluster system, move the AdvancedCopy Manager daemon start and stop script of the Managed Server transactions to a backup location.

- On the primary node and the secondary node, move the AdvancedCopy Manager daemon start and stop script of the Managed Server transactions to a backup location.

18. Performing the cluster unsetup

Refer to "Uninstallation of ETERNUS SF Manager" in "Deletion of Cluster Environment for Management Server Transactions" in the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version to delete unnecessary resources.



Note

Do not uninstall the ETERNUS SF Manager.



Note

In cases when Managed Server transactions coexist, do not release the configurations of these Managed Server transactions.

5.2.2.2 Performing the upgrade (Primary node)

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, /etc/opt, /var/opt) 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, /etc/opt, /var/opt.
- Perform the custom installation when the previous version of AdvancedCopy Manager has been installed and the Management Server has multiple IP addresses.

 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.

 Point

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:

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

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)" 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 V16.0      |
|                                     |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 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.

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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 Product.

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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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```
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 Storage Cruiser's manager is complete.

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "[5.2.2.3 Performing the upgrade \(Secondary node\)](#)".

5.2.2.3 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 \(Primary node\)](#)".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from the following tasks.

After upgrading on the primary node and the secondary node, perform the cluster setup. Refer to "[A.8 Cancelling the repository settings](#)" to perform the repository database unsetup on a primary node and a secondary node, before performing the cluster setup. 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 information on the cluster setup.

In cases when Managed Server transactions coexist in the cluster system, restore the AdvancedCopy Manager daemon start and stop script of the Managed Server transactions backup location (step 17 of "[5.2.2.1 Preparing for the upgrade](#)").

- On the primary node and the secondary node, restore the AdvancedCopy Manager daemon start and stop script of the Managed Server transactions.

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

When the upgrade has been completed, the tasks below need to be performed on the primary node.

1. Stop the cluster application (transaction)
Stop the cluster application (transaction) to which ETERNUS SF Manager belongs. Refer to the relevant cluster software manuals for information on stopping it.
However, the shared disk for shared data of ETERNUS SF Manager must be mounted.
2. 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:

- `<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 16.0	Version=V15.0	Version=V16.0
Version 15.1 to 16.0	Version=V15.1	
Version 15.2 to 16.0	Version=V15.2	
Version 15.3 to 16.0	Version=V15.3	

Note

Do not change anything other than the version information.

3. Implement restoration of the previous version. Note that if step a through step c have already been performed, it is unnecessary to perform these again.

With the following procedures, restore the operation environment of the previous version of the Storage Cruiser's manager.

- a. Log in to the server as a superuser.
- b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.
- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Implement restoration of the previous version. Execute the following command. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpostinst_cluster.sh backupDir [tmpDir] -primary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters "/^*? \ \$ [] , % ! { }" are not supported for directory names.
- The number of characters in a directory name must be up to 220.

- e. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- f. Unmount the DVD-ROM.

Example:

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

- g. Eject the DVD-ROM.

4. Start the cluster application (transaction).
Start the cluster application (transaction) to which ETERNUS SF Manager belongs.
Refer to the relevant cluster software manuals for information.

5. 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.

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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.

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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.

7. 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.

- a. Execute the `stguserset` command.

```
/opt/swstorage/bin/stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

- b. Stop the RMI daemon.
- c. Start the RMI daemon.

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.

8. Import the configuration information.

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
# /opt/FJSVesfcm/bin/esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.

Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

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 on the secondary node.

1. Check the cluster application (transaction) is stopped.

If not stopped, stop the cluster application (transaction) to which ETERNUS SF Manager belongs. Refer to the relevant cluster software manuals for information on stopping it.

2. Implement restoration of the previous version. Note that if step a through step c have already been performed, it is unnecessary to perform these again.

With the following procedures, restore the operation environment of the previous version of the Storage Cruiser's manager.

a. Log in to the server as a superuser.

b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.

c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

d. Mount the shared disk for shared data of ETERNUS SF Manager.

If it is mounted on the primary node, unmount it to mount on the secondary node.

e. Implement restoration of the previous version.

Execute the following command. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function

with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpostinst_cluster.sh backupDir [ tmpDir ] -secondary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters "/^`*? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.

- f. Unmount the shared disk for shared data of ETERNUS SF Manager.
If it is required for the work on the primary node, mount it on the primary node.
- g. Change to a directory other than the DVD-ROM.
Example:

```
# cd
```

- h. Unmount the DVD-ROM.
Example:

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

- i. Eject the DVD-ROM.

5.2.2.6 Starting the Managed Server transactions

Perform the following procedure:

1. Check that start the cluster application (transaction) is started on the primary node.
If not started, start the cluster application (transaction) of ETERNUS SF Manager.
Refer to the relevant cluster software manuals for information on starting it.
2. If Managed Server transactions exist in a clustered system, start the Managed Server transactions in the primary node for a target transaction.
Refer to the relevant cluster software manuals 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.
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.

Subsequently, go to "5.2.3 Resuming operation".

Point

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 6-d and 12-e of "5.2.2.1 Preparing for the upgrade" maybe deleted.

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 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.
 - If performance monitoring had been performed, restart performance monitoring with the following steps.
 1. Start performance monitoring.
Refer to "Instruction for performance management" and "Setting monitoring intervals" in the *ETERNUS SF Storage Cruiser Operation Guide*.
 2. If threshold monitoring had been performed, 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*.
-

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

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

5.3.1 Preparing for the upgrade

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

5.3.1.1 Backing up the operational environment of the previous version

For recovery in case the upgrade fails, perform a backup of the operating environment of the previous version of the Storage Cruiser's agent. The procedure is shown below:

1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack (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. Furthermore, if the Installer screen is displayed by autorun, exit the installer.
3. Stop the Storage Cruiser's agent service.
Open the Service Control Manager and stop the ETERNUS SF Storage Cruiser Agent service.
4. Start the command prompt with "Run as administrator".
5. Implement backup of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

```
dvdromDrive:\Agent_windows\Storage_Cruiser\windows_x86\scagtpreinst.bat backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch again.



- The characters " | : * ? / . < > , % & ^ = ! ; are not supported for directory name.

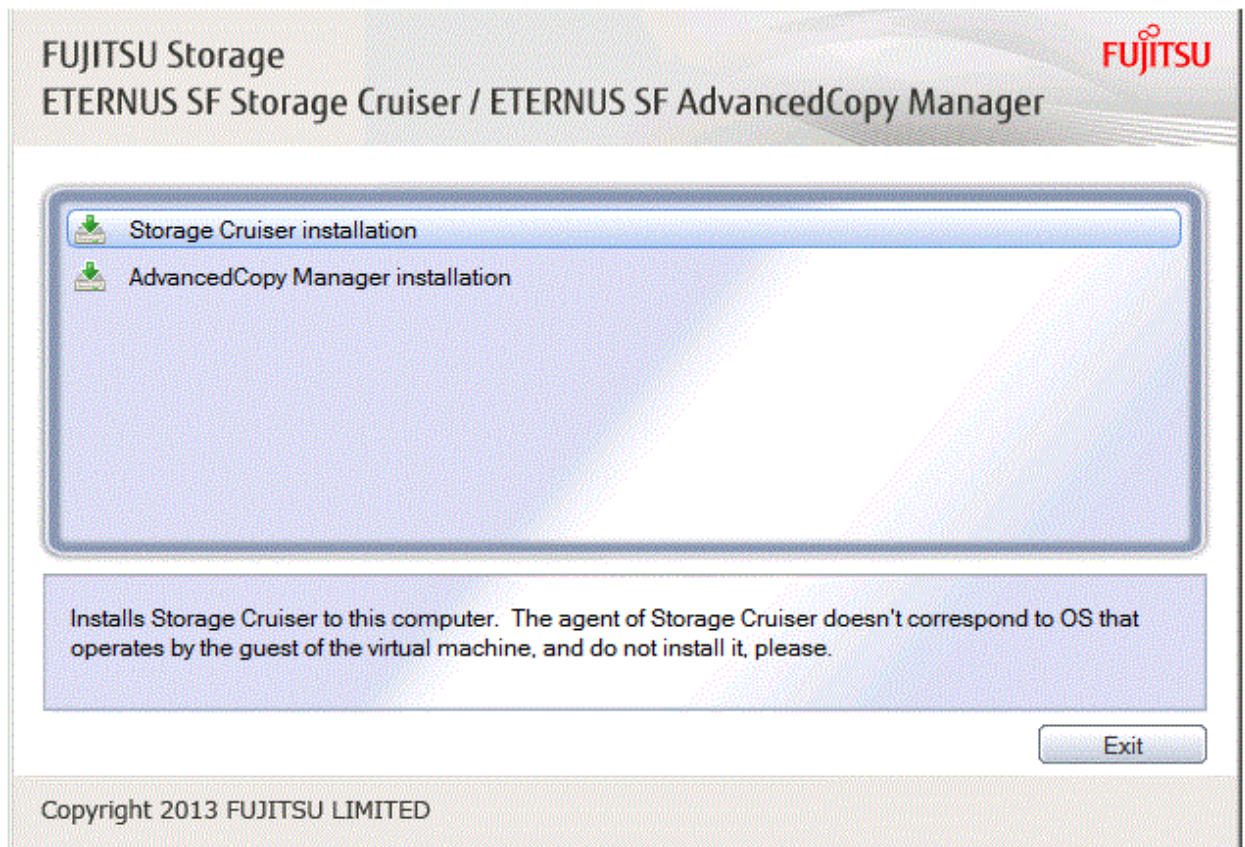
- If the directory name contains any spaces, they should be surrounded by double quote characters.

6. Back up the operating system.

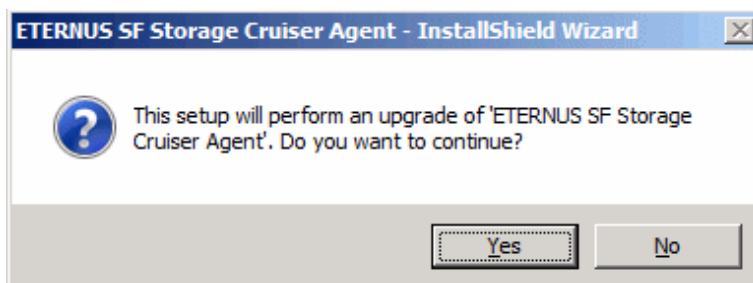
5.3.2 Performing the upgrade

The upgrade is performed as follows:

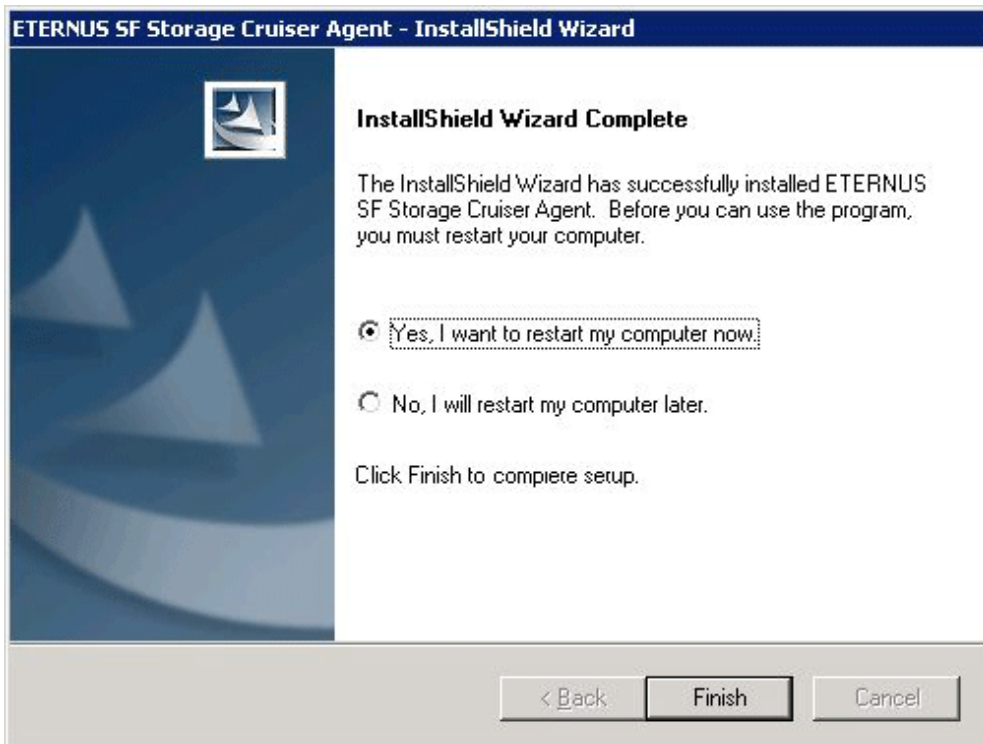
1. Execute autorun.exe in the DVD-ROM of this version "ETERNUS SF SC/ACM/Express Media Pack Agent Program & Manual".
2. The following window will be displayed. Click **Storage Cruiser installation**.



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



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



5. Perform the following operations with the Web Console to reload the server information.
 - a. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
 - b. On the Main pane, check the target server checkbox.
 - c. On the Action pane, click **Reload Conf.** under **Server**.

5.3.3 Tasks to be performed after the upgrade

If the customization of "Correlation.ini Parameter" in the *ETERNUS SF Storage Cruiser Operation Guide* has been performed, restore the Storage Cruiser's agent configuration information in accordance with the following procedure.

If customization has not been performed, no action is required.

1. Restore of the Storage Cruiser's Agent Configured Information

The configuration information of the previous version Storage Cruiser's agent is saved in the following file under the *backupDir* directory specified by "[5.3.1.1 Backing up the operational environment of the previous version](#)".

```
backupDir\etc\Correlation.ini
```

Refer to the backup file and reflect the definitions which have been changed from the installation of the previous version Storage Cruiser's agent to the \$ENV_DIR\Agent\etc\Correlation.ini file.

(\$ENV_DIR is "Environment Directory" specified at the Storage Cruiser's agent installation.)

 **See**

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



See

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



Point

- When returning back to the state before installation of the upgrade, recover (restore) the system from the backup taken in step 6 of "5.3.1.1 Backing up the operational environment of the previous version".
- Once normal operation has been confirmed after the upgrade of the Storage Cruiser's agent, the backup data in the backup destination directory created in step 5 of "5.3.1.1 Backing up the operational environment of the previous version" maybe deleted.

5.4 Upgrading the Storage Cruiser's agent (for Solaris)

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



Point

For performing the upgrade in single-user mode:

Check that the local file system is already mounted before the installation. If it is not mounted yet, mount the local file system.

```
# /usr/sbin/mountall -l
```

5.4.1 Preparing for the upgrade

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

5.4.1.1 Backing up the operational environment of the previous version

For recovery in case the upgrade fails, perform a backup of the operating environment of the previous version of the Storage Cruiser's agent. The procedure is shown below:

1. Log on to the server using root privileges.
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:

```
# /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.
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.

In command example, the device name of the DVD-ROM drive is mounted as /dev/dsk/c0t4d0s0. The device name of the DVD-ROM drive will differ depending on the device.

```
# mount -F hsfs -o ro /dev/dsk/c0t4d0s0 dvdromMountPoint
```

5. Implement backup of the previous version.

Execute the following shell script included in the DVD-ROM. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

```
dvdromMountPoint/Agent_unix/Storage_Cruiser/Solaris/scagtpreinst.sh backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the shell script again.

5.4.2 Performing the upgrade

The upgrade is performed as follows:

1. Execute the following command.

```
# cd dvdromMountPoint/Agent_unix/Storage_Cruiser/Solaris
# ./scagtinstall.sh
```

2. The following message is displayed. To continue, enter "y". To discontinue, enter "n" or "q".

```
ETERNUS SF Storage Cruiser 16.0
Copyright FUJITSU LIMITED 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]
```

3. If "y" was entered, the following message is 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,?]
```

4. If "y" was entered, the upgrade will continue.

If the upgrade completes normally, the following message is 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 the upgrade fails, the following message is displayed.

```
ERROR : not privileged
or
ERROR : "ETERNUS SF Storage Cruiser" Agent cannot be installed in non-global zone.
```

```
or
ERROR : Upgrading FJSVssage was failed.
```

5. Eject the DVD-ROM.

```
# cd /
# umount dvdromMountPoint
```

6. Execute the following command to start the daemon:

```
# /opt/FJSVssage/bin/sstorageagt
```

7. Perform the following operations with the Web Console to reload the server information.

- a. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
- b. On the Main pane, check the target server checkbox.
- c. On the Action pane, click **Reload Conf.** under **Server**.

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

Point

- It is recommended to back up the system before starting the upgrade. If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback).
When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.
- When the Upgrade Installation terminates in an error, refer to "Corrective actions for error occurrence in upgrade from V 15.x (for Solaris/Linux)" in the *Software Release Guide* to perform recovery the system to the normal state.
- Once normal operation has been confirmed after the upgrade of the Storage Cruiser's agent, the backup data in the backup destination directory created in step 5 of "[5.4.1.1 Backing up the operational environment of the previous version](#)" maybe deleted.

5.5 Upgrading the Storage Cruiser's agent (for RHEL5/RHEL6, SUSE Linux Enterprise Server 11)

This section describes the upgrade procedure for the Storage Cruiser's agent for RHEL5/RHEL6, SUSE Linux Enterprise Server 11.

5.5.1 Preparing for the upgrade

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

5.5.1.1 Backing up the operational environment of the previous version

For recovery in case the upgrade fails, perform a backup of the operating environment of the previous version of the Storage Cruiser's agent. The procedure is shown below:

1. Log on to the server using root privileges.
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:

```
# /bin/ps -ef | grep FJSVssage
```

If not stopped, execute the following command to stop it forcibly:

```
# /usr/bin/kill -9 daemonProclD
```

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.

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.

In command example, the device name of the DVD-ROM drive is mounted as /dev/cdrom. The device name of the DVD-ROM drive will differ depending on the device.

```
# mount /dev/cdrom dvdromMountPoint
```

5. Implement backup of the previous version.

Execute the following shell script included in the DVD-ROM. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

```
dvdromMountPoint/Agent_unix/Storage_Cruiser/Linux/scagtpreinst.sh backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the shell script again.

5.5.2 Performing the upgrade

The upgrade is performed as follows:

1. Execute the following command:

```
# cd dvdromMountPoint/Agent_unix/Storage_Cruiser/Linux
# /bin/sh ./scagtinstall.sh
```

2. The following message is displayed. To continue, enter "y". To discontinue, enter "n" or "q".

```
ETERNUS SF Storage Cruiser 16.0
Copyright FUJITSU LIMITED 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]
```

3. If "y" was entered, the upgrade will continue.

If the upgrade completes normally, the following message is 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 the upgrade fails, the following message is displayed.

```
ERROR : not privileged
or
INFO : Upgrade is terminated.
or
ERROR : Upgrading FJSVssage was failed.
```

4. Eject the DVD-ROM.

```
# cd /
# umount dvdromMountPoint
```

5. Execute the following command to start the daemon:

```
# /opt/FJSVssage/bin/sstorageagt
```

6. Perform the following operations with the Web Console to reload the server information.

- a. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
- b. On the Main pane, check the target server checkbox.
- c. On the Action pane, click **Reload Conf.** under **Server**.

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

Point

- It is recommended to back up the system before starting the upgrade. If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback).
When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.
- When the Upgrade Installation terminates in an error, refer to "Corrective actions for error occurrence in upgrade from V 15.x (for Solaris/Linux)" in the *Software Release Guide* to recover the system to the normal state.
- Once normal operation has been confirmed after the upgrade of the Storage Cruiser's agent, the backup data in the backup destination directory created in step 5 of "[5.5.1.1 Backing up the operational environment of the previous version](#)" maybe deleted.

5.6 Upgrading the Storage Cruiser's agent (for RHEL-AS4/RHEL-ES4, HP-UX, AIX)

This section describes the upgrade procedure for the 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. Perform the following operations with the Web Console to reload the server information.
 - a. On the global navigation tab, click **Server**.

The registered server list is displayed on the Main pane.
 - b. On the Main pane, check the target server checkbox.
 - c. On the Action pane, click **Reload Conf.** under **Server**.

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



See

.....

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" in " [Linux Version] Maintenance of Agent"
 - For HP-UX, see "Changing the IP address of a server node" in " [HP-UX Version] Maintenance of Agent"
 - For AIX, see "Changing the IP address of a server node" in " [AIX Version] Maintenance of Agent"
-

Chapter 6 Upgrading AdvancedCopy Manager Version 14.x

This chapter describes the upgrade procedure for AdvancedCopy Manager Version 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.

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">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, back up the AdvancedCopy Manager Copy Control Module operational environment.



See

Refer to "[A.6 Backing up 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 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.



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.



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.



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.



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. 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
```

2. 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"

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

12 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
	Internal Port 5 (No screen display)	24917

- Custom installation

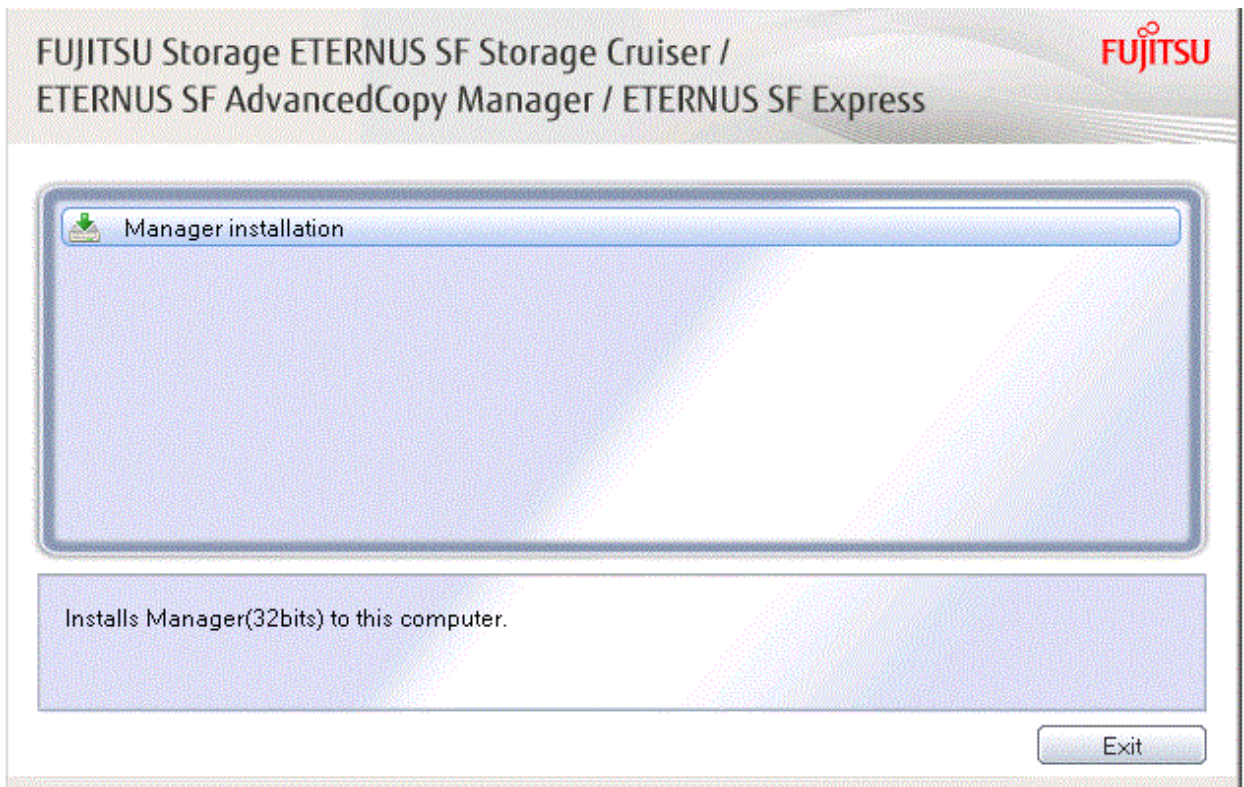
The upgrade is performed by manually entering the configuration information into the interface (installation destination and communication service port numbers).

The upgrade is performed as follows:

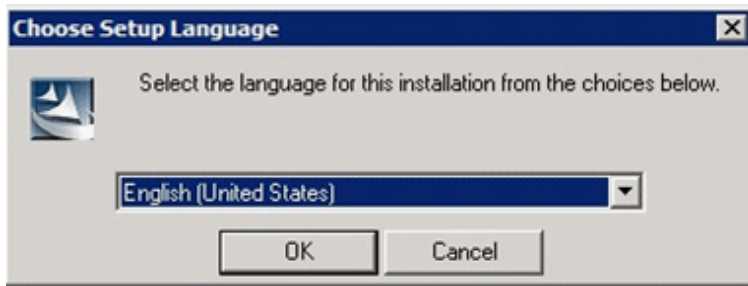
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

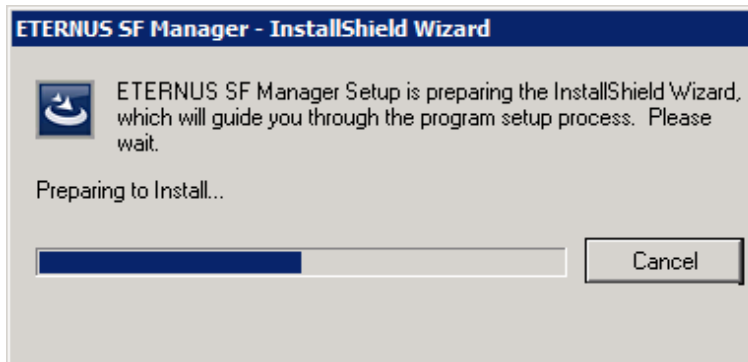
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



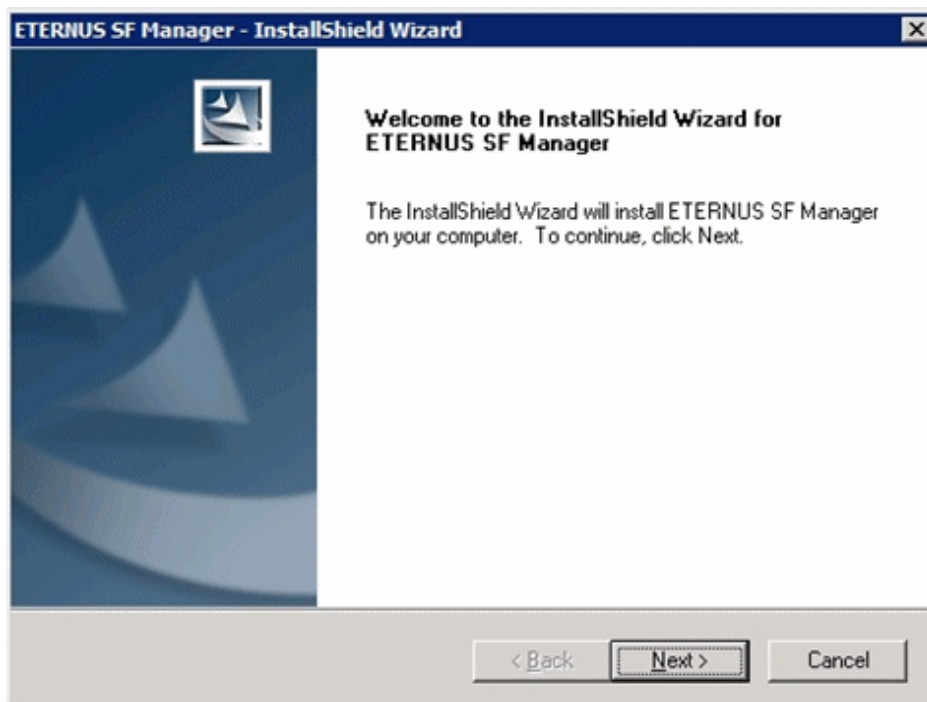
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**. The language selected in this dialog box will be used during installation and uninstallation.



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

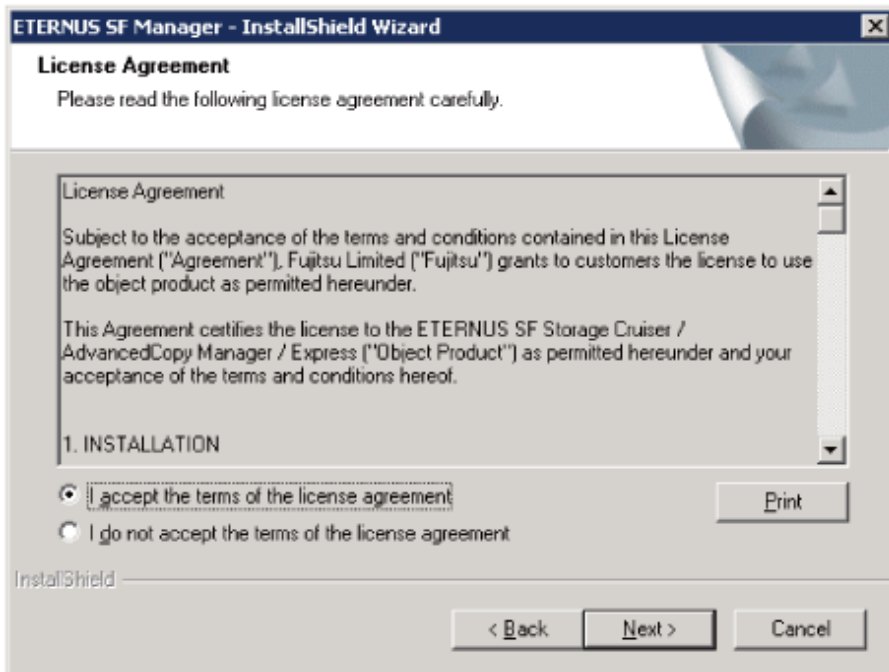


6. The installation wizard page will be displayed. Click **Next**.

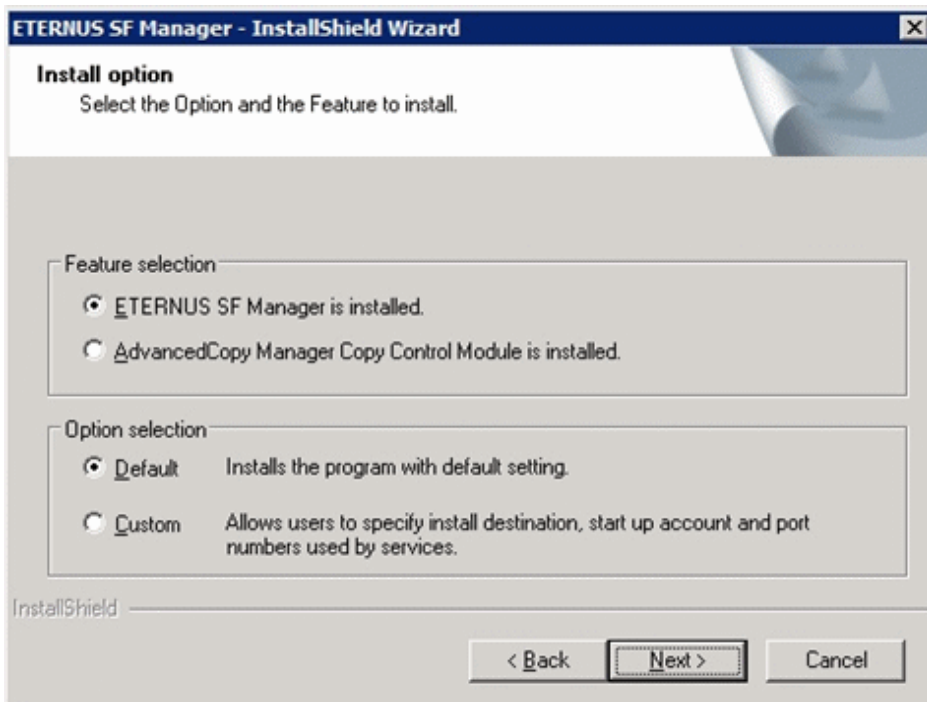


7. Read the terms and conditions of the **License Agreement** page.

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.].

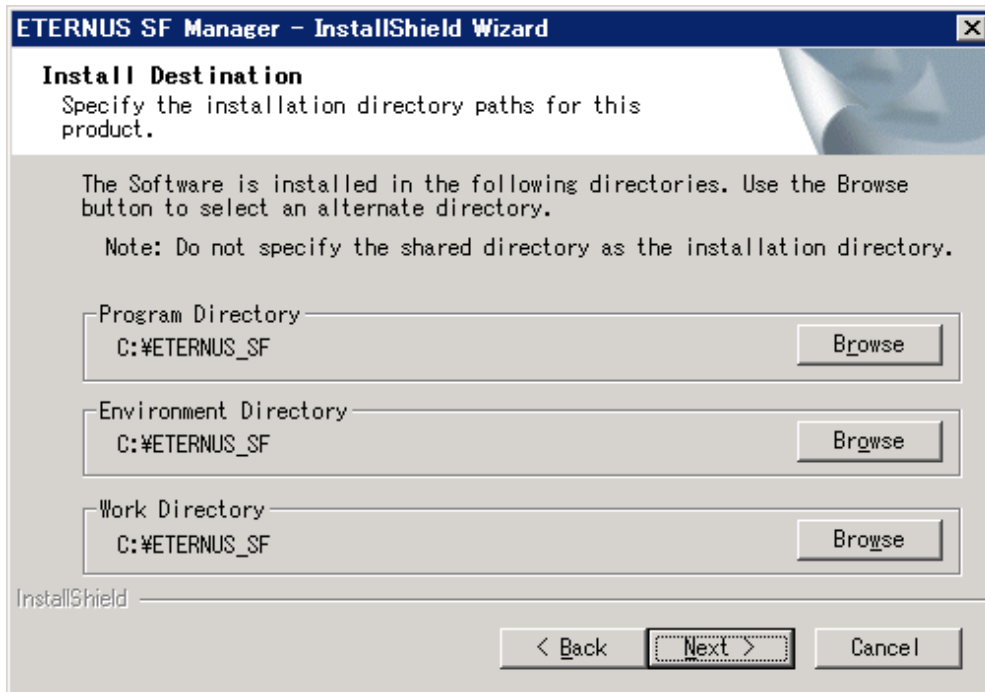
Option selection

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**.



Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; # ' @ () + are not supported for directory 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.

ETERNUS SF Manager - InstallShield Wizard

Port Registration
Specify the port number to be assigned to each service.

To operate the storage management server, the port number is needed. Please specify the port number used in the following services.

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

For Internal Use

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

InstallShield

< Back Next > Cancel

The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 1024 and 65535 are valid.

To change the port number of Internal Port 5, edit the %SystemRoot%\system32\drivers\etc\services file by manual and define the unused port number under the following service name and in the range of 1024-65535:

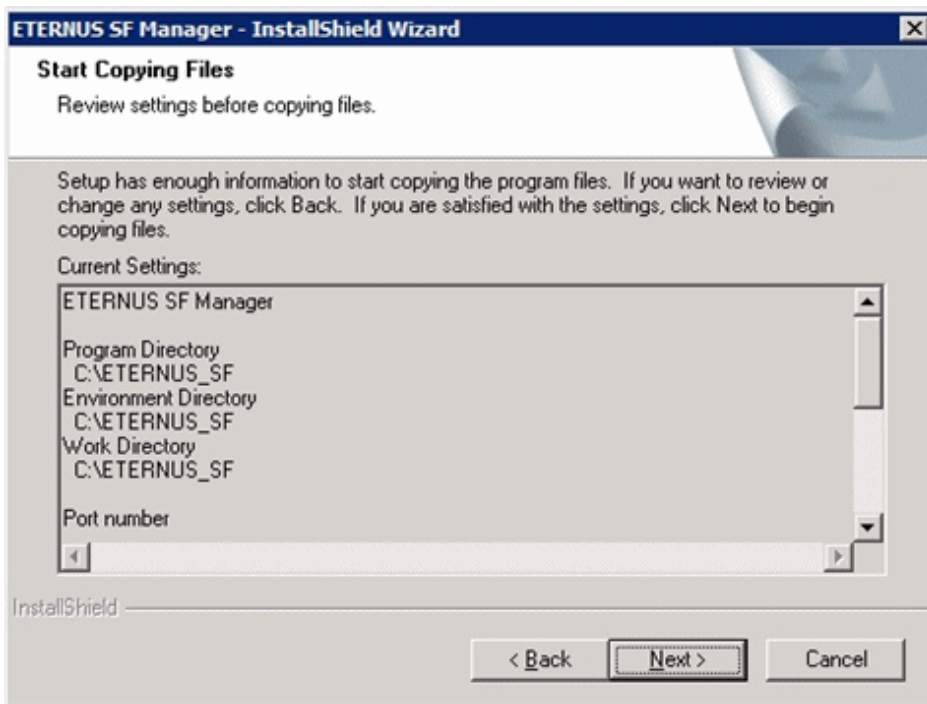
Service Name	Receive Port	Purpose
astm	24917/tcp	Use for internal communication.

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

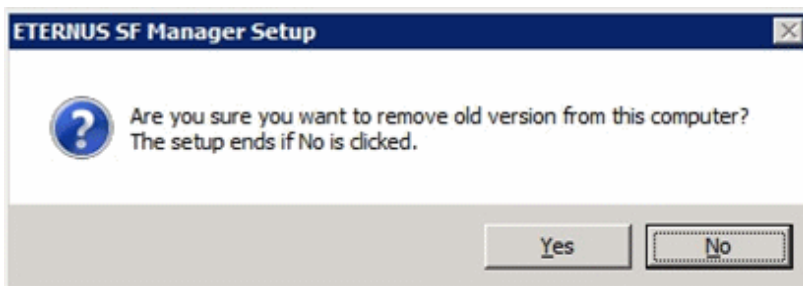
11. Check the settings information in the **Start Copying Files** page.

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.

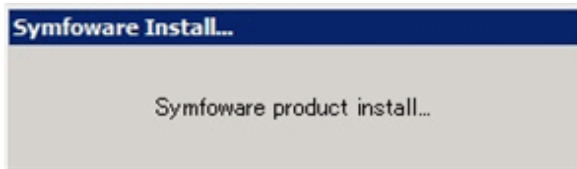
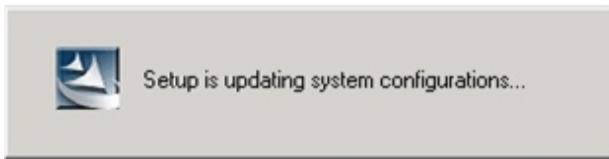
Point

- 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.

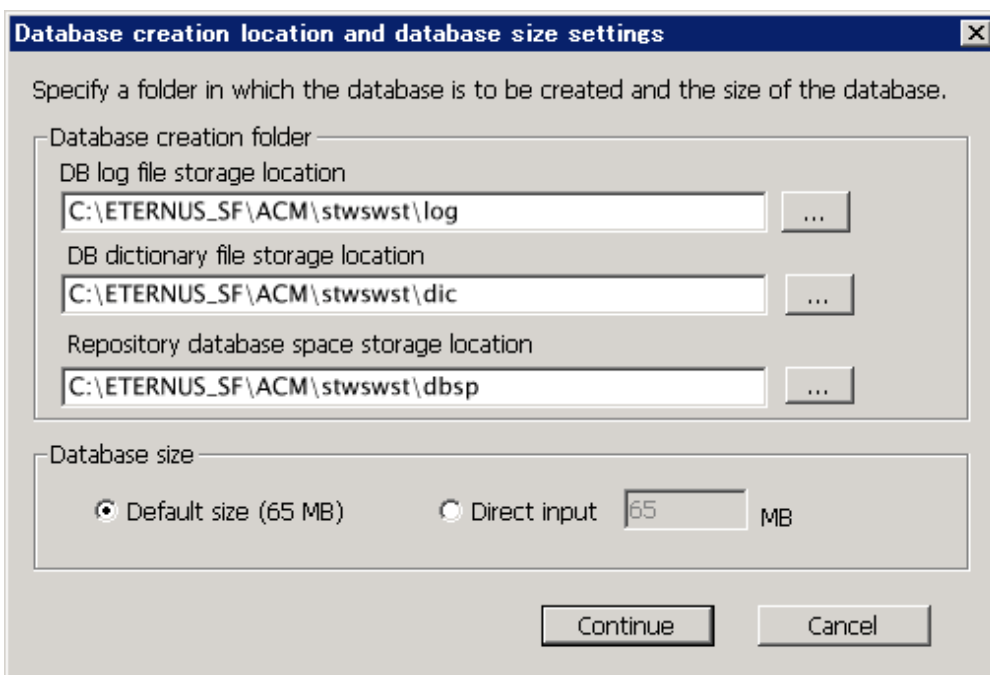
14. When the uninstallation is completed, the copying of the files for the new version will be started.

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

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).

Information

- 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.

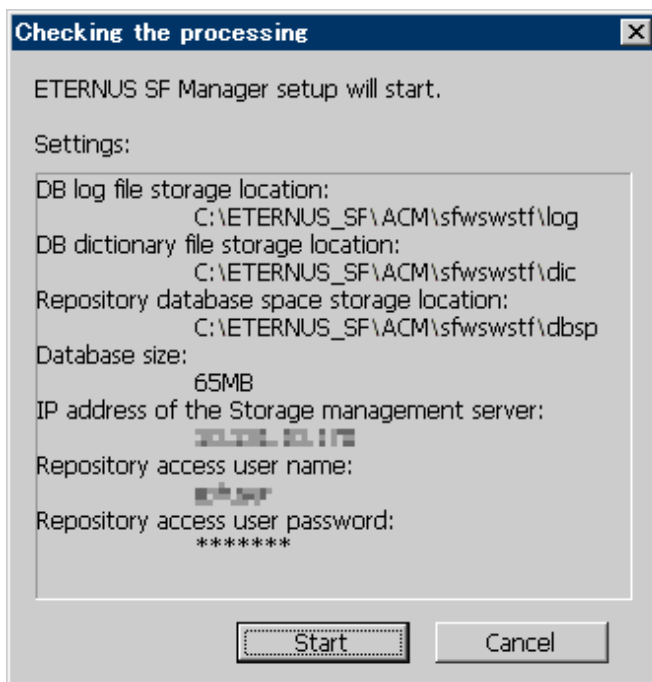
Server Type	User Type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

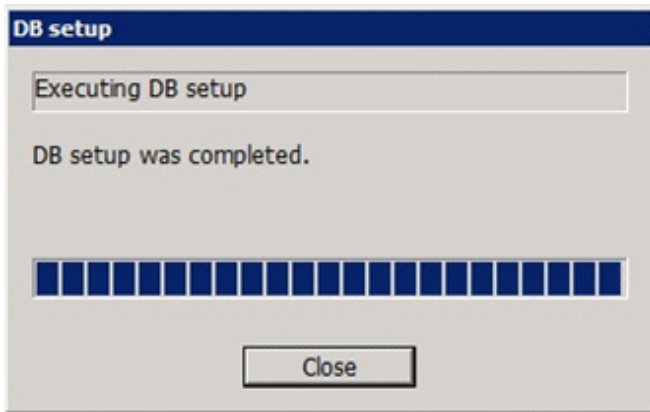
Note

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.

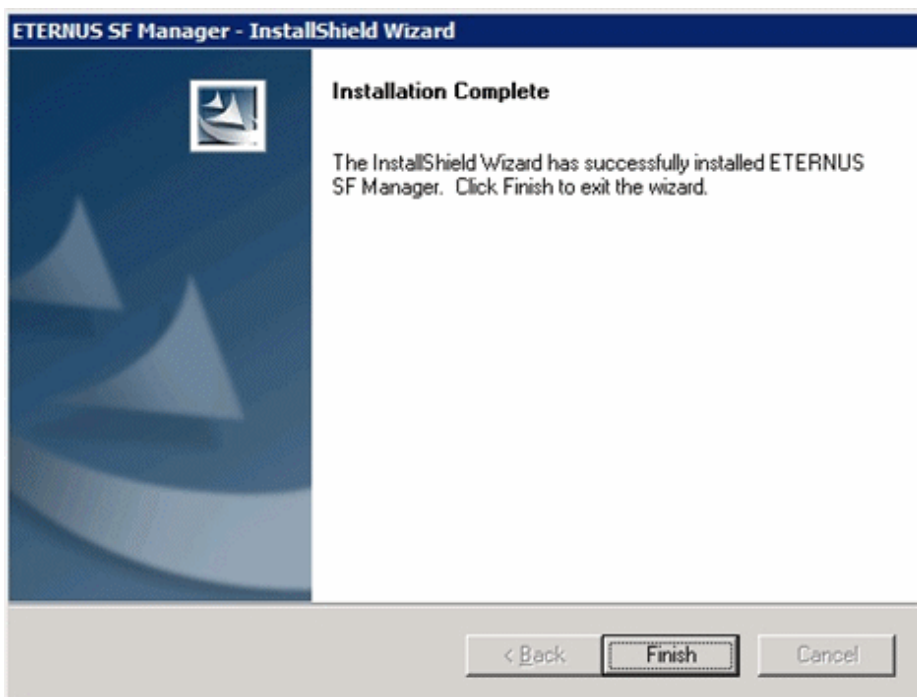
18. The following page will be displayed. Check the contents and click **Start**.



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, /etc/opt, /var/opt) 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, /etc/opt, /var/opt.
- Perform the custom installation 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.

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.

Point

- For Solaris, add "/opt/FSUNrdb2b/lib" to the value of the environment variable LD_LIBRARY_PATH_64 of the terminal on which the Upgrade Installation will be performed.
- 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)" 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 V16.0                |
|  All Rights Reserved, Copyright (C) FUJITSU LIMITED 2013  |
+-----+
```

License Agreement

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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.

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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

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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.

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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]:

- 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.

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

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

- Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- Unmount the DVD-ROM.

Example:

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

- 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)
	Solaris, Linux	Perform the steps in the following order: <ol style="list-style-type: none"> A.10 Restoring the repository data (for Solaris, Linux) 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](#)".



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 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.

- For Windows

1. Execute the `stguserset` command.

```
ProgramDir\ACM\bin\stguserset userName password
```



When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the service (AdvancedCopy Manager GUI Service).
3. Start the service (AdvancedCopy Manager GUI Service and ETERNUS SF Manager Tomcat Service).

- For Solaris or Linux

1. Execute the stguserset command.

```
/opt/swstorage/bin/stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the RMI daemon.
3. Start the RMI daemon.

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.

6.1.4.3 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

- For Windows (DOS prompt):

```
programDir\Common\bin\esfadm devconf import -all
```

- For Solaris or Linux:

```
# /opt/FJSVesfcm/bin/esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.

Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

6.1.4.4 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.

6.1.4.5 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.

6.1.4.6 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.

6.1.4.7 Redefining missing information

- Server information

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



See

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

- AdvancedCopy Manage Copy Control Module configuration information

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



See

Refer to "Command References" in the *ETERNUS SF AdvancedCopy Manager 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:
```

- 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.
```

- 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.

6.1.5 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:

- [6.2.1 Backing up the repository data](#)
- [6.2.2 Backing up the management information](#)
- [6.2.3 Releasing the backup and restore in Exchange Server database \(for Windows\)](#)
- [6.2.4 Uninstalling the previous version](#)
- [6.2.5 Installing this version](#)
- [6.2.6 Restoring the repository data](#)
- [6.2.7 Changing server information](#)
- [6.2.8 Restoring the management information](#)
- [6.2.9 Setting the backup and restore in Exchange Server database \(for Windows\)](#)
- [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 Server database (for Windows)

When the backup and the restoration function of the Exchange Server database are used, release the setting in reference to the manual of the previous version.

- For Windows Server 2003:

"Backup and restore of Exchange Server 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 or later:

"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 previous version manual.

For non-clustered systems



Note

In the course of the following procedures, be careful not to perform the procedure "Deletion of all storage servers".

- For Windows:

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 Solaris, Linux, HP-UX or AIX:

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 clustered systems

If cluster operations are used for Managed Servers as Managed Server transactions, perform the unsetup of cluster settings before performing 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 previous version for information on the procedures for the unsetup 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.

- When the Management Server OS is Windows:

```
programDir\ACM\bin\stgrepocnv -d backupDir
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJJSVswstf/bin/stgrepocnv -d backupDir
```



Note

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

- For Solaris, add "/opt/FSUNrdb2b/lib" to the value of the environment variable LD_LIBRARY_PATH_64 of the terminal on which the command will be executed.



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.

6.2.7 Changing server information

To ensure data consistency, execute the Web Console or stgxfwcmmodsrv command to change the server information. The stgxfwcmmodsrv command must be executed on the Management Server.

When executing the stgxfwcmmodsrv command, specify the Managed 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.

- When the Management Server OS is Windows:

```
programDi r\ACM\bin\stgxfwcmmodsrv -n serverName
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```



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 Server database (for Windows)

Reconfigure the backup and restoration functions of the Exchange Server 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 Server 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 or later:

"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, execute the Web Console or stgxfwcmmodsrv command to update the version information for the Managed Server. The stgxfwcmmodsrv command must be executed on the Management Server.

When executing the stgxfwcmmodsrv command, specify the Managed Server name for the -n option.

- When the Management Server OS is Windows:

```
programDir\ACM\bin\stgxfwcmmodsrv -n serverName
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJVSwsstf/bin/stgxfwcmmodsrv -n serverName
```

Finally, perform the following operations with the Web Console to reload the server information.

1. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
2. On the Main pane, check the target server checkbox.
3. On the Action pane, click **Reload Conf.** under **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 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 from the AdvancedCopy Manager Copy Control Module Version 14.x.

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.



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.



Refer to "[A.6 Backing up 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 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 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.



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).

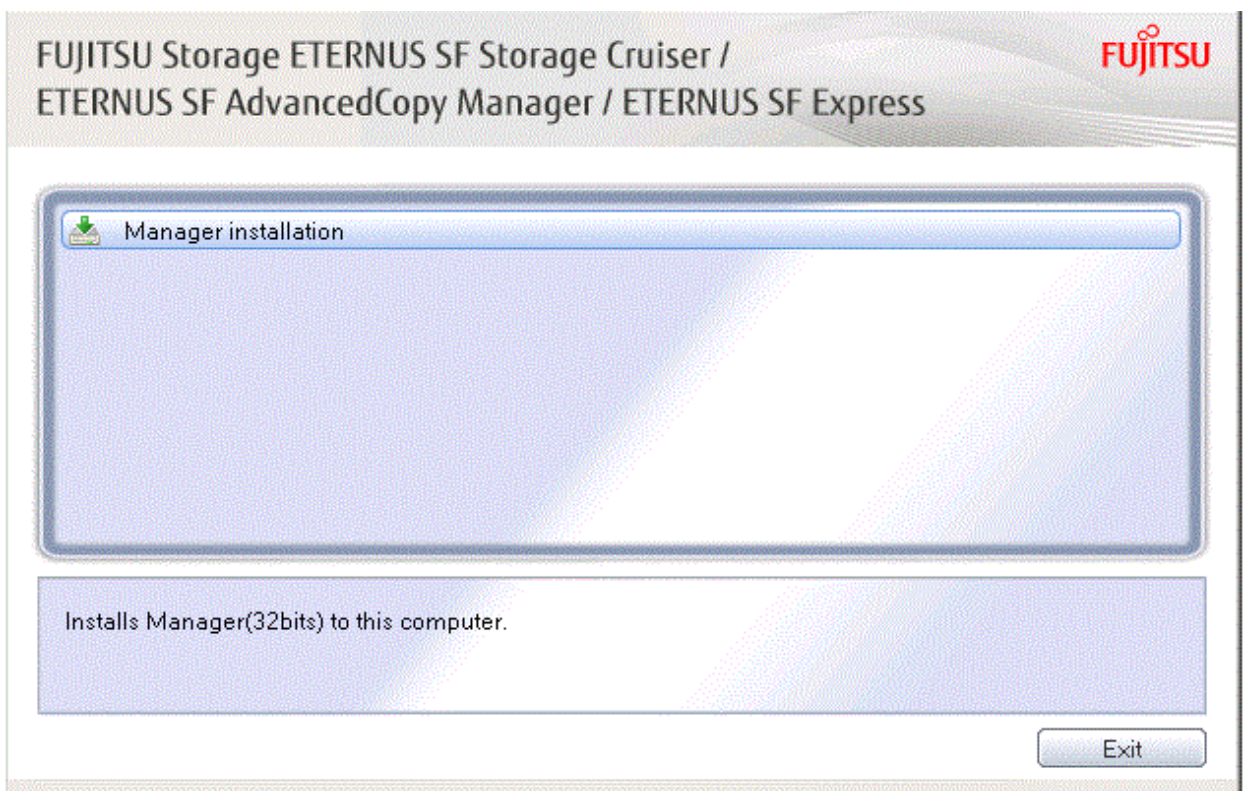
The upgrade is performed as follows:

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.

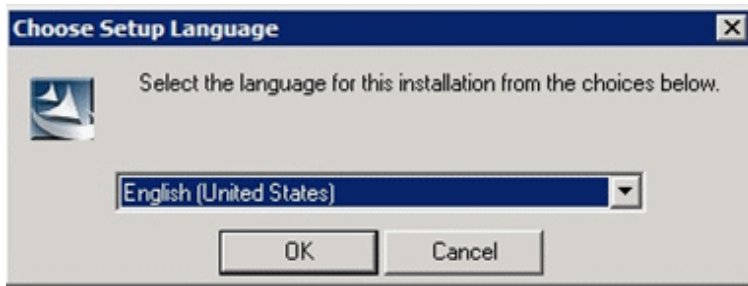
Refer to "DVD-ROM contents" in the *ETERNUS SF Installation and Setup Guide* for this version for information on the DVD-ROM structure and detailed contents.

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

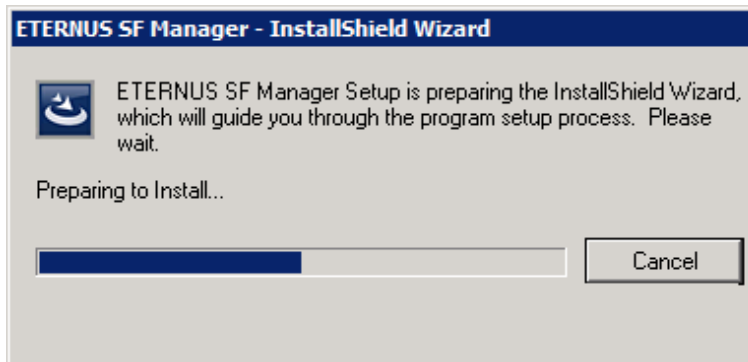
To cancel the upgrade at this point, click **Exit**.



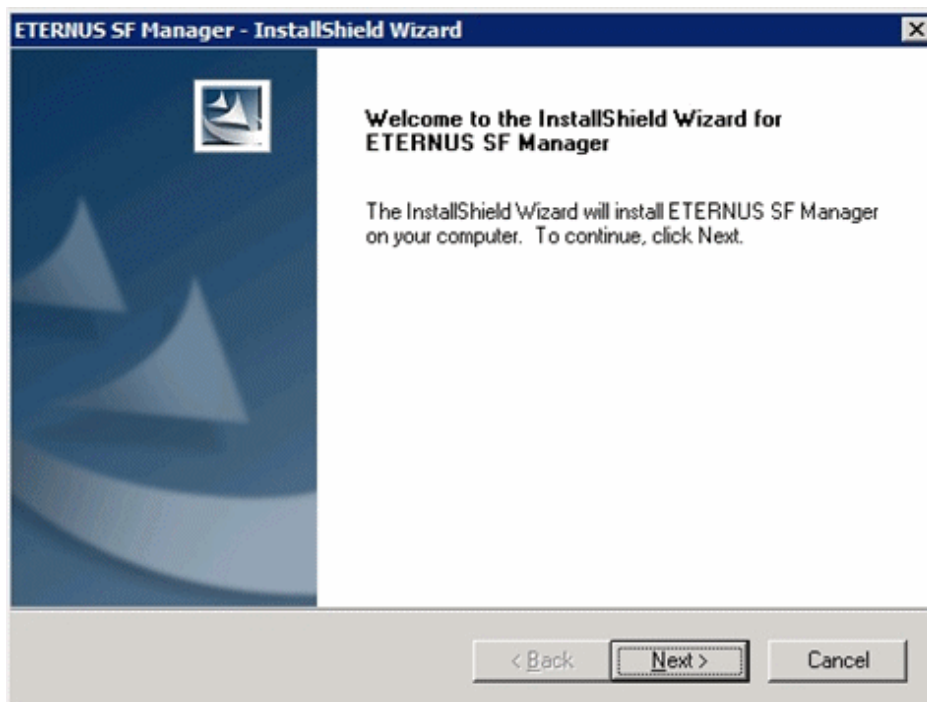
- The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**. The language selected in this dialog box will be used during installation and uninstallation.



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

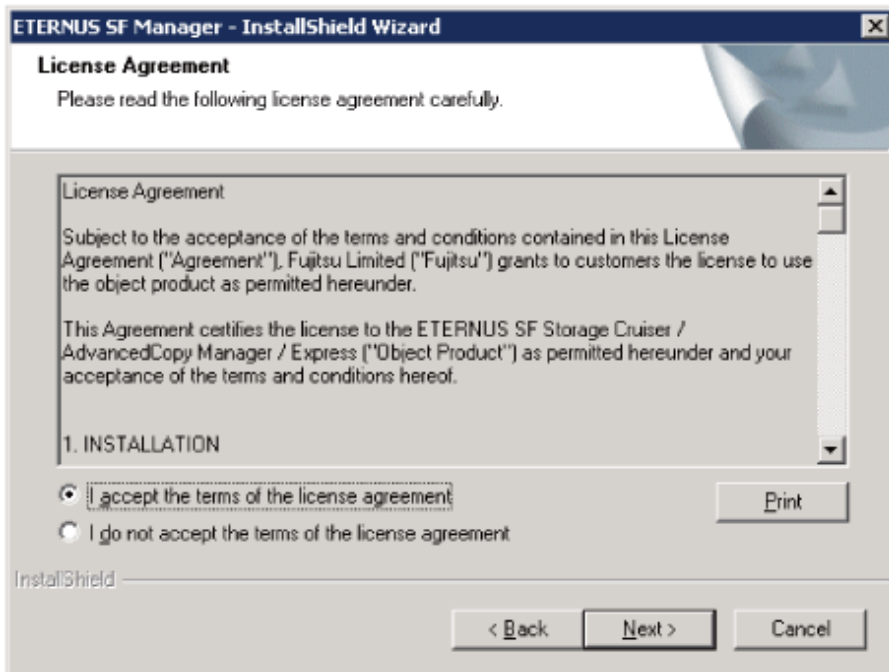


- The installation wizard page will be displayed. Click **Next**.

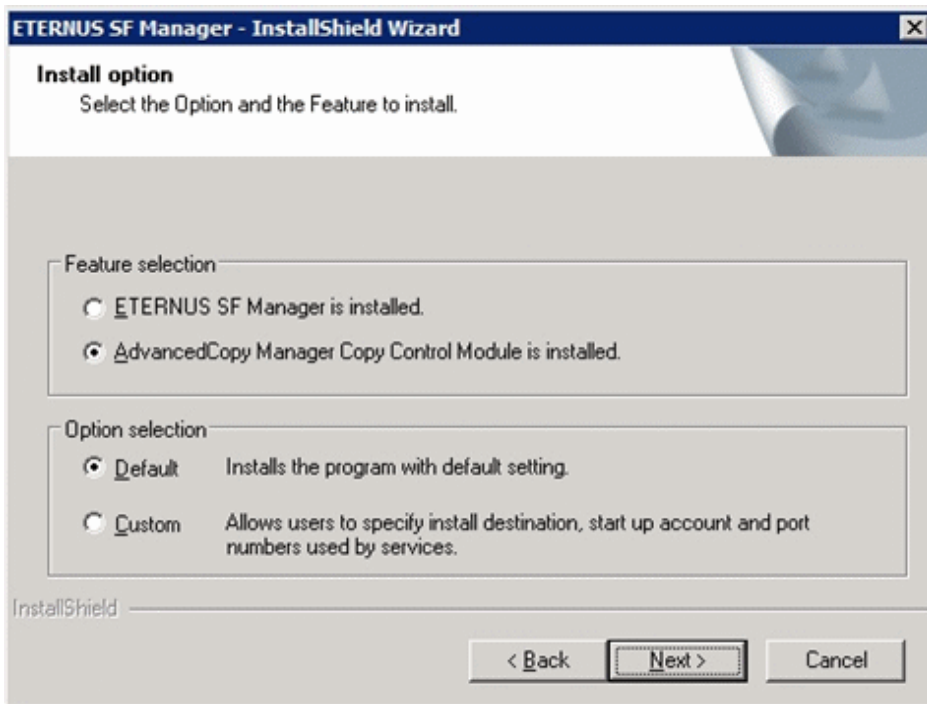


7. Read the terms and conditions of the **License Agreement** page.

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.].

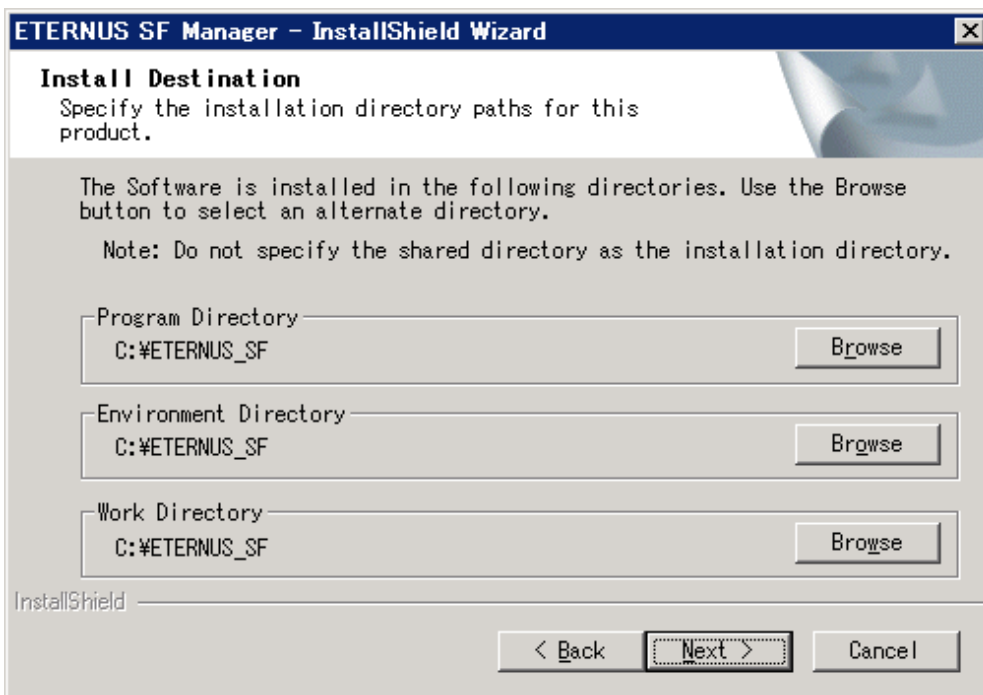
Option selection

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**.



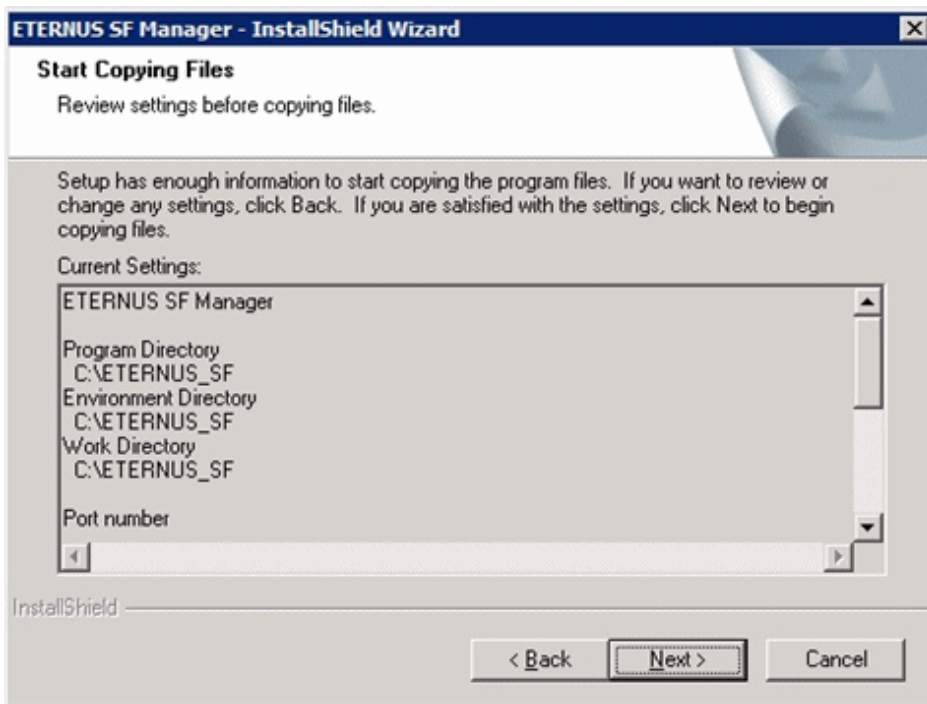
 **Point**

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

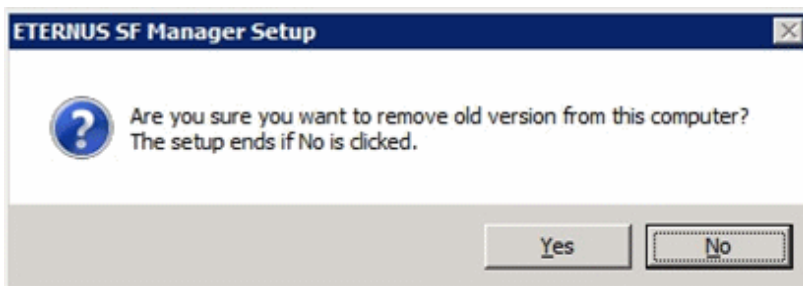
10. Check the settings information in the **Start Copying Files** page.

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.

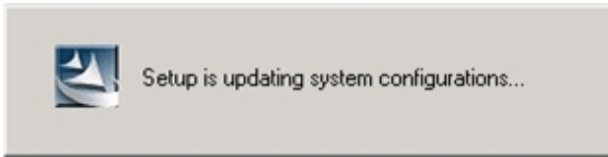
Point

- 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.

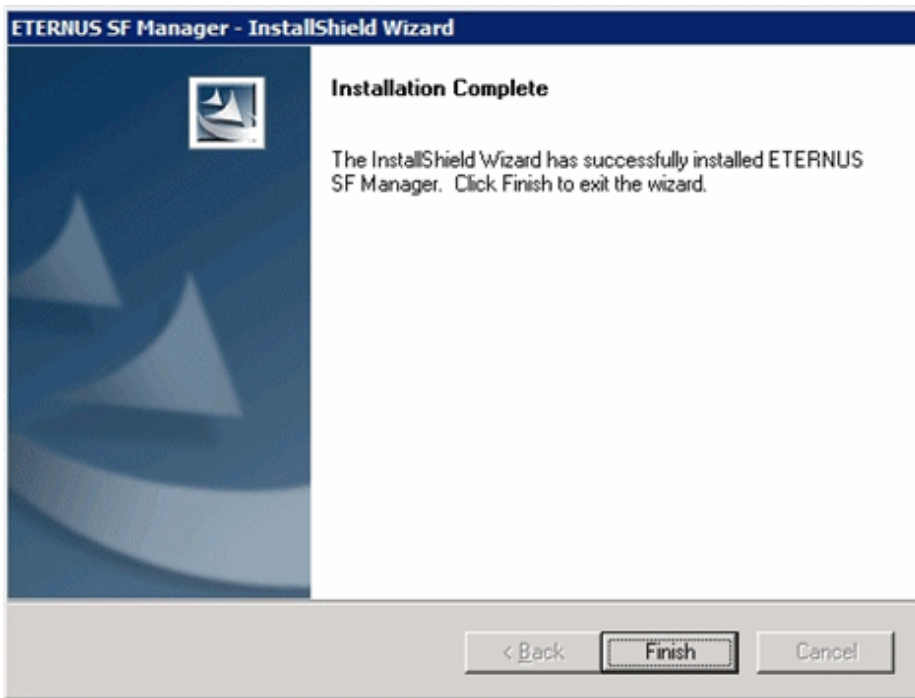
13. When the uninstallation is completed, the copying of the files for the new version will be started.

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)" 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 V16.0                |
|                |                                |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 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
```

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-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. 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 AdvancedCopy Manager CCM

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

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

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

Point

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

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

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

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

Example:

```
# cd
```

11. Unmount the DVD-ROM.

Example:

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

12. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager 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 "Command References" in the *ETERNUS SF AdvancedCopy Manager 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.



See

.....
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.
- When upgrading the AdvancedCopy Manager's manager, there is information that cannot be migrated. Refer to "[9.3 What to do when configuration import is not possible](#)" for information on the information that cannot be migrated and the corrective action.

7.1 Upgrading the AdvancedCopy Manager's manager (for Windows)

This section describes the upgrade procedure for the AdvancedCopy Manager's manager for Windows.

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.

Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

7.1.1.1.1 Backing up the operational environment of the previous version

With the following steps, perform a backup of the operation environment of the previous version of the AdvancedCopy Manager's manager.

Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.

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. Stopping the service of ETERNUS SF Manager

Execute the following batch file:

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

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

4. Implement backup of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path. In the *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpreinst.bat backupDir [tmpDir]
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (*tmpDir*) related to the performance management function to the same logical drive as the drive on which the product of the previous version is installed. In the case of backup to a different logical drive, it may take time to perform backup and restore.

7.1.1.1.2 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 AdvancedCopy Manager's manager.

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

7.1.1.1.3 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.

7.1.1.1.4 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.

7.1.1.1.5 Estimating the database size

A database is necessary for this version of AdvancedCopy Manager.
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.

7.1.1.1.6 Preparing for uninstallation

Refer to "[A.7 Unsetting up the database](#)" to unsetup the repository database of the previous version:

7.1.1.2 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

12 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
	Internal Port 5 (No screen display)	24917

- Custom installation

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

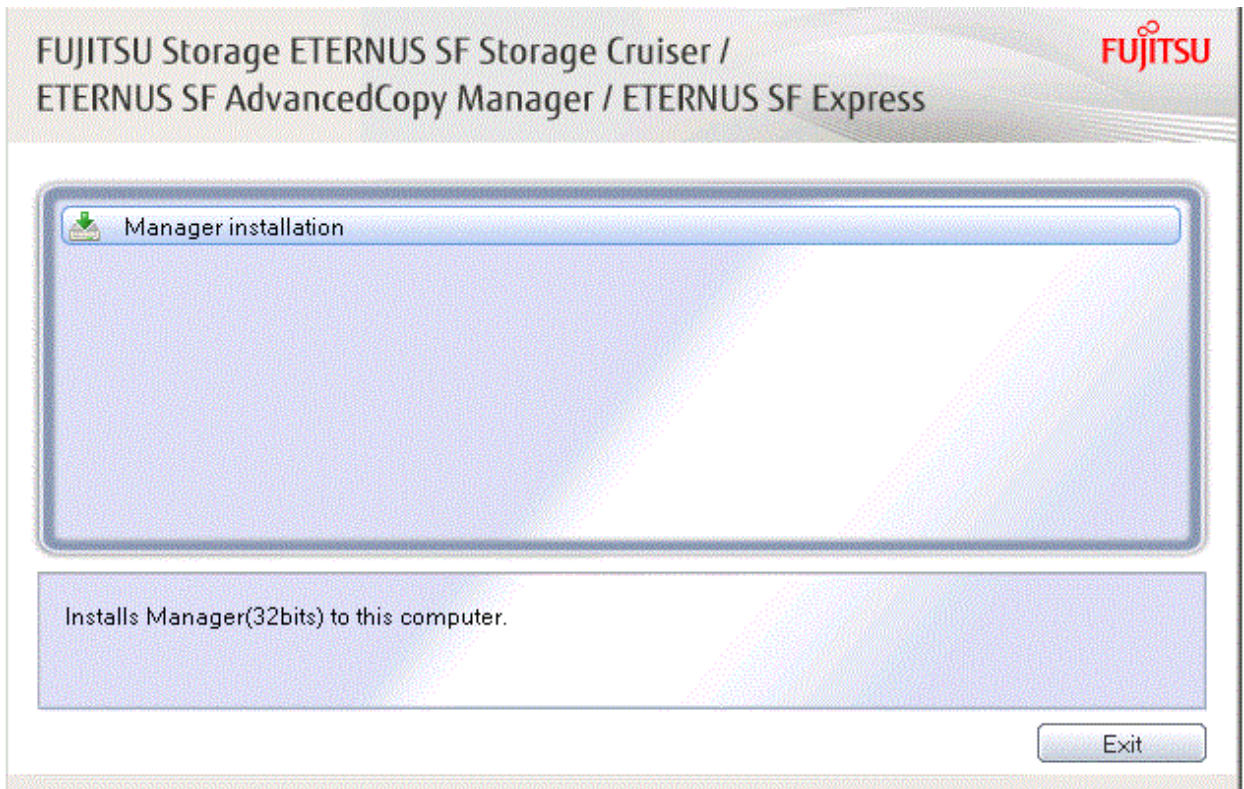
The upgrade is performed as follows:

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

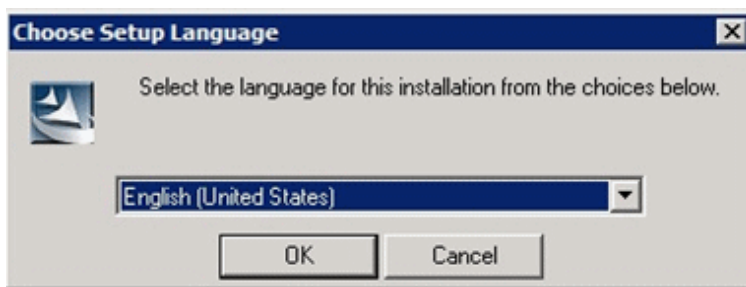
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

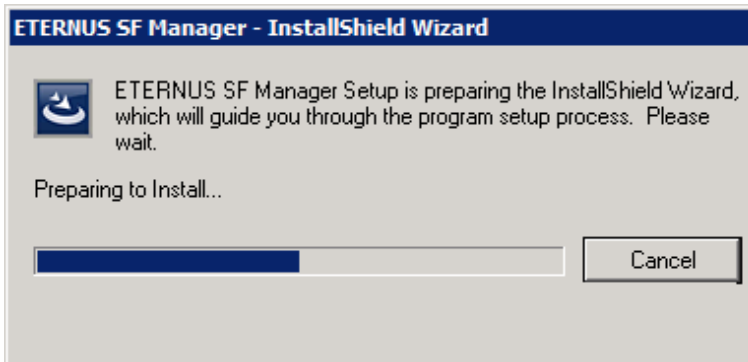
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



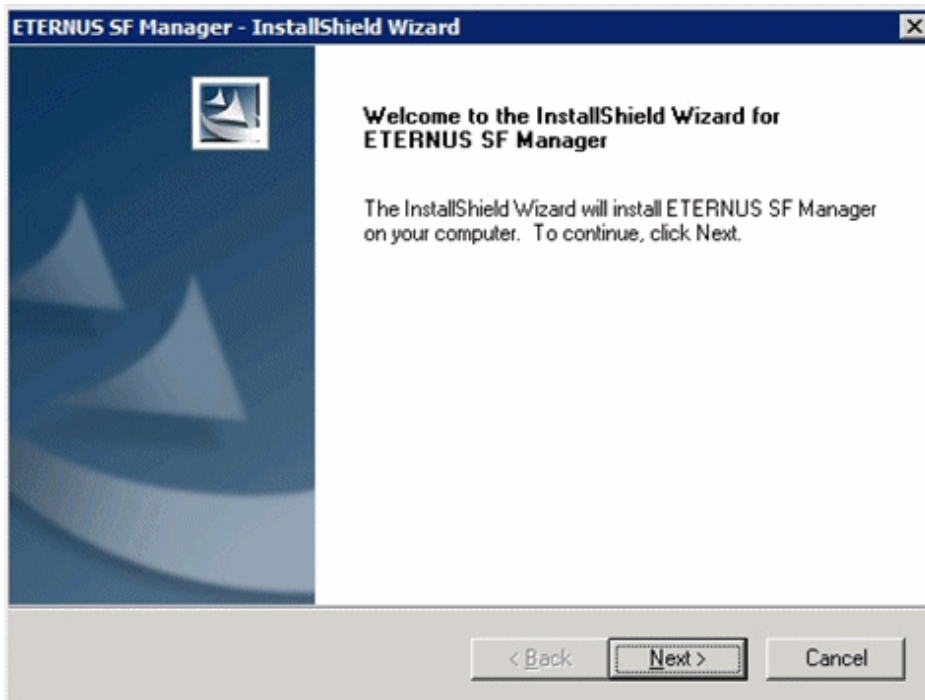
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

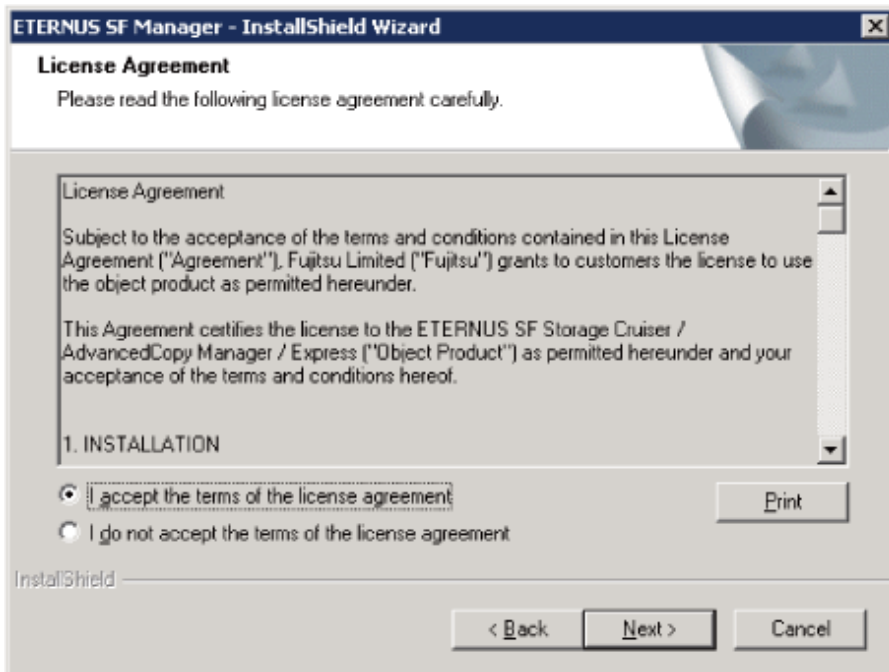


6. The installation wizard page will be displayed. Click **Next**.

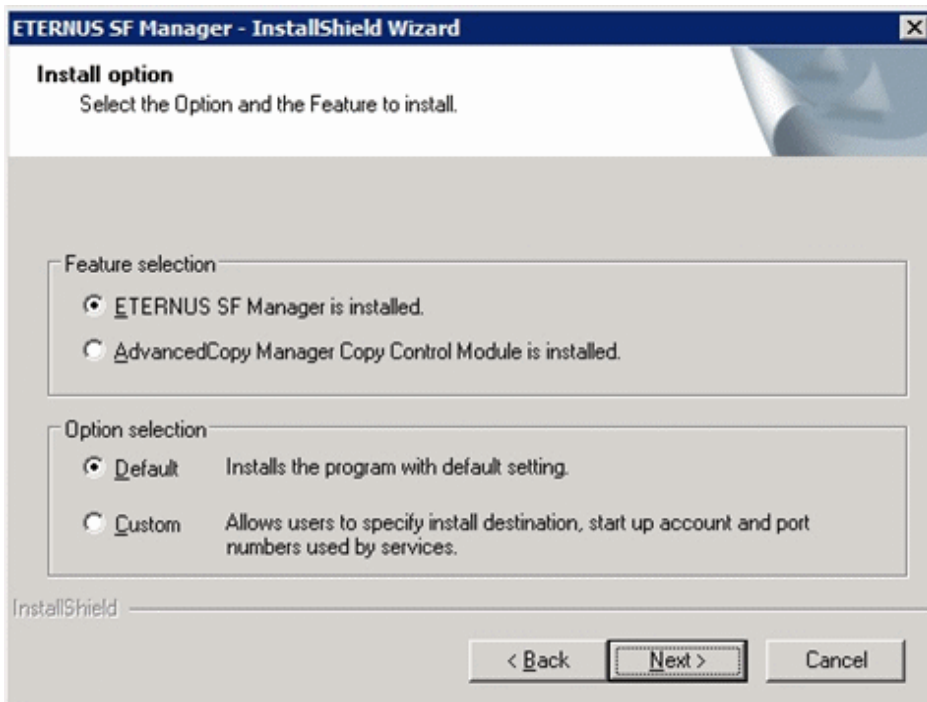


7. Read the terms and conditions of the **License Agreement** page.

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.].

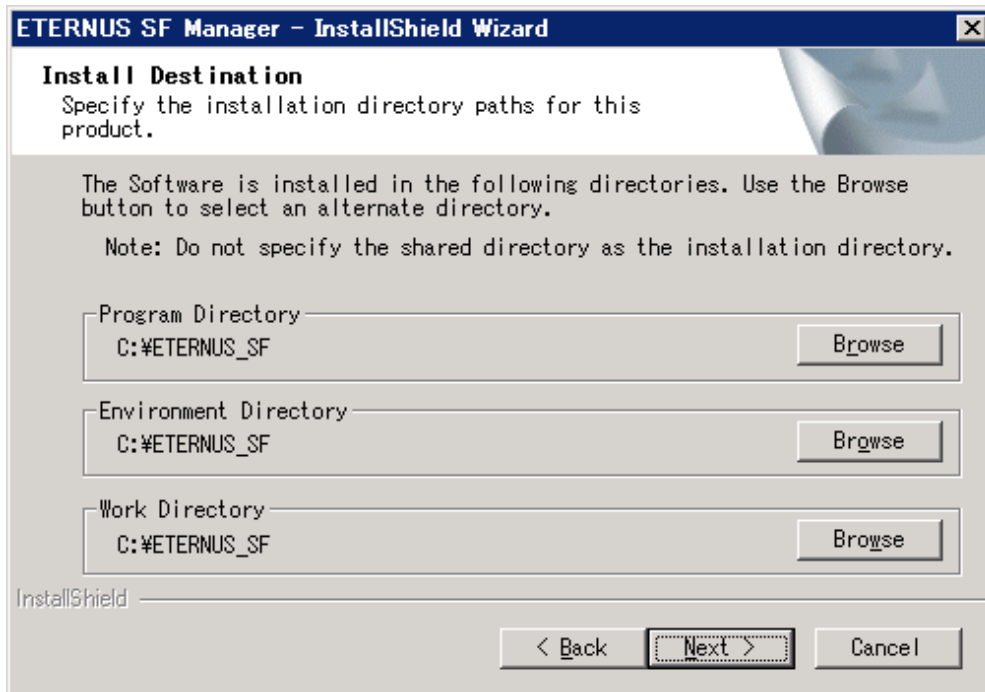
Option selection

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**.



 **Point**

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

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

The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 1024 and 65535 are valid.

To change the port number of Internal Port 5, edit the %SystemRoot%\system32\drivers\etc\services file by manual and define the unused port number under the following service name and in the range of 1024-65535:

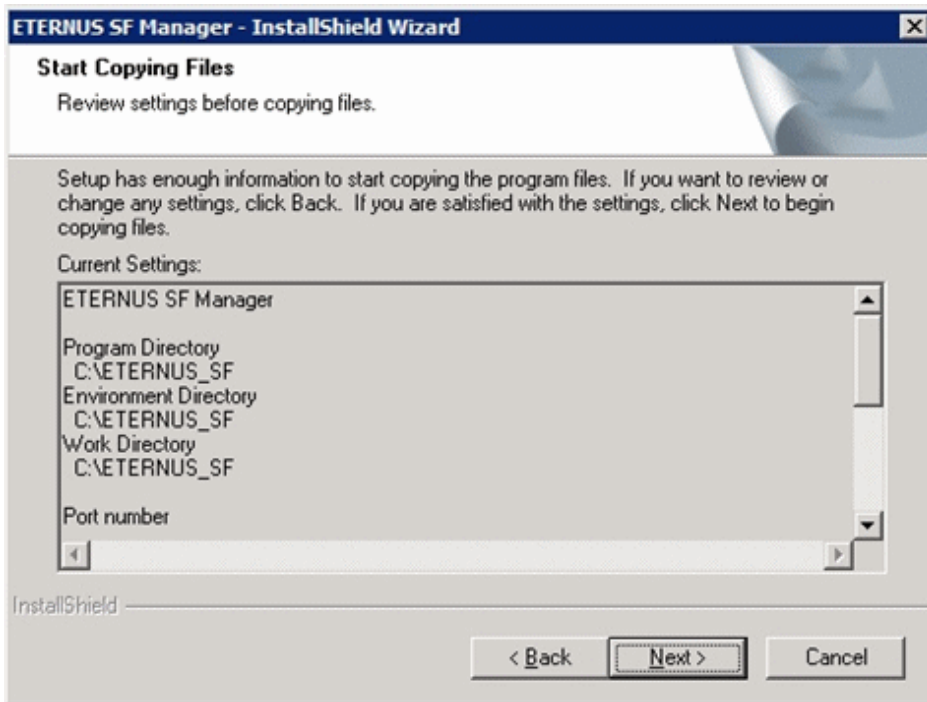
Service Name	Receive Port	Purpose
astm	24917/tcp	Use for internal communication.

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

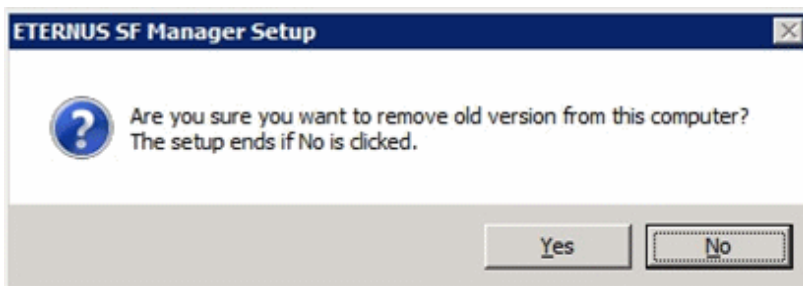
11. Check the settings information in the **Start Copying Files** page.

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

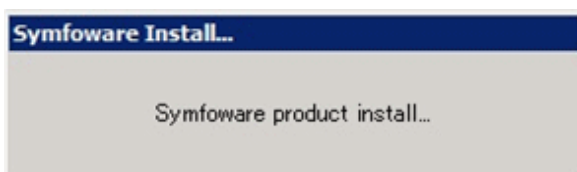
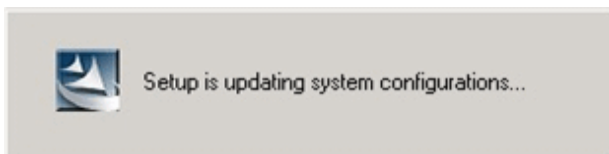
To change a setting, click **Back**.



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



13. 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. 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.

16. 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
127.0.0.1

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

Repository access user

User

Password

Settings Cancel

IP address

Enter the IP address of the Management Server (local system).
Specify Internet Protocol address referring to the following.

- When you use only the IPv4 address with the Management Server:
Set the IPv4 address used.
- When you use only the IPv6 address with the Management Server:
Set a temporary IPv4 address (127.0.0.1 for instance).
The following operations are executed after the Upgrade Installation is completed and the IP address version of the Management Server is changed to IPv6.
 - a. Create a server information change instruction file on the Management Server. Describe only the IPv6 address as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

- When you use both the IPv4 and IPv6 addresses with the Management Server:
Set the IPv4 address used.
The following operations are executed after the Upgrade Installation is completed and the IPv6 address is added as the IP address of the Management Server.
 - a. Create a server information change instruction file on the Management Server. Describe both the IPv4 and the IPv6 addresses as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

Information

- Refer to "Changing the IP address of Management Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version for the update procedure of IP address information.
- 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.

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).

Information

- 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.

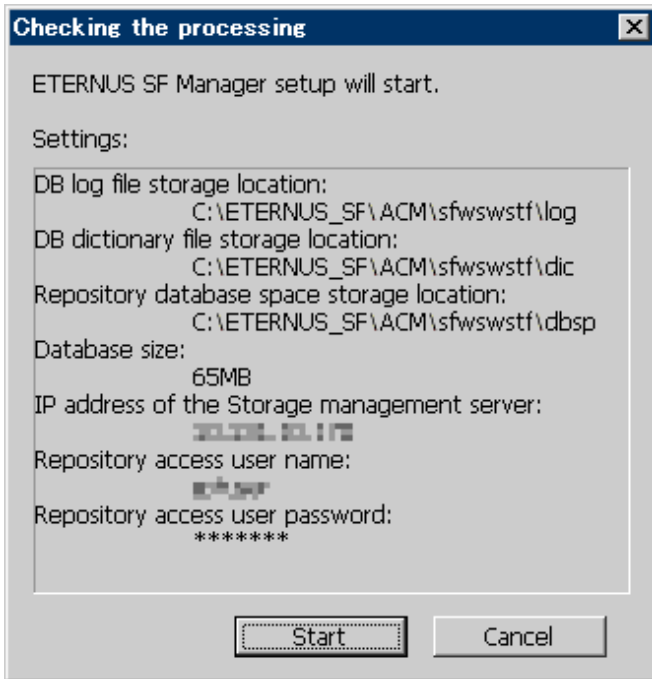
Server Type	User Type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

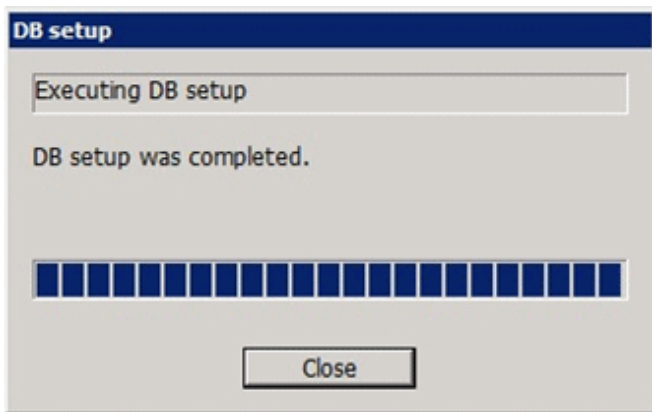
Note

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.

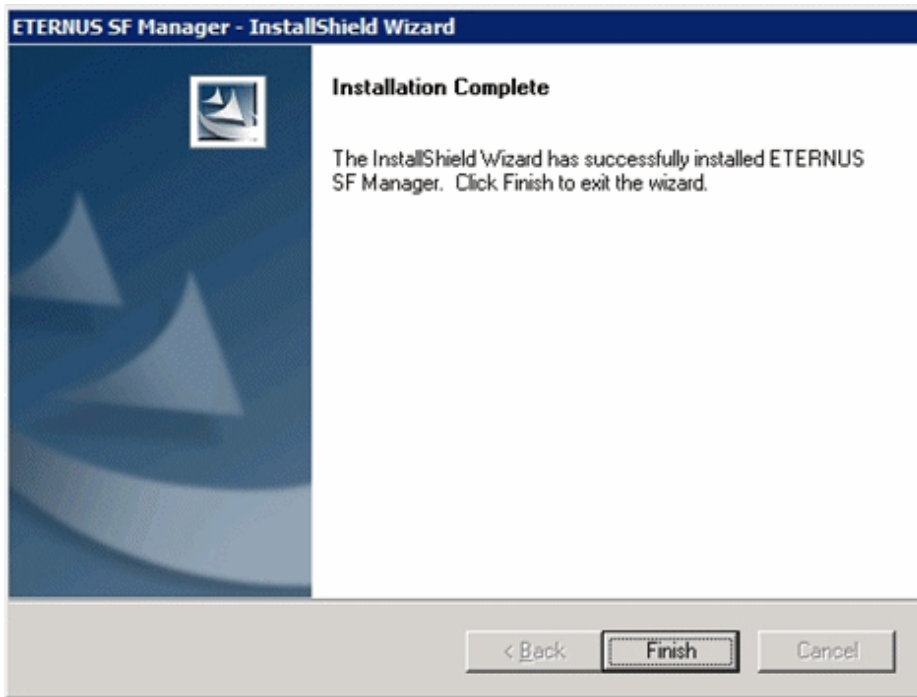
17. The following page will be displayed. Check the contents and click **Start**.



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



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



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

Subsequently, go to "[7.1.1.3 Tasks to be performed after the upgrade](#)".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "[7.1.1.3 Tasks to be performed after the upgrade](#)".

7.1.1.3 Tasks to be performed after the upgrade

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

7.1.1.3.1 Restoring the environment from the previous version

With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager's manager.

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

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. Implement restoration of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpostinst.bat backupDir [tmpDir]
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.

4. Eject the DVD-ROM.
5. Restart the service of ETERNUS SF Manager
Execute the following batch file:

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

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

6. Start the SymfoWARE RDB RDBSWSTF services

The method for activation is as follows:

- a. Click on **Start > Administrative Tools > Services** to open the Windows Services screen.
- b. As a list of the services registered on the system will be displayed, select SymfoWARE RDB RDBSWSTF and click **Start**.

7.1.1.3.2 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.

```
programDi r\ACM\bin\stgxfwcmmodsrv -n serverName
```

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.

7.1.1.3.3 Changing the access user password for repository database

Reconfigure the repository access user information by executing the stguserset command.
Even if the password has not changed, ensure that you reset the password.

1. Execute the stguserset command.

```
programDi r\ACM\bin\stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the service (AdvancedCopy Manager GUI Service).
3. Start the service (AdvancedCopy Manager GUI Service and ETERNUS SF Manager Tomcat Service).



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.

7.1.1.3.4 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
programDir\Common\bin\esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.



Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

7.1.1.3.5 Change the associated software

If the following related software was being used with the previous version, it is necessary to update these to a version that supports this edition.

- ETERNUS VASA Provider
- Fujitsu ETERNUS Storage Systems Monitoring Pack



Note

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

7.1.1.3.6 Deleting the Backup Data

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 4 of "7.1.1.1.1 Backing up the operational environment of the previous version" maybe deleted.

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.



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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.
.....

1. 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.
2. 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.
3. 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.
4. 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.
5. If Managed Server transactions coexist in the clustered system, perform the following procedure:
 - a. 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.
 - b. 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.
6. Stop the local transactions on all the nodes, perform the following procedure:
 - a. Select **Control Panel > Administrative Tools > Services** to open the Windows Services screen.
 - b. Select "AdvancedCopy Manager COM Service" and then click **Stop**.
7. On the primary node, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager's manager.
Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.
 - a. Log on to the server using Administrator privileges.
 - b. 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.
 - c. Implement backup of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path.
For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of

Storage Cruiser with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpreinst_cluster.bat backupDir [tmpDir] -primary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

 **Point**

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (*tmpDir*) related to the performance management function to the same logical drive as the drive on which the product of the previous version is installed. In the case of backup to a different logical drive, it may take time to perform backup and restore.

d. Eject the DVD-ROM.

8. 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 AdvancedCopy Manager's manager.

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

9. 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.

10. 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.

11. Estimating the database size

A database is necessary for this version of AdvancedCopy Manager.
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.

12. On the secondary node, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager's manager.

The capacity required for performing this backup is 10MB.

- a. Log on to the server using Administrator privileges.
- b. 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.
- c. Mount the shared disk for shared data of ETERNUS SF Manager.
If it is mounted on the primary node, unmount it to mount on the secondary node.
- d. Implement backup of the previous version
Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpreinst_cluster.bat backupDir [tmpDir] -secondary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.



- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (*tmpDir*) related to the performance management function to the same logical drive as the drive on which the product of the previous version is installed. In the case of backup to a different logical drive, it may take time to perform backup and restore.

- e. Unmount the shared disk for shared data of ETERNUS SF Manager.
If it is required for the work on the primary node, mount it on the primary node.
- f. Eject the DVD-ROM.

13. 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 AdvancedCopy Manager's manager.

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

14. 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.



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.

15. 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.

16. Performing the cluster unsetup

Refer to "Uninstallation of ETERNUS SF Manager" in "Deletion of Cluster Environment for Management Server Transactions" in the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version to delete the service resources, the cluster resources and unnecessary resources.



- Do not uninstall the ETERNUS SF Manager.
- Do not delete the ETERNUS SF Manager installation directory of each node.



In cases when Managed Server transactions coexist, do not release the configurations of these Managed Server transactions.

7.1.2.2 Performing the upgrade (Primary node)

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

12 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
	Internal Port 5 (No screen display)	24917

- Custom installation

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

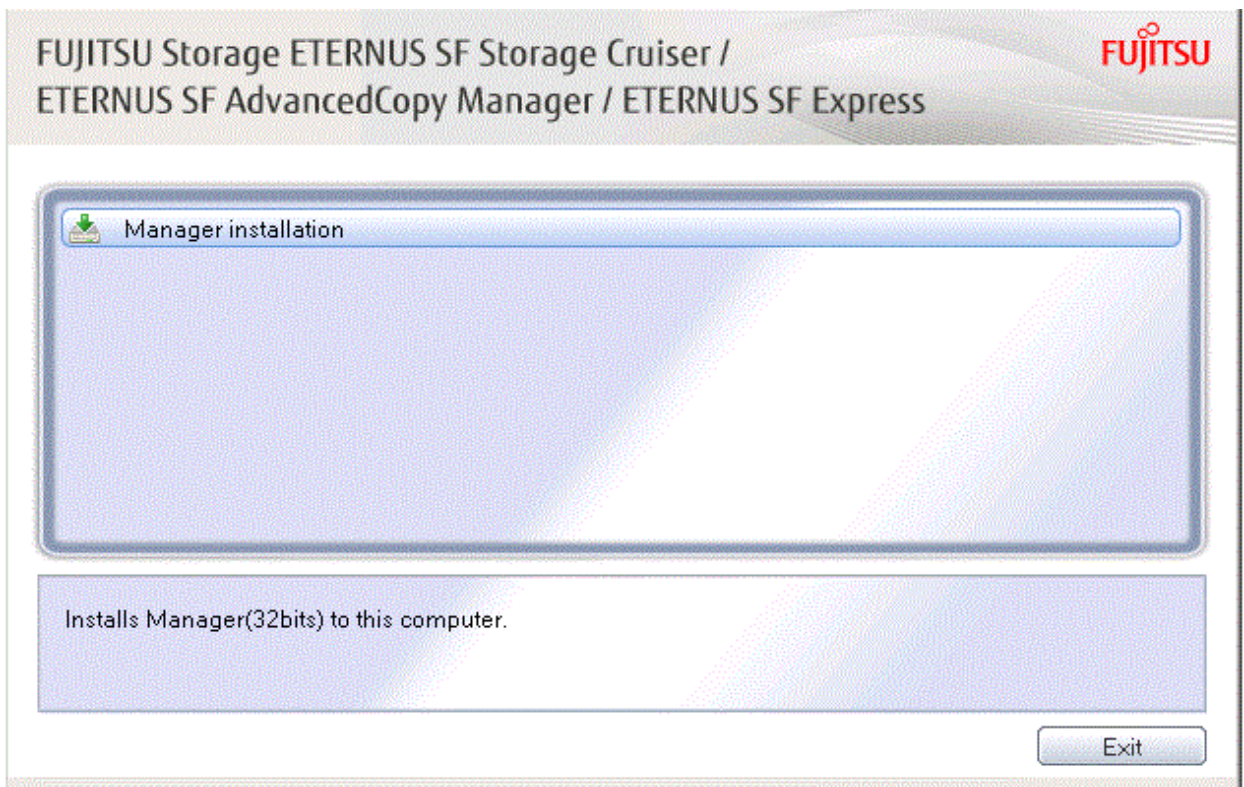
The upgrade is performed as follows:

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

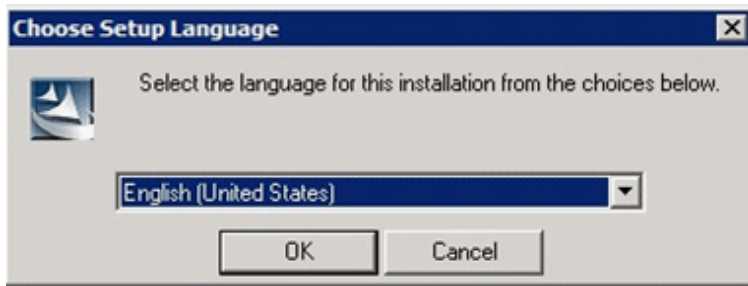
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

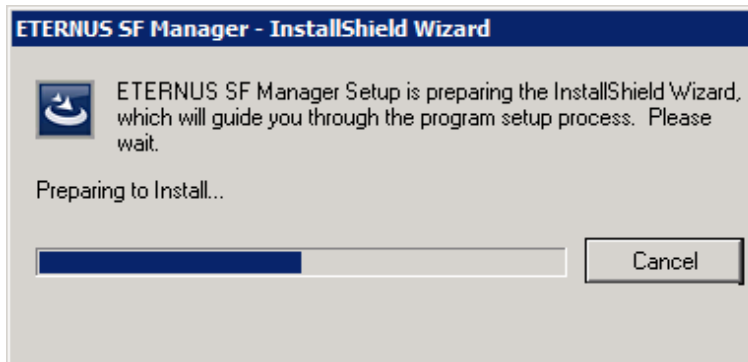
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



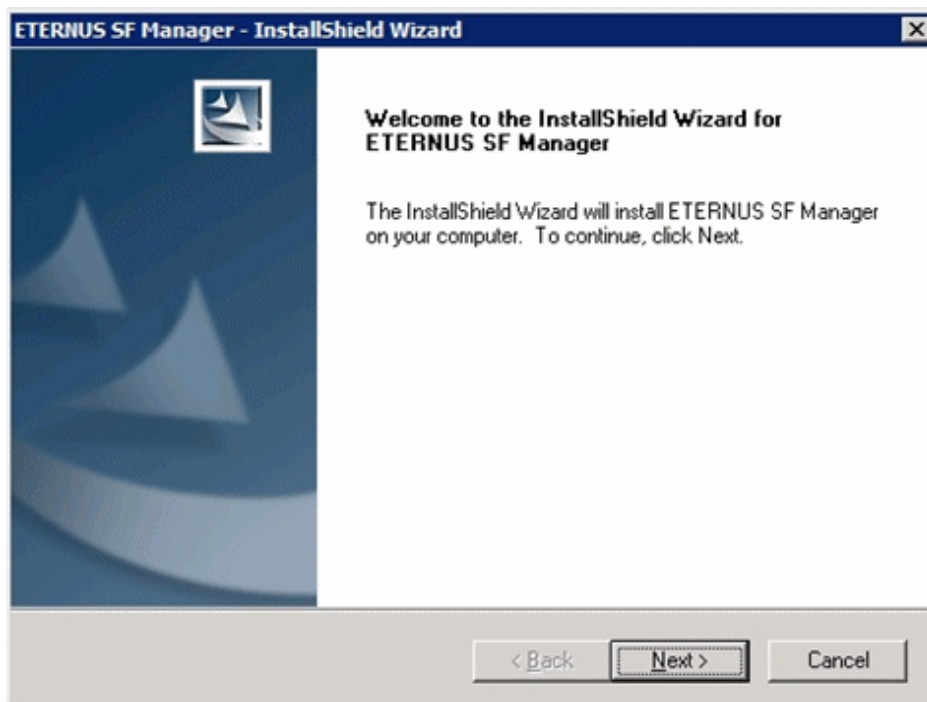
- The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**. The language selected in this dialog box will be used during installation and uninstallation.



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

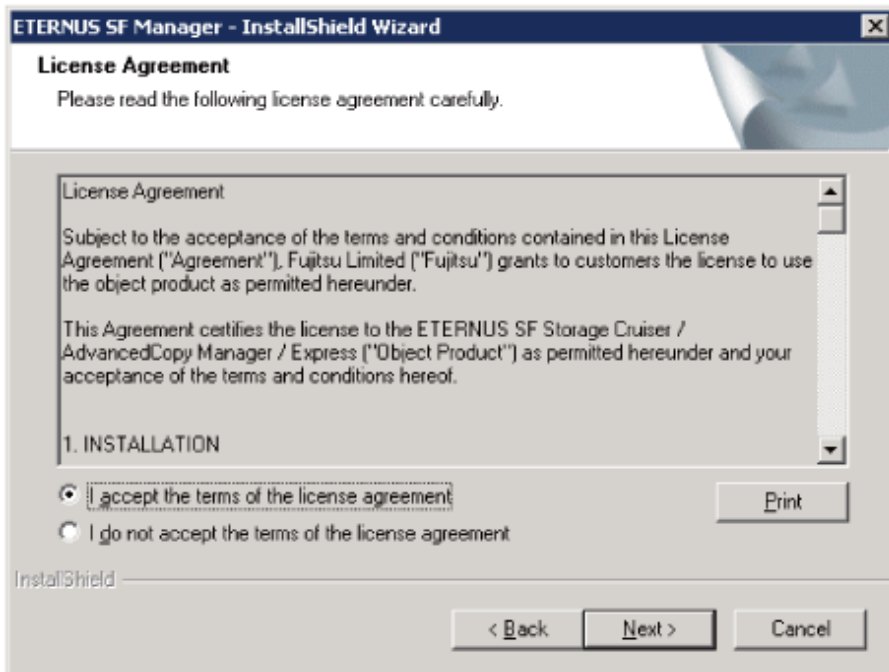


- The installation wizard page will be displayed. Click **Next**.

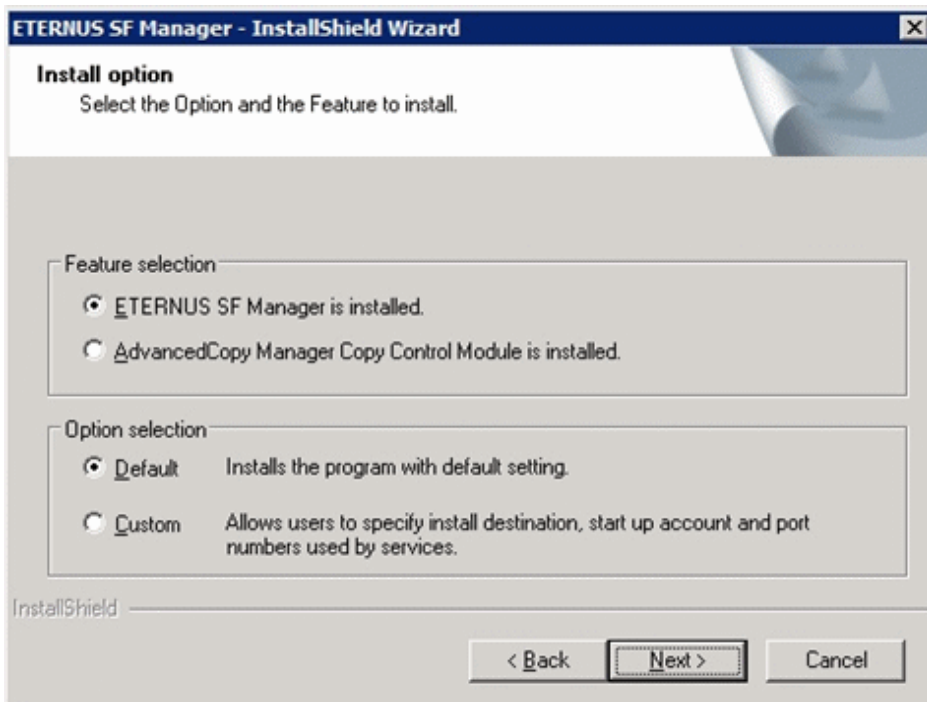


7. Read the terms and conditions of the **License Agreement** page.

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.].

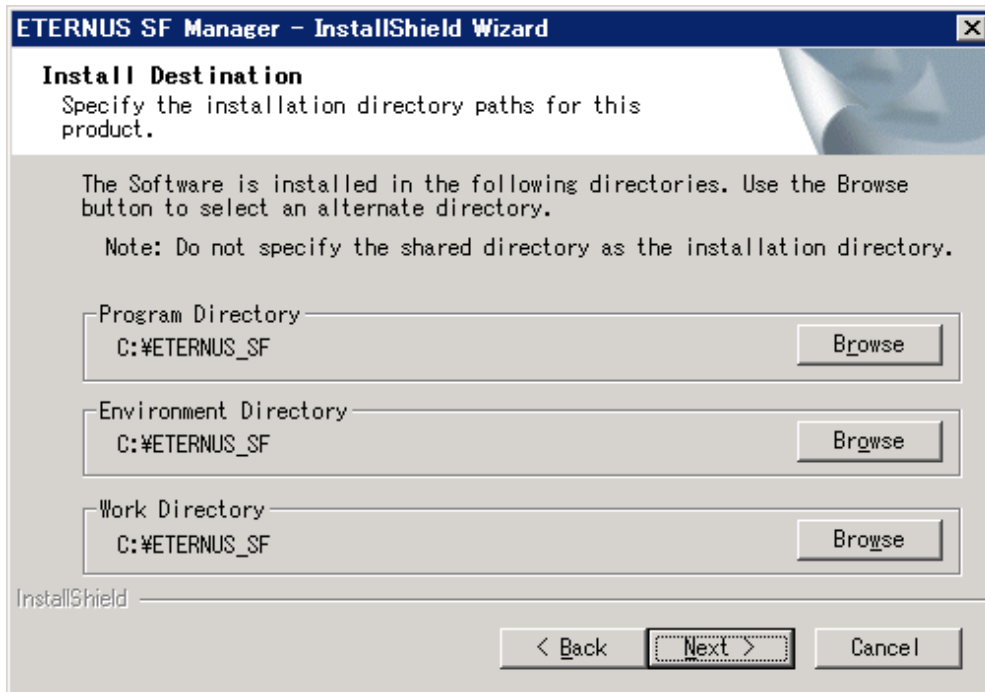
Option selection

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**.



Point

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

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

The default values are displayed. If necessary, enter alternative port numbers suitable for your environment. Values between 1024 and 65535 are valid.

To change the port number of Internal Port 5, edit the %SystemRoot%\system32\drivers\etc\services file by manual and define the unused port number under the following service name and in the range of 1024-65535:

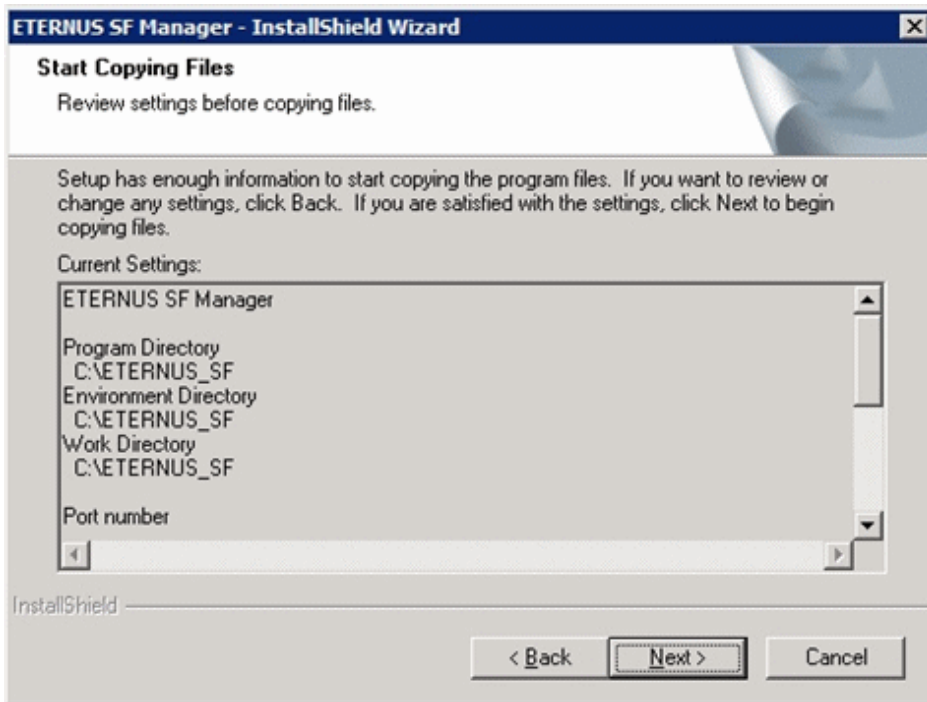
Service Name	Receive Port	Purpose
astm	24917/tcp	Use for internal communication.

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

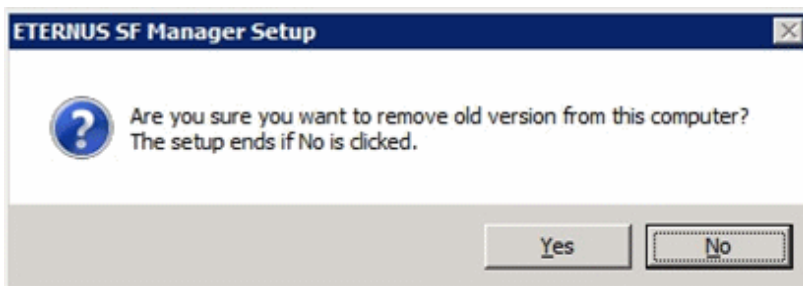
11. Check the settings information in the **Start Copying Files** page.

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

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



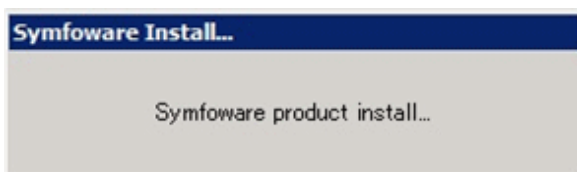
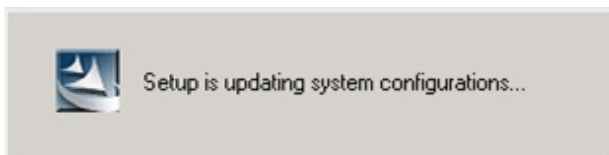
12. The following dialog box will be displayed. To proceed with the uninstallation, click **Yes**.



13. 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. 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.

16. 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
127.0.0.1

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 Internet Protocol address referring to the following.

- When you use only the IPv4 address with the Management Server:
Set the IPv4 address used.
- When you use only the IPv6 address with the Management Server:
Set a temporary IPv4 address (127.0.0.1 for instance).
The following operations are executed after the Upgrade Installation is completed and the IP address version of the Management Server is changed to IPv6.
 - a. Create a server information change instruction file on the Management Server. Describe only the IPv6 address as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

- When you use both the IPv4 and IPv6 addresses with the Management Server:
Set the IPv4 address used.
The following operations are executed after the Upgrade Installation is completed and the IPv6 address is added as the IP address of the Management Server.
 - a. Create a server information change instruction file on the Management Server. Describe both the IPv4 and the IPv6 addresses as the IP address after it changes in the server information change instruction file.
 - b. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
programDir\ACM\bin\stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

Information

- Refer to "Changing the IP address of Management Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for this version for the update procedure of IP address information.
- 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.

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).

Information

- 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.

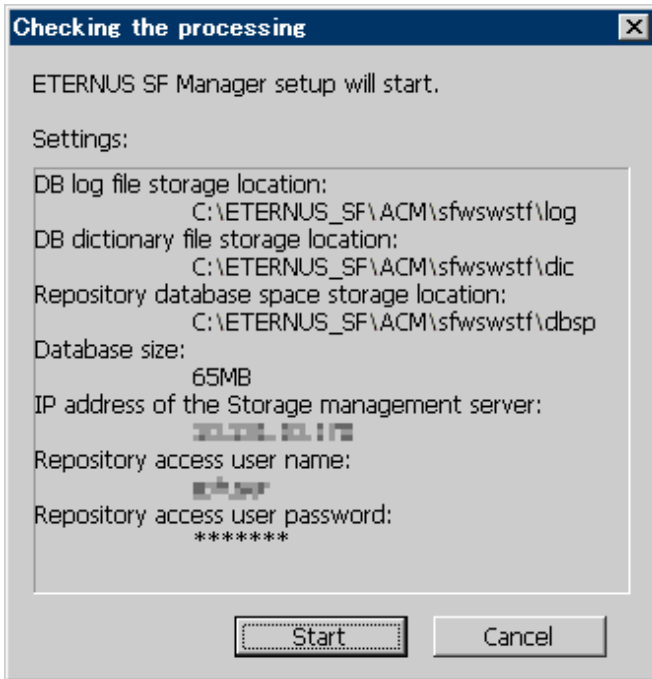
Server Type	User Type
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (does not belong to the domain)	

- 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.

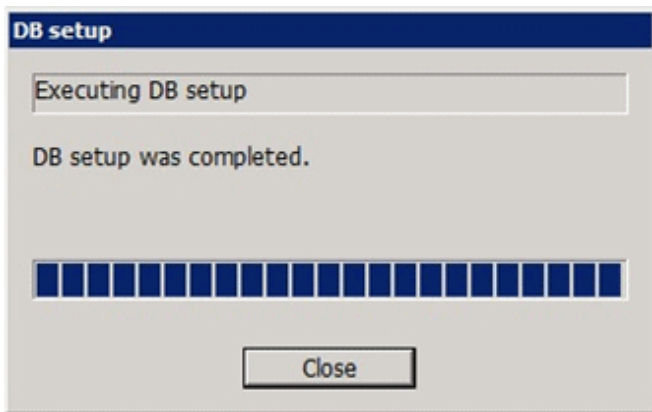
Note

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.

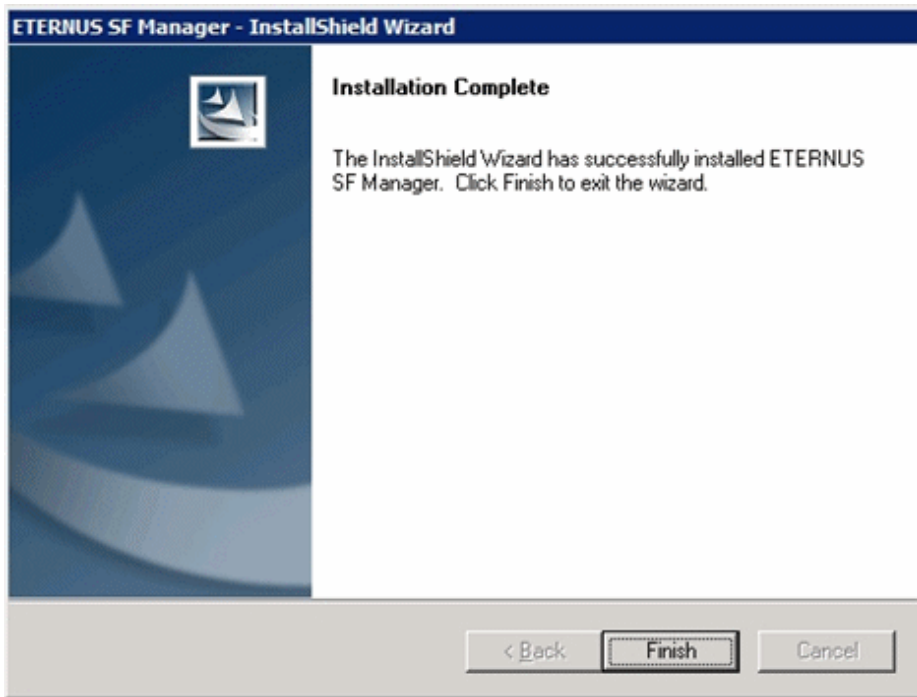
17. The following page will be displayed. Check the contents and click **Start**.



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



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



20. Eject the DVD-ROM.

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

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

- a. Install the target version.
- b. If the installation is successfully completed, continue from "[7.1.2.3 Performing the upgrade \(Secondary node\)](#)".

7.1.2.3 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 \(Primary node\)](#)".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from the following tasks.

After upgrading on the primary node and the secondary node, perform the cluster setup. Refer to "[A.7 Unsetting up the database](#)" to perform the repository database unsetup on a primary node and a secondary node, before performing the cluster setup. Refer to "Preparations for Customizing Management Server Transactions" and "Customization for Management Server Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* of this version for information on the cluster setup.

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

When the upgrade has been completed, the tasks below need to be performed on the primary node.

1. 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.
2. 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 16.0	Version=V15.0	Version=V16.0
Version 15.1 to 16.0	Version=V15.1	
Version 15.2 to 16.0	Version=V15.2	
Version 15.3 to 16.0	Version=V15.3	

Note

Do not change anything other than the version information.

3. Implement restoration of the previous version.
With the following procedures, perform a restore of the operation environment of the previous version of the AdvancedCopy Manager's manager.

Note that if step a and step b have already been performed, it is unnecessary to perform these again.

- a. Log on to the server using Administrator privileges.
- b. 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.
- c. Implement restoration of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpostinst_cluster.bat backupDir [tmpDir] -primary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
- The number of characters in a directory name must be up to 220.

- d. Eject the DVD-ROM.

4. Start the ETERNUS SF Manager services.
Use the Failover Cluster Manager to start the transactions of ETERNUS SF Manager.

5. 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.

```
programDi r\ACM\bin\stgxfwcmmodsrv -n serverName
```

 **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 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.

```
programDi r\ACM\bin\stgxfwcmmodsrv -n serverName
```

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 (for Windows)* for this version for information on the command.

7. 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.

- a. Execute the `stguserset` command.

```
programDi r\ACM\bin\stguserset userName password
```

 **Information**

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

- b. Stop the service (AdvancedCopy Manager GUI Service).
- c. Start the service (AdvancedCopy Manager GUI Service and ETERNUS SF Manager Tomcat Service).

 **Point**

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 the corresponding operating system for information on the procedure to change the password.

8. Import the configuration information.

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
programDir\Common\bin\esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that the **IMPORT STATUS** column displays "Complete" with `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.



When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.



- If the ETERNUS VASA Provider was being used with the previous version:
It is necessary to reinstall a version of the ETERNUS VASA Provider that supports this edition.
- If the Fujitsu ETERNUS Storage Systems Monitoring Pack was being used with the previous version:
It is necessary to reinstall a version of the Fujitsu ETERNUS Storage Systems Monitoring Pack that supports this edition.

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 on the secondary node.

1. Check that the ETERNUS SF Manager services are stopped.
If not stopped, use the Failover Cluster Manager to stop the transactions of ETERNUS SF Manager.
2. Implement restoration of the previous version.
With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager's manager.
Note that if step a and step b have already been performed, it is unnecessary to perform these again.
 - a. Log on to the server using Administrator privileges.
 - b. 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.
 - c. Mount the shared disk for shared data of ETERNUS SF Manager.
If it is mounted on the primary node, unmount it to mount on the secondary node.
 - d. Implement restoration of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function

of Storage Cruiser with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
dvdromDrive:\Manager_windows\vuptools\esfpostinst_cluster.bat backupDir [tmpDir] -secondary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory names.
 - The number of characters in a directory name must be up to 220.
- e. Unmount the shared disk for shared data of ETERNUS SF Manager.
If it is required for the work on the primary node, mount it on the primary node.
- f. Eject the DVD-ROM.

Point

- If the ETERNUS VASA Provider was being used with the previous version:
It is necessary to reinstall a version of the ETERNUS VASA Provider that supports this edition.
- If the Fujitsu ETERNUS Storage Systems Monitoring Pack was being used with the previous version:
It is necessary to reinstall a version of the Fujitsu ETERNUS Storage Systems Monitoring Pack that supports this edition.

7.1.2.6 Starting ETERNUS SF Manager

Perform the following procedure:

1. Check that ETERNUS SF Manager services are started on the primary node.
If not started, use the Failover Cluster Manager to start the transactions of ETERNUS SF Manager.
2. 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.
3. Start the local transactions on all the nodes, perform the following procedure:
 - a. Select **Control Panel > Administrative Tools > Services** to open the Windows Services screen.
 - b. Select "AdvancedCopy Manager COM Service" and then click **Start**.

Note

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

Point

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 7-c and step 12-d of "7.1.2.1 Preparing for the upgrade" maybe deleted.

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.



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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.
.....

7.2.1.1.1 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.
.....

7.2.1.1.2 Backing up the operational environment of the previous version

With the following procedures, perform a backup of the operation environment of the previous version of the AdvancedCopy Manager's manager.

Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.

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)" 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. Execute the following command to stop the daemon of ETERNUS SF Manager:

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

5. Implement backup of the previous version.

Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For

tmpDir, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpreinst.sh backupDir [ tmpDir ]
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters " / ` * ? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (*tmpDir*) related to the performance management function to under /var/opt. In the case of backup to a different location from that under /var/opt, it may take time to perform backup and restore.

7.2.1.1.3 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 AdvancedCopy Manager's manager.

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

7.2.1.1.4 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.

7.2.1.1.5 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.

7.2.1.1.6 Estimating the database size

A database is necessary for this version of AdvancedCopy Manager.

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.

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

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.

7.2.1.1.8 Preparing for uninstallation

Execute the DB unsetup.

Refer to "[A.8 Cancelling the repository settings](#)" to unsetup the repository database of the previous version.

7.2.1.2 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 installation destination directories (/opt, /etc/opt, /var/opt) 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, /etc/opt, /var/opt.
- Perform the custom installation when the Management Server has multiple IP addresses.
- 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.

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.

Point

- For Solaris, add "/opt/FSUNrdb2b/lib" to the value of the environment variable LD_LIBRARY_PATH_64 of the terminal on which the Upgrade Installation will be performed.
- 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:

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

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)" 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 V16.0    |
|                                     |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 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.
```

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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
```

The upgrade for the AdvancedCopy Manager's manager is complete.
 Perform "7.2.1.3 Tasks to be performed after the upgrade" afterwards.

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "7.2.1.3 Tasks to be performed after the upgrade".

7.2.1.3 Tasks to be performed after the upgrade

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

7.2.1.3.1 Restoring the environment from the previous version

With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager's manager. Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

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)" 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. Implement restoration of the previous version.

Execute the following command. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpostinst.sh backupDir [ tmpDir ]
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters "/`*? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.

5. Unmount the DVD-ROM.

Example:

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

6. Eject the DVD-ROM.

7. Restart the daemon of ETERNUS SF Manager.

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

7.2.1.3.2 Change the server information

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

When executing the `stgxfwcmmodsrv` command, specify the Management Server name for the `-n` option.

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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 the operating system of the Management Server for this version for information on the command.

7.2.1.3.3 Changing the access user password for repository database

Reconfigure the repository access user information by executing the `stguserset` command. Even if the password has not changed, ensure that you reset the password.

1. Execute the `stguserset` command.

```
/opt/swstorage/bin/stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

2. Stop the RMI daemon.
3. Start the RMI daemon.

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.

7.2.1.3.4 Importing the configuration information

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
/opt/FJSVesfcm/bin/esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.

Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

7.2.1.3.5 Deleting the Backup Data

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 5 of "7.2.1.1.2 Backing up the operational environment of the previous version" maybe deleted.

Subsequently, go to "7.2.3 Resuming operation".

7.2.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.



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.



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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

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
```



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 it (transaction).

3. Stop the cluster application (transaction) on the primary node.

Stop the cluster application (transaction) to which ETERNUS SF Manager belongs.

Refer to the relevant cluster software manuals for information on stopping it

However, the shared disk for shared data of ETERNUS SF Manager must be mounted.

4. If Managed Server transactions exist in a clustered system, perform the following.
 - a. 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 transactions.

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

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. On the primary node, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager's manager.

Refer to "[A.33 Capacity necessary for backup of previous version](#)" for information on the capacity required to perform a backup.

- a. Log in to the server as a superuser.
- b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.
- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Implement backup of the previous version.

Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpreinst_cluster.sh backupDir [tmpDir] -primary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the command again.



Point

- Spaces and the characters "/ ^ * ? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (*tmpDir*) related to the performance management function to under /var/opt. In the case of backup to a different location from that under /var/opt, it may take time to perform backup and restore.

- e. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

f. Unmount the DVD-ROM.

Example:

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

g. Eject the DVD-ROM.

7. 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 AdvancedCopy Manager's manager.

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

8. 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.



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.

9. Checking Symfaware

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

10. Estimating the database size

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

11. Confirming the port number for the communication service

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.

12. On the secondary node, perform a backup of the operating environment of the previous version of the AdvacnedCopy Manager's manager.

The capacity required for performing this backup is 10MB.

- a. Log in to the server as a superuser.
- b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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
- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Mount the shared disk for shared data of ETERNUS SF Manager.
If it is mounted on the primary node, unmount it to mount on the secondary node.
- e. Implement backup of the previous version.
Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path. For the *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not being used, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpreinst_cluster.sh backupDir [tmpDir] -secondary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the command again.



Point

- Spaces and the characters "/`*?\"\$ [], % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.
- Move the files (tmpDir) related to the performance management function to under /var/opt. In the case of backup to a different location from that under /var/opt, it may take time to perform backup and restore.

- f. Unmount the shared disk for shared data of ETERNUS SF Manager.
If it is required for the work on the primary node, mount it on the primary node.

- g. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- h. Unmount the DVD-ROM.

Example:

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

- i. Eject the DVD-ROM.

13. 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 AdvancedCopy Manager's manager.

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

14. 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.



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.

15. Checking Symfaware

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

16. Confirming the port number for the communication service

Therefore, ensure the new ports are available 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 information on port numbers.

17. In cases when Managed Server transactions coexist in the cluster system, move the AdvancedCopy Manager daemon start and stop script of the Managed Server transactions to a backup location.

- On the primary node and the secondary node, move the AdvancedCopy Manager daemon start and stop script of the Managed Server transactions to a backup location.

18. Performing the cluster unsetup

Refer to "Uninstallation of ETERNUS SF Manager" in "Deletion of Cluster Environment for Management Server Transactions" in the *ETERNUS SF Storage Cruiser Installation Guide* for the relevant previous version to delete unnecessary resources.



Do not uninstall the ETERNUS SF Manager.

Note

In cases when Managed Server transactions coexist, do not release the configurations of these Managed Server transactions.

7.2.2.2 Performing the upgrade (Primary node)

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, /etc/opt, /var/opt) 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, /etc/opt, /var/opt.
- Perform the custom installation when the Management Server has multiple IP addresses.

- 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.

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.

Point

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:

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

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)" 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 V16.0                |
|                |                                |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 2013 |
|                |                                |
+-----+
```

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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 AdvancedCopy Manager's manager is complete.

 **Point**

.....
When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

- 1. Install the target version.
 - 2. If the installation is successfully completed, continue from "7.2.2.3 Performing the upgrade (Secondary node)".
-

7.2.2.3 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)".

 **Point**

.....
When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

- 1. Install the target version.

2. If the installation is successfully completed, continue from the following tasks.

After upgrading on the primary node and the secondary node, perform the cluster setup. Refer to "A.8 Cancelling the repository settings" to perform the repository database unsetup on a primary node and a secondary node, before performing the cluster setup. Refer to "Preparations for Customizing Management Server Transactions" and "Customization for Management Server Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* of this version for information on the cluster setup.

In cases when Managed Server transaction coexist in the cluster system, recover the AdvancedCopy Manager daemon start and stop script of the Managed Server transaction evacuated in step 17 of "7.2.2.1 Preparing for the upgrade".

- On the primary node and the secondary node, recover the AdvancedCopy Manager daemon start and stop script of the Managed Server transaction.

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

When the upgrade has been completed, the tasks below need to be performed on the primary node.

1. Stop the cluster application (transaction). Stop the cluster application (transaction) to which ETERNUS SF Manager belongs. Refer to the relevant cluster software manuals for information on stopping it.
However, the shared disk for shared data of ETERNUS SF Manager must be mounted.
2. 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 16.0	Version=V15.0	Version=V16.0
Version 15.1 to 16.0	Version=V15.1	
Version 15.2 to 16.0	Version=V15.2	
Version 15.3 to 16.0	Version=V15.3	

Note

Do not change anything other than the version information.

3. Implement restoration of the previous version.

Note that if step a through step c have already been performed, it is unnecessary to perform these again.

With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager's manager.

- a. Log in to the server as a superuser.
- b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.
- c. Mount the DVD-ROM (if automount is not enabled).
Example:

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

- d. Implement restoration of the previous version.

Execute the following command. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/ esfpostinst_cluster.shesfccmpostinst_cluster.sh
backupDir [ tmpDir ] -primary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters "/`*? \ \$ [] , % ! { } are not supported for directory names.
- The number of characters in a directory name must be up to 220.

- e. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- f. Unmount the DVD-ROM.

Example:

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

- g. Eject the DVD-ROM.

4. Start the cluster application (transaction).

Start the cluster application (transaction) to which ETERNUS SF Manager belongs.
Refer to the relevant cluster software manuals for information.

5. On the primary node, 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.

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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 the operating system of the Management Server for this version for information on the command.

6. In cases when Managed Server transactions coexist in the cluster system, change the server information of the Managed Server transactions.

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

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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* for the operating system of the Management Server for this version for information on the command.

7. Reconfigure the access user password for the repository database on primary node.

Reconfigure the repository access user information by executing the `stguserset` command.

- a. Execute the `stguserset` command.

```
/opt/swstorage/bin/stguserset userName password
```

Information

When using special characters (for example, "!") for the password, be sure to escape the special characters in accordance with the specifications of the command line being used.

- b. Stop the RMI daemon.
- c. Start the RMI daemon.

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.

8. Import the configuration information.

Import the configuration information from the previous version by executing the `esfadm devconf import` command using Administrator permissions.

Check that the managed devices and servers can be accessed before executing the `esfadm devconf import` command.

```
# /opt/FJSVesfcm/bin/esfadm devconf import -all
```

After executing the `esfadm devconf import` command, confirm that "Complete" is displayed in **IMPORT STATUS** column in the `esfadm devconf importstatus` command.

In addition, confirm that "Complete" is displayed in **STATUS** column of the import status of the migration target resources. When "Failed" is displayed, the import of configuration information has failed. Refer to "9.4 What to do when an error occurs" to take the corrective action.

Note

When executing the `esfadm devconf import` command, if a managed device or server is not accessible, the `esfadm devconf import` command should be re-executed since the device configuration information is not imported.

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 on the secondary node.

1. Check that the cluster application (transaction) has stopped.

If not stopped, stop the cluster application (transaction) to which ETERNUS SF Manager belongs.
Refer to the relevant cluster software manuals for information on stopping it (transaction).

2. Implement restoration of the previous version.

Note that if step a through step c have already been performed, it is unnecessary to perform these again.

With the following procedures, perform a restore of the operation environment of the previous version of the AdvancedCopy Manager's manager.

- a. Log in to the server as a superuser.

- b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.

- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Mount the shared disk for shared data of ETERNUS SF Manager.

If it is mounted on the primary node, unmount it to mount on the secondary node.

- e. Implement restoration of the previous version.

Execute the following command. For *backupDir*, specify the directory in which the backup data is stored with an absolute path. For *tmpDir*, specify a directory in which to temporarily place the files related to the performance management function of Storage Cruiser with an absolute path. When the performance management function is not backed up, it is unnecessary to specify a directory for the *tmpDir*.

```
# /mnt/dvd/Manager_unix/vuptools/esfpostinst_cluster.sh backupDir [ tmpDir ] -secondary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the command again.



- Spaces and the characters "/^*? \ \$ [] , % ! { }" are not supported for directory names.
- The number of characters in a directory name must be up to 220.

- f. Unmount the shared disk for shared data of ETERNUS SF Manager.

If it is required for the work on the primary node, mount it on the primary node.

- g. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- h. Unmount the DVD-ROM.

Example:

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

- i. Eject the DVD-ROM.

7.2.2.6 Starting ETERNUS SF Manager

Perform the following procedure:

1. Check that the cluster application (transaction) has started on the primary node.
If not started, start the cluster application (transaction) to which ETERNUS SF Manager belongs.
Refer to the relevant cluster software manuals for information on starting it.
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* for the operating system of the Management Server for this version for information on starting the daemon.

Subsequently, go to "[7.2.3 Resuming operation](#)".

Point

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step6-d and step 12-e of "[7.2.2.1 Preparing for the upgrade](#)" maybe deleted.

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 describes the upgrade procedure 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. If the Storage Cruiser's agent has been installed, stop the service of the Storage Cruiser's agent. Refer to "Starting and Stopping the Agent" in "Command References" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on how to stop the service.
2. Stop the service of AdvancedCopy Manager's agent.

Perform the following procedure:

- a. Select **Control Panel > Administrative Tools > Services** to open the Windows Services screen.
- b. Select "AdvancedCopy Manager COM Service" and then click **Stop**.

3. Implement backup of the previous version.

For recovery in case the upgrade fails, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager's agent.

Information

The capacity required for performing the backup is the total value of the following:

- Environment Directory and Work Directory of "For Windows environment" under "Required disk space for installation" in the *ETERNUS SF Installation and Setup Guide*
- "For Windows environment" under "Required disk space for operation" in the *ETERNUS SF Installation and Setup Guide*

The procedure is shown below:

- Log on to the server using Administrator privileges.
- 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. Furthermore, if the Installer screen is displayed by autorun, exit the installer.
- Confirm the architecture of the AdvancedCopy Manager's agent that has been installed.
Select **Control Panel > Programs and Functions** and confirm the architecture of the AdvancedCopy Manager's agent.
 - When using the "AdvancedCopy Manager (x86) - Agent"
The 32 bit version AdvancedCopy Manager's agent has been installed.
 - When using the "AdvancedCopy Manager (x64) - Agent"
The 64 bit version AdvancedCopy Manager's agent has been installed.
- Start the command prompt with "Run as administrator".
- Implement backup of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

[When using the 32 bit version Agent]

```
dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x86\esfacmapreinst.bat  
backupDir
```

[When using the 64 bit version Agent]

```
dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x64\esfacmapreinst.bat  
backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

Point

- The characters " | : * ? / . < > % & ^ ; ! are not supported for directory names.
- If the directory name contains any spaces, they should be surrounded by double quote characters.

- Back up the operating system.

7.3.1.2 Performing the upgrade

The upgrade is performed as follows:

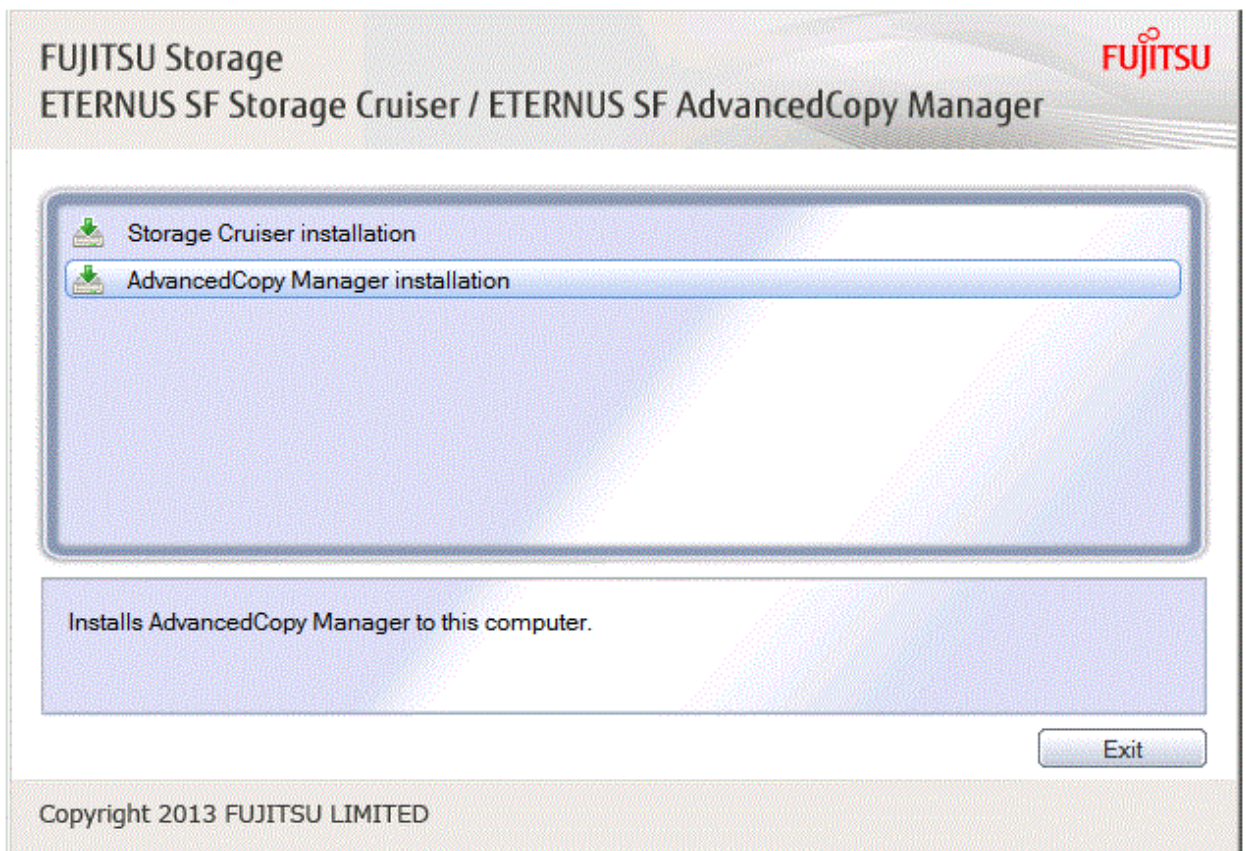
Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

Note

Although the initial screen of the installer will be displayed during these steps, this will not be used in the Upgrade Installation. Be sure to click **Exit** and end the screen.

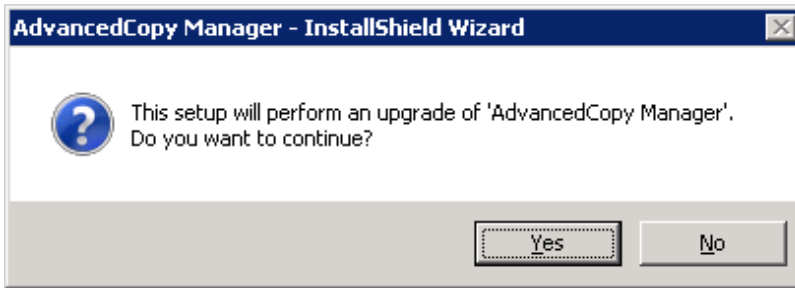
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Agent Program and Manual)" for this version into the DVD-ROM drive.

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.
3. The following window will be displayed.
For the Upgrade Installation, this window is not used. Click **Exit**.

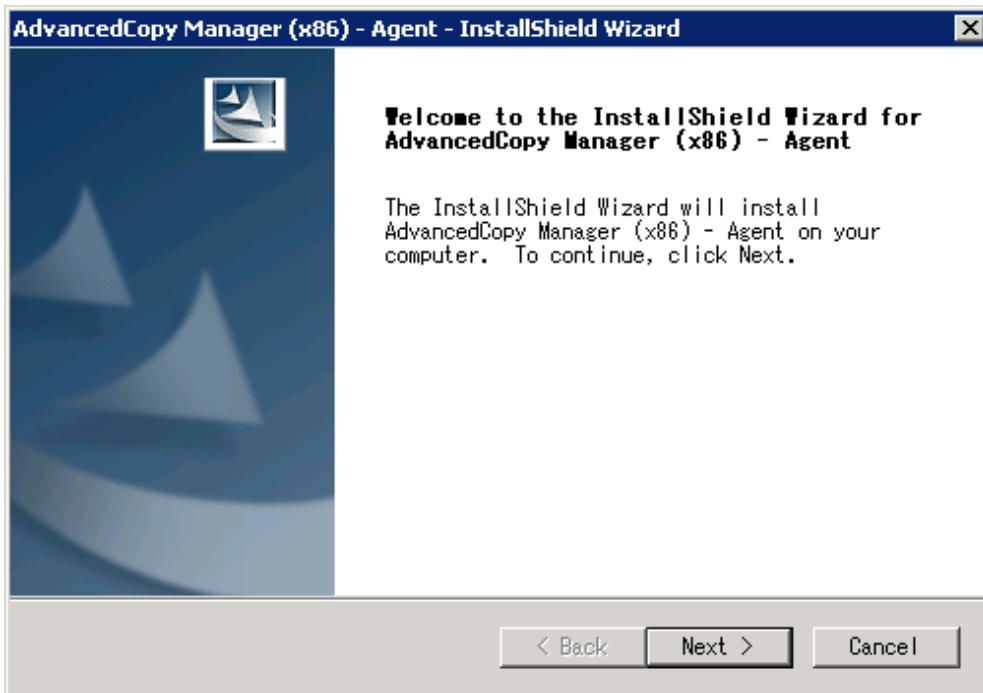


4. Start the following installation wizard corresponding to the architecture of AdvancedCopy Manager's agent checked in preparing for the upgrade:
 - For 32-bit version:
`dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x86\setup.exe`
 - For 64-bit version:
`dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x64\setup.exe`

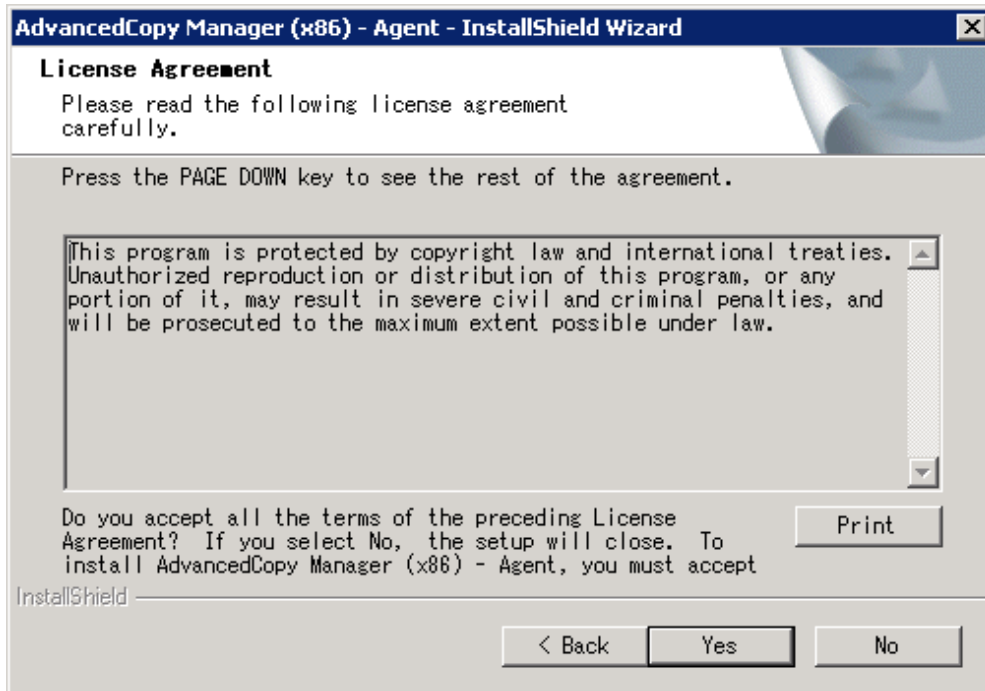
5. The following dialog box will be displayed. Click **Yes**.



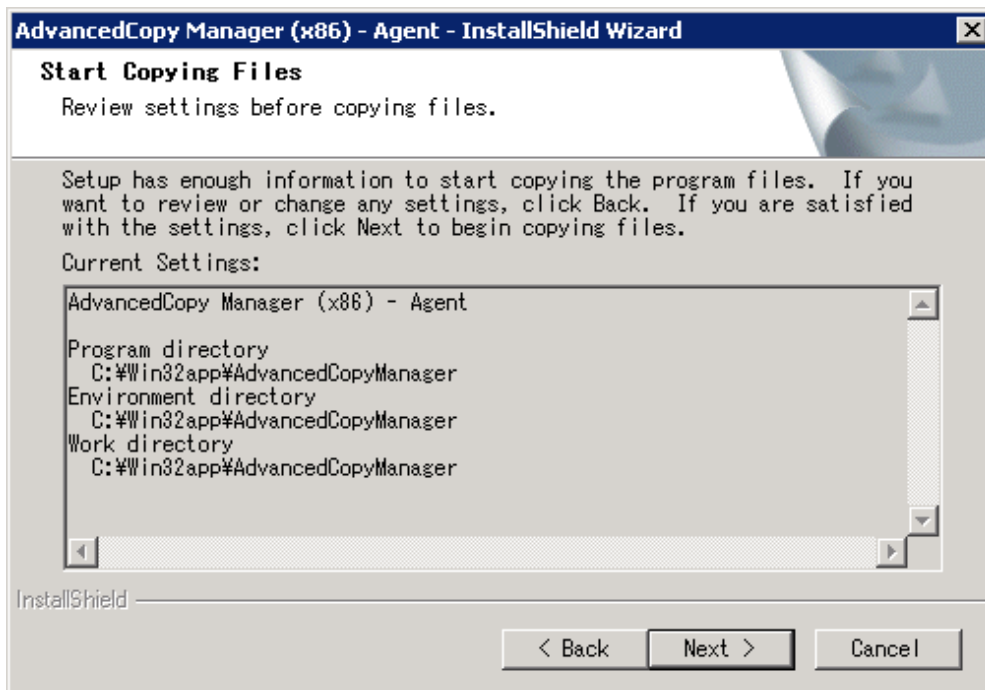
6. The installation wizard page will be displayed. Click **Next**.



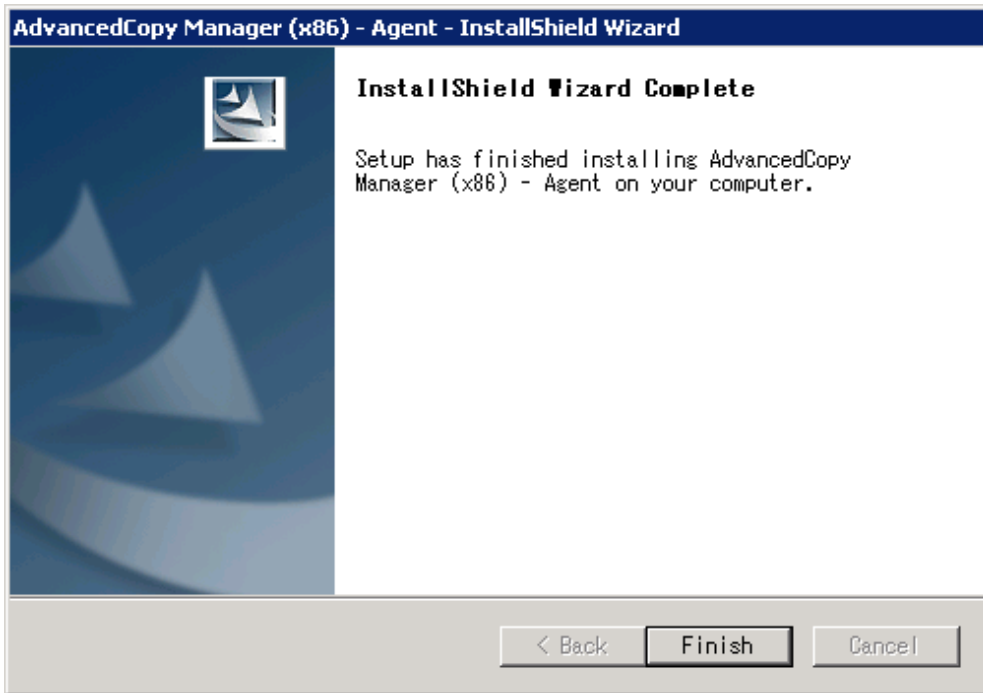
7. Read the terms and conditions of the **License Agreement** page.
If the conditions are agreeable, click **Yes**.



8. Check the settings information in the **Start Copying Files** page, and then click **Next**.



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



10. 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:

Note that in these tasks, in addition to operations with the Managed Server, there are operations to execute from the Management Server and the Web Console.

1. If the Storage Cruiser's agent has been installed, start the service of the Storage Cruiser's agent. Refer to "Starting and Stopping the Agent" in "Command References" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on how to start the service.
2. Starting the service of AdvancedCopy Manager's agent

Perform the following procedure:

- a. Select **Control Panel > Administrative Tools > Services** to open the Windows Services screen.
 - b. Select "AdvancedCopy Manager COM Service" and then click **Start**.
3. To ensure data consistency, with the Management Server, execute the `stgxfwcmmodsrv` command to change the server information.

When executing the `stgxfwcmmodsrv` command, specify the Managed Server name for the `-n` option.

- When the Management Server OS is Windows:

```
programDi r\ACM\bin\stgxfwcmmodsrv -n serverName
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```



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.

4. Perform the following operations with the Web Console to reload the server information.
 - a. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
 - b. On the Main pane, check the target server checkbox.
 - c. On the Action pane, click **Reload Conf.** under **Server**.



Point

- Once normal operation has been confirmed after the upgrade of the AdvancedCopy Manager's agent, the backup data in the backup destination directory created in step 3-e of "7.3.1.1 Preparing for the upgrade" may be deleted.
- When returning back to the state before installation of the upgrade, recover (restore) the system from the backup taken in step 3-f of "7.3.1.1 Preparing for the upgrade".

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. In all of the nodes in which the Storage Cruiser's agent has been installed, stop the service of the Storage Cruiser's agent.
Refer to "Starting and Stopping the Agent" in "Command References" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on how to stop the service.
4. Stop the local transactions on all the nodes, perform the following procedure:
 - a. Select **Control Panel > Administrative Tools > Services** to open the Windows Services screen.
 - b. Select "AdvancedCopy Manager COM Service" and then click **Stop**.
5. Implement backup of the previous version with all of the nodes.

For recovery in case the upgrade fails, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager's agent.

- On the primary node and the secondary node, implement backup of the previous version.
- In cases when there are multiple Managed Server transactions, in each primary node of the Managed Server transactions, switch the shared disk for the shared data of the Managed Server transactions online.



Information

The capacity required for performing the backup is the total value of the following:

- Environment Directory and Work Directory of "For Windows environment" under "Required disk space for installation" in the *ETERNUS SF Installation and Setup Guide*
- "For Windows environment" under "Required disk space for operation" in the *ETERNUS SF Installation and Setup Guide*

In the case of a primary node operating a Managed Server transaction, add the following to the capacity required to perform the backup:

- "Capacity of Shared Disk" in the *ETERNUS SF Cluster Environment Setup Guide*

The procedure is shown below:

- Log on to the server using Administrator privileges.
- Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack (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. Furthermore, if the Installer screen is displayed by autorun, exit the installer.
- Confirm the architecture of the AdvancedCopy Manager's agent that has been installed.
Select **Control Panel > Programs and Functions** and confirm the architecture of the AdvancedCopy Manager's agent.
 - When using the "AdvancedCopy Manager (x86) - Agent"
The 32 bit version AdvancedCopy Manager's agent has been installed.
 - When using the "AdvancedCopy Manager (x64) - Agent"
The 64 bit version AdvancedCopy Manager's agent has been installed.
- Start the command prompt with "Run as administrator".
- Implement backup of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

[When using the 32 bit version Agent]

```
dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x86\esfacmapreinst.bat
backupDir
```

[When using the 64 bit version Agent]

```
dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x64\esfacmapreinst.bat
backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

Point

- The characters " | : * ? / . < > % & ^ ; ! are not supported for directory names.
- If the directory name contains any spaces, they should be surrounded by double quote characters.

- Perform a backup of the following.
 - Windows System (primary node and secondary node)
 - Shared Disk for the Shared Data of the Managed Server transactions
- Eject the DVD-ROM.

7.3.2.2 Performing the upgrade (Primary node)

The upgrade is performed as follows:

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

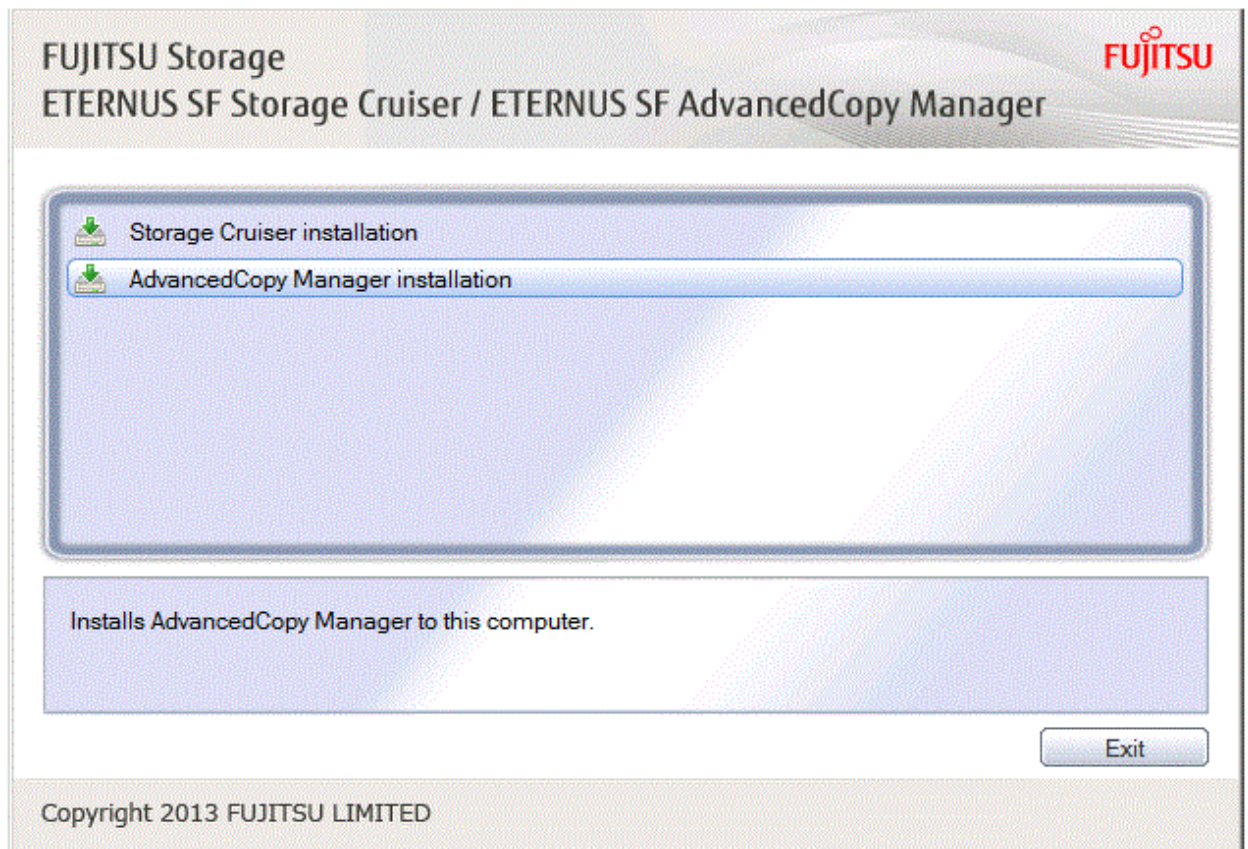
If multiple Managed Server transactions exist, use this procedure on each primary node for Managed Server transactions.

Note

Although the initial screen of the installer will be displayed during these steps, this will not be used in the Upgrade Installation. Be sure to click **Exit** and end the screen.

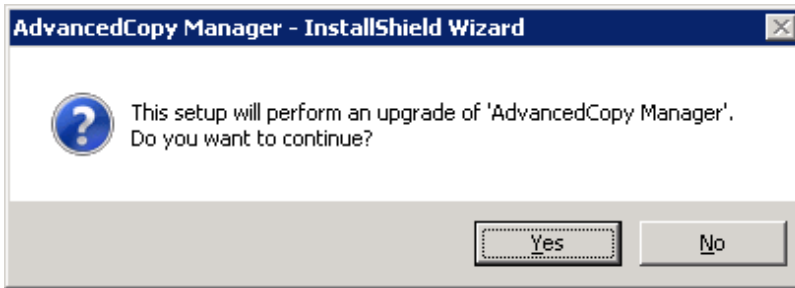
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Agent Program and Manual)" for this version into the DVD-ROM drive.

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.
3. The following window will be displayed.
For the Upgrade Installation, this window is not used. Click **Exit**.

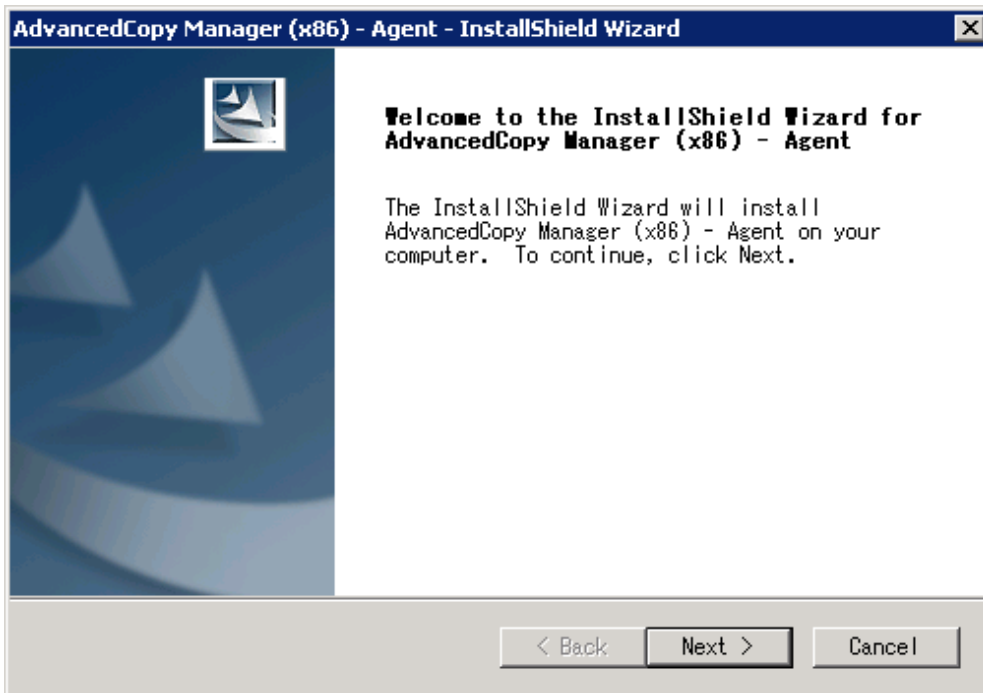


4. Start the following installation wizard corresponding to the architecture of AdvancedCopy Manager's agent checked in preparing for the upgrade:
 - For 32-bit version:
`dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x86\setup.exe`
 - For 64-bit version:
`dvdromDrive:\Agent_windows\AdvancedCopy_Manager\agent\windows_x64\setup.exe`

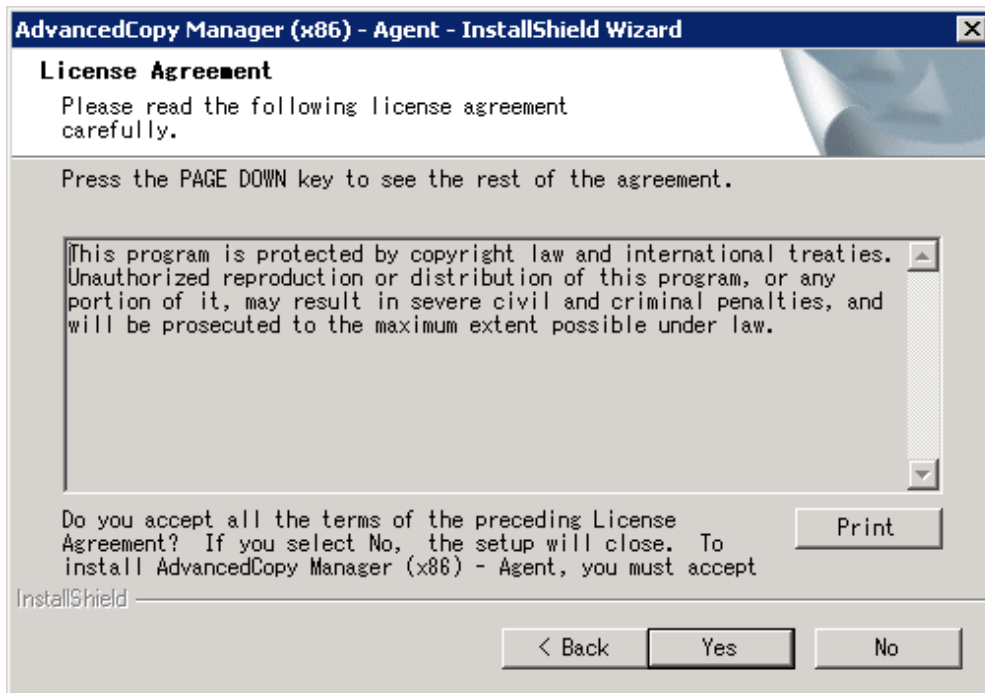
5. The following dialog box will be displayed. Click **Yes**.



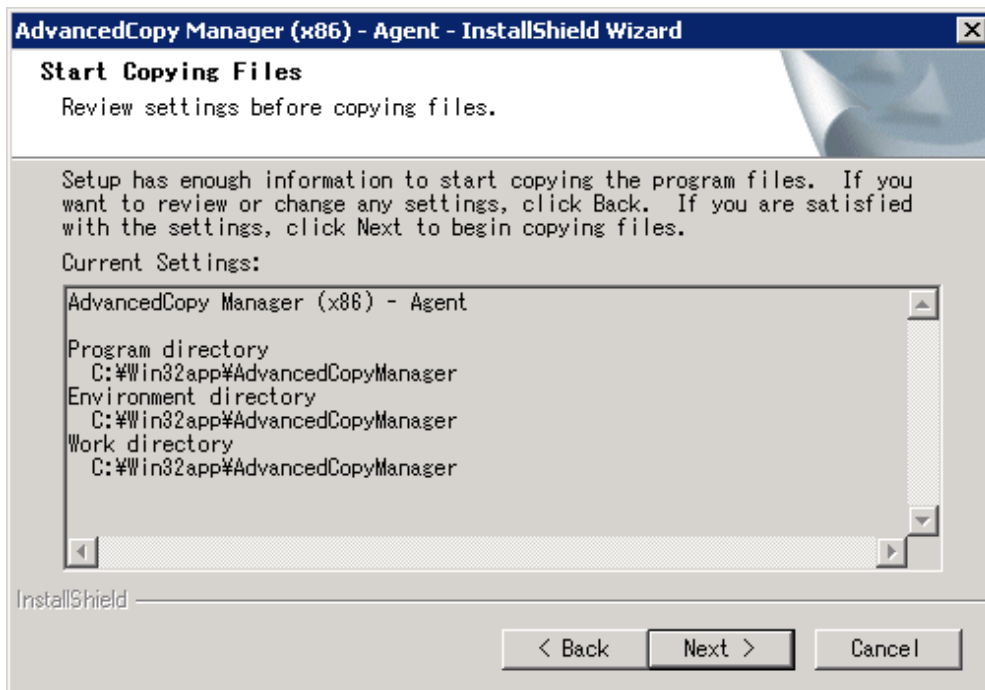
6. The following installation wizard page will be displayed. Click **Next**.



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

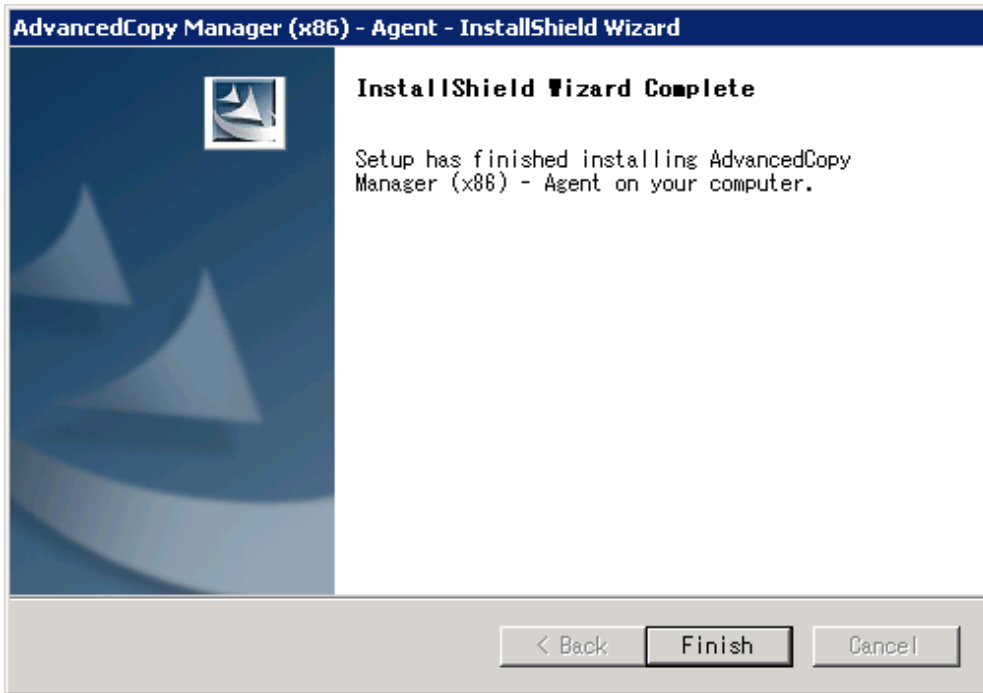


8. Check the settings information in the **Start Copying Files** page, and then click **Next**.



9. Copying of the program is started.

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



10. 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 16.0	Version=V15.0	Version=V16.0
Version 15.1 to 16.0	Version=V15.1	
Version 15.2 to 16.0	Version=V15.2	
Version 15.3 to 16.0	Version=V15.3	

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

Perform the following procedure:

Note that in these tasks, in addition to operations with the Managed Server, there are operations to execute from the Management Server and the Web Console.

1. On the primary node, start the Managed Server transactions.

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. In all of the nodes in which the Storage Cruiser's agent has been installed, start the service of the Storage Cruiser's agent. Refer to "Starting and Stopping the Agent" in "Command References" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on how to start the service.
3. Start the local transactions on all the nodes, perform the following procedure:
 - a. Select **Control Panel > Administrative Tools > Services** to open the Windows Services screen.
 - b. Select "AdvancedCopy Manager COM Service" and then click **Start**.
4. To ensure data consistency, with the Management Server, execute the `stgxfwcmmodsrv` command to change the server information.

When executing the `stgxfwcmmodsrv` command, specify the Managed Server name for the `-n` option.

- When the Management Server OS is Windows:

```
programDir\ACM\bin\stgxfwcmmodsrv -n ServerName
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n ServerName
```

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.

5. Perform the following operations with the Web Console to reload the server information.
 - a. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
 - b. On the Main pane, check the target server checkbox.

- c. On the Action pane, click **Reload Conf.** under **Server**.

Point

- Once normal operation has been confirmed after the upgrade of the AdvancedCopy Manager's agent, the backup data in the backup destination directory created in step 5-e of "[7.3.2.1 Preparing for the upgrade](#)" maybe deleted.
- When returning back to the state before installation of the upgrade, recover (restore) the system from the backup taken in step 5-f of "[7.3.2.1 Preparing for the upgrade](#)".

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. Implement backup of the previous version.

For recovery in case the upgrade fails, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager's agent.

Information

The capacity required for performing the backup is the total value of the following:

- Fixed configuration directory and Modifying configuration directory of "For Solaris environment" or "For Linux environment" under "Required disk space for installation" in the *ETERNUS SF Installation and Setup Guide*
- "For Solaris, Linux, HP-UX or AIX environment" under "Required disk space for operation" in the *ETERNUS SF Installation and Setup Guide*

The procedure is shown below:

- a. Log in to the server as a superuser.
- b. 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.
- c. Mount the DVD-ROM.
 - Example for Solaris:

```
# mount -F hsfs -o ro /dev/dsk/c0t4d0s0 dvdromMountPoint
```

In command example, the device name of the DVD-ROM drive is mounted as /dev/dsk/c0t4d0s0. The device name of the DVD-ROM drive will differ depending on the device.

- Example for RHEL5/RHEL6 and SUSE Linux Enterprise Server 11:

```
# mount /dev/cdrom dvdromMountPoint
```

In command example, the device name of the DVD-ROM drive is mounted as /dev/cdrom. The device name of the DVD-ROM drive will differ depending on the device.

- d. Implement backup of the previous version.

Execute the following shell script included in the DVD-ROM. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

[When using the RHEL5 x86 Edition Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel5_x86/esfacmapreinst.sh backupDir
```

[When using the RHEL5 x64 Edition Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel5_x64/esfacmapreinst.sh backupDir
```

[When using the RHEL6 Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel6_x86/esfacmapreinst.sh backupDir
```

[When using the Solaris Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/Solaris/esfacmapreinst.sh backupDir
```

[When using the SUSE Linux Enterprise Server 11 Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/sles11_x86/esfacmapreinst.sh backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the shell script again.

7.4.1.2 Performing the upgrade

The upgrade is performed as follows:

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

1. Login to the server on which to perform the tasks. Perform operations after logging in with root (superuser).
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack (Agent Program and Manual)" for this version into the DVD-ROM drive.
3. Mount the DVD-ROM.

- Example for Solaris:

```
# mount -F hsfs -o ro /dev/dsk/c0t4d0s0 dvdromMountPoint
```

In command example, the device name of the DVD-ROM drive is mounted as /dev/dsk/c0t4d0s0. The device name of the DVD-ROM drive will differ depending on the device.

- Example for RHEL5/RHEL6 and SUSE Linux Enterprise Server 11:

```
# mount /dev/cdrom dvdromMountPoint
```

In command example, the device name of the DVD-ROM drive is mounted as /dev/cdrom. The device name of the DVD-ROM drive will differ depending on the device.

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               |
|                   16.0                                       |
|               Copyright FUJITSU LIMITED 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 dvdromMountPoint
```



.....
 If the upgrade was terminated abnormally, refer to "Corrective actions for error occurrence in upgrade from V 15.x (for Solaris/Linux)" in the *Software Release Guide* to recover the system to the normal state.

7.4.1.3 Tasks to be performed after the upgrade

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

Note that in these tasks, in addition to operations with the Managed Server, there are operations to execute from the Management Server and the Web Console.

1. Execute the following command to start the daemon of AdvancedCopy Manager's agent.

```
# /opt/swstorage/bin/startacm
```

2. To ensure data consistency, with the Management Server, execute the `stgxfwcmmodsrv` command to change the server information.

When executing the `stgxfwcmmodsrv` command, specify the Managed Server name for the `-n` option.

- When the Management Server OS is Windows:

```
programDir\ACM\bin\stgxfwcmmodsrv -n serverName
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJSSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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. Perform the following operations with the Web Console to reload the server information.
 - a. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
 - b. On the Main pane, check the target server checkbox.
 - c. On the Action pane, click **Reload Conf.** under **Server**.

Point

- Once normal operation has been confirmed after the upgrade of the AdvancedCopy Manager's agent, the backup data in the backup destination directory created in step 2-d of "7.4.1.1 Preparing for the upgrade" maybe deleted.
- It is recommended to back up the system before starting the upgrade. If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback).
When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

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. Refer to the relevant cluster software manuals for information on stopping it.
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. Implement backup of the previous version with all of the nodes.

For recovery in case the upgrade fails, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager's agent.

- On the primary node and the secondary node, implement backup of the previous version.
- In cases when there are multiple Managed Server transactions, in each primary node of the Managed Server transactions, switch the shared disk for the shared data of the Managed Server transactions online.

Information

The capacity required for performing the backup is the total value of the following:

- Fixed configuration directory and Modifying configuration directory of "For Solaris environment" or "For Linux environment" under "Required disk space for installation" in the *ETERNUS SF Installation and Setup Guide*
- "For Solaris, Linux, HP-UX or AIX environment" under "Required disk space for operation" in the *ETERNUS SF Installation and Setup Guide*

In the case of a primary node operating a Managed Server transaction, add the following to the capacity required to perform the backup:

- "Capacity of Shared Disk" in the *ETERNUS SF Cluster Environment Setup Guide*

The procedure is shown below:

- a. Log in to the server as a superuser.
- b. 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.
- c. Mount the DVD-ROM.

- Example for Solaris:

```
# mount -F hfs -o ro /dev/dsk/c0t4d0s0 dvdromMountPoint
```

In command example, the device name of the DVD-ROM drive is mounted as /dev/dsk/c0t4d0s0. The device name of the DVD-ROM drive will differ depending on the device.

- Example for RHEL5/RHEL6 and SUSE Linux Enterprise Server 11:

```
# mount /dev/cdrom dvdromMountPoint
```

In command example, the device name of the DVD-ROM drive is mounted as /dev/cdrom. The device name of the DVD-ROM drive will differ depending on the device.

d. Implement backup of the previous version.

Execute the following shell script included in the DVD-ROM. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

[When using the RHEL5 x86 Edition Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel5_x86/esfacmapreinst.sh backupDir
```

[When using the RHEL5 x64 Edition Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel5_x64/esfacmapreinst.sh backupDir
```

[When using the RHEL6 Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/rhel6_x86/esfacmapreinst.sh backupDir
```

[When using the Solaris Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/Solaris/esfacmapreinst.sh backupDir
```

[When using the SUSE Linux Enterprise Server 11 Agent]

```
# dvdromMountPoint/Agent_unix/AdvancedCopy_Manager/sles11_x86/esfacmapreinst.sh backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the shell script again.

e. Execute the following commands, and then eject the DVD-ROM:

```
# cd /
# umount dvdromMountPoint
```

f. Back up the AdvancedCopy Manager daemon start and stop script of the Managed Server transactions.

On the primary node and the secondary node, back up the AdvancedCopy Manager daemon start and stop script of the Managed Server transactions.

7.4.2.2 Performing the upgrade (Primary node)

The upgrade is performed as follows:

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

1. Login to the server on which to perform the tasks. Perform operations after logging in with root (superuser).
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack (Agent Program and Manual)" for this version into the DVD-ROM drive.
3. Mount the DVD-ROM.

- Example for Solaris:

```
# mount -F hsfs -o ro /dev/dsk/c0t4d0s0 dvdromMountPoint
```

In command example, the device name of the DVD-ROM drive is mounted as /dev/dsk/c0t4d0s0. The device name of the DVD-ROM drive will differ depending on the device.

- Example for RHEL5/RHEL6 and SUSE Linux Enterprise Server 11:

```
# mount /dev/cdrom dvdromMountPoint
```

In command example, the device name of the DVD-ROM drive is mounted as /dev/cdrom. The device name of the DVD-ROM drive will differ depending on the device.

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           |
|                   16.0                               |
|           Copyright FUJITSU LIMITED 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 dvdromMountPoint
```

Point

If the upgrade was terminated abnormally, refer to "Corrective actions for error occurrence in upgrade from V 15.x (for Solaris/Linux)" in the *Software Release Guide* to recover the system to the normal state.

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 16.0	Version=V15.0	Version=V16.0
Version 15.1 to 16.0	Version=V15.1	
Version 15.2 to 16.0	Version=V15.2	
Version 15.3 to 16.0	Version=V15.3	

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 \(Primary node\)](#)".

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.

7.4.2.5 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
```



Do not change anything other than the line starting with "System=".

7.4.2.6 Starting the Managed Server transactions

Perform the following procedure:

Note that in these tasks, in addition to operations with the Managed Server, there are operations to execute from the Management Server and the Web Console.

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

When executing the stgxfwcmmodsrv command, specify the Managed Server name for the -n option.

- When the Management Server OS is Windows:

```
programDir\ACM\bin\stgxfwcmmodsrv -n serverName
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJSVswstf/bin/stgxfwcmmodsrv -n serverName
```

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. Perform the following operations with the Web Console to reload the server information.

- a. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
- b. On the Main pane, check the target server checkbox.
- c. On the Action pane, click **Reload Conf.** under **Server**.

Point

- Once normal operation has been confirmed after the upgrade of the AdvancedCopy Manager's agent, the backup data in the backup destination directory created in step 4-d of "[7.4.2.1 Preparing for the upgrade](#)" maybe deleted.
- It is recommended to back up the following resources before starting the upgrade. If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback).
 - System (primary node and secondary node)
 - The shared disk for the shared data of the Managed Server transactions

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

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 Server 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 Server 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 Server database (for Windows Server 2003)

When the backup and restoration function of the Exchange Server database are used, release the setting by referring to the manual of the previous version.

"Backup and restore of Exchange Server 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



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.



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

- When the Management Server OS is Windows:

```
programDir\ACM\bin\stgrepocnv -d backupDir
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJVS\swstf/bin/stgrepocnv -d backupDir
```



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.

7.5.7 Changing server information

To ensure data consistency, execute the Web Console or `stgxfwcmmodsrv` command to change the server information. The `stgxfwcmmodsrv` command must be executed on the Management Server.

When executing the `stgxfwcmmodsrv` command, specify the Managed Server name for the `-n` option.

- When the Management Server OS is Windows:

```
programDir\ACM\bin\stgxfwcmmodsrv -n serverName
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJVS\swstf/bin/stgxfwcmmodsrv -n serverName
```



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 Server database (for Windows Server 2003)

Reconfigure the backup and restoration functions of the Exchange Server database for which the setting has been released by referring to the manual of this version.

"Backup and restore of Exchange Server 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. The stgxfwcmmodsrv command must be executed on the Management Server.

When executing the stgxfwcmmodsrv command, specify the Managed Server name for the -n option.

- When the Management Server OS is Windows:

```
programDir\ACM\bin\stgxfwcmmodsrv -n serverName
```

- When the Management Server OS is Solaris or Linux:

```
/opt/FJVSswstf/bin/stgxfwcmmodsrv -n serverName
```

Finally, perform the following operations with the Web Console to reload the server information.

1. On the global navigation tab, click **Server**.
The registered server list is displayed on the Main pane.
2. On the Main pane, check the target server checkbox.
3. On the Action pane, click **Reload Conf.** under **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 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.

7.6.1 Upgrading non-clustered systems

The section describes the upgrade of non-clustered systems.

7.6.1.1 Preparing for the upgrade

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

Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

7.6.1.1.1 Backing up the environment setting files

With the following procedures, perform a backup of the operation environment of the previous version of the AdvancedCopy Manager Copy Control Module.

Note that the capacity required for performing this backup is 100MB.

Point

It is recommended to backup the system before starting the upgrade. If a failure occurs during the upgrade, you cannot restore the environment to the pre-installation status (rollback).

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

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. Implement backup of the previous version

Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

```
dvdromDrive:\Manager_windows\vuptools\esfccmpreinst.bat backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory name.
- The number of characters in a directory name must be up to 220.

7.6.1.1.2 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 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 the following locations in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

- When using the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager Program

"Operating Environment of the ETERNUS SF Manager"

- When installing and using the AdvancedCopy Manager Copy Control Module Program

"Operating Environment of the AdvancedCopy Manager CCM"

7.6.1.2 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).

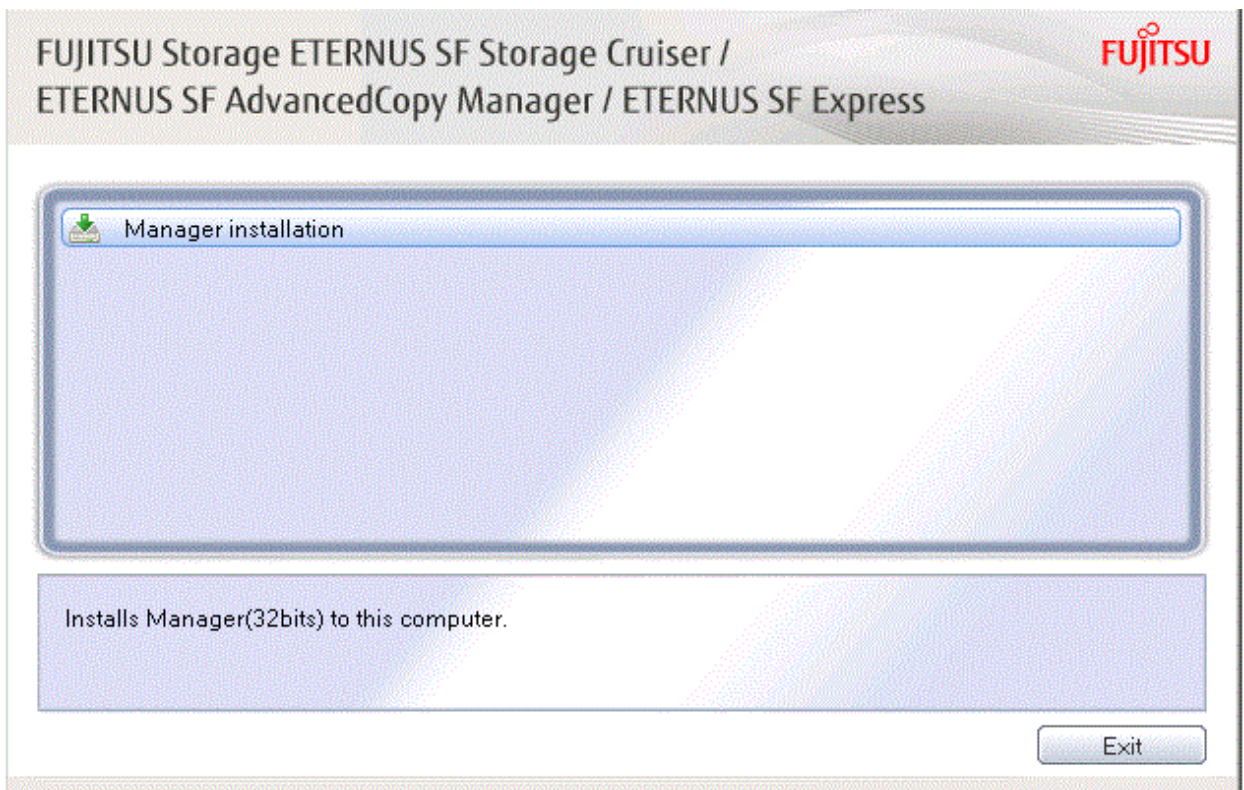
The upgrade is performed as follows:

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

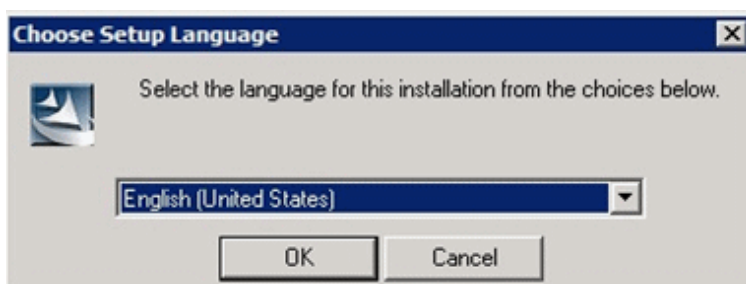
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

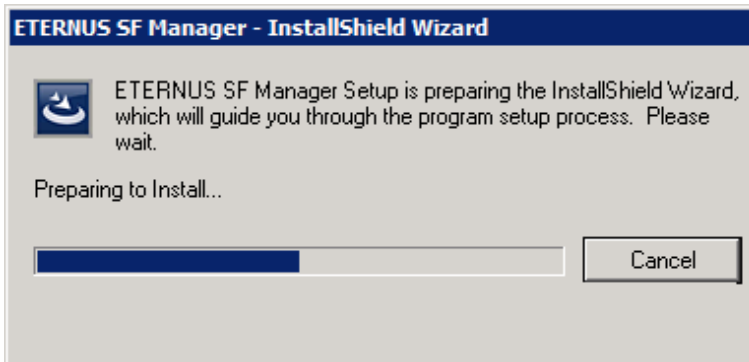
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



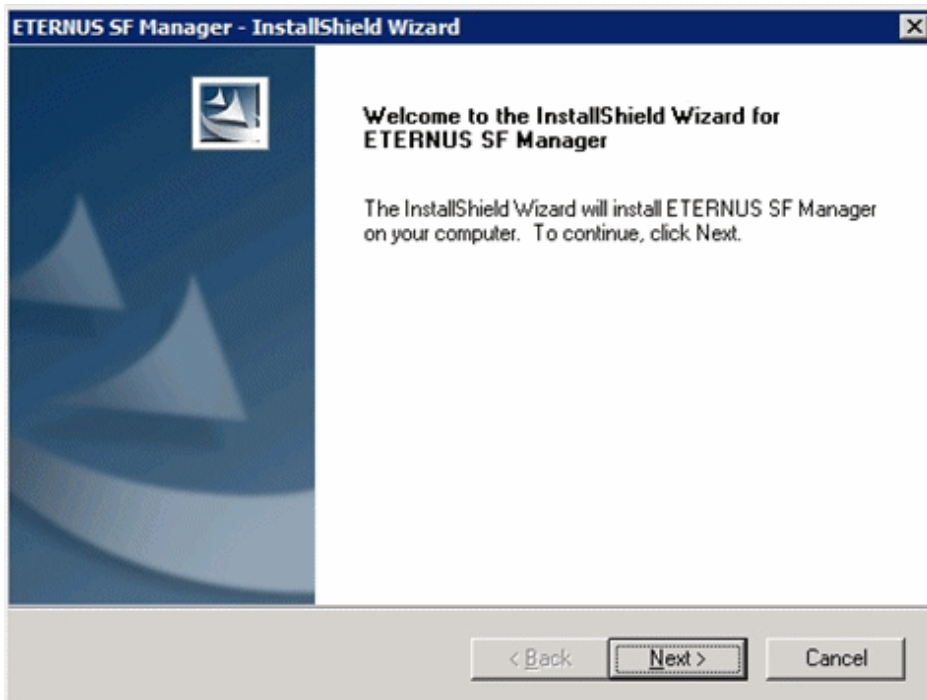
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

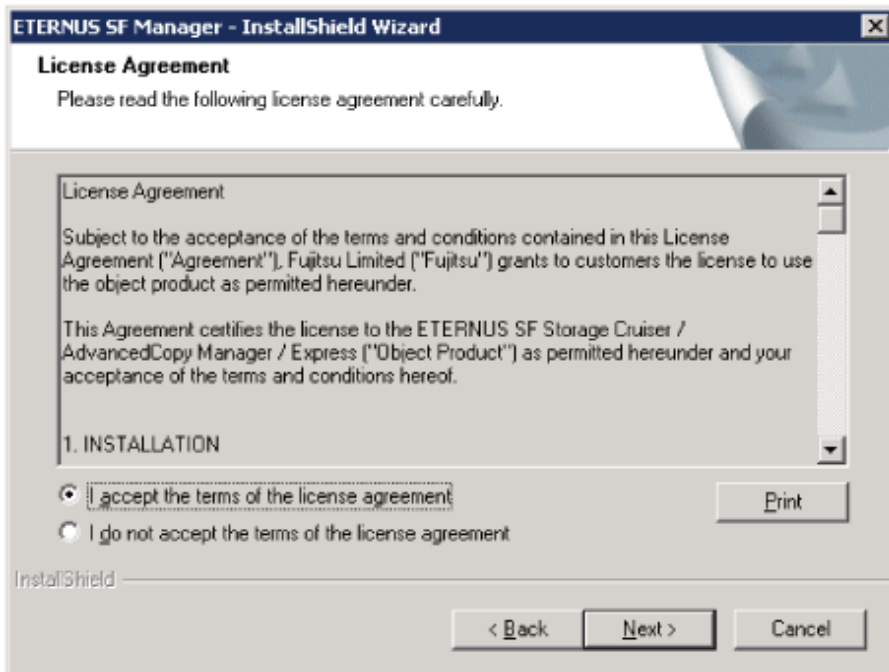


6. The installation wizard page will be displayed. Click **Next**.

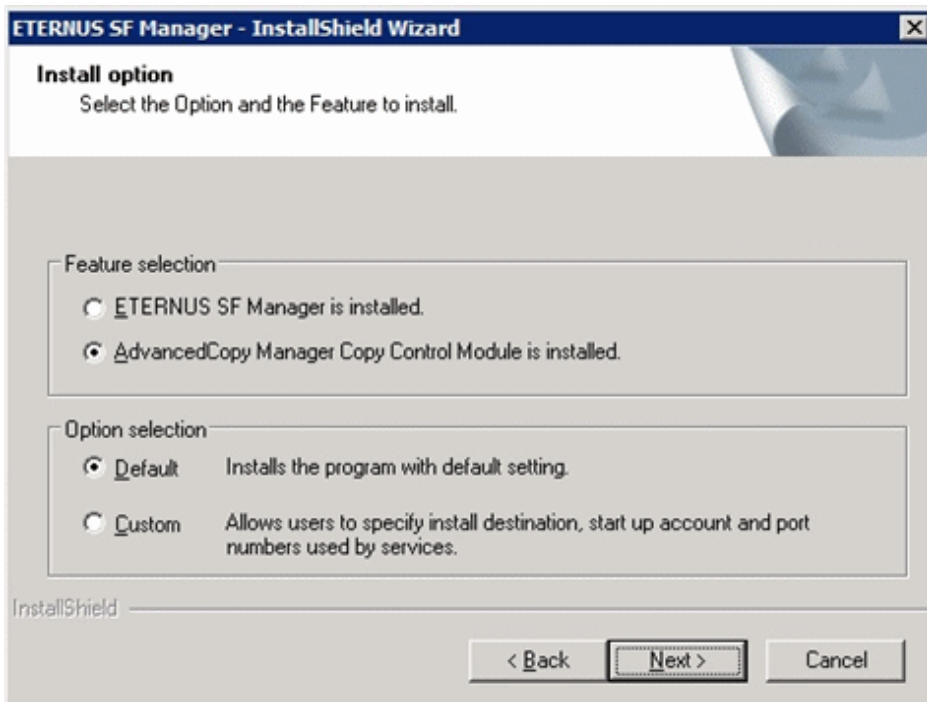


7. Read the terms and conditions of the **License Agreement** page.

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**.



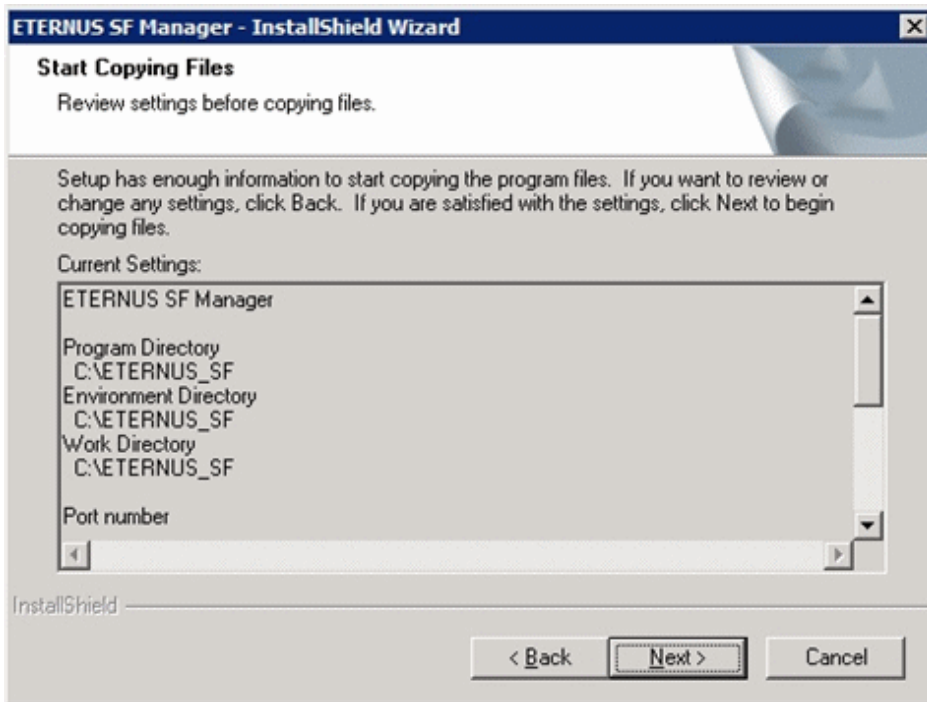
P Point

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

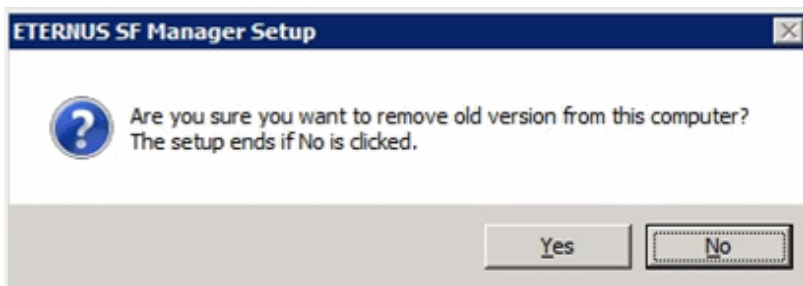
10. Check the settings information in the **Start Copying Files** page.

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

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



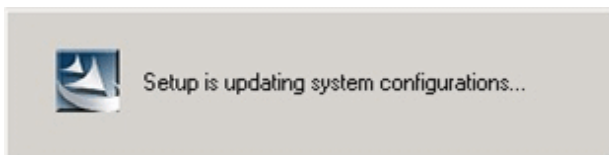
11. The following dialog box will be displayed. To proceed with the uninstallation, click **Yes**.



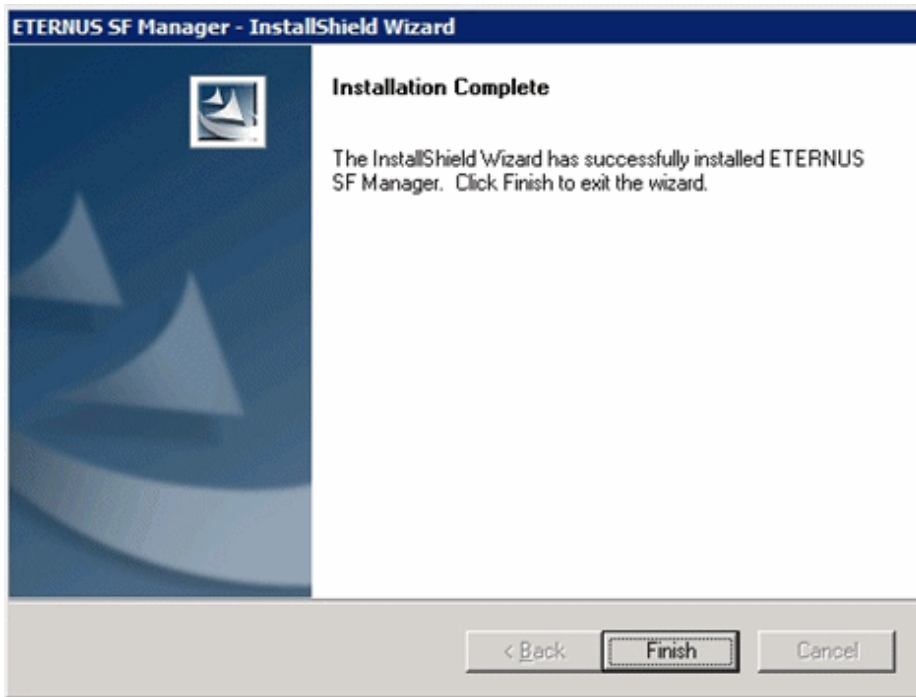
12. When the uninstallation is completed, the copying of the files for the new version will be started.

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

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



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



The upgrade for the AdvancedCopy Manager Copy Control Module is complete. Perform "7.6.1.3 Tasks to be performed after the upgrade" afterwards.

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "7.6.1.3 Tasks to be performed after the upgrade".

7.6.1.3 Tasks to be performed after the upgrade

When the AdvancedCopy Manager Copy Control Module upgrade has been completed, the tasks below need to be performed.

7.6.1.3.1 Restoring the environment setting files

With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager Copy Control Module. Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

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. Implement restoration of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path.

```
dvdromDrive:\Manager_windows\vuptools\esfccmpostinst.bat backupDir
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory name.
- The number of characters in a directory name must be up to 220.

4. Eject the DVD-ROM.

7.6.1.3.2 Deleting the Backup Data

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 3 of "7.6.1.1.1 Backing up the environment setting files" maybe deleted.

7.6.2 Upgrading clustered systems

The section describes the upgrade of clustered systems.

The following values are used in the description:

Value	Description
\$SINS_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.

Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

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 of AdvancedCopy Manager Copy Control Module.

2. Stop the CCM Server transactions on the primary node.

Use the Failover Cluster Manager to stop the transactions of AdvancedCopy Manager Copy Control Module. However, the shared disk for shared data of AdvancedCopy Manager Copy Control Module must be online.

3. On the primary node, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager Copy Control Module.

Note that the capacity required for performing this backup is 100MB.

- a. Log on to the server using Administrator privileges.
- b. 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.
- c. Implement backup of the previous version.
Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

```
dvdromDrive:\Manager_windows\vuptools\esfccmpreinst_cluster.bat backupDir -primary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory name.
- The number of characters in a directory name must be up to 220.

d. Eject the DVD-ROM.

4. 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 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 the following locations in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

- When using the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager Program

"Operating Environment of the ETERNUS SF Manage"

- When installing and using the AdvancedCopy Manager Copy Control Module Program

"Operating Environment of the AdvancedCopy Manager CCM"

5. On the secondary node, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager Copy Control Module.

The capacity required for performing this backup is 10MB.

- a. Log on to the server using Administrator privileges.
- b. 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.

- c. Implement backup of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path..

```
dvdromDrive:\Manager_windows\vuptools\esfccmpreinst_cluster.bat backupDir -secondary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory name.
- The number of characters in a directory name must be up to 220.

d. Eject the DVD-ROM.

6. 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 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 previous 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 the relevant previous version for information on the required disk space.

- For using the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager Program
"Operating Environment of the ETERNUS SF Manager"
- For installing and using the AdvancedCopy Manager Copy Control Module Program
"Operating Environment of the AdvancedCopy Manager CCM"

7. Performing the cluster unsetup



See

.....
Refer to the "Deletion of Cluster Environments for CCM Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for the previous version for information.
.....

7.6.2.2 Performing the upgrade (Primary node)

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).

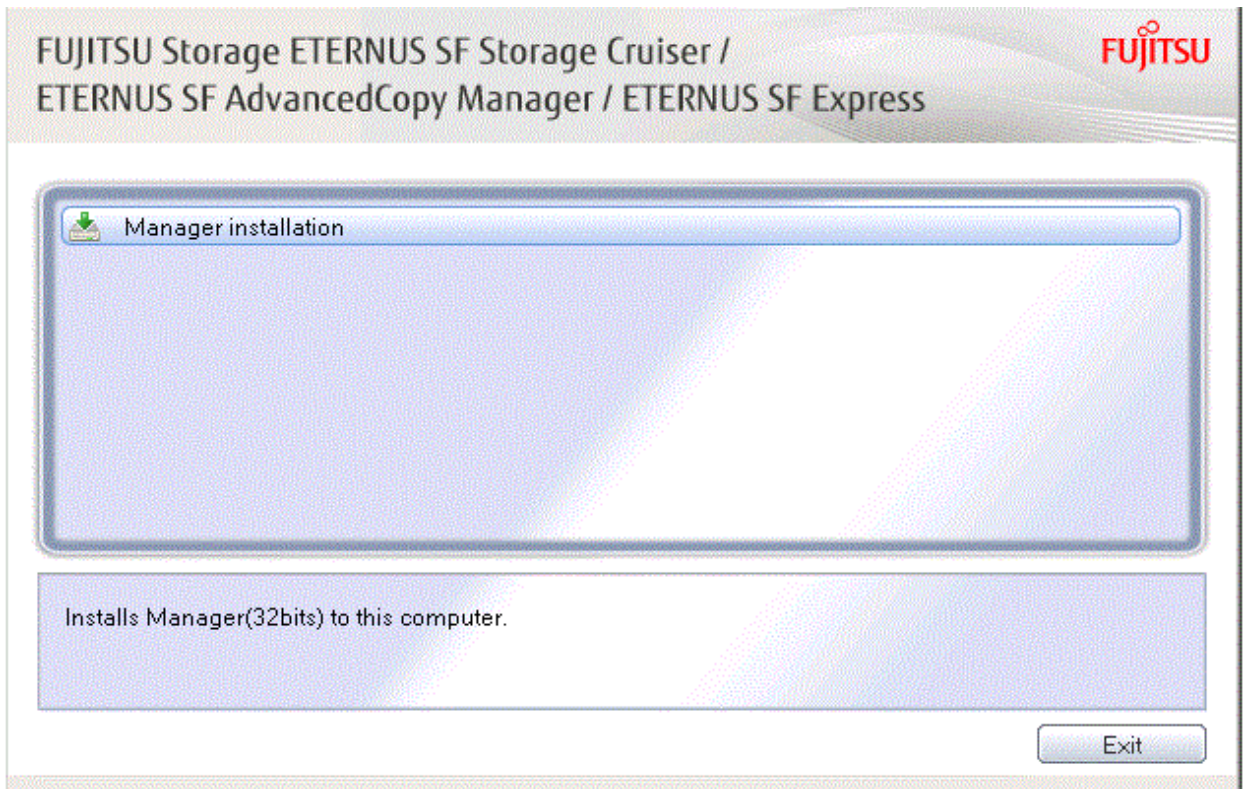
The upgrade is performed as follows:

Note that if step 1 and step 2 have already been performed, it is unnecessary to perform these again.

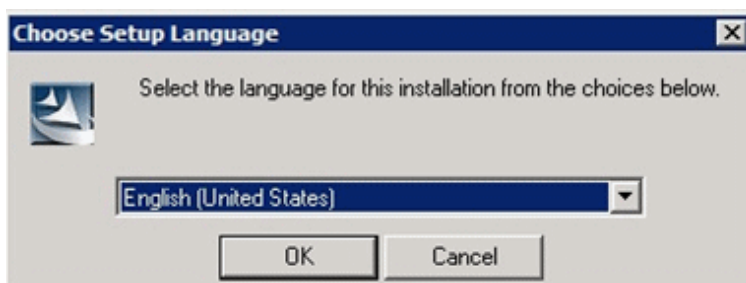
1. Log on to the server using Administrator privileges.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express Mediapack for Windows (Manager Program) (1/2)" for this version into the DVD-ROM drive.

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.

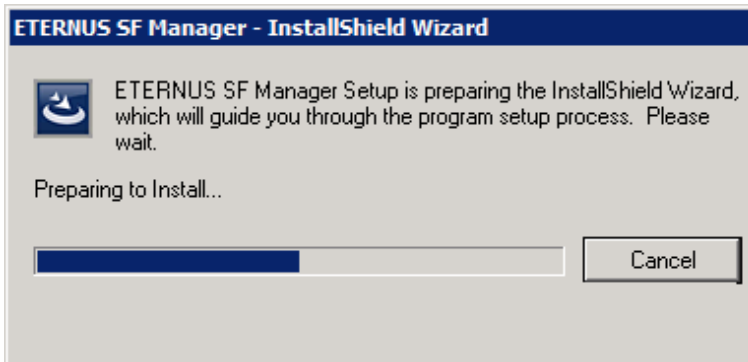
3. The following window will be displayed. Click **Manager installation**.
To cancel the upgrade at this point, click **Exit**.



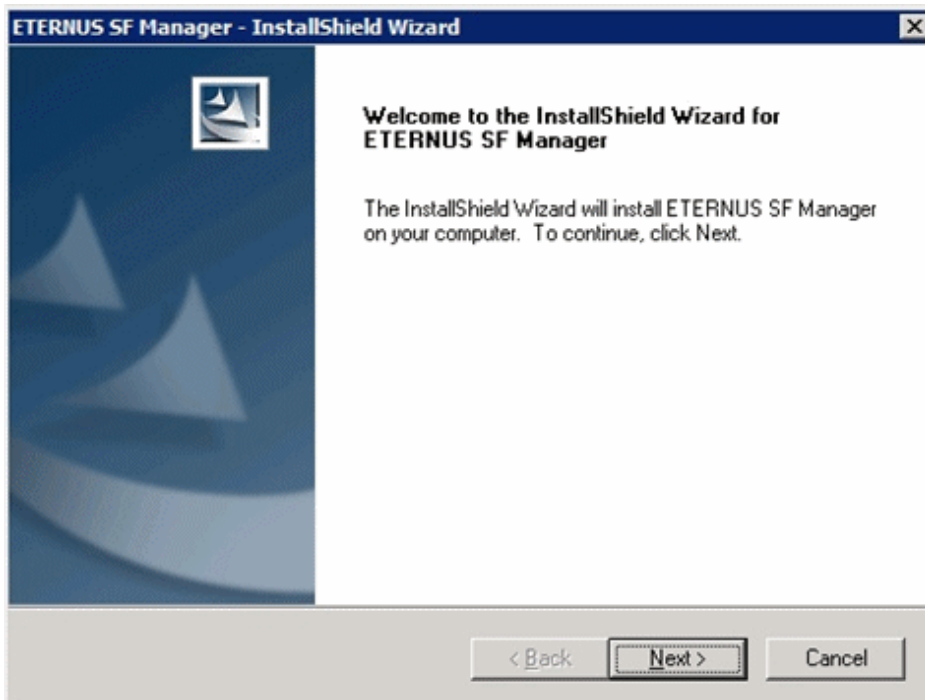
4. The **Choose Setup Language** dialog box will be displayed. Select the appropriate language and click **OK**.
The language selected in this dialog box will be used during installation and uninstallation.



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

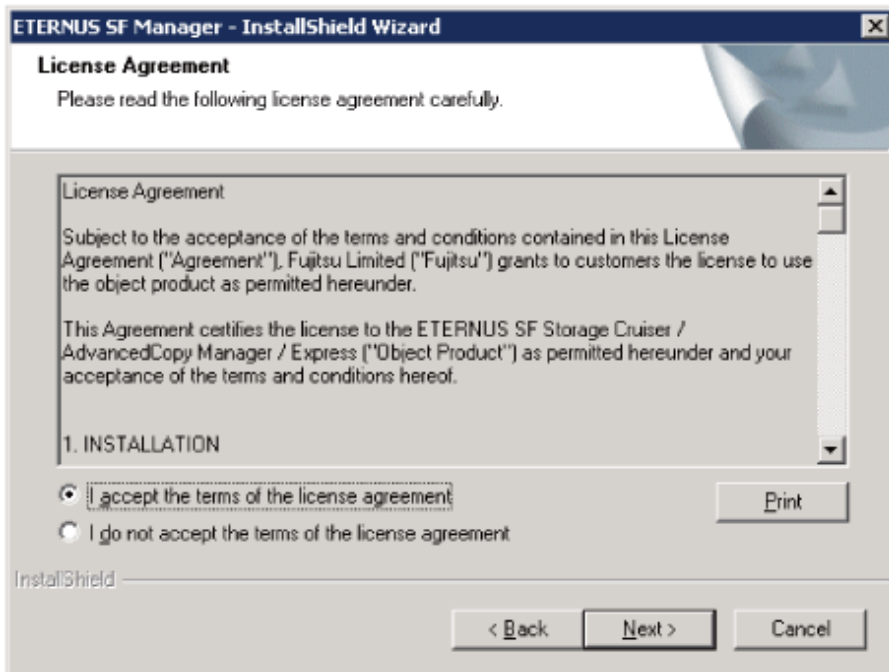


6. The installation wizard page will be displayed. Click **Next**.

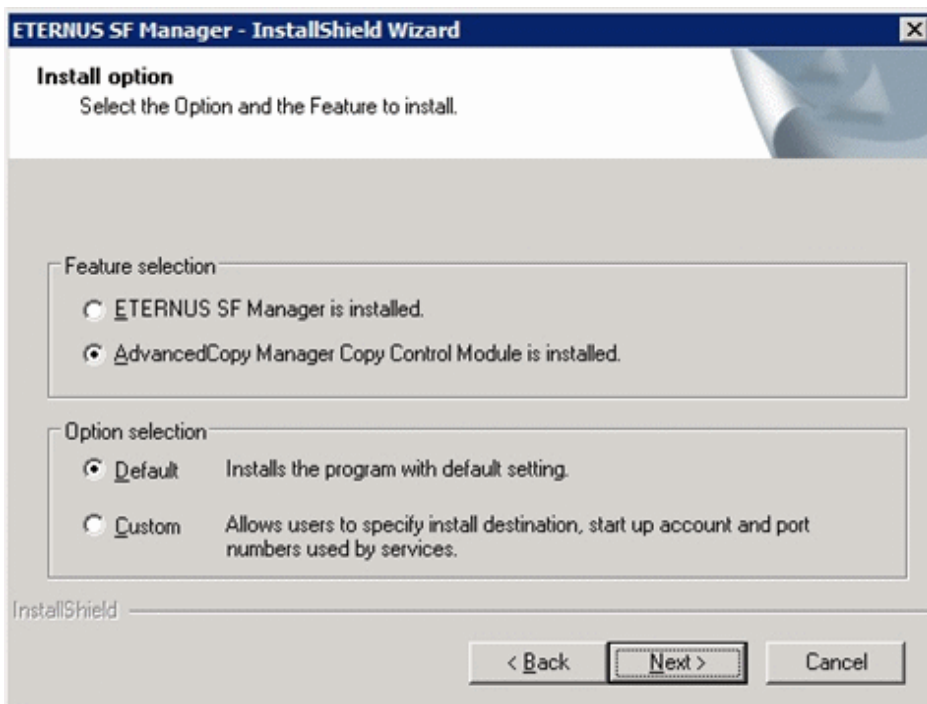


7. Read the terms and conditions of the **License Agreement** page.

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.].

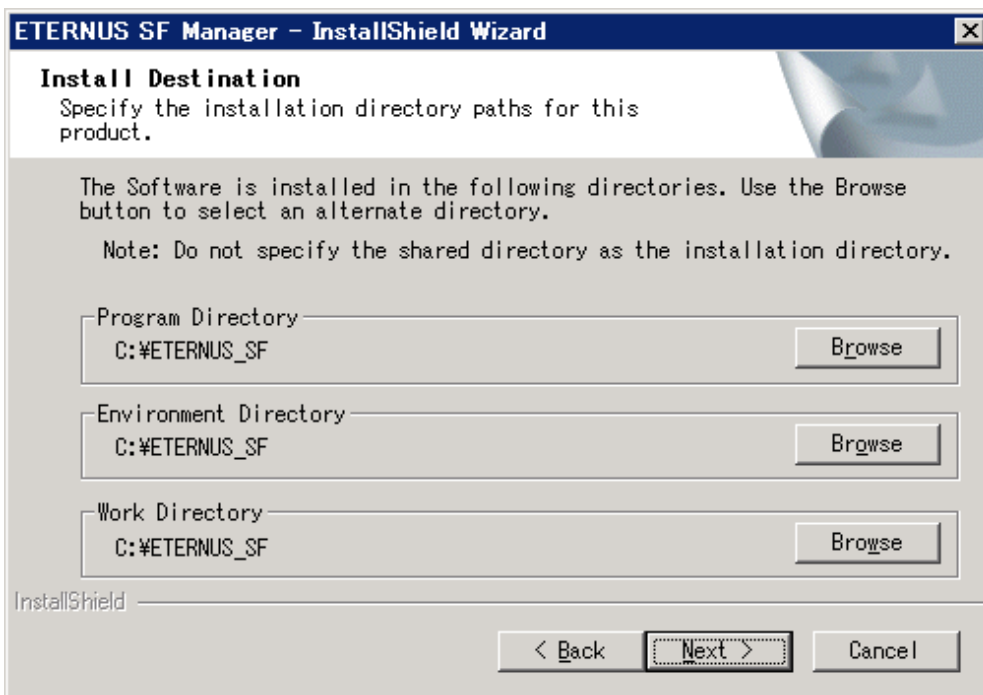
Option selection

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**.



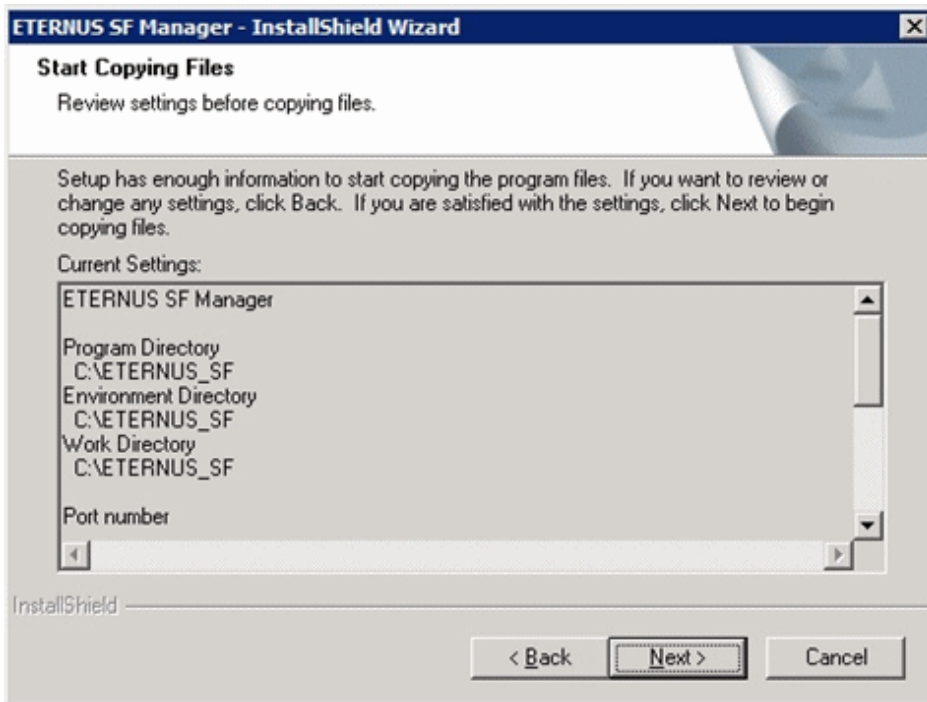
P Point

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

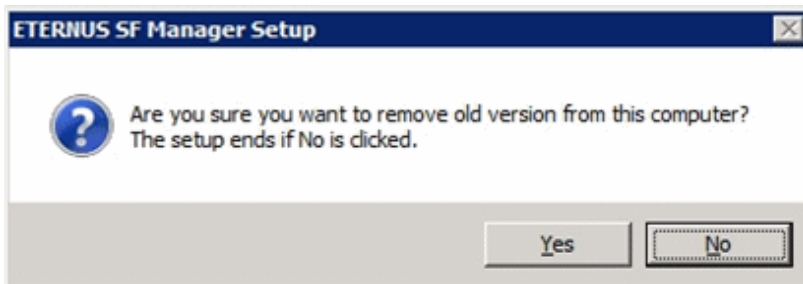
10. Check the settings information in the **Start Copying Files** page.

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

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



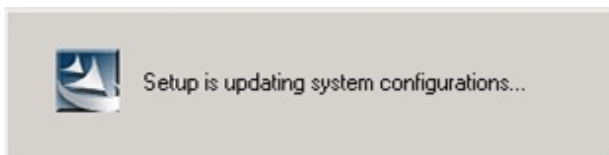
11. The following dialog box will be displayed. To proceed with the uninstallation, click **Yes**.



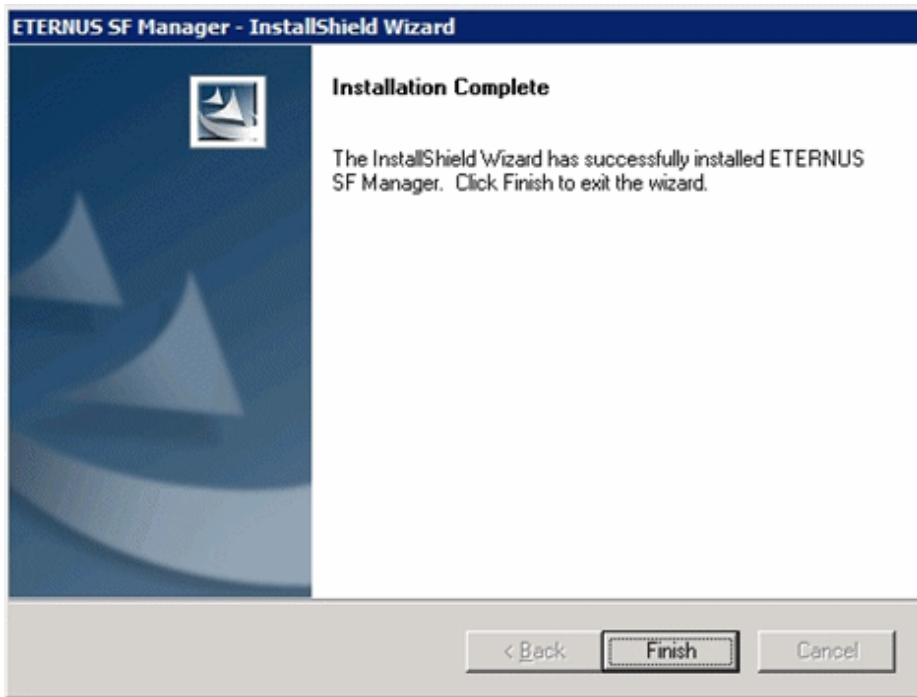
12. When the uninstallation is completed, the copying of the files for the new version will be started.

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

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



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



15. Eject the DVD-ROM.

The upgrade for the AdvancedCopy Manager Copy Control Module is complete. Perform "[7.6.2.4 Tasks to be performed after the upgrade \(Primary node\)](#)" afterwards.

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "[7.6.2.3 Performing the upgrade \(Secondary node\)](#)".

7.6.2.3 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 \(Primary node\)](#)".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from the following tasks.

After upgrading on the primary node and the secondary node, perform the cluster setup. Refer to "Preparations for Customizing CCM Server Transactions" and "Customization for CCM Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for this version.

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

When the upgrade has been completed, the tasks below need to be performed on the primary node.

1. Stop the CCM Server transactions

Use the Failover Cluster Manager to stop the transactions to which the AdvancedCopy Manager CCM. However, the shared disk for shared data of the AdvancedCopy Manager CCM must be online.
2. Implement restoration of the previous version. Note that if step a and step b have already been performed, it is unnecessary to perform these again.

With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager Copy Control Module.

 - a. Log on to the server using Administrator privileges.
 - b. 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.
 - c. Implement restoration of the previous version.

Execute the following batch file. Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path.

```
dvdromDrive:\Manager_windows\vuptools\esfccmpostinst_cluster.bat backupDir -primary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

 **Point**

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory name.
- The number of characters in a directory name must be up to 220.

- d. Eject the DVD-ROM.

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

When the upgrade has been completed, the tasks below need to be performed on the secondary node.

1. Check that the CCM Server transactions are stopped.

If not stopped, use the Failover Cluster Manager to stop the transactions to which the AdvancedCopy Manager CCM belongs.
2. Implement restoration of the previous version. Note that if step a and step b have already been performed, it is unnecessary to perform these again.

With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager Copy Control Module.

 - a. Log on to the server using Administrator privileges.
 - b. 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.
 - c. Implement restoration of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path.

```
dvdromDrive:\Manager_windows\vuptools\esfccmpostinst_cluster.bat backupDir -secondary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.

Point

- Spaces and the characters " | : * ? / . < > , % & ^ = ! ; () are not supported for directory name.
- The number of characters in a directory name must be up to 220.

d. Eject the DVD-ROM.

7.6.2.6 Start the CCM Server transactions

Start the CCM Server transactions.

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

Point

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 3-c and step 5-c of "[7.6.2.1 Preparing for the upgrade](#)" maybe deleted.

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

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

Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

7.7.1.1.1 Backing up the environment setting files

With the following proceduress, backup the operation environment of the previous version of the AdvancedCopy Manager Copy Control Module.

Note that the capacity required for performing this backup is 100MB.

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)" 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. Implement a backup of the previous version.

Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

```
# /mnt/dvd/Manager_unix/vuptools/esfccmpreinst.sh backupDir
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters " / ^ * ? \ \$ [] , % ! { } are not supported for directory name.
- The number of characters in a directory name must be up to 220.

7.7.1.1.2 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 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 the following locations in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

- When using the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager Program

"Operating Environment of the ETERNUS SF Manager"

- When installing and using the AdvancedCopy Manager Copy Control Module Program

"Operating Environment of the AdvancedCopy Manager CCM"

7.7.1.2 Performing the upgrade (for Solaris, Linux)

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

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

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)" 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
```

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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 AdvancedCopy Manager CCM

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
```

The upgrade for the AdvancedCopy Manager Copy Control Module is complete. Perform "[7.7.1.3 Tasks to be performed after the upgrade](#)" afterwards.

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "[7.7.1.3 Tasks to be performed after the upgrade](#)".

7.7.1.3 Tasks to be performed after the upgrade

When the AdvancedCopy Manager Copy Control Module upgrade has been completed, the tasks below need to be performed.

7.7.1.3.1 Restoring the environment setting files

With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager Copy Control Module. Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.

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)" 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. Implement restoration of the previous version.

Execute the following command. For *backupDir*, specify the directory in which the backup data is stored with an absolute path.

```
# /mnt/dvd/Manager_unix/vuptools/esfccmpostinst.sh backupDir
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the command again.

Point

- Spaces and the characters " / ^ * ? \ \$ [] , % ! { } are not supported for directory name.
- The number of characters in a directory name must be up to 220.

5. Unmount the DVD-ROM.

Example:

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

6. Eject the DVD-ROM.

7.7.1.3.2 Deleting the Backup Data

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 4 of ["7.7.1.1.1 Backing up the environment setting files"](#) maybe deleted.

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.

Point

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

When returning back to the state before installation of the upgrade, recover (restore) the system from the backup.

1. Check that the CCM Server transactions are stopped on the secondary node.
If not stopped, stop the transaction of AdvancedCopy Manager Copy Control Module.
Refer to the relevant cluster software manuals for information on stopping it.
2. Stop the CCM Server transaction on the primary node.
Refer to the relevant cluster software manuals for information on stopping it.
The shared disk for shared data of AdvancedCopy Manager Copy Control Module must be mounted.
3. On the primary node, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager Copy Control Module.
Note that the capacity required for performing this backup is 100MB.
 - a. Log in to the server as a superuser.
 - b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.

- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Implement backup of the previous version.

Execute the following command. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

```
# /mnt/dvd/Manager_unix/vuptools/esfccmpreinst_cluster.sh backupDir -primary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.



- Spaces and the characters "/`*?\"/>.....

- e. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- f. Unmount the DVD-ROM.

Example:

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

- g. Eject the DVD-ROM.

4. 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 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 the following locations in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

- When using the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager Program
"Operating Environment of the ETERNUS SF Manager"
- When installing and using the AdvancedCopy Manager Copy Control Module Program
"Operating Environment of the AdvancedCopy Manager CCM"

5. On the secondary node, perform a backup of the operating environment of the previous version of the AdvancedCopy Manager Copy Control Module.

The capacity required for performing this backup is 10MB.

- a. Log in to the server as a superuser.
- b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.
- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Implement backup of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which to store the backup data with an absolute path.

```
# /mnt/dvd/Manager_unix/vuptools/esfccmpostinst_cluster.sh backupDir -secondary
```

When the backup fails, after confirming the output error message and removing the cause of the failure, execute the batch file again.



Point

- Spaces and the characters "/`* ?\ \$ [] , % ! { } are not supported for directory name.
- The number of characters in a directory name must be up to 220.

- e. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- f. Unmount the DVD-ROM.

Example:

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

- g. Eject the DVD-ROM.

6. 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 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 the following locations in the *ETERNUS SF Installation and Setup Guide* for the relevant previous version for information on the required disk space.

- When using the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager Program "Operating Environment of the ETERNUS SF Manager"
- When installing and using the AdvancedCopy Manager Copy Control Module Program "Operating Environment of the AdvancedCopy Manager CCM"

7. Performing the cluster unsetup



Refer to the "Deletion of Cluster Environments for CCM Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for the previous version for information.

7.7.2.2 Performing the upgrade (Primary node)

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

Note that if step 1 through step 3 have already been performed, it is unnecessary to perform these again.



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)" 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
```

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```

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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 AdvancedCopy Manager CCM

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

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from "[7.7.2.3 Performing the upgrade \(Secondary node\)](#)".

7.7.2.3 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 \(Primary node\)](#)".

Point

When the Upgrade Installation terminates in an error, perform recovery by following the steps outlined below.

1. Install the target version.
2. If the installation is successfully completed, continue from the following tasks.

After upgrading on the primary node and the secondary node, perform the cluster setup. Refer to "Preparations for Customizing CCM Server Transactions" and "Customization for CCM Server Transactions" in the *ETERNUS SF Cluster Environment Setup Guide* for this version.

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

When the upgrade has been completed, the tasks below need to be performed on the primary node.

1. Stop the CCM Server transactions.
Refer to the relevant cluster software manuals for information on stopping it.
However, the shared disk for shared data of the AdvancedCopy Manager CCM must be mounted.
2. Implement restoration of the previous version. Note that if step a through step c have already been performed, it is unnecessary to perform these again.
With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager Copy Control Module.
 - a. Log in to the server as a superuser.
 - b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.

- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Implement restoration of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path.

```
# /mnt/dvd/Manager_unix/vuptools/esfccmpostinst_cluster.sh backupDir -primary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again.



- Spaces and the characters "/`* ? \ \$ [] , % ! { } are not supported for directory name.
- The number of characters in a directory name must be up to 220.

- e. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

- f. Unmount the DVD-ROM.

Example:

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

- g. Eject the DVD-ROM.

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

When the upgrade has been completed, the tasks below need to be performed on the secondary node.

1. Check that the CCM Server transactions are stopped.

If not stopped, stop the CCM Server transactions. Refer to the relevant cluster software manuals for information on stopping it.

2. Implement restoration of the previous version. Note that if step a through step c have already been performed, it is unnecessary to perform these again.

With the following procedures, restore the operation environment of the previous version of the AdvancedCopy Manager Copy Control Module.

- a. Log in to the server as a superuser.

- b. Insert the DVD-ROM "ETERNUS SF SC/ACM Mediapack for Solaris (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.

- c. Mount the DVD-ROM (if automount is not enabled).

Example:

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

- d. Implement restoration of the previous version.

Execute the following batch file. For *backupDir*, specify the directory in which the backup data is stored with an absolute path.

```
# /mnt/dvd/Manager_unix/vuptools/esfccmpostinst_cluster.sh backupDir -secondary
```

When the restore fails, after confirming the output error message and removing the cause of the failure, execute the batch again

 **Point**

- Spaces and the characters "/`*?\" \$ [] , % ! { } are not supported for directory name.
- The number of characters in a directory name must be up to 220.

e. Change to a directory other than the DVD-ROM.

Example:

```
# cd
```

f. Unmount the DVD-ROM.

Example:

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

g. Eject the DVD-ROM.

7.7.2.6 Start the CCM Server transactions

Start the transactions of AdvancedCopy Manager Copy Control Module.

Refer to the relevant cluster software manuals for information on stopping it.

 **Point**

Once normal operation has been confirmed after the upgrade, the backup data in the backup destination directory created in step 3-d and step 5-d of "7.7.2.1 Preparing for the upgrade" maybe deleted.

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 Collecting the troubleshooting information

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 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 Technical Support.

- For the previous version is Version 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 Technical Support.

Target for upgrade	Reference
Express	"Collecting the troubleshooting information" in the <i>ETERNUS SF Express Operation Guide</i>
Storage Cruiser	"Collecting the troubleshooting information" in the <i>ETERNUS SF Storage Cruiser Operation Guide</i>
AdvancedCopy Manager	"Collecting the troubleshooting information" in the <i>ETERNUS SF AdvancedCopy Manager Operation Guide</i>
AdvancedCopy Manager Copy Control Module	"Collecting the troubleshooting information" in the <i>ETERNUS SF AdvancedCopy Manager Operation Guide for Copy Control Module</i>

Chapter 9 Configuration import

This chapter describes the configuration import.

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	Automatic registration only
	For ETERNUS Disk storage systems other than those listed above	Manual registration only
Fibre channel switches	ETERNUS SN200 series (except model 250M) Brocade 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 previous version and 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.

However, the migration of the server to which the Softek Storage Cruiser's agent is registered is not supported.

- If only Storage Cruiser's agent is registered on the configuration information in the previous version.

No.	Server Type In Previous Version	This Version	
		Server Type	Function Level
1	VMware Host	VMware Host	Storage Cruiser
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 Previous Version	Previous Version	This Version	
			Server Type	Function Level
1	Management Server	14.x	Cannot be migrated	
2		15.x	Stand-alone (Only when registering as AdvancedCopy Manager's agent)	AdvancedCopy Manager
3	Managed Server	14.x	Stand-alone	AdvancedCopy Manager
4		15.x		

- If Storage Cruiser's agent and AdvancedCopy Manager's agent are registered on the configuration information in the previous version.

No.	Server Type In Previous Version		Previous Version	This Version		
	Storage Cruiser	AdvancedCopy Manager		Server Type	Function Level	
1	VMware Host	-	14.x	VMware Host	Storage Cruiser (*1)	
2			15.x			
3	VMware Guest	Management Server	14.x	VMware Guest	No Agent	
4			15.x		- No Agent (No AdvancedCopy Manager's agent registered or the VMware Tool is in unstartup state)	
5			Managed Server		14.x	- No Agent (VMware Tool is in unstartup state)
6					15.x	- AdvancedCopy Manager (VMware Tool is in startup state)
7	Server registered automatically	Management Server	14.x	Stand-alone	Storage Cruiser	
8			15.x		- Storage Cruiser (When not registering as AdvancedCopy Manager's agent)	
9			Managed Server		14.x	Storage Cruiser AdvancedCopy Manager
10					15.x	
11	Server registered manually	Management Server	14.x	Stand-alone	No Agent	
12			15.x		- No Agent (When not registering as	

No.	Server Type In Previous Version		Previous Version	This Version	
	Storage Cruiser	AdvancedCopy Manager		Server Type	Function Level
					AdvancedCopy Manager's agent) - AdvancedCopy Manager (When registering as AdvancedCopy Manager's agent)
13		Managed Server	14.x		AdvancedCopy Manager
14			15.x		
15	Server unregistered	Management Server	14.x		Cannot be migrated
16			15.x		
17		Managed Server	14.x		
18			15.x		

*1: 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 esfadm devconf import (Configuration import command)

NAME

esfadm devconf import - import the configuration information from the previous version

SYNOPSIS

Windows environment

```
$INS_DIR\Common\bin\esfadm devconf import -all
```

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

Solaris or Linux environment

```
/opt/FJSVesfcm/bin/esfadm devconf import -all
```

DESCRIPTION

A request for the configuration information import from the previous version 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.

OPTIONS

-all

All configuration information registered at the previous version is imported.

At this version, specify this option.

EXIT STATUS

- =0: Completed successfully
- >0: Terminated abnormally

EXAMPLES

Windows environment

```
> C:\ETERNUS_SF\Common\bin\esfadm devconf import -all
esfadm90000 Operation is accepted.
```

Solaris or Linux environment

```
# /opt/FJSVesfcm/bin/esfadm devconf import -all
esfadm90000 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.
- When the removed devices are registered in the configuration information at the previous version, the import of configuration information for their devices fails. In this case, the action is unnecessary.
- Import time for a storage device is approximately 10 minutes. For an estimate of the total import time, do the following calculation:

$[\text{Total import time}] = \text{number of storage devices} \times 10 \text{ minutes}$

- 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, re-execute this command after taking appropriate action for the message of Operation History.

9.2.2 esfadm devconf importstatus (configuration import status display command)

NAME

esfadm devconf importstatus - displays the import status of configuration information of the previous version

SYNOPSIS

Windows environment

```
$INS_DIR\Common\bin\esfadm devconf importstatus -detail
```

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

Solaris or Linux environment

```
/opt/FJSVesfcm/bin/esfadm devconf importstatus -detail
```

DESCRIPTION

The import status of configuration information of the previous version is displayed.
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 Execute : the configuration information import process is executing Complete : the configuration information import is complete

- Import status of migration target resources

The import status for the configuration information of the previous version is displayed.

Title	Displayed Contents
CATEGORY	Type of migration target resource tierpolicy: Tiering policy storage : storage fcswitch : fibre channel switch server : server library : tape library
DEVICE NAME	Name of the device When the CATEGORY is "tierpolicy", "-" is displayed.
IP ADDRESS	IP address of the device When the CATEGORY is "tierpolicy", "-" is displayed.
REGISTER MODE	Device registration mode Auto : Automatic registration Manual : Manual registration When the CATEGORY is "tierpolicy", "-" is displayed.
STATUS	Import status for the migration target resource Wait : Paused Execute : Executing Complete : Completed Failed : Failed (*1)

*1: Refer to the Web Console Operation History for details.

OPTIONS

-detail

All of the import processing status and the import status of the migration target resources are displayed.
At this version, specify this option.

EXIT STATUS

=0: Completed successfully

>0: Terminated abnormally

EXAMPLES

Windows environment

```
> C:\ETERNUS_SF\Common\bin\esfadm devconf importstatus -detail
```

```
-----  
IMPORT STATUS  
-----
```

```
Complete  
-----
```

```
-----  
CATEGORY   DEVICE NAME      IP ADDRESS      REGISTER MODE   STATUS  
-----  
tierpolicy - - - - - Complete  
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    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	Corrective Action
1	AdvancedCopy Manager Copy Control Module configuration (Only when the previous version is 14.x)	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. 2. Register the ETERNUS Disk storage system in AdvancedCopy Manager Copy Control Module with the <code>acarray add</code> 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.
2	iSCSI HBA information (Only when the previous version is 14.x)	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.
3	VMware vCenter Server configuration information (Only when the previous version is 15.x)	Register the configuration information with the following procedure: <ul style="list-style-type: none"> - Preparing for the upgrade <ol style="list-style-type: none"> 1. Log in to the Web Console. 2. On the global navigation tab, click Server.

No.	Information That Cannot Be Imported	Corrective Action
		<p>3. On the Category pane, click Correlation. The items of the Category pane change into the items concerning the correlation management. Then, on the Category pane, click End to End View (VMware).</p> <p>4. Record the IP address and the port number of VMware vCenter Server displayed on the Main pane.</p> <p>- Tasks to be performed after the upgrade</p> <ol style="list-style-type: none"> 1. Log in to the Web Console 2. On the global navigation tab, click Server. 3. On the Category pane, click Correlation. The items of the Category pane change into the items concerning the correlation management. Then, on the Category pane, click End to End View (VMware). 4. On the Action pane, click Register/Reload. Then, configure the VMware vCenter Server information from which it refrains beforehand.
4	Hyper-V host configuration information (Only when the previous version is 15.x)	<p>Register the configuration information with the following procedure:</p> <p>- Preparing for the upgrade</p> <ol style="list-style-type: none"> 1. Log in to the Web Console. 2. On the global navigation tab, click Server. 3. On the Category pane, click Correlation. The items of the Category pane change into the items concerning the correlation management. Then, on the Category pane, click End to End View (Hyper-V). 4. Record the IP address of the server which the Registration as Hyper-V Host column is "Registered" among servers displayed in the Main pane. <p>- Tasks to be performed after the upgrade</p> <ol style="list-style-type: none"> 1. Log in to the Web Console. 2. On the global navigation tab, click Server. 3. On the Category pane, click Correlation. The items of the Category pane change into the items concerning the correlation management. Then, on the Category pane, click End to End View (Hyper-V). 4. On the Main pane, check the target server checkbox to be registered as Hyper-V host. 5. On the Action pane, click Register/Reload. Then, configure the Hyper-V host information from which it refrains beforehand.



See

- Refer to the *ETERNUS SF Web Console Guide* for this version for information on the instructions regarding the Web Console operations.
- Refer to "Command References" in the *ETERNUS SF AdvancedCopy Manager Operation Guide for Copy Control Module* for this version for information on the `acarray remove` command and `acarray 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, re-execute the `esfadm devconf import command` after taking appropriate action for the message of 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.

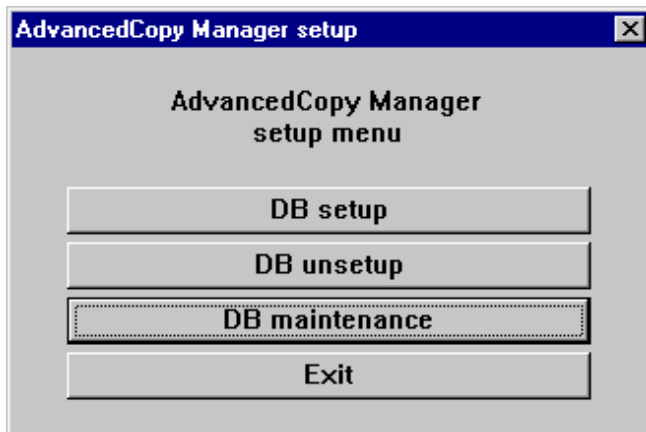
Perform this operation on the Management Server (Storage Management Server).

Note

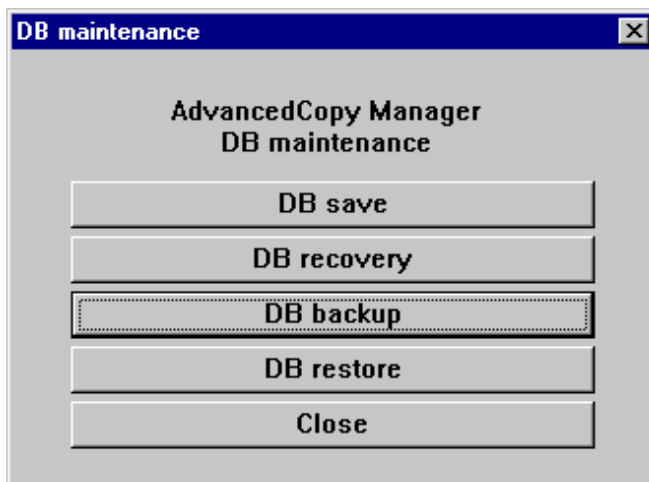
- Create a directory in which data will be saved in advance.
- Do not use the telnet server service.
This operation will fail when issued from the telnet server service.

The procedure is shown below:

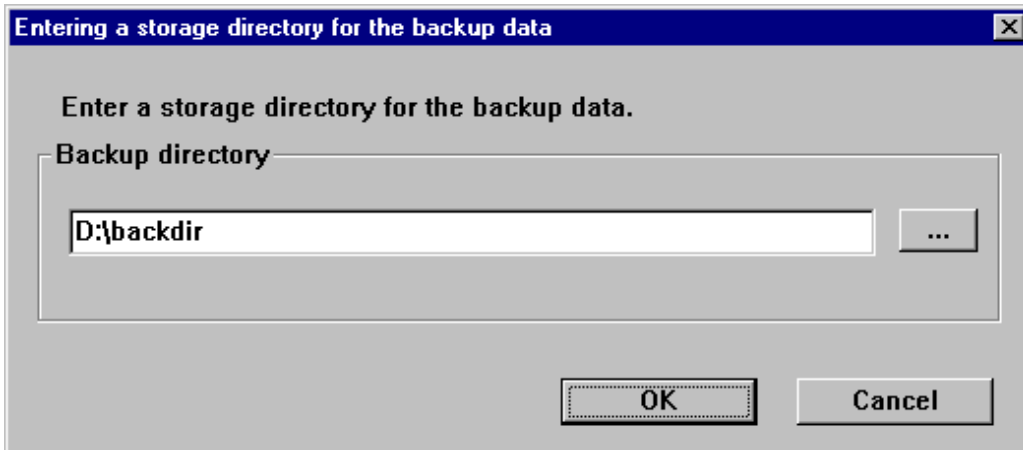
1. Click **Start > Programs -> AdvancedCopy Manager or ETERNUS SF Manager > DB Setup**.
2. The following screen is displayed.
Click **DB maintenance**.



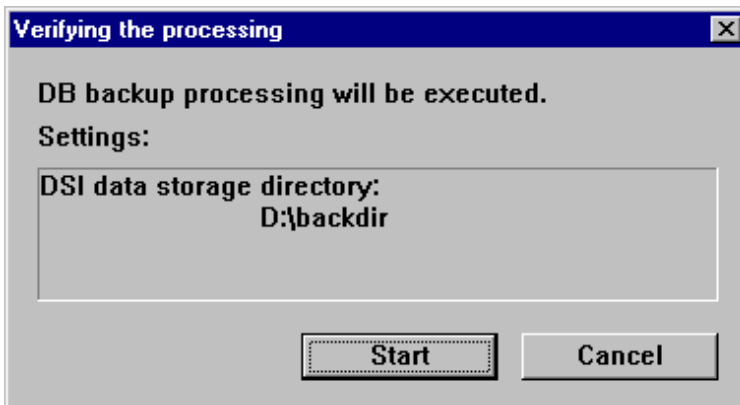
3. The following screen is displayed.
Click **DB backup**.



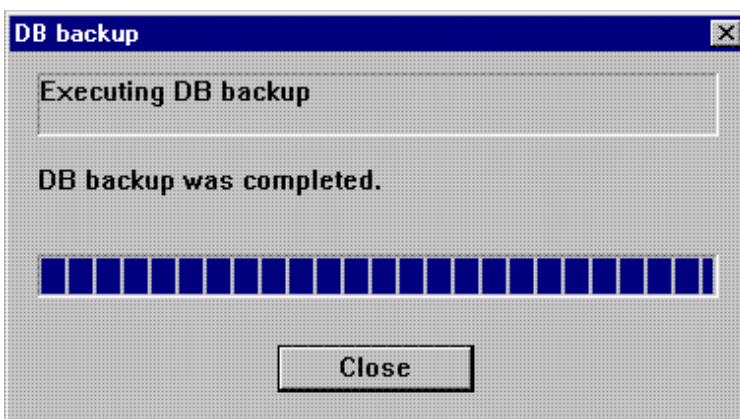
- The following screen is displayed.
Enter a backup directory and click **OK**.



- 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:

1. Execute the following command.

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

2. The following message is displayed.

To continue processing, enter "y". To stop processing, enter "n".

```
////////////////////////////////////
AdvancedCopy Manager Storage Management Server ( **** )
Database backup
////////////////////////////////////

+-----+
| All of the stored data will be saved in an external file. |
| [Notes] |
| Prepare a directory for storing the data to be saved. |
+-----+

Do you want to continue with processing? [y/n] ==> y
```

3. The following message is displayed.

Enter the absolute path name of the directory for storing the data to be saved.

```
////////////////////////////////////
AdvancedCopy Manager Storage Management Server ( **** )
Database backup
////////////////////////////////////

Enter the absolute path name of the directory
for storing the data to be saved.

Enter ==> /storage/backdir
```

Note

If the saved data exists in the directory, the processing is not performed.

Delete the saved data in the directory or specify another directory to retry the processing.

4. The following message is displayed.
Enter "y" to continue processing or "n" to stop processing.
When you enter "n", the screen returns step 2.

```

////////////////////////////////////
AdvancedCopy Manager Storage Management Server ( **** )
Database backup
////////////////////////////////////

Directory containing the saved data : /storage/backdir

Do you want to continue with processing? [y/n] ==> y

```

5. The processing is performed and the execution results are displayed on the screen.
The following example is for the execution result.

```

///// AdvancedCopy Manager database backup /////

=====
DB data backup will start.
=====
....
Unloading of data is complete.(base)
...
Unloading of data is complete.(backup)
.
Unloading of data is complete.(repl)

=====
Backup of DB data is complete.
=====

Database backup ended normally.

#

```

6. Check that the backup of database has been completed successfully.
Make sure that the file with ".unl" extension is created in the specified directory.

A.3 Backing up the management information (for Windows)

Save the management information which exists in the Managed Server (Storage Server).

If a backup operation has been done

1. Check the data size of the backup management list under the following directory:
 - If the Managed Server is in a non-cluster environment:
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

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\SRCLOCK.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\SRCLOCK.INI
Copy destination volume locking specification file	<shared disk>:\etc\opt\swstorage\etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<shared disk>:\etc\opt\swstorage\etc\repl\data\DEFAULT\check.ini

Note

There is incompatibility in the copy source volume locking specification file between Version 14.2 or earlier and this version. If the previous environment's version is 14.2 or earlier, change the settings of file by referring to "Swsrpmake command and swsrpcancel command 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 Symfoware databases, also check the file sizes in the target directory for output of the recovery control file.

Point

When you use the directory which has been saved as the save directory before, at least three times greater than the size calculated above is required.

2. Save the backup management list.

Specify the directory which can store the data size checked in step 1 and execute the following command:

```
# /opt/FJSVswsts/bin/swstresback 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 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
```



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 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

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

A.6 Backing up 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 - 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	

File name	Remarks
- /etc/opt/FJSVccm/prop/user.properties	Only when files exist.
- /etc/opt/FJSVccm/accc/etc/stxc.alias	
- /etc/opt/FJSVccm/accc/etc/stxcvolinf	
- /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	Only when files exist.
- /etc/opt/FJSVccm/accc/etc/stxc.alias	
- /etc/opt/FJSVccm/accc/etc/stxc_ext.alias	
- /etc/opt/FJSVccm/accc/etc/stxcvolinf	
- /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	Only when files exist.
- \$\$SHARE_DL:\$\$SHARE_TOP\etc\stxc.alias	
- \$\$SHARE_DL:\$\$SHARE_TOP\etc\stxc_ext.alias	
- \$\$SHARE_DL:\$\$SHARE_TOP\etc\stxcvolinf	
- \$\$SHARE_DL:\$\$SHARE_TOP\var\micc\database\DeviceRegList.xml	
- \$INS_DIR\micc\sys\install.sys	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> .
- \$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	

\$\$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
<ul style="list-style-type: none"> - \$\$SHARE_MNT/etc/opt/FJSVccm/db/eternus.xml - All files under \$\$SHARE_MNT/etc/opt/FJSVccm/db/cg directory 	
<ul style="list-style-type: none"> - \$\$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.
<ul style="list-style-type: none"> - \$\$SHARE_MNT/var/opt/FJSVccm/micc/database/DeviceRegList.xml 	
<ul style="list-style-type: none"> - /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.

Note

- 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:

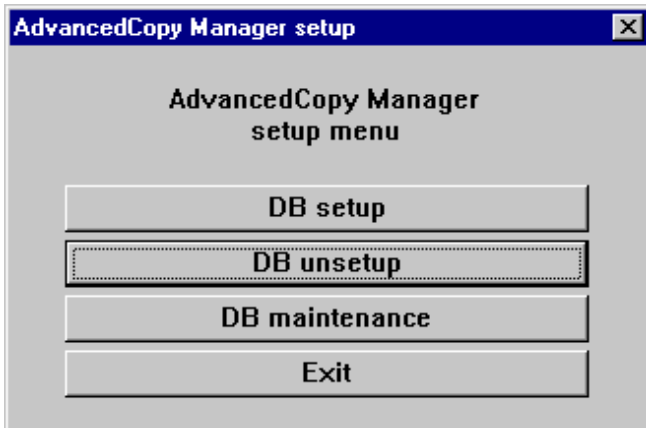
1. Login to the server where the database unsetup will be performed.

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

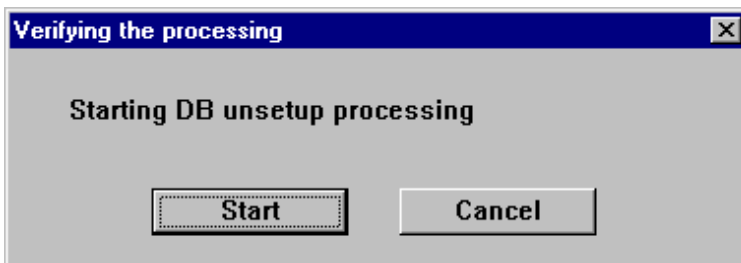
If you login to the server with another user, this operation may fail.

2. Click **Start > Programs > AdvancedCopy Manager** or **ETERNUS SF Manager > DB Setup**.

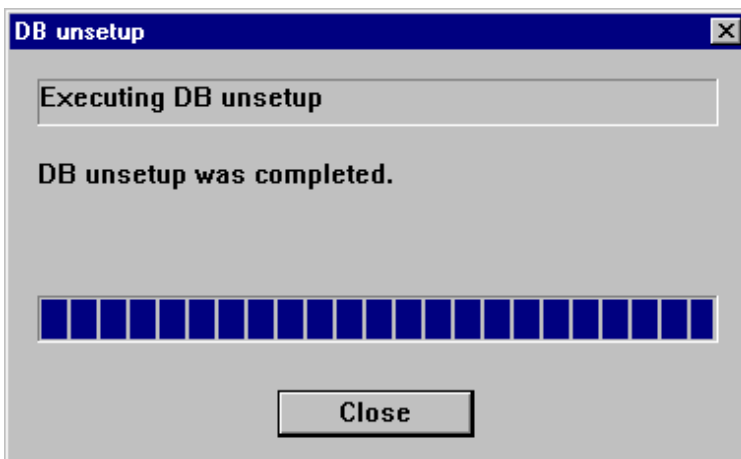
- The following screen is displayed.
Click **DB unsetup**.



- 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.



- Perform this operation as a root user.

- When the Management Server (Storage Management Server) is operated on the clustered system, the repository configurations are cancelled by deleting the Management Server transaction. Therefore, it is unnecessary to carry out this operation.
- Perform this operation with the locale specified when you installed the Management Server. If Symfoware has been installed in advance, perform this operation with the locale specified at the time of installing Symfoware.
- When another software is monitoring Symfoware, stop Symfoware monitoring before executing the database unsetup. During Symfoware monitoring, the database unsetup may fail.

The procedure is shown below:

1. Execute the following command:

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

2. The following message is displayed.

To continue processing, enter "y". To stop processing, enter "n".

```

////////////////////////////////////
AdvancedCopy Manager Storage management server ( **** )
Database unsetup
////////////////////////////////////

+-----+
|
| All of database environments of AdvancedCopy Manager
| will be deleted.
|
| [Notes]
|   Once processing has started, all stored data is discarded.
|   Make sure that the environment allows execution
|   before proceeding.
|
+-----+

Do you want to continue with processing? [y/n] ==>

```

3. Deletion of the Management Server database is executed and the execution results are displayed on the screen. The following example is for the execution result.



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 `stgrepocnv` command to recover the migration target repository data to the current version repository.

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



Refer to "stgrepocnv (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 `stgxfwcmdisprv` 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 `stgrepocnv` command to recover the migration target repository data to the current version repository.

```
# /opt/FJSVswstf/bin/stgrepocnv -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.



For Solaris, add "/opt/FSUNrdb2b/lib" to the value of the environment variable LD_LIBRARY_PATH_64 of the terminal on which the command will be executed.

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 stgxfwcmdisprv 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
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	<shared disk>:\etc\opt\swstorage\etc\backup\data\BTRANLOCK.INI
Backup volume locking specification file for backups	<shared disk>:\etc\opt\swstorage\etc\backup\data\BBACKLOCK.INI
Backup-restored volume locking specification file	<shared disk>:\etc\opt\swstorage\etc\backup\data\RDSTLOCK.INI

Note

Do not restore pre-processing and post-processing scripts for backup management function by using copy command.

The sample of pre-processing and post-processing scripts may be changed when upgrading a version. If you have customized pre-processing and post-processing scripts before the upgrade, re-customize it in reference to pre-processing and post-processing scripts which has been saved before the upgrade.

If a replication operation has been done

1. Restore the device.ini file. No need to restore this file if you have already restored it in "If a backup operation has been done".

Restore the device.ini file saved in "A.3 Backing up the management information (for Windows)" by 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 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
```

See

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

Information

The volume locking specification files might not exist according to the environment. If they were not backed up in "A.3 Backing up the management information (for Windows)", this step is not needed.

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\SRCLOCK.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\SRCLOCK.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\SRCLOCK.INI
Copy destination volume locking specification file	<shared disk>:\etc\opt\swstorage\etc\repl\data\DSTLOCK.INI
Timeout value setting file for the concurrent suspend function	<shared disk>:\etc\opt\swstorage\etc\repl\data\DEFAULT\check.ini

Note

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.

- 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.



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/FJVSswsts/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/FJVSwsrp/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 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.



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.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 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 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	Only when files exist.
- \$ENV_DIR\CCM\etc\stxc.alias	
- \$ENV_DIR\CCM\etc\stxc_ext.alias	
- \$ENV_DIR\CCM\etc\stxcvolinf	

\$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	Only when files exist.
- /etc/opt/FJSVccm/acc/etx/stxc.alias	
- /etc/opt/FJSVccm/acc/etx/stxc_ext.alias	
- /etc/opt/FJSVccm/acc/etx/stxcvolinf	

2. Copy the files which are saved in "A.6 Backing up 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 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.



Information

About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.

1. Stop the ETERNUS SF Manager Web service.

Execute the following shell script to stop the service.

```
/opt/FJSVesfcm/bin/stop-webservice.sh
```

2. Create backup data.

1. Create the following backup directories:

```
mkdir -p $BAK_DIR/Common
```


- 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
```

- The prompt is displayed, and waiting for input. Input the following strings.

```
master01!
```

- Start the ETERNUS SF Manager Web service.

Execute the following shell script to start the service.

```
/opt/FJSVesfcm/bin/start-webservice.sh
```

A.17 Backing up the license management database (for Windows)

Save the license management database.



Information

About the notation in procedure

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

- 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.



Information

About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.

1. Create the following backup directories:

```
mkdir -p $BAK_DIR/LM
```

2. From a user with OS Administrator privilege, execute the following command to create backup data.
The file name of the created backup data is *backupFileName*.

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

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

Restore the common control repository.



Information

About the notation in procedure

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

1. Stop the ETERNUS SF Express Tomcat service.

Open Service Control Manager to stop the following service.

- ETERNUS SF Manager Tomcat Service

2. Restore the backup data. The following procedure must be implemented by a user with administrator privileges for the operating system.

1. Execute the following command.

If you did not change the port number, specify 15432 for *portNumber*. If you did change the port number, specify the changed port number for *portNumber*.

```
$INS_DIR\Common\systgres\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\systgres\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
```



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.



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.



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
```

A.23 Backup of Express operational environment

Follow the procedure below to save the environment for the Express's manager.



About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.
\$INS_DIR	The directory in which the Express's manager has been installed

1. Stop the service.

With the Windows services screen, stop the following 4 services:

- ETERNUS SF Express Manager
- ETERNUS SF Express Apache Service
- ETERNUS SF Express Tomcat Service
- ETERNUS SF Storage Cruiser Manager

2. Backup the administration information of the disk array.

Using Explorer, create the following backup directories:

- \$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current
- \$BAK_DIR\ESC\Manager\var\opt\FJSVssmgr\current\opencimom\logr

Copy the subdirectories and files belonging to the following directory from their backup directory.

Copy Source Directory	Backup destination directory
\$INS_DIR\Storage Cruiser\Manager\var\opt\FJSVssmgr\current\opencimom\logr	\$BAK_DIR\ESC\Manager\var\opt\FJSVssmgr\current\opencimom\logr

Copy the following file of the backup source to the directory of the backup destination.

Copy Source File	Backup destination directory
\$INS_DIR\Storage Cruiser\Manager\etc\opt\FJSVssmgr\current\sanma.conf	\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current

3. Back up the files related to the performance management function.

This step can be skipped if you are not using the performance management function.

Using Explorer, create the following backup directories:

- \$BAK_DIR\ESC\Manager\var\opt\FJSVssmgr\current\perf

Copy the following file and sub-directory under the backup source directory to the backup destination directory.

Backup Source Directory	Backup destination directory
\$INS_DIR\Storage Cruiser\Manager\var\opt\FJSVssmgr\current\perf	\$BAK_DIR\ESC\Manager\var\opt\FJSVssmgr\current\perf

A.24 Restoring of Express operational environment

Follow the procedure below to restore the environment for the Express's manager.



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.

Directory name	Explanation
\$ENV_DIR	"Environment Directory" specified at the ETERNUS SF Manager installation.
\$TMP_DIR	"Work Directory" specified at the ETERNUS SF Manager installation.

1. Execute the following batch to stop the ETERNUS SF Manager services.

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

2. Restore the device administration information.

Using Explorer or a similar program, delete the files belonging to the following restore destination directory.

However, be sure not to delete the restore destination directory itself. If the restore destination directory itself does not exist, create it.

```
- $TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\current\opencimom\logr
```

Using Explorer or a similar program, copy the files belonging to the following directory from their backup location.

Copy Source Directory	Copy Destination Directory
\$BAK_DIR\ESC\Manager\var\opt\FJSVssmgr\current\opencimom\logr	\$TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\current\opencimom\logr

3. Restore the files related to the performance management function.

This step can be skipped if you are not using the performance management function or the files related to the performance management function are not backed up.

Using Explorer or a similar program, delete the subdirectories and files belonging to the following restore destination directory.

However, be sure not to delete the restore destination directory itself. If the restore destination directory itself does not exist, create it.

```
- $TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\current\perf
```

Using Explorer or a similar program, copy the subdirectories and files belonging to the following directory from their backup location.

Copy Source Directory	Copy Destination Directory
\$BAK_DIR\ESC\Manager\var\opt\FJSVssmgr\current\perf	\$TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\current\perf

4. Restore the other files which can be customized.

This restoration is unnecessary for the files or the directories which have not been backed up.

Using Explorer or a similar program, copy the following files from the backup locations.

Copy Source File	Copy Destination Directory
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\sanma.conf	\$ENV_DIR\ESC\Manager\etc\opt\FJSVssmgr\current

5. Execute the following batch to start ETERNUS SF Manager services.

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

A.25 Backup of manager operation environment (for Windows)

Follow the procedure below to back up the environment for the Storage Cruiser's manager.



Information

About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.
\$INS_DIR	The "Program Directory" when the manager was installed
\$ENV_DIR	The "Environment Directory" when the manager was installed
\$TMP_DIR	The "Work Directory" when the manager was installed

1. Stop the Storage Cruiser's manager.
With the Windows services screen, stop the following service:
 - ETERNUS SF Storage Cruiser Manager
2. Backup the device administration information.
Create the following directory for the backup data in Explorer or a similar program.

- \$BAK_DIR\ESC\Manager\var\opt\FJSSmgr\current\opencimom\logr

Using Explorer or a similar program, copy the files belonging to the following directories to their backup locations.

Copy Source Directory	Copy Destination Directory
\$TMP_DIR\Manager\var\opt\FJSSmgr\current\opencimom\logr	\$BAK_DIR\ESC\Manager\var\opt\FJSSmgr\current\opencimom\logr

3. Back up the files related to the performance management function.
This step can be skipped if you are not using the performance management function. Backup is not required if there are no subdirectories or files.

Note

If a pile of files related to the performance management function exists, calculate the backup time according to the amount of files.

Using Explorer, create the following backup directories:

- \$BAK_DIR\ESC\Manager\etc\opt\FJSSmgr\current
- \$BAK_DIR\ESC\Manager\var\opt\FJSSmgr\current\perf

Using Explorer or a similar program, copy the following file to the backup location.

Copy Source File	Copy Destination Directory
\$ENV_DIR\Manager\etc\opt\FJSSmgr\current\perf.conf	\$BAK_DIR\ESC\Manager\etc\opt\FJSSmgr\current

Using Explorer or a similar program, copy the subdirectories and files belonging to the following directories to their backup locations.

Copy Source Directory	Copy Destination Directory
\$TMP_DIR\Manager\var\opt\FJSSmgr\current\perf	\$BAK_DIR\ESC\Manager\var\opt\FJSSmgr\current\perf

4. Back up the other files which can be customized.
It is unnecessary to back up the files or the directories which are not existed.
Create the following backup directories in Explorer or a similar program.

- \$BAK_DIR\ESC\Manager\etc\opt\FJSSmgr\current
- \$BAK_DIR\ESC\Manager\etc\opt\FJSSmgr\current\eventmail

Using Explorer or a similar program, copy the following files to their backup locations.

Copy Source File	Copy Destination Directory
\$ENV_DIR\Manager\etc\opt\FJSVssmgr\current\sanma.conf	\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current
\$ENV_DIR\Manager\etc\opt\FJSVssmgr\current\ssmgr.conf	
\$ENV_DIR\Manager\etc\opt\FJSVssmgr\current\trapop.bat	
\$ENV_DIR\Manager\etc\opt\FJSVssmgr\current\traprm.bat	

Using Explorer or a similar program, copy the subdirectories and files belonging to the following directory to their backup location.

Copy Source Directory	Copy Destination Directory
\$ENV_DIR\Manager\etc\opt\FJSVssmgr\current\eventmail	\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\eventmail

5. Back up the SNMP Trap XML definition files.

This step can be skipped if you are not customizing the SNMP Trap XML definition files.

Below is an example for if the SNMP Trap XML definition file 1_3_6_1_1588_2_1_1_1.xml has been customized. As shown in this example, back up each file one at a time.

Create the following backup directory in Explorer or a similar program.

- \$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\snmpth

Using Explorer or a similar program, copy the following file to its backup location.

Copy Source File	Copy Destination Directory
\$ENV_DIR\Manager\etc\opt\FJSVssmgr\current\snmpth\1_3_6_1_1588_2_1_1_1.xml	\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\snmpth

6. Back up the device polling setting files.

This step can be skipped if you are not customizing the device polling setting files.

Below is an example for if the device polling setting file DP_config.xml is being customized. As in this example, back up each file one at a time.

Create the following backup directory in Explorer or a similar program.

- \$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\devicepolling

Using Explorer or a similar program, copy the following file to its backup location.

Copy Source File	Copy Destination Directory
\$ENV_DIR\Manager\etc\opt\FJSVssmgr\current\devicepolling\DP_config.xml	\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\devicepolling

7. Back up the polling service setting file.

This step can be skipped if you are not customizing the polling service setting file.

If customizing the polling service setting file pollingService.xml, follow the step below to back it up.

Create the following backup directory in Explorer or a similar program.

- \$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\polling

Using Explorer or a similar program, copy the following file to its backup location.

Copy Source File	Copy Destination Directory
\$ENV_DIR\Manager\etc\opt\FJSVssmgr\current\polling\pollingService.xml	\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\polling

A.26 Backup of Windows version manager operation environment (For the cluster environment)

For cluster environment, follow the procedure below to back up the environment for the Storage Cruiser's manager.

1. Stop all cluster services to which the Manager belongs.
Refer to "Cluster Transaction and Local Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* for details of cluster transaction.
2. Mount the shared disk on the primary node.
3. Perform step 2 to 7 of "[A.25 Backup of manager operation environment \(for Windows\)](#)" on the primary node.
Directory description in "[A.25 Backup of manager operation environment \(for Windows\)](#)" are replaced to the following directories.
 - \$BAK_DIR means the backup destination directory.
 - \$INS_DIR means "Program Directory" specified at the manager installation.
 - \$ENV_DIR means "Environment Directory" specified at the ETERNUS SF Manager installation.
 - \$TMP_DIR means "Work Directory" as specified during installation.
4. Unmount the shared disk mounted in step 2.
5. Start all cluster transactions to which the Manager belongs.

A.27 Backup of manager operation environment (for Solaris, Linux)

Follow the procedure below to back up the environment for the Storage Cruiser's manager.

Information

About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.

1. Stop the Storage Cruiser's manager.
Execute the following command:


```
/opt/FJSVssmgr/sbin/managerctl stop
```
2. Backup the device administration information.
Create the f backup directories.


```
mkdir -p $BAK_DIR/var/opt/FJSVssmgr/current/opencimom/logr
```

 Copy the file to the backup location.


```
cp -Rp /var/opt/FJSVssmgr/current/opencimom/logr/* $BAK_DIR/var/opt/FJSVssmgr/current/opencimom/logr/
```
3. Back up the files related to the performance management function.
This step can be skipped if you are not using the performance management function. Backup is not required if there are no subdirectories or files.

Note

If a pile of files related to the performance management function exists, calculate the backup time according to the amount of files.

Create the directories for the backup data.

```
mkdir -p $BAK_DIR/etc/opt/FJSVssmgr/current
mkdir -p $BAK_DIR/var/opt/FJSVssmgr/current/perf
```

Copy the subdirectories and files to the backup locations.

```
cp -p /etc/opt/FJSVssmgr/current/perf.conf $BAK_DIR/etc/opt/FJSVssmgr/current/  
cp -Rp /var/opt/FJSVssmgr/current/perf/* $BAK_DIR/var/opt/FJSVssmgr/current/perf/
```

4. Back up the other files which can be customized.

It is unnecessary to back up the files or the directories which are not existed.

Create the directories for the backup data.

```
mkdir -p $BAK_DIR/etc/opt/FJSVssmgr/current  
mkdir -p $BAK_DIR/etc/opt/FJSVssmgr/current/eventmail
```

Copy the subdirectories and files to the backup locations.

```
cp -p /etc/opt/FJSVssmgr/current/sanma.conf $BAK_DIR/etc/opt/FJSVssmgr/current/  
cp -p /etc/opt/FJSVssmgr/current/ssmgr.conf $BAK_DIR/etc/opt/FJSVssmgr/current/  
cp -p /etc/opt/FJSVssmgr/current/trapop.sh $BAK_DIR/etc/opt/FJSVssmgr/current/  
cp -p /etc/opt/FJSVssmgr/current/traprm.sh $BAK_DIR/etc/opt/FJSVssmgr/current/  
cp -Rp /etc/opt/FJSVssmgr/current/eventmail/* $BAK_DIR/etc/opt/FJSVssmgr/current/eventmail/
```

5. Back up the SNMP Trap XML definition files.

This step can be skipped if you are not customizing the SNMP Trap XML definition files.

Below is an example for if the SNMP Trap XML definition file 1_3_6_1_1588_2_1_1_1.xml has been customized. As shown in this example, back up each customized file one at a time.

Create the directories for the backup data.

```
mkdir -p $BAK_DIR/etc/opt/FJSVssmgr/current/snmptb
```

Copy the file to the backup location.

```
cp -p /etc/opt/FJSVssmgr/current/snmptb/1_3_6_1_1588_2_1_1_1.xml  
$BAK_DIR/etc/opt/FJSVssmgr/current/snmptb/
```

6. Back up the device polling setting files.

This step can be skipped if you are not customizing the device polling setting files.

Below is an example for if the device polling setting file, DP_config.xml, has been customized. As shown in this example, back up each customized file one at a time.

Create the directories for the backup data.

```
mkdir -p $BAK_DIR/etc/opt/FJSVssmgr/current/devicepolling
```

Copy the file to the backup location.

```
cp -p /etc/opt/FJSVssmgr/current/devicepolling/DP_config.xml $BAK_DIR/etc/opt/FJSVssmgr/current/  
devicepolling/
```

7. Back up the polling service setting file.

This step can be skipped if you are not customizing the polling service setting file.

If you have customized the polling service setting file pollingService.xml, back up this file using the step shown below.

Create the directories for the backup data.

```
mkdir -p $BAK_DIR/etc/opt/FJSVssmgr/current/polling
```

Copy the file to the backup location.

```
cp -p /etc/opt/FJSVssmgr/current/polling/pollingService.xml $BAK_DIR/etc/opt/FJSVssmgr/current/  
polling/
```

A.28 Backup of Solaris/Linux version manager operation environment (For the cluster environment)

For cluster environment, follow the procedure below to back up the environment for the Storage Cruiser's manager.

1. Stop all cluster services to which the Manager belongs.
Refer to "Cluster Transaction and Local Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* for details of cluster transaction.
2. Mount the shared disk on the primary node.
3. Perform step 2 to 7 of "[A.27 Backup of manager operation environment \(for Solaris, Linux\)](#)" on the primary node.
4. Unmount the shared disk mounted in step 2.
5. Start all cluster transactions to which the Manager belongs.

A.29 Restoring of manager operation environment (for Windows)

Follow the procedure below to restore the environment for the Storage Cruiser's manager.



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.
\$ENV_DIR	"Environment Directory" specified at the ETERNUS SF Manager installation.
\$TMP_DIR	"Work Directory" specified at the ETERNUS SF Manager installation.

1. Execute the following batch to stop the ETERNUS SF Manager services.

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

2. Restore the device administration information

Using Explorer or a similar program, delete the files belonging to the following restore destination directory.

However, be sure not to delete the restore destination directory itself. If the restore destination directory itself does not exist, create it.

- \$TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\current\opencimom\logr

Using Explorer or a similar program, copy the following subdirectories and files from its backup location.

Copy Source Directory	Copy Destination Directory
\$BAK_DIR\ESC\Manager\var\opt\FJSVssmgr\current\opencimom\logr	\$TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\current\opencimom\logr

3. Restore the files related to the performance management function.

This step can be skipped if you are not using the performance management function or the files related to the performance management function are not backed up.

Using Explorer or a similar program, delete the subdirectories and files belonging to the following restore destination directory.

However, be sure not to delete the restore destination directory itself. If the restore destination directory itself does not exist, create it.

- \$TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\current\perf

Using Explorer or a similar program, copy the following file from its backup location.

Copy Source File	Copy Destination Directory
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\perf.conf	\$ENV_DIR\ESC\Manager\etc\opt\FJSVssmgr\current

Using Explorer or a similar program, copy the subdirectories and files belonging to the following directory from their backup location.

Copy Source Directory	Copy Destination Directory
\$BAK_DIR\ESC\Manager\var\opt\FJSVssmgr\current\perf	\$TMP_DIR\ESC\Manager\var\opt\FJSVssmgr\current\perf

After copying, edit perf.conf(performance management definition file).

What is edited is as follows:

MONITORING_SIZE

The number of devices whose performance is being monitored is specified in decimal format.
Set the MONITORING_SIZE parameter to 0 (zero).

MONITORING_NUMBER

The information for the device whose performance is being monitored and the valid/invalid values for threshold monitoring are set up.
Delete all the lines of MONITORING_ number parameters.

[Before editing]

```
#Tue Nov 05 20:11:02 JST 2013
PERF_DATA_KEEP_DAYS=7;
LOG_ROTATION=2;
MONITORING_SIZE=1
MONITORING_0=1.3.6.1.4.1.211.1.21.1.100@00ETERNUSDXMS0ET410SA#####KP1234567890##:
30,0,63,Thresholds_Enable
```

[After editing]

```
#Tue Nov 05 20:11:02 JST 2013
PERF_DATA_KEEP_DAYS=7;
LOG_ROTATION=2;
MONITORING_SIZE=0
```

Note

If there is no ENABLED_ECO_MODE or ENABLED_PORT_ISCSI parameter definition in the perf.conf file, add the definition after migration.

Refer to "perf.conf Parameter" in the *ETERNUS SF Storage Cruiser Operation Guide* for details of customizing the parameter of the perf.conf file.

4. Restore the other files which can be customized.

This restoration is unnecessary for the files or the directories which have not been backed up.

Using Explorer or a similar program, copy the following files from the backup locations.

Copy Source File	Copy Destination Directory
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\sanma.conf	\$ENV_DIR\ESC\Manager\etc\opt\FJSVssmgr\current
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\ssmgr.conf	
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\trapop.bat	
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\traprm.bat	

Using Explorer or a similar program, copy the subdirectories and files belonging to the following directory from their backup location.

Copy Source Directory	Copy Destination Directory
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\eventmail	\$ENV_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\eventmail

5. Restore the SNMP Trap XML definition files.

This restoration is unnecessary for the files which have not been backed up.

Using Explorer or a similar program, copy the SNMP Trap XML definition files from their backup location.

Copy Source File	Copy Destination Directory
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\snmpth*.xml	\$ENV_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\snmpth

6. Restore the device polling setting files.

This restoration is unnecessary for the files which have not been backed up.

Using Explorer or a similar program, copy the device polling setting file from its backup location.

Copy Source File	Copy Destination Directory
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\devicepolling\DP_config.xml	\$ENV_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\devicepolling

7. Restore the polling service setting file.

This restoration is unnecessary for the files which have not been backed up.

Using Explorer or a similar program, copy the polling service setting file from its backup location.

Copy Source File	Copy Destination Directory
\$BAK_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\polling\pollingService.xml	\$ENV_DIR\ESC\Manager\etc\opt\FJSVssmgr\current\polling

8. Execute the following batch to start the ETERNUS SF Manager services.

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

A.30 Restoring of Windows version manager operation environment (For the cluster environment)

For cluster environment, follow the procedure below to restore the environment for the Storage Cruiser's manager.

- Stop all cluster services to which the Manager belongs.
Refer to "Cluster Transaction and Local Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* for details of cluster transaction.
- Mount the shared disk on the primary node.
- Perform steps step 2 to 7 of "[A.29 Restoring of manager operation environment \(for Windows\)](#)" on the primary node.
Directory description in "[A.29 Restoring of manager operation environment \(for Windows\)](#)" are replaced to the following directories.
 - \$BAK_DIR means the backup destination directory.
 - \$INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.
 - \$ENV_DIR means "Environment Directory" specified at the ETERNUS SF Manager installation.
 - \$TMP_DIR means "Work Directory" as specified during installation.
- Unmount the shared disk mounted in step 2.
- Start all cluster transactions to which the Manager belongs.

A.31 Restoring of manager operation environment (for Solaris, Linux)

Follow the procedure below to restore the environment for the Storage Cruiser's manager.



About the notation in procedure

Directory name	Explanation
\$BAK_DIR	Backup destination directory.

1. Execute the following shell script to stop ETERNUS SF Manager services.
An error will occur if the shell script is executed before the ETERNUS SF manager service activation completes. It was automatically activated by the installation process. In the case that an error does occur, execute the script again after a 30 seconds.

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

2. Restore the device administration information.
Delete the files belonging to the restore destination directory.
However, be sure not to delete the restore destination directory itself. If the restore destination directory itself does not exist, create it.

```
rm -rf /var/opt/FJSVssmgr/current/opencimom/logr/*
```

Copy the files from their backup locations.

```
cp -Rp $BAK_DIR/var/opt/FJSVssmgr/current/opencimom/logr/* /var/opt/FJSVssmgr/current/opencimom/logr/
```

3. Restore the files related to the performance management function.
This step can be skipped if you are not using the performance management function or the files related to the performance management function are not backed up.
Delete the subdirectories and files belonging to the restore destination directory.
However, be sure not to delete the restore destination directory itself. If the restore destination directory itself does not exist, create it.

```
rm -f /etc/opt/FJSVssmgr/current/perf.conf  
rm -rf /var/opt/FJSVssmgr/current/perf/*
```

Copy the subdirectories and files from the backup location.

```
cp -p $BAK_DIR/etc/opt/FJSVssmgr/current/perf.conf /etc/opt/FJSVssmgr/current/  
cp -Rp $BAK_DIR/var/opt/FJSVssmgr/current/perf/* /var/opt/FJSVssmgr/current/perf/
```

After copying, edit perf.conf(performance management definition file).

What is edited is as follows:

MONITORING_SIZE

The number of devices whose performance is being monitored is specified in decimal format.
Set the MONITORING_SIZE parameter to 0 (zero).

MONITORING_NUMBER

The information for the device whose performance is being monitored and the valid/invalid values for threshold monitoring are set up.

Delete all the lines of MONITORING_ *number* parameters.

[Before editing]

```
#Tue Nov 05 20:11:02 JST 2013
PERF_DATA_KEEP_DAYS=7;
LOG_ROTATION=2;
MONITORING_SIZE=1
MONITORING_0=1.3.6.1.4.1.211.1.21.1.100@00ETERNUSDXMS0ET410SA#####KP1234567890##:
30,0,63,Thresholds_Enable
```

[After editing]

```
#Tue Nov 05 20:11:02 JST 2013
PERF_DATA_KEEP_DAYS=7;
LOG_ROTATION=2;
MONITORING_SIZE=0
```

Note

If there is no ENABLED_ECO_MODE or ENABLED_PORT_ISCSI parameter definition in the perf.conf file, add the definition after migration.

Refer to "perf.conf Parameter" in the *ETERNUS SF Storage Cruiser Operation Guide* for details of customizing the parameter of the perf.conf file.

4. Restore the other files which can be customized.

This restoration is unnecessary for the files or the directories which have not been backed up.

Copy the subdirectories and files from the backup location.

```
cp -p $BAK_DIR/etc/opt/FJSVssmgr/current/sanma.conf /etc/opt/FJSVssmgr/current/
cp -p $BAK_DIR/etc/opt/FJSVssmgr/current/ssmgr.conf /etc/opt/FJSVssmgr/current/
cp -p $BAK_DIR/etc/opt/FJSVssmgr/current/trapop.sh /etc/opt/FJSVssmgr/current/
cp -p $BAK_DIR/etc/opt/FJSVssmgr/current/traprm.sh /etc/opt/FJSVssmgr/current/
cp -Rp $BAK_DIR/etc/opt/FJSVssmgr/current/eventmail/* /etc/opt/FJSVssmgr/current/eventmail/
```

5. Restore the SNMP Trap XML definition files.

This restoration is unnecessary for the files which have not been backed up.

Copy the SNMP Trap XML definition files from the backup location.

```
cp -p $BAK_DIR/etc/opt/FJSVssmgr/current/snmpth/*.xml /etc/opt/FJSVssmgr/current/snmpth/
```

6. Restore the device polling setting files.

This restoration is unnecessary for the files which have not been backed up.

Copy the files from the backup location.

```
cp -p $BAK_DIR/etc/opt/FJSVssmgr/current/devicepolling/*.xml /etc/opt/FJSVssmgr/current/
devicepolling/
```

7. Restore the polling service setting file.

This restoration is unnecessary for the files which have not been backed up.

Copy the file from the backup location.

```
cp -p $BAK_DIR/etc/opt/FJSVssmgr/current/polling/*.xml /etc/opt/FJSVssmgr/current/polling/
```

8. Execute the following shell script to start ETERNUS SF Manager services.

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

A.32 Restoring of Solaris/Linux version manager operation environment (For the cluster environment)

For cluster environment, follow the procedure below to restore the environment for the Storage Cruiser's manager.

1. Stop all cluster transaction to which the Manager belongs.
Refer to "Cluster Transaction and Local Transaction" in the *ETERNUS SF Cluster Environment Setup Guide* for details of cluster transaction.
2. Mount the shared disk on the primary node.
3. Perform and step 2 to 7 of "[A.31 Restoring of manager operation environment \(for Solaris, Linux\)](#)" on the primary node.
4. Unmount the shared disk mounted in step 2.
5. Start all cluster transactions to which the Manager belongs.

A.33 Capacity necessary for backup of previous version

The formula for estimation of the capacity required in order to backup a previous version is listed below.

According to the number of registered storage devices, servers, switches and users (number of user accounts) using the Web Console, add the following capacity:

$$\text{Capacity (MB)} = 125 + \text{devicesToBeManaged} * 4.1 + \text{users}$$

According to the number of registered storage devices add the total of the following capacity to the abovementioned capacity:

- When using an ETERNUS DX80 S2/DX90 S2 (firmware version V10L40 or later)

$$\text{Capacity (MB)} = \text{devicesToBeManaged} * 4$$

- When using an ETERNUS DX400 S2 series (firmware version V10L40 or later)

$$\text{Capacity (MB)} = \text{devicesToBeManaged} * 6$$

- When using an ETERNUS DX8000 S2 series (firmware version V10L40 or later)

$$\text{Capacity (MB)} = \text{devicesToBeManaged} * 23$$

- In cases other than those listed above

$$\text{Capacity (MB)} = 0$$

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)" 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 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. - For UTF8: [1] - For EUC: [2]	None (*4)

Parameter name	Description	Default value
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,*5)	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 Symfaware 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 10: [EUC]
- For Solaris 11: [UTF8]
- For Linux: [UTF8]

*5: The value set to Management_Server_IP_address is as follows.

- When you use only the IPv4 address with the Management Server
Set the IPv4 address used.
- When you use only the IPv6 address with the Management Server
Set a temporary IPv4 address (127.0.0.1 for instance).

The following operations are executed after the Upgrade Installation is completed and the IP address version of the Management Server is changed to IPv6.

1. Create a server information change instruction file on the Management Server. Describe only the IPv6 address as the IP address after it changes in the server information change instruction file.

2. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
/opt/FJSSVswstf/bin/stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

- When you use both the IPv4 and IPv6 addresses with the Management Server:
Set the IPv4 address used.

The following operations are executed after the Upgrade Installation is completed and the IPv6 address is added as the IP address of the Management Server.

1. Create a server information change instruction file on the Management Server. Describe both the IPv4 and the IPv6 addresses as the IP address after it changes in the server information change instruction file.
2. Execute the `stgxfwcmmodsrv` command with the `-f` option.

```
/opt/FJSSVswstf/bin/stgxfwcmmodsrv -f serverInformationChangeInstructionFileName
```

Information

- Refer to "Changing the IP address of Management Server" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* at this version corresponding to OS of the Management Server for the update procedure of IP address information.
- Refer to "stgxfwcmmodsrv (Server information change command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* at this version corresponding to OS of the Management Server for this version for information on the command.

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)" 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
```