

ETERNUS SF
Express V15.0/
Storage Cruiser V15.0/
AdvancedCopy Manager V15.0

Migration Guide

Preface

Purpose

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

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

Intended Readers

This manual is intended for persons who upgrade to this version from a previous version of these software, 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 level and knows the backup and the restoration methods for the operational environment of the previous version level.

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

Organization

This manual is composed as follows:

[Chapter 1 Overview](#)

This chapter provides an overview of upgrade.

[Chapter 2 Changes from Previous Version](#)

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

[Chapter 3 Upgrade for Express](#)

This chapter describes the upgrade procedure for Express.

[Chapter 4 Upgrade for Storage Cruiser](#)

This chapter describes the upgrade procedure for Storage Cruiser.

[Chapter 5 Upgrade for AdvancedCopy Manager](#)

This chapter describes the upgrade procedure for AdvancedCopy Manager.

[Chapter 6 Troubleshooting](#)

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

[Chapter 7 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 chapter describes the operations performed in the environment of the previous version level.

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(R) XP Professional Edition Microsoft(R) Windows(R) XP Home Edition	Windows XP	
Windows Vista(R) Home Basic Windows Vista(R) Home Premium Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate	Windows Vista	
Windows(R) 7 Home Basic Windows(R) 7 Home Premium Windows(R) 7 Professional Windows(R) 7 Enterprise Windows(R) 7 Ultimate	Windows 7	
Solaris(TM) 9 Operating System	Solaris 9	Solaris or Solaris OS
Oracle Solaris 10	Solaris 10	
Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T)	RHEL-AS4	Linux
Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T)	RHEL-ES4	
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)	-	
HP-UX 11.0 HP-UX 11i v1 HP-UX 11i v2 HP-UX 11i v3	HP-UX	

Formal name	Abbreviation	
AIX 5L V5.1 AIX 5L V5.2 AIX 5L V5.3	AIX	
VMware(R) Infrastructure 3 Foundation VMware(R) Infrastructure 3 Standard VMware(R) Infrastructure 3 Enterprise	VMware Infrastructure 3	VMware
VMware vSphere(R) 4 Essentials Kit VMware vSphere(R) 4 Essentials Plus Kit VMware vSphere(R) 4 Standard Edition(TM) VMware vSphere(R) 4 Standard Plus Data Recovery VMware vSphere(R) 4 Advanced Edition(TM) VMware vSphere(R) 4 Enterprise Edition(TM) VMware vSphere(R) 4 Enterprise Plus Edition(TM)	VMware vSphere 4	
VMware vSphere(R) 5 Essentials Kit VMware vSphere(R) 5 Essentials Plus Kit VMware vSphere(R) 5 Standard Edition(TM) VMware vSphere(R) 5 Standard Plus Data Recovery VMware vSphere(R) 5 Enterprise Edition(TM) VMware vSphere(R) 5 Enterprise Plus Edition(TM)	VMware vSphere 5	

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

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

Formal name	Abbreviation		
ETERNUS DX60/DX60 S2 ETERNUS DX80/DX80 S2 ETERNUS DX90/DX90 S2	-	ETERNUS DX series	ETERNUS Disk storage system
ETERNUS DX410 ETERNUS DX440	ETERNUS DX400 series	ETERNUS DX400/DX400 S2 series	
ETERNUS DX410 S2 ETERNUS DX440 S2	ETERNUS DX400 S2 series		
ETERNUS DX8100 ETERNUS DX8400 ETERNUS DX8700	ETERNUS DX8000 series	ETERNUS DX8000/DX8000 S2 series	
ETERNUS DX8100 S2 ETERNUS DX8700 S2	ETERNUS DX8000 S2 series		
ETERNUS2000 ETERNUS4000 ETERNUS8000	-		
Web GUI of ETERNUS DX series ETERNUSmgr	ETERNUS Web GUI		

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

Formal name	Abbreviation
Microsoft(R) SQL Server(TM)	SQL Server
PRIMECLUSTER Global Disk Services	GDS
PRIMECLUSTER Global File Services	GFS
Symfoware Server Enterprise Extended Edition Symfoware Server Enterprise Edition	Symfoware
VMware(R) ESX(R)	VMware ESX
VMware(R) ESXi(TM)	VMware ESXi
VMware(R) vCenter(TM) Server	VMware vCenter Server or vCenter Server

Manuals

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

Others

- In this manual, "ETERNUS4000" does not include ETERNUS4000 models 80 and 100.

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Notes

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Manual organization and reading suggestions

Manual organization

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

When to read	Related manuals (abbreviated)	Related products (NOTE)			Explanation
		EXP	SC	ACM	
Before installation	Quick Reference	Yes	Yes	Yes	This manual is unique for each product. The following manuals are available: <ul style="list-style-type: none"> - Express Quick Reference - Storage Cruiser Quick Reference - AdvancedCopy Manager Quick Reference
	Overview	No	No	Yes	This manual is unique for each product.
During installation	Installation and Setup Guide	Yes			This manual is common for all products.
	Cluster Environment Setup Guide	No	Yes		This manual is common for Storage Cruiser and AdvancedCopy Manager.
	Migration Guide	Yes			This manual is common for all products.
During operation	Operation Guide	Yes	Yes	Yes	This manual is unique for each product. The following manuals are available: <ul style="list-style-type: none"> - Express Operation Guide

When to read	Related manuals (abbreviated)	Related products (NOTE)			Explanation
		EXP	SC	ACM	
					<ul style="list-style-type: none"> - Storage Cruiser Operation Guide - Storage Cruiser Operation Guide for Optimization Option - AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) - AdvancedCopy Manager Operation Guide (for Linux) - AdvancedCopy Manager Operation Guide (for HP-UX) - AdvancedCopy Manager Operation Guide (for AIX)
	Operation Guide for Copy Control Module	Yes	No	Yes	This manual is common for Express and AdvancedCopy Manager.
	Web Console Guide	Yes			This manual is common for all products.
Anytime	Event Guide	Yes		No	This manual is common for Express and Storage Cruiser.
	Messages	Yes			This manual is common for all products.
	Glossary	Yes			This manual is common for all products.

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

How to read manuals

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

Purpose	Related products (NOTE)	Manual	Main contents	How to read
Acquiring a product overview and basic operation knowledge	EXP	- Express Quick Reference	- Product overview	Please read if you want to acquire a fundamental knowledge of the product and its operation in order to decide to install it or not.
	SC	- Storage Cruiser Quick Reference	- Installation decision	
	ACM	- AdvancedCopy Manager Quick Reference	- Overview of the necessary tasks from installation to first use	
		- AdvancedCopy Manager Overview	<ul style="list-style-type: none"> - Main functions - Linkable applications - Procedure overview for Advanced Copy of ETERNUS Disk storage system 	
Deciding if a version upgrade is required	common	- ETERNUS SF Migration Guide	<ul style="list-style-type: none"> - Incompatibilities with previous version - Notes and cautions about version upgrade - Version upgrade procedure 	Please read if you want to upgrade from a previous version.
Installing and correctly operating the product	common	- ETERNUS SF Installation and Setup Guide	<ul style="list-style-type: none"> - Operating environment - Installation procedure 	Please read if you want to install and setup the product.

Purpose	Related products (NOTE)	Manual	Main contents	How to read
Setting up operating environment depending on purpose			<ul style="list-style-type: none"> - Setup procedure - Uninstallation procedure 	
	SC, ACM	- ETERNUS SF 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	EXP	- 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.
	SC	- 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 Option	<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 	
	EXP, ACM	- ETERNUS SF Operation Guide for Copy Control Module	<ul style="list-style-type: none"> - Starting and stopping the software - Data backup/restore inside the storage system 	
	ACM	<ul style="list-style-type: none"> - AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) 	<ul style="list-style-type: none"> - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference 	

Purpose	Related products (NOTE)	Manual	Main contents	How to read
		<ul style="list-style-type: none"> - AdvancedCopy Manager Operation Guide (for Linux) - AdvancedCopy Manager Operation Guide (for HP-UX) - AdvancedCopy Manager Operation Guide (for AIX) 		
	common	- ETERNUS SF Web Console Guide	<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	common	- ETERNUS SF 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	EXP, SC	- ETERNUS SF 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 other important terms	common	- ETERNUS SF Glossary	<ul style="list-style-type: none"> - Product specific terminology explanation - Explanation of important terminology appearing in the manual - Synonyms and related terms - Proper form of abbreviated terms 	Please read if you want to learn the meaning of important terms, product specific terms or abbreviations used in the manuals.

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

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Chapter 1 Overview

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

1.1 Upgrade patterns

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

Point

The ETERNUS SF Version 15.0 product combinations obey to the following rules:

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

With ETERNUS SF Version 15.0, 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 the combination of the installed products.

Combination of products				Reference
Express	Storage Cruiser	AdvancedCopy Manager	AdvancedCopy Manager Copy Control Module	
Y	-	-	-	Chapter 3 Upgrade for Express
Y	-	Y	-	
Y	-	-	Y	
Y	-	Y	Y	
-	Y	-	-	4.1 Upgrade for Storage Cruiser's manager
-	Y	Y	-	
-	Y	-	Y	
-	Y	Y	Y	5.1 Upgrade for AdvancedCopy Manager's manager
-	-	Y	-	
-	-	Y	Y	5.3 Upgrade for AdvancedCopy Manager Copy Control Module
-	-	-	Y	

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:

The uninstallation of the previous version is an option of the upgrade process. 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 procedure are as follows:

Products which can use Upgrade Installation	Product after the upgrade
Express Version 14.x	Express Version 15.0
Storage Cruiser Version 13.x (Note 1) Storage Cruiser Version 14.x (Note 1)	Storage Cruiser Version 15.0
AdvancedCopy Manager Version 13.x (Note 2) AdvancedCopy Manager Version 14.x (Note 2)	AdvancedCopy Manager Version 15.0

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

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

Note

For the upgrade patterns not listed in the table above:

It is not possible to use the Upgrade Installation procedure 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 level on the server where the upgrade will be performed must be supported by the version of the product that will be installed.

See

- Some operating system versions are unsupported in this version. For details, refer to "[Chapter 2 Changes from Previous Version](#)".
- For information regarding the operating system versions supported by the product, refer to "Operating Environment" in the "ETERNUS SF Installation and Setup Guide".

1.4.2 Notes for Express

Configuration information for previous version level

The following configuration information of the previous version for Express cannot be carried over to this version level.

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



See

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

Advanced Copy sessions existing in ETERNUS Disk storage system

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

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

1.4.3 Notes for Storage Cruiser

Upgrade from Softek Storage Cruiser Version 1.2.2

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

Configuration information for previous version level

The following configuration information of the previous version for Storage Cruiser cannot be carried over to this version level

- User account for using GUI client

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

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

You can confirm the user account for the previous version level in the "Login account registration" window that is displayed by selecting [Tool]-[Authentication] in the GUI client resource management screen.
2. After performing Upgrade Installation, configure the information recorded in Step 1, manually.



See

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

1.4.4 Notes for AdvancedCopy Manager

Advanced Copy sessions existing in ETERNUS Disk storage system

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

Configuration information for previous version level

The following configuration information of the previous version for AdvancedCopy Manager cannot be carried over to this version level.

- The user account for using GUI client

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

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

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

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

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

- In the case of AdvancedCopy Manager Version 13.3 or later:

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

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



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

Chapter 2 Changes from Previous Version

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

2.1 Changes for Express

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

2.1.1 Changes for Version 15.0

Changes for supported operating systems

The following operating systems are no longer supported.

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



See

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

Changes for supported functions

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

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

The `express_diag` command is no longer supported

Version	Details
14.2 or earlier	It is possible to use <code>express_diag</code> command (Diagnosis of Express's manager environment).

Version	Details
15.0	The <code>express_diag</code> command is no longer supported. If a problem occurs with the Express's manager, collect the required troubleshooting information, and then contact a Fujitsu system engineer.

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

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



See

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

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

Change for the connection address to the ETERNUS SF Web Console

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

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



See

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

Changes to the license process

The license management process is changed as follows.

Version	Details
14.2 or earlier	<ul style="list-style-type: none"> - The Advanced Copy license is selected in install options. - For product upgrades to Storage Cruiser and AdvancedCopy Manager, it is necessary to uninstall/install each product.
15.0	<ul style="list-style-type: none"> - The Advanced Copy license is set from the Web Console and command.

Version	Details
	- Product upgrades to Storage Cruiser and AdvancedCopy Manager are possible only through software license registration of the relevant products.



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

Changes to the messages and event logs

The messages and event logs are changed as follows.

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

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

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

Version	Details
14.2 or earlier	\$INS_DIR\Express\Manager\bin (Note1)
15.0	\$INS_DIR\ESC\Manager\opt\FJSVssmgr\sbin (Note2)

Note1: \$INS_DIR means "Program Directory" specified at the Express installation.

Note2: \$INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

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

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

Version	Details	
	Command name	Path name
14.2 or earlier	express_managersnap	\$INS_DIR\Express\Manager\bin (Note1)
15.0	esfsnap	\$INS_DIR\Common\bin (Note2)

Note1: \$INS_DIR means "Program Directory" specified at the Express installation.

Note2: \$INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

2.2 Changes for Storage Cruiser

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

2.2.1 Changes for Version 15.0

Changes to the GUI

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

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



See

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

Changes for supported devices

The following devices are no longer supported.

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



See

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

Changes for supported operating systems

The following operating systems are no longer supported.

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

Version	Details
	<p>Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition SP2 Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition SP2</p> <p>- Storage Cruiser's agent</p> <p>Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems (non-SP) Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems SP2 Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems SP2 Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP) Solaris(TM) 8 Operating System Red Hat(R) Enterprise Linux(R) 5 (for Intel Itanium) Red Hat(R) Enterprise Linux(R) AS (v.4 for Itanium) Red Hat(R) Enterprise Linux(R) AS (v.3 for x86) Red Hat(R) Enterprise Linux(R) ES (v.3 for x86) SUSE(R) Linux Enterprise Server 9 EM64T</p>



See

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

Changes for supported functions

Storage Volume Configuration Navigator is no longer supported.

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

The map view function is no longer supported

Displaying map is no longer supported.

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

Information

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

Memo information table is no longer supported

The memo information table has been discontinued.

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

The Correlation window is no longer supported

The Correlation window below is no longer supported.

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

Connectivity management display is no longer supported

The connectivity management display has been discontinued.

Version	Details
14.2 or earlier	-
15.0	The following items relative to connectivity management cannot be displayed: <ul style="list-style-type: none">- Business components (application) display- DBMS display- File system (mount point) display- Mirror drive display- Multipath drive display- Raw Device display- IOB display- Router display- DE display- Battery display- Element integrated display- Connection display

Version	Details
	- Configuration information saving

Revolving light icon is no longer supported

The revolving light icon is no longer supported.

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

Displaying condition report is no longer supported

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

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

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

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

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

Beacon function for Solaris server node is no longer supported

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

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

File output function for performance management graph is no longer supported

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

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

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

This change is for Windows environment only.

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



Example

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

- In the case of Version 14.2 or earlier:

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

- In the case of Version 15.0:

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

Changes for the device registration for ETERNUS Disk storage system

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

Version	Details
14.2 or earlier	It is not necessary to specify an account of ETERNUS Disk storage system.
15.0	For the following models, it is necessary to specify an account holding ETERNUS Disk storage system Software Role privileges. <ul style="list-style-type: none"> - ETERNUS DX80 S2/DX90 S2 - ETERNUS DX400 S2 series For models besides those listed above, it is necessary to specify an account holding ETERNUS Disk storage system Administrator privileges.

Change default value of registered a device

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

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

Changes for the login account



The login account has been changed as follows.

Version	Details
14.2 or earlier	In order to connect to the Management Server from the Storage Cruiser client, a dedicated Storage Cruiser account is necessary.

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

Change the icon displaying threshold monitoring of Thin Provisioning Pool

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

Version	Details
14.2 or earlier	Displays " 
15.0	Displays " 

Change the display method for Capacity Chart of Thin Provisioning Pool

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

Version	Details
14.2 or earlier	<ul style="list-style-type: none"> - The following items that can be selected as the content to be displayed. <ul style="list-style-type: none"> - Used capacity - Remain capacity - The following items that can be selected as the unit. <ul style="list-style-type: none"> - TB - % - The following items that can be selected as the Time Axis. <ul style="list-style-type: none"> - Past 1 month - Past N year (N : 1 - 10) - Two or more graph windows of Thin Provisioning Pool can be displayed with one direction.
15.0	<ul style="list-style-type: none"> - The content to be displayed is only "Used Capacity". - The unit is only TB. - The following items that can be selected as the Duration. <ul style="list-style-type: none"> - 1 Month - 1 Year - 10 Years - One graph window of Thin Provisioning Pool can be displayed with one direction.

Changes to the process of deleting the Management Server

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

Version	Details
14.2 or earlier	In the case of the access path being set when deleting the Management Server, the access path is deleted at the same time.

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

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

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

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

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

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

Version	Details	
	Command name	Path name
14.2 or earlier	managersnap	<ul style="list-style-type: none"> - For Windows environment(Note1) \$INS_DIR\Manager\opt\FJSVssmgr\sbin - For Solaris, Linux environment: /opt/FJSVssmgr/sbin
15.0	esfsnap	<ul style="list-style-type: none"> - For Windows environment(Note2) \$INS_DIR\Common\bin - For Solaris, Linux environment: /opt/FJSVesfcm/bin

Note1: \$INS_DIR means "Program Directory" specified at the Storage Cruiser installation.

Note2: \$INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

2.2.2 Changes for Version 14.2 or earlier

Change to the error message output by storage management commands

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

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

Changes for the SNMP trap reception program

- For Windows environment:

Version	Detail
V14.1 or earlier	- SystemWalker MpWkstr is used as the SNMP trap monitoring service.

Version	Detail
	<ul style="list-style-type: none"> - If in use with the ServerView AlarmService, the mpmsts ON command must be executed. - If in use with Systemwalker Centric Manager, no special settings are required.
V14.2	<ul style="list-style-type: none"> - The OS standard SNMP trap monitoring service is used. Windows Server 2003: SNMP Trap Service Windows Server 2008: SNMP Trap - If in use with the ServerView AlarmService, the mpmsts ON command need not be executed. - If in use with Systemwalker Centric Manager, the settings indicating coexistence with the ServerView AlarmService are required at the Systemwalker Centric Manager side.

- For Linux environment:

Version	Detail
V14.1 or earlier	<ul style="list-style-type: none"> - FJSVswstt is used as the SNMP trap monitoring daemon. - No special settings are required to use FJSVswstt. - If in use with the ServerView AlarmService, the ServerView trap transfer program is required. - If in use with any of the Systemwalker Centric Manager versions or with ServerView Resource Coordinator VE V2.1.1 to V2.1.3, no special settings are required.
V14.2	<ul style="list-style-type: none"> - The snmptrapd in the OS standard net-snmp package is used as the SNMP trap monitoring daemon. - The snmptrapd settings must be changed in order to use snmptrapd. - If in use with the ServerView AlarmService, the ServerView trap distributor program(SMAWtrpsv) is not required. - If in use with any of the Systemwalker Centric Manager versions or with ServerView Resource Coordinator VE V2.1.1 to V2.1.3, the settings indicating use with the ServerView AlarmService are required at the Systemwalker Centric Manager or ServerView Resource Coordinator VE side.

Changes for communication recovery event messages

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

Version	Details
V13.4 or earlier	Unit status changed: OK Unit status changed: Warning Unit status changed: Error
V14.0	Connection OK



See

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

Change the management method for VMware Infrastructure 3 Version 3.5

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

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



See

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

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

This change is for HP-UX environment only.

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

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



Example

- In the case of Version 13.3 or earlier:

Integration icon name for logical volume: PVLink Logical Volumes(vg01)

Integration icon for logical volume - **Basic information** tab: PVLink Logical Volumes(vg01)

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

- In the case of Version 13.4 or later:

Integration icon name for logical volume: LVM Logical Volumes(vg01)

Integration icon for logical volume - **Basic information** tab: LVM Logical Volumes(vg01)

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

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

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



Example

- In the case of Version 13.1 or earlier:

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

- In the case of Version 13.2 or later:

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

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

This change is for Solaris environment only.

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

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

This change is for Solaris environment only.

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

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

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



See

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

2.3 Changes for AdvancedCopy Manager

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

2.3.1 Changes for Version 15.0

Changes to terminology used with AdvancedCopy Manager Copy Control Module

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

Version	Details
14.2 or earlier	Access Path
15.0	Access Volume

Changes to the GUI

The GUI client has been replaced with the Web Console.

Uninstall the installed GUI client.

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



See

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

Changes for supported devices

The following devices are no longer supported.

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



See

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

Changes for supported operating systems

The following operating systems are no longer supported.

Version	Details
14.2 or earlier	-
15.0	<ul style="list-style-type: none"> - AdvancedCopy Manager's manager <ul style="list-style-type: none"> Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) - AdvancedCopy Manager's agent <ul style="list-style-type: none"> Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems (non-SP) Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems SP2 Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems SP2 Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP) Solaris(TM) 8 Operating System Red Hat(R) Enterprise Linux(R) 5 (for Intel Itanium) Red Hat(R) Enterprise Linux(R) AS (v.4 for Itanium) - AdvancedCopy Manager Copy Control Module <ul style="list-style-type: none"> Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems (non-SP) Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems SP2 Microsoft(R) Windows Server(R) 2003, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems SP2 Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition (non-SP) Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition (non-SP)



See

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

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

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

This change is for Windows environment only.

Version	Details
14.2 or earlier	C:\Win32app\AdvancedCopyManager
15.0	C:\ETERNUS_SF\ACM

Example

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

- In the case of Version 14.2 or earlier:
C:\Win32app\AdvancedCopyManager\bin\stgcmmodnode
- In the case of Version 15.0:
C:\ETERNUS_SF\ACM\bin\stgcmmodnode

Changes to command preview

Command preview is no longer supported

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

See

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

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

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

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

Information

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

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

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

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

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

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

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

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

Information

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

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

Lock: Lock the transaction volume.

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

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

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

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

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

Information

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

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

Lock: Lock the copy source volume.

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



Note

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

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

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

Version	Details
14.2 or earlier	Environment setup and cancel are performed with the following commands. <ul style="list-style-type: none"> - stgclset_ixprm (Linux version PRIMECLUSTER environment setup command) - stgclunset_ixprm (Linux version PRIMECLUSTER environment cancel command)
15.0	The above two commands are not supported. Instead, environment setup and cancel are performed by the Linux/HP-UX version cluster setup and un-setup procedures.

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

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

Version	Details	
	Command name	Path name
14.2 or earlier	acmcapture	<ul style="list-style-type: none"> - For Windows environment <i><AdvancedCopy Manager Program Directory>\bin</i> - For Solaris, Linux environment: <i>/opt/FJSVswstf/bin</i>
15.0	esfsnap	<ul style="list-style-type: none"> - For Windows environment(Note) <i>\$INS_DIR\Common\bin</i> - For Solaris, Linux environment: <i>/opt/FJSVesfcm/bin</i>

Note: \$INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

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

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

Version	Details	
	Command name	Path name
14.2 or earlier	acmcapture	<ul style="list-style-type: none"> - For Windows environment <AdvancedCopy Manager Program Directory>\bin - For Solaris, Linux environment: /opt/FJSVswstf/bin
15.0	esfsnap	<ul style="list-style-type: none"> - For Windows environment(Note) \$INS_DIR\Common\bin - For Solaris, Linux environment: /opt/FJSVesfcm/bin

Note: \$INS_DIR means "Program Directory" specified at the ETERNUS SF Manager installation.

2.3.2 Changes for Version 14.2 or earlier

Changes the messages output by AdvancedCopy Manager Copy Control Module

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

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

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

Changes the name of the host affinity group list display command

Version	Details
14.1 or earlier	acinq hag
14.2	acinq hostag

Changes the method for adding remote ETERNUS disk storage system

- For Windows environment:

Version	Details
14.0 or earlier	Register by specifying a nonexistent drive letter as an access path (Note)
14.1	Register by specifying the BOX-ID of ETERNUS disk storage system

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

- For Solaris and Linux environments:

Version	Details
14.1 or earlier	Register by specifying a nonexistent device as an access path (Note)
14.2	Register by specifying the BOX-ID of ETERNUS disk storage system

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

Chapter 3 Upgrade for Express

This chapter describes the upgrade procedure for Express.

To upgrade to this version, it is necessary to install the ETERNUS SF Manager program.

Point

- The Upgrade Installation can be performed for Express.
- If upgrading Express, the following information cannot be transferred from the previous version.
 - Event log history
 - Login/Logout history
 - Configuration modification history
 - User Account of Express Web GUI

3.1 Before installation

The following preparation work must be done before starting the Upgrade Installation for Express.

3.1.1 Backup of the previous version

Back up the operational environment of Express for the previous version level.

See

For details about the backup method, refer to the "ETERNUS SF Express User's Guide" for the relevant previous version.

Note

The following information cannot be backed up. Save the current settings informations in a memo.

- Contact information when trouble occurs
- Servers registered in Express

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, backup the operational environment of AdvancedCopy Manager for the previous version level.

In case of a Storage Management Server which also serves as a Storage Server in Windows environment, backup the following files after backing up the operational environment. Execute backup process by using copy command on the command prompt screen.

- In case of a non-cluster environment
`<Environment Directory>\etc\device.ini`
- In case of a cluster environment
`<Drive letter of shared disk for shared data for AdvancedCopy Manager>:\etc\opt\swstorage\etc\device.ini`

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

Server type	Reference
Storage Management Server	A.1 Backup of 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 Backup of repository data (for Windows)A.3 Backup of management information (for Windows)

Note

- The following information cannot be backed up. Save the current settings informations in a memo.
 - Account for using the GUI client

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, backup the operational environment of AdvancedCopy Manager Copy Control Module for the previous version level.

See

For details on the backup method for the operational environment, refer to "[A.6 Backup of the environment setting files](#)".

3.1.2 Available disk space verification

Make sure that there is enough available disk space on the server where the Upgrade Installation will be performed. The required disk space for the upgrade is calculated as the required disk space for the new version to be installed minus the required disk space of the previous version.

Required disk space for the new version

This space is required to install this version of the ETERNUS SF Manager program.
For details on the required space, refer to "Operating environment of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.

Required disk space for the previous version

This space is required to install the previous version of the Express program.
For details on the required space, refer to the "ETERNUS SF Express User's Guide" for the relevant previous version.

3.1.3 Incompatible software uninstallation

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

See

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

3.1.4 Symfoware verification

Symfoware product is bundled with this product. If Symfoware is already installed on the server where the Upgrade Installation will be performed, it is necessary to check the Symfoware environment before starting the Upgrade Installation.



.....
For details on how to check, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

If Symfoware is not installed, this verification is not necessary.

3.1.5 Database size estimation

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



.....
For details on how to check, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

3.1.6 Preparation for uninstallation of the previous version level

If AdvancedCopy Manager is installed, before starting the Upgrade Installation, the following work must be done as the preparation for uninstallation of the previous version level.

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

Cancel the configuration information of the web server as follows.

1. Login to the system in which you want to uninstall the AdvancedCopy Manager.
The login user must have Administrator privileges for the terminal to be uninstalled the previous version level.
2. If you configured the web server during installation, cancel the configuration information of the Web server.

Execute the following command on the command prompt screen.

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

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

2. Execution of DB unsetup

Cancel the repository database of the previous version level.

For details, refer to "A.7 Unsetup of database".

3.2 Upgrade installation

There are two methods of performing the Upgrade Installation.

- Default installation

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

- Installation destination

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

- Port numbers for the various communication services

11 port numbers are used, as follow:

Service	Display name on the [Port Registration] screen	Used 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	5432
Remote access service	Remote access service	9851
Exclusive control service	Exclusive control service	9852
Internal use	Internal Port 1	8005
	Internal Port 2	8009
	Internal Port 3	8443
	Internal Port 4	24916

- Custom installation

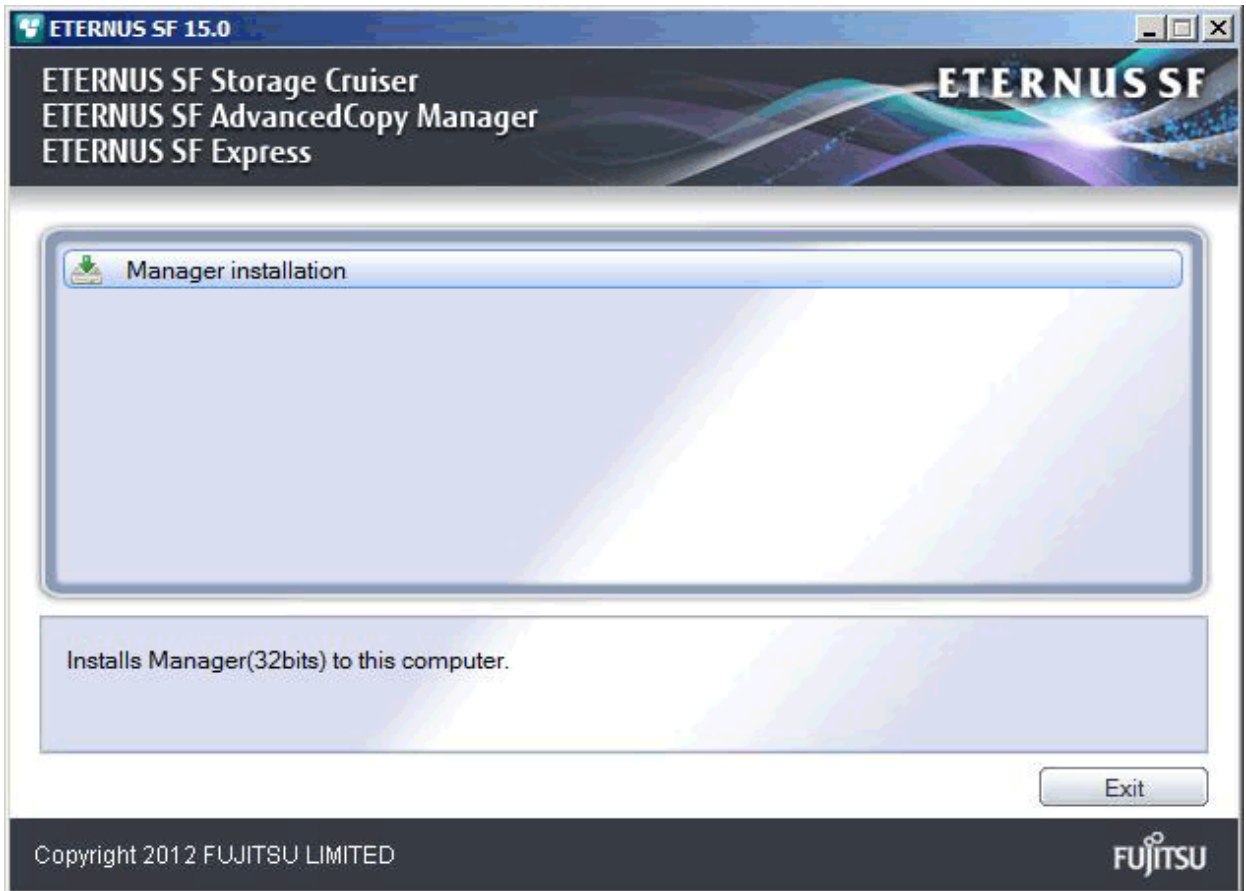
Upgrade is done by entering the configuration information on the screen (installation destination, communication service port numbers).

The Upgrade Installation procedure is performed as follow:

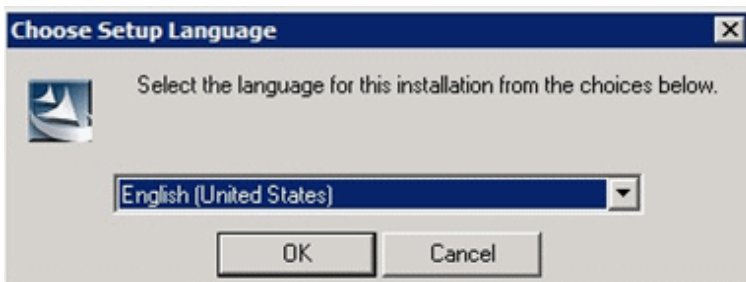
1. Using an account with Administrator privileges, log in the server where the upgrade will be performed.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express V15.0 Mediapack for Windows (Manager Program)" into the DVD-ROM drive.

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

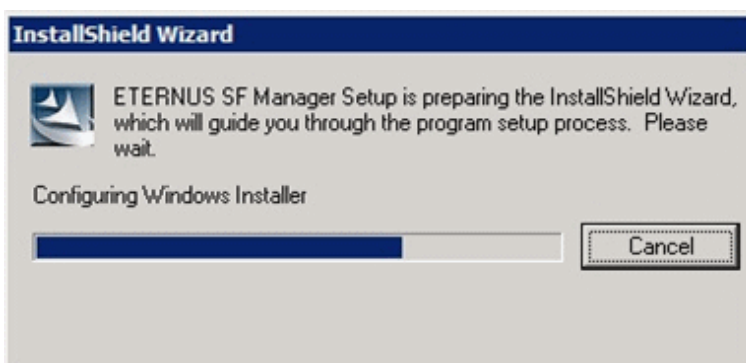
3. The following screen is displayed. Click the [Manager installation] button.
To cancel the Upgrade Installation at this point, click the [Exit] button.



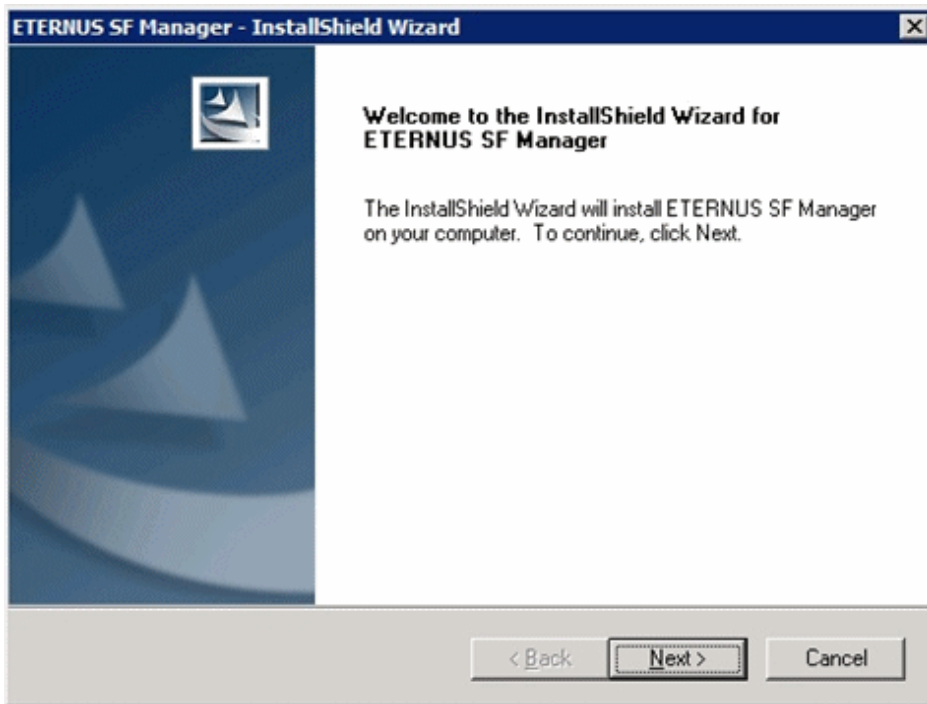
4. The [Choose Setup Language] screen is displayed. Select the language to be used for the installation and click the [OK] button.
The language selected in this screen is used during the installation, and also during the uninstallation.



5. The following screen is displayed. To cancel the Upgrade Installation at this stage, click the [Cancel] button.

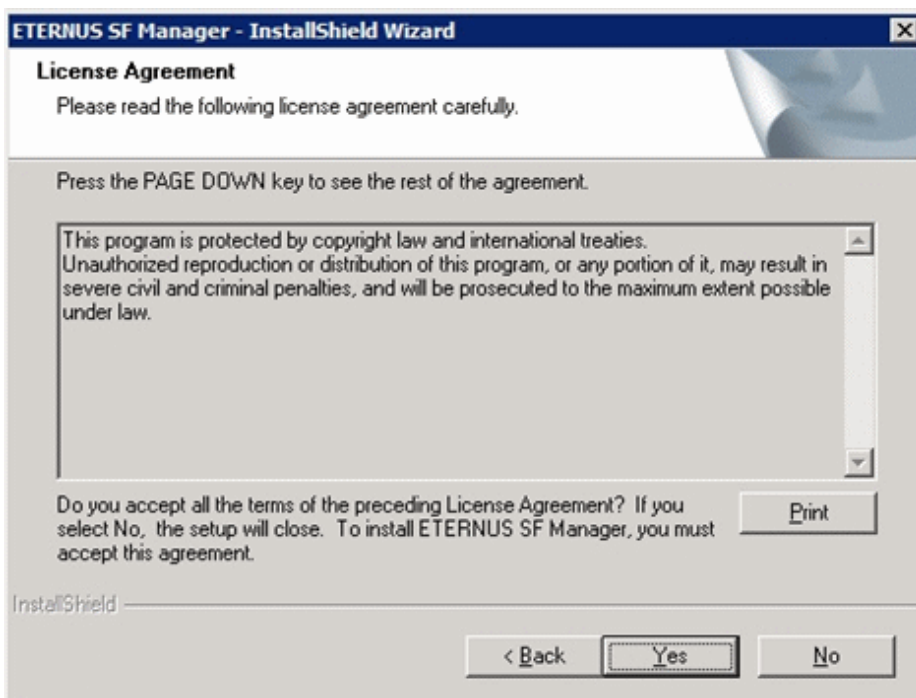


6. The following screen is displayed. After checking the screen contents, click the [Next] button.

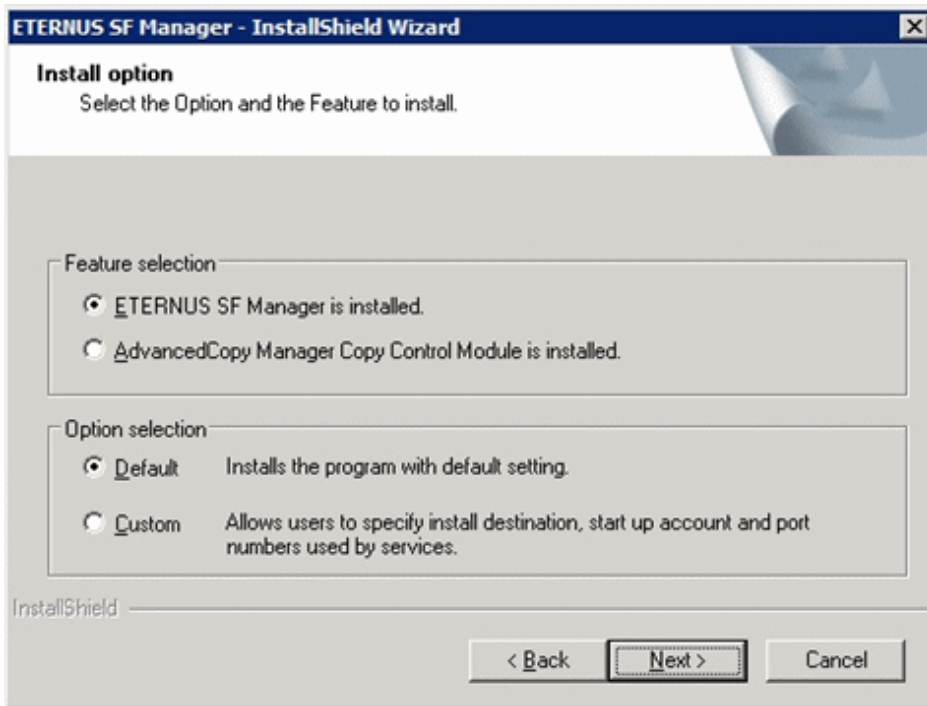


7. Read the terms and conditions in the [License Agreement] screen.

After reading the contents, if the conditions are agreed click the [Yes] button.



8. Select the functions to install and the options in the [Install option] screen.



Feature selection

Select [ETERNUS SF Manager is installed.].

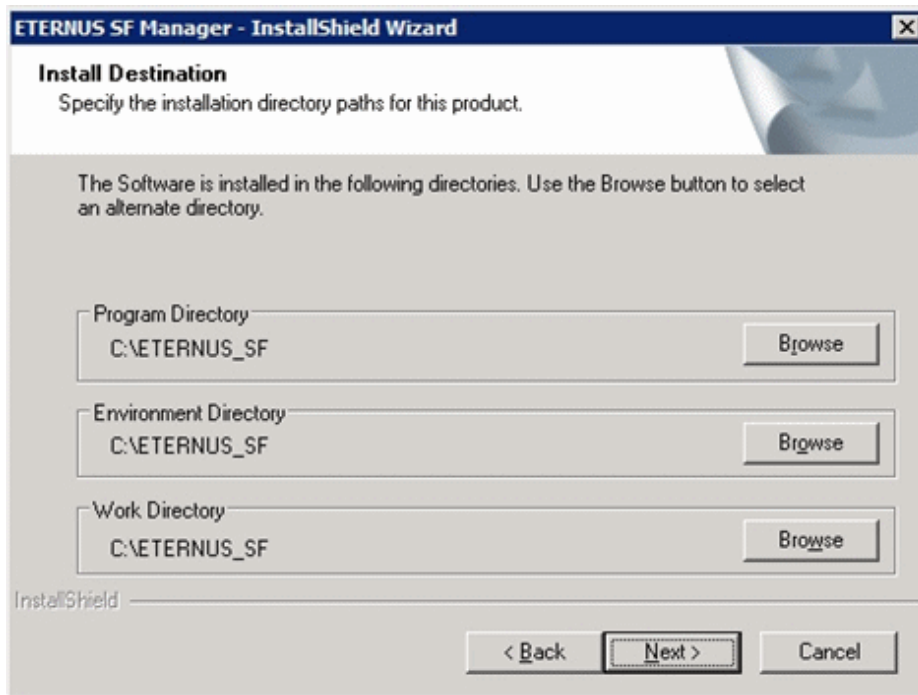
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	<p>Changing values in the [Installation Destination] screen and [Port Registration] screen is optional and can be omitted. In that case, the steps 9 and 10 can be skipped.</p> <p>In this installation method, the following checks are automatically performed regarding the information provided as a 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 is displayed. If no error is detected, the [Start Copying Files] screen is displayed.</p>
Custom	The installation information must be entered in the screens from step 9 and later.

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

If installing to a directory besides the directory displayed by default, click the [Browse] button and change the install location. After designating all of the directories, click the [Next] button.



Note

- Do not specify the shared directory as the installation directory.
- The blank space and the following characters [" | : * ? / . < > , % & ^ = ! ;] cannot be used in 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] screen.

Service	Port Number
ETERNUS SF Manager Apache service	9855
Communications service 1	1226
Communications service 2	4917
Repository service 1	2004
Repository service 2	5432
Remote access service	9851
Exclusive control service	9852

For Internal Use	
Internal Port 1	8005
Internal Port 2	8009
Internal Port 3	8443
Internal Port 4	24916

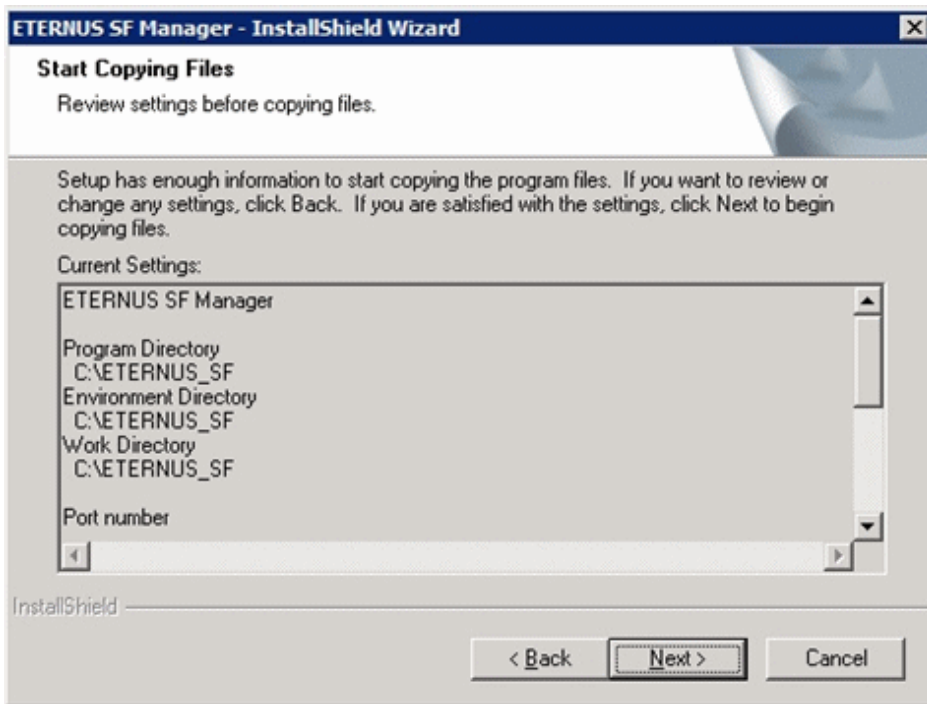
The values displayed at the screen opening are default values. If necessary, enter replacement port numbers matching your environment. Values between 5001 and 32767 are valid.

After finishing input, click the [Next] button. If one of the entered values is already in use, the input screen will be displayed again.

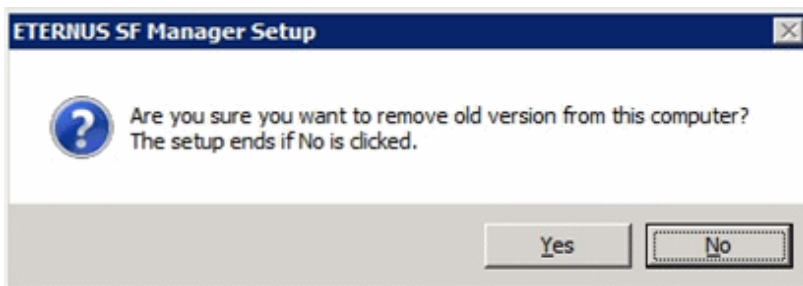
11. Check the settings information in the [Start Copying Files] screen.

If the settings are correct, click the [Next] button.

To go back and change a setting, click the [Back] button.



12. The following screen is displayed. To proceed with the uninstallation of the previous version, click the [Yes] button.



13. The previous version uninstallation is started.

The uninstallation program is executed.

Answer to the question in each screen.

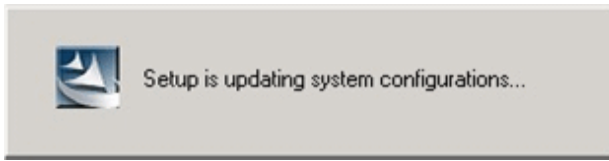
Point

- For the question regarding restart to the computer, click the [No] button. When clicking the [Yes] button, the Upgrade Installation is interrupted. When re-execute the installation after restart the computer, the installation is treated as new one.
- When the uninstallation of the previous version completes successfully, the [Uninstallation was completed successfully] screen may be displayed. Although the instruction on the screen indicates the deletion of the files and folders, do not delete the files and folders when operating the Upgrade Installation.

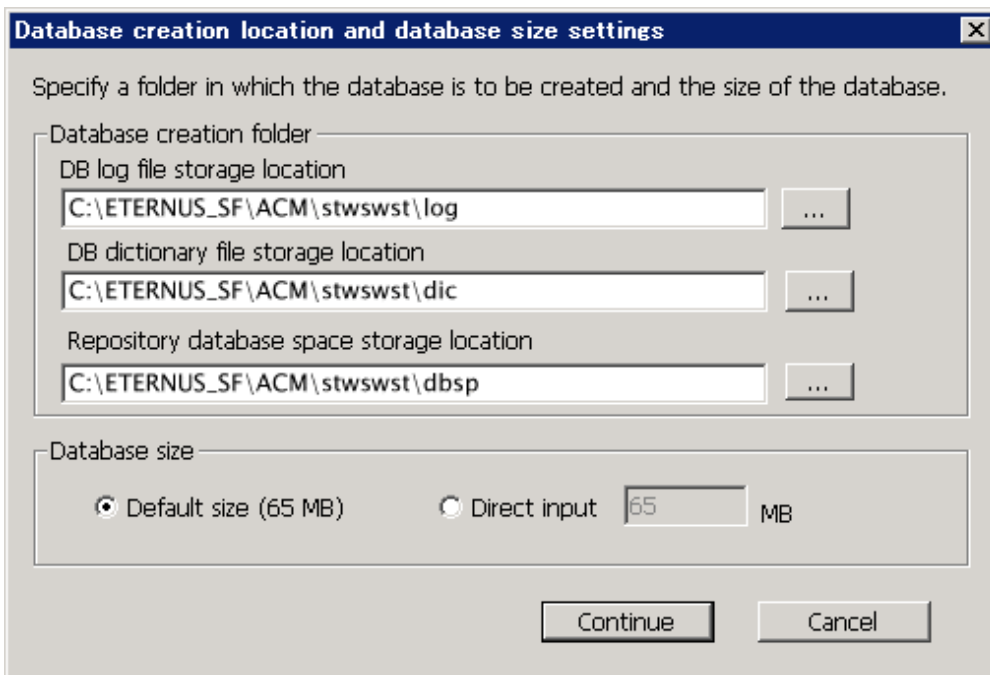
14. Once the previous version uninstallation is completed, the copy of the new program version is started.

During the process, the file copy completion status is displayed in the [Setup Status] screen.

15. Once the copy process ends, the system configuration is updated. Wait for the configuration update process to finish.



16. Enter the requested information for the repository database creation in the following screen. After the input, click the [Continue] button.



Database creation folder

This is the folder where the database will be created.

Enter the path, including the drive name, for each of the following database directories. The specified folders must be new NTFS folders. If a folder specified is not a NTFS folder or if it already exists, choose another name.

The default of the folders to store the repository database is displayed in each field. Change if 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 the shared folder as the folder where the database will be created.
- The number of characters in a folder name must be between 4 and 80. The blank space and the following characters [" | : * ? / . < > , % & ^ = ! ; # ' @] cannot be used in folder names.
- Do not check 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.
Overhead is greater to a compressed and/or encrypted drive. Access errors may occur in low OS resource conditions.
If the encryption property is checked, access errors may occur when decryption cannot be performed.

Database size

The database size is entered in MB. The size to enter is the result of the calculation performed before installation as described in "3.1.5 Database size estimation". To use the default value, check the [Default size (65 MB)] box.

- The following screen is displayed for the IP address and the database user settings.
Once the input is finished, click the [Settings] button.

The default value is displayed in the screen. Change if necessary.

IP address

Enter the IP address of the Management Server (own system).

If the previous version level of AdvancedCopy Manager has been installed, specify the IP address of the Management Server used with the previous production.



Note

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.

Repository access user

Enter username and password for the database access user.

The usernames entered here must have local login or domain login permissions at the OS level.

For the default value of username and password, confirm with a Fujitsu system engineer.

However, use other than default value because of security reasons.

The following conditions apply for the usernames and passwords:

- Username and password must be compatible with the underlying operating system.
- Username and password must be no longer than 18 characters (bytes).

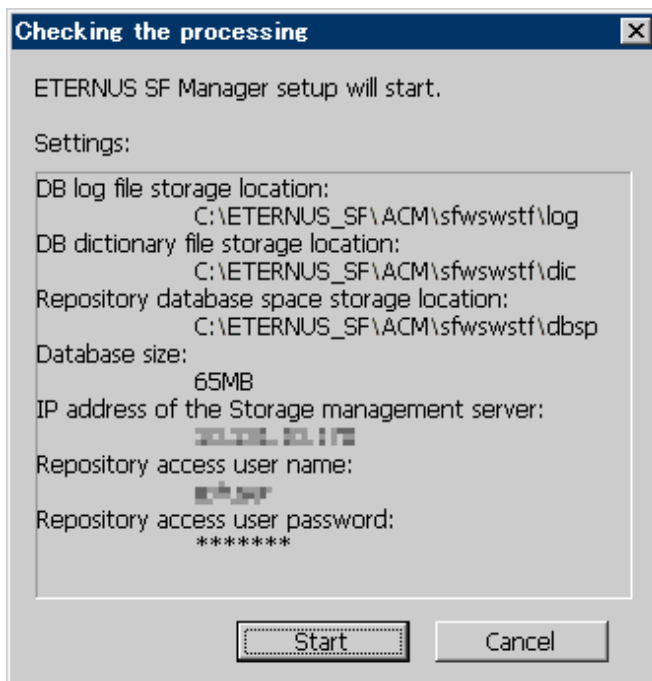


- If the user name specified here is not yet registered to the system, perform the registration, and add either local login or domain login privileges. Refer to the table below and specify a user that corresponds to the server type being used.

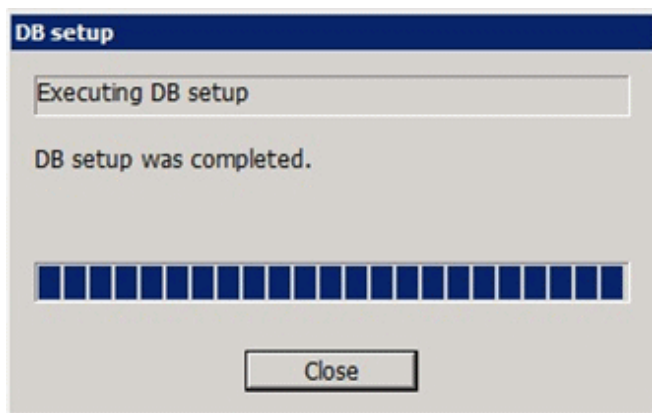
Server type	User to be specified
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (not belong to the domain)	

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

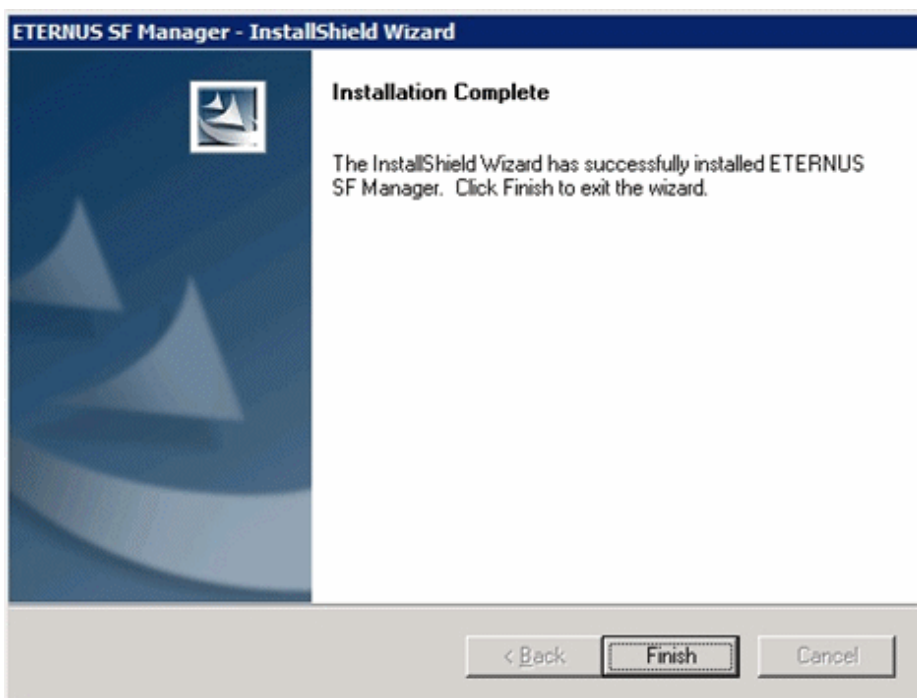
18. The following screen is displayed. Check the contents and click the [Start] button.



19. The database setup process starts. When the process is finished, the following screen is displayed. Click the [Close] button.



20. The following screen is displayed. The Upgrade Installation process is finished, click the [Finish] button.



21. Eject the DVD-ROM from the DVD-ROM drive.

3.3 Post-upgrade Installation tasks

Once the Express Upgrade Installation has been completed, the following tasks need to be performed.

3.3.1 Restoration from previous version

Restore the operational environment backed up in "[3.1.1 Backup of the previous version](#)".

Refer to "Restoring Express's manager environment (Windows)" in the "ETERNUS SF Express Operation Guide" for this version level, execute from Step 4 (the procedure to stop the service for ETERNUS SF Manager).



Note

In the restoring procedure, the directory name of the copy source may differ to the previous version level. In such a case, read as the previous version level directory name as follows:

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

\$BAK_DIR is a backup destination directory.

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, restore the operational environment backed up in "[3.1.1 Backup of the previous version](#)".



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

1. Restore the repository data

When performing stgrepcnv (Repository data migration command), recover the migration target repository data to the current version repository. For details on the command, refer to "stgrepcnv (Repository data migration command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)" for this version level.

In case of a Storage Management Server which also serves as a Storage Server in Windows environment, restore the files from the data backed up in "[3.1.1 Backup of the previous version](#)" after recovering the repository data. Restore to the following location by using copy command on the command prompt screen.

- In case of a non-cluster environment
<Environment Directory after upgrading>\etc\device.ini
- In case of a cluster environment
<Drive letter of shared disk for shared data after upgrading of AdvancedCopy Manager>:\etc\opt\swstorage\etc\device.ini

2. Change the server information

To ensure data consistency, use stgxfwcmmodsrv (Server information change command) to perform the server information change processing.

When executing stgxfwcmmodsrv (Server information change command), specify the Management Server name to the -n option. For details on the command, refer to "stgxfwcmmodsrv (Server Information change command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)" for this version level.

Check the [Server] column of stgxfwcmdispsrv (Server information display command) execution result for the Management Server name specified to the -n option.

3. Restore the management information (Management Server which also serves as a Managed Server only.)

Refer to "[5.2.8 Restoration of the management information](#)" and restore the management information.

When performing a replication operation, restore the management information by using swsprcoverres (Resource adjustment command) with the -r option.

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, restore the operational environment backed up in "[3.1.1 Backup of the previous version](#)".



For details on the restoration method, refer to "Restoring environment settings files" in the "ETERNUS SF Operation Guide for Copy Control Module" for this version level.

3.3.2 Import of the Configuration information

Import the Configuration information from the previous version by executing the configuration information import command (esfimportdevconf) with administrator permissions.

Check that the targeted devices can be accessed before executing the configuration information import command.

```
[Program directory]\Common\bin\esfimportdevconf
```

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



See

.....
Refer to "7.2 Command reference" for details about the each import command.
.....

3.3.3 Setting up user account

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



See

.....
For details on how to set up, refer to "Setting up user account" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

3.3.4 Setting up for using Web Console

If you set up firewalls between the PC on which the Web Console is launched and the Management Server, make settings so as to allow transmission to pass the firewalls.



See

.....
For details on how to set up, refer to "Setting up for using Web Console" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

3.3.5 Set account information that can access to ETERNUS Disk storage system

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



See

.....
For details on how to set up, refer to "Set and change the information of the account who can access ETERNUS Disk storage system" in the "ETERNUS SF Web Console Guide" for this version level.
.....

3.3.6 License registration

Register the appropriate licenses.



See

Refer to "License Management" in the "ETERNUS SF Installation and Setup Guide" for this version level about the license settings.

3.3.7 Redefinition of the missing information

- Administrator information

Enter the administrator information



See

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

- Server information

Enter the server information



See

Refer to "Register the server" in the "ETERNUS SF Web Console Guide" for this version level about server registration.

- Connection type

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



See

Refer to "Connection type settings" in the "ETERNUS SF Express Operation Guide" for this version level about connection type settings.

- AdvancedCopy Manage Copy Control Module configuration information

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



See

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

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

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray list
Name BOX-ID IP Address
```

```
-----  
DX90 00ETERNUSDXL##ET09E24B####LH4311015511## 10.124.6.251
```

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

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

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

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

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

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

Point

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

5. Reload the Configuration information.

See

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

3.3.8 Resuming operations

Upon completion of the tasks above, rebuild the operational environment of Express.

See

.....
To rebuild the operational environment of Express, refer to the following manuals for this version level:

- "Setup of ETERNUS SF Manager" in "ETERNUS SF Installation and Setup Guide"
 - "Configuration" in "ETERNUS SF Express Operation Guide"
-

Chapter 4 Upgrade for Storage Cruiser

This chapter describes the upgrade procedure for Storage Cruiser.

Point

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

The Storage Cruiser's agent cannot be upgraded by using the Upgrade Installation.

For upgrading the Storage Cruiser's agent, as with previous versions, it is necessary to uninstall the previous version of the program and then install this version of the program.

For details, refer to "[4.2 Upgrade for Storage Cruiser's agent](#)".

- If upgrading Storage Cruiser, make sure that the Storage Cruiser's manager version level is the same or higher than the Storage Cruiser's agent version level.
- If upgrading Storage Cruiser, the following information cannot be imported:
 - Event log history
 - Account for using the GUI client
- If Storage Cruiser and AdvancedCopy Manager Copy Control Module are both installed on the same server, when upgrading one, both of Storage Cruiser and AdvancedCopy Manager Copy Control Module get upgraded. Therefore it is necessary to perform backups of the previous versions before starting the upgrade procedure.

4.1 Upgrade for Storage Cruiser's manager

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

To upgrade to this version, it is necessary to install the ETERNUS SF Manager program.

4.1.1 Before installation

The following preparation work must be done before starting the Upgrade Installation for Storage Cruiser's manager.

4.1.1.1 Backup of the previous version

Backup the operational environment of Storage Cruiser's manager for the previous version level using the following procedure.

Note

The iSCSI HBA information cannot be backed up. Save the current settings information in a memo.

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

1. Stop the Storage Cruiser's manager.

- For Windows environment

Stop the "ETERNUS SF Storage Cruiser Manager" in the Windows [Services] screen.

- For Solaris, Linux environment

Execute the following command.

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



See

For details about stopping the Storage Cruiser's manager, refer to the "ETERNUS SF Storage Cruiser User's Guide" for the relevant previous version.

2. Backup the operational environment of Storage Cruiser's manager for the previous version level, referring to the following parts in the "ETERNUS SF Storage Cruiser Operation Guide" for this version.

- For Windows environment

Perform Step 4 through 10 of "Backup of Windows Manager". In Step 4, perform the "Upgrade from a previous version".



Note

The file names or directory names of the copy source that are described in Step 5 through 10 of "Backup of Windows Manager" differ to those of a previous version level.

Read as the following file names or directory names.

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

- For Solaris, Linux environment

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

AdvancedCopy Manager operational environment

When AdvancedCopy Manager is installed, backup the operational environment of AdvancedCopy Manager for the previous version level.

In case of a Storage Management Server which also serves as a Storage Server in Windows environment, backup the following files after backing up the operational environment. Execute backup process by using copy command on the command prompt screen.

- In case of a non-cluster environment

<Environment Directory>\etc\device.ini

- In case of a cluster environment

<Drive letter of shared disk for shared data for AdvancedCopy Manager>:\etc\opt\swstorage\etc\device.ini

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

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

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, backup the operational environment of AdvancedCopy Manager Copy Control Module for the previous version level.



See

.....
For details on the backup method for the operational environment, refer to "A.6 Backup of the environment setting files".
.....

License information

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

Backup the license management database of ETERNUS SF License Manager by using esflm backup command. For details of esflm backup command, refer to the "ETERNUS SF AdvancedCopy Manager Installation and Setup Guide" for the previous version level.

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

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

4.1.1.2 Available disk space verification

Make sure that there is enough available disk space on the server where the Upgrade Installation will be performed.

The required disk space for the upgrade is calculated as the required disk space for the new version to be installed minus the required disk space of the previous version.

Required disk space for the new version

This space is required to install this version of the ETERNUS SF Manager program.

For details on the required space, refer to "Operating environment of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.

Required disk space for the previous version

This space is required to install the previous version of the Storage Cruiser's manager program.

For details on the required space, refer to the "ETERNUS SF Storage Cruiser Installation Guide" for the relevant previous version.

4.1.1.3 Incompatible software uninstallation

Check if any incompatible software for this version of the ETERNUS SF Manager program is installed on the server where the Upgrade Installation will be performed.

If the incompatible software is found, refer to that software manual and uninstall it before starting the Upgrade Installation.



See

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

4.1.1.4 Symfoware verification

Symfoware product is bundled with this product. If Symfoware is already installed on the server where the Upgrade Installation will be performed, it is necessary to check the Symfoware environment before starting the Upgrade Installation.



.....
For details on how to check, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

If Symfoware is not installed, this verification is not necessary.

4.1.1.5 Database size estimation

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



.....
For details about how to check, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

4.1.1.6 Registration of access user for repository database (for Solaris, Linux)

For operations for Storage Cruiser's manager of this version level, registration of access user for repository database is required.
Therefore, register the access user for repository database before starting Upgrade Installation.



.....
For details about registering user, confirm with a Fujitsu system engineer.
.....

4.1.1.7 Kernel parameter tuning (for Solaris, Linux)

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



.....
For details about tuning, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

4.1.1.8 Confirmation of Port number for Communication service (for Solaris, Linux)

For operations for AdvancedCopy Manager's manager of this version level, the ports to be used are added compared to the previous version level.
Therefore, make sure the port to be used is vacant before starting Upgrade Installation



See

For details about using port numbers, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.

4.1.1.9 Preparation for uninstallation of the previous version level

If AdvancedCopy Manager is installed, before starting the Upgrade Installation, the following work must be done as the preparation for uninstallation of the previous version level.

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

Cancel the configuration information of the web server as follows.

1. Login to the system in which you want to uninstall the AdvancedCopy Manager.
The login user must have Administrator privileges for the terminal to be uninstalled the previous version level.
2. If you configured the web server during installation, cancel the configuration information of the Web server.
Execute the following command on the command prompt screen.

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

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

2. Stop daemon. (for Solaris and Linux environments only)

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

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

3. Execution of DB unsetup.

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

- For Windows environment
["A.7 Unsetup of database"](#)
- For Solaris, Linux environment
["A.8 Cancel of repository settings"](#)

In the case of cluster operation

Under cluster operation, the user must execute cluster unsetup before uninstallation.



See

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

4.1.2 Upgrade installation (for Windows)

There are two methods of performing the Upgrade Installation for Windows.

- Default installation

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

- Installation destination

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

- Port numbers for the various communication services

11 port numbers are used, as follow:

Service	Display name on the [Port Registration] screen	Used 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	5432
Remote access service	Remote access service	9851
Exclusive control service	Exclusive control service	9852
Internal use	Internal Port 1	8005
	Internal Port 2	8009
	Internal Port 3	8443
	Internal Port 4	24916

- Custom installation

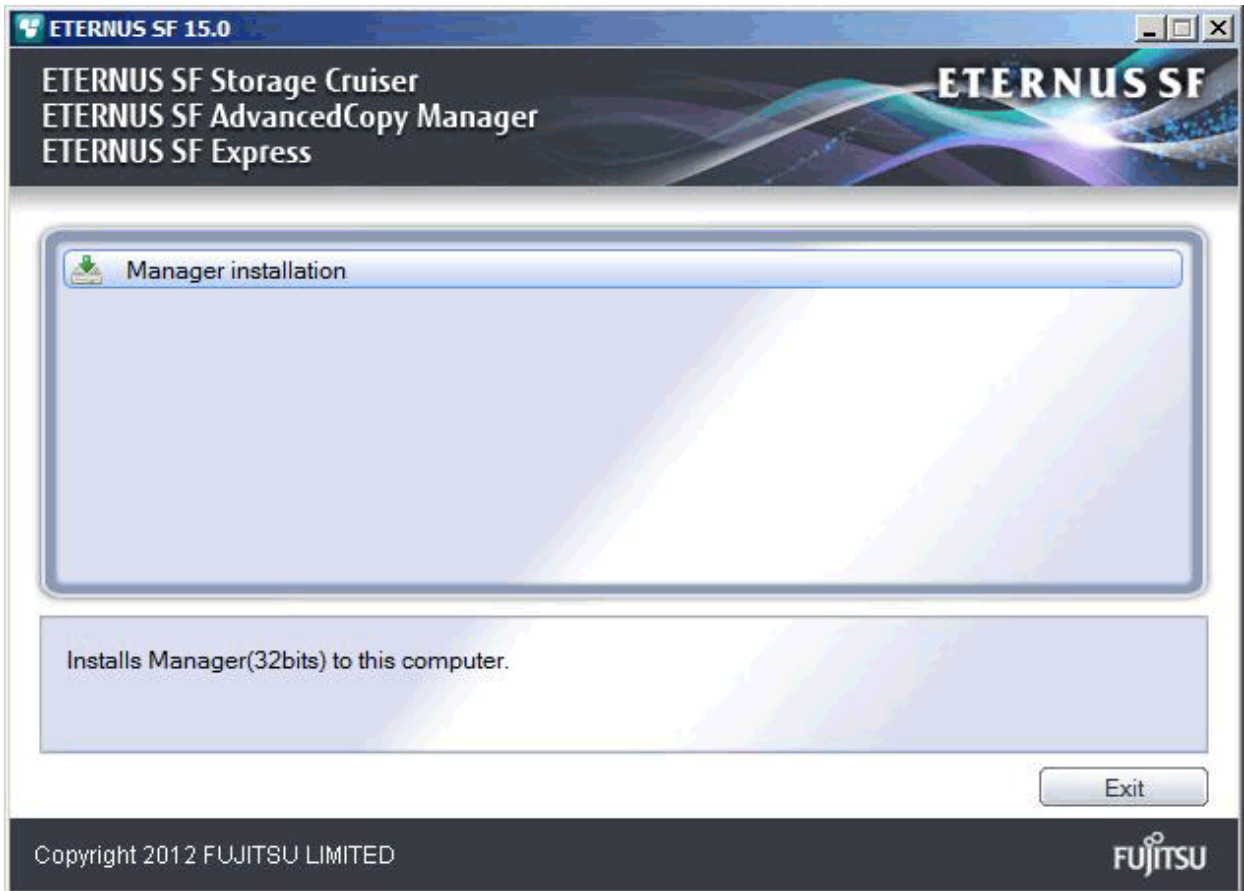
Upgrade is done by entering the configuration information on the screen (installation destination, communication service port numbers).

The Upgrade Installation procedure is performed as follow:

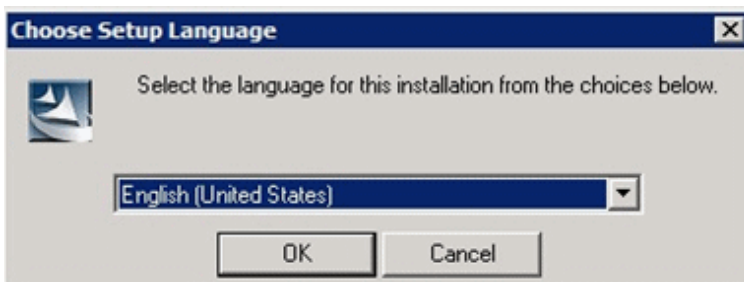
1. Using an account with Administrator privileges, log in the server where the upgrade will be performed.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express V15.0 Mediapack for Windows (Manager Program)" into the DVD-ROM drive.

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

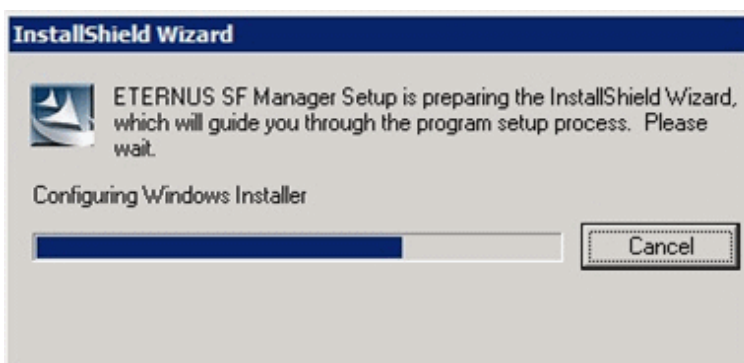
- The following screen is displayed. Click the [Manager installation] button. To cancel the Upgrade Installation at this point, click the [Exit] button.



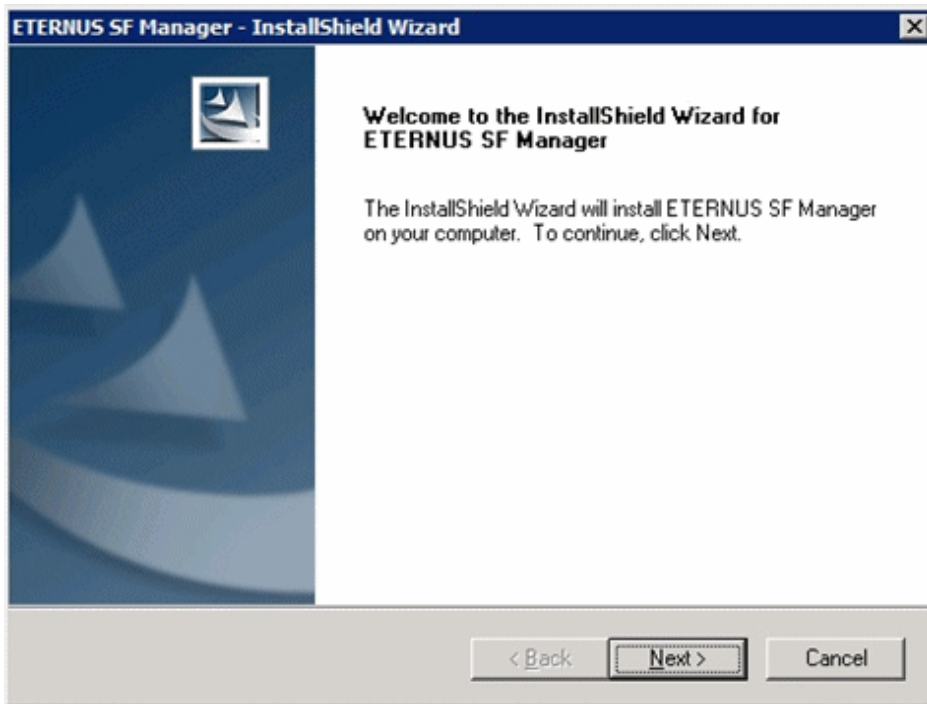
- The [Choose Setup Language] screen is displayed. Select the language to be used for the installation and click the [OK] button. The language selected in this screen is used during the installation, and also during the uninstallation.



- The following screen is displayed. To cancel the Upgrade Installation at this stage, click the [Cancel] button.

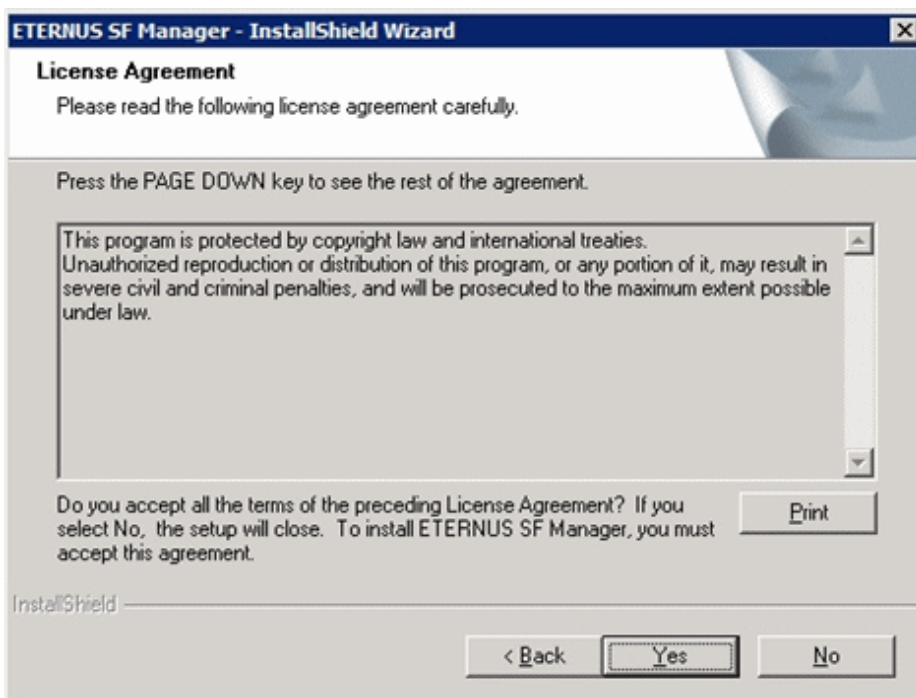


6. The following screen is displayed. After checking the screen contents, click the [Next] button.

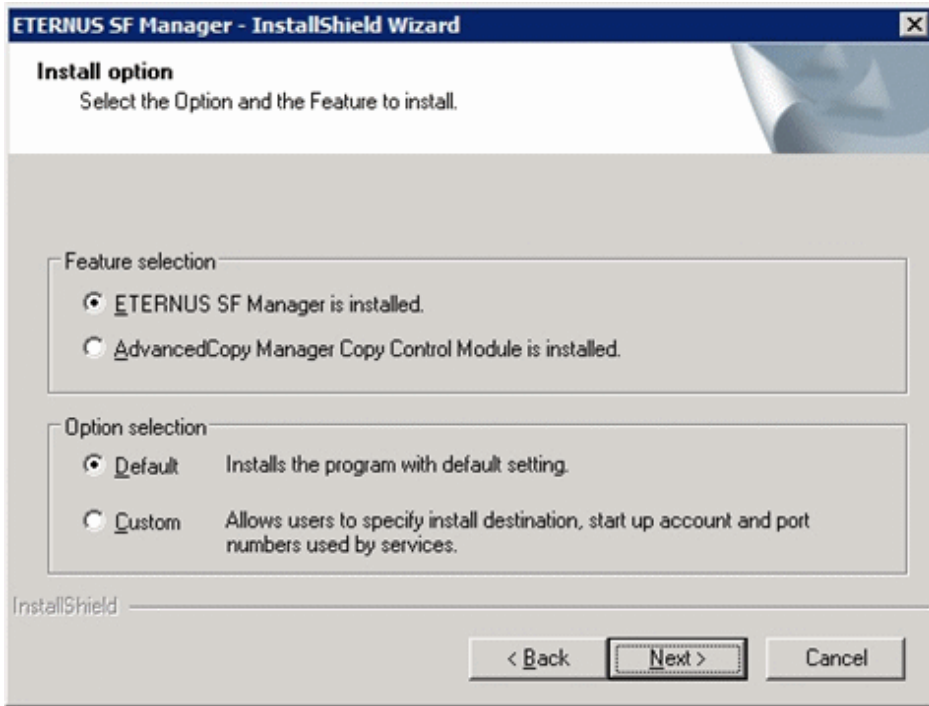


7. Read the terms and conditions in the [License Agreement] screen.

After reading the contents, if the conditions are agreed click the [Yes] button.



8. Select the functions to install and the options in the [Install option] screen.



Feature selection

Select [ETERNUS SF Manager is installed.].

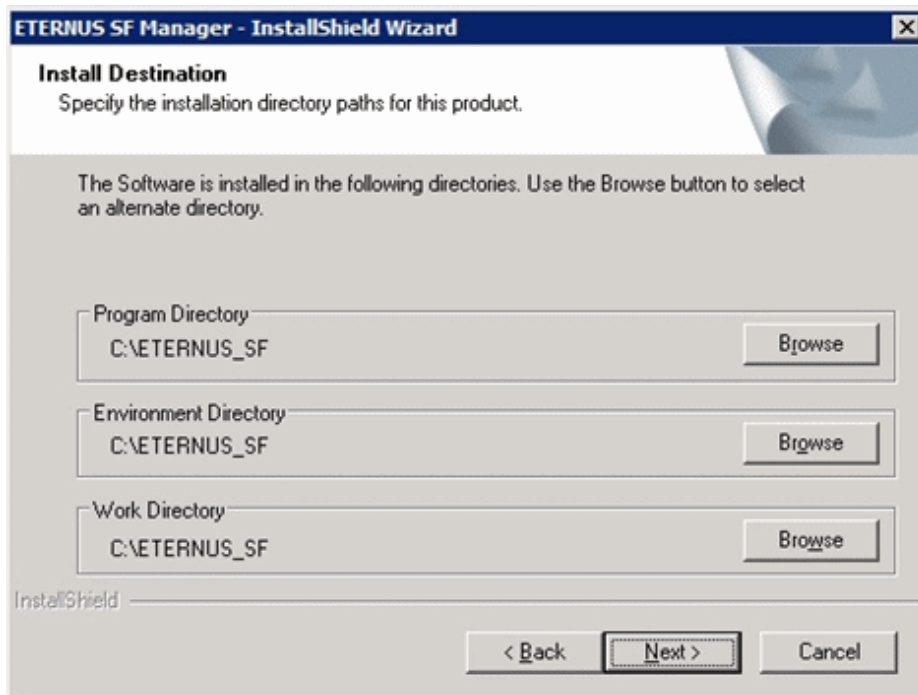
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	<p>Changing values in the [Installation Destination] screen and [Port Registration] screen is optional and can be omitted. In that case, the steps 9 and 10 can be skipped.</p> <p>In this installation method, the following checks are automatically performed regarding the information provided as a 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 is displayed. If no error is detected, the [Start Copying Files] screen is displayed.</p>
Custom	The installation information must be entered in the screens from step 9 and later.

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

If installing to a directory besides the directory displayed by default, click the [Browse] button and change the install location. After designating all of the directories, click the [Next] button.



Note

- Do not specify the shared directory as the installation directory.
- The blank space and the following characters [" | : * ? / . < > , % & ^ = ! ;] cannot be used in 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] screen.

Service	Port Number
ETERNUS SF Manager Apache service	9855
Communications service 1	1226
Communications service 2	4917
Repository service 1	2004
Repository service 2	5432
Remote access service	9851
Exclusive control service	9852

For Internal Use	
Internal Port 1	8005
Internal Port 2	8009
Internal Port 3	8443
Internal Port 4	24916

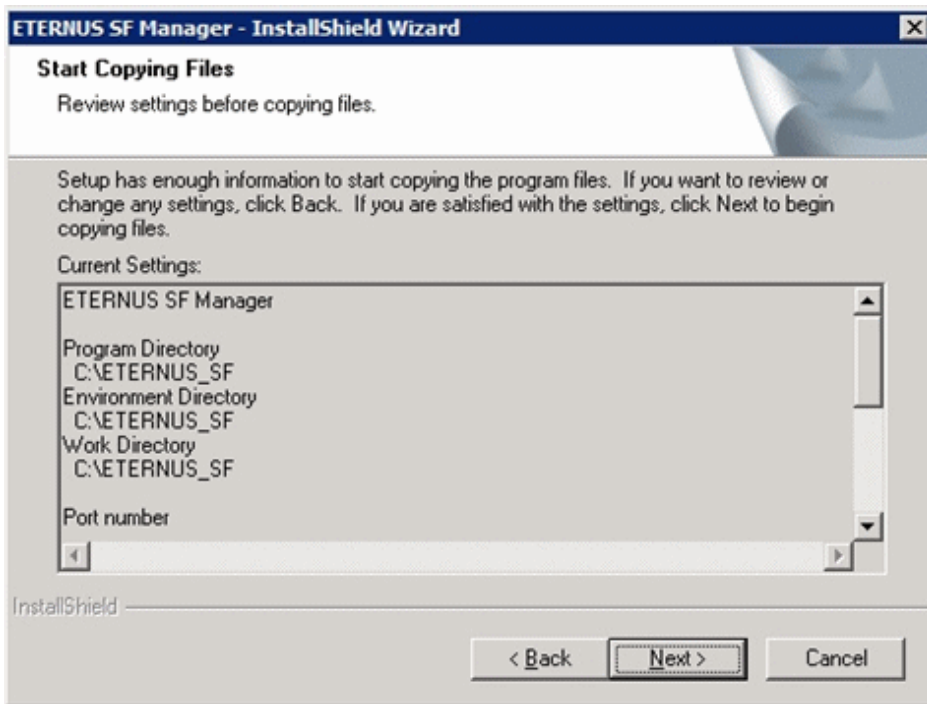
The values displayed at the screen opening are default values. If necessary, enter replacement port numbers matching your environment. Values between 5001 and 32767 are valid.

After finishing input, click the [Next] button. If one of the entered values is already in use, the input screen will be displayed again.

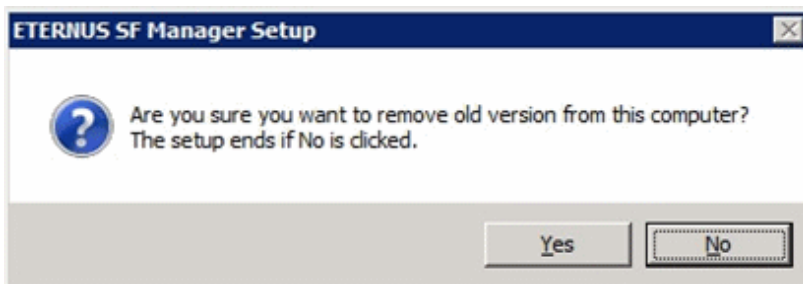
11. Check the settings information in the [Start Copying Files] screen.

If the settings are correct, click the [Next] button.

To go back and change a setting, click the [Back] button.



12. The following screen is displayed. To proceed with the uninstallation of the previous version, click the [Yes] button.



13. The previous version uninstallation is started.

The uninstallation program is executed.

Answer to the question in each screen.

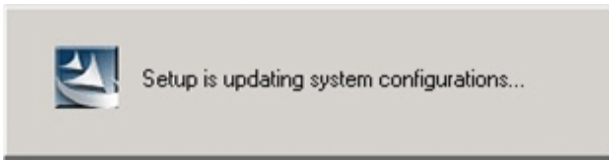
Point

- For the question regarding restart to the computer, click the [No] button.
When clicking the [Yes] button, the Upgrade Installation is interrupted. When re-execute the installation after restart the computer, the installation is treated as new one.
- When the uninstallation of the previous version completes successfully, the [Uninstallation was completed successfully] screen may be displayed. Although the instruction on the screen indicates the deletion of the files and folders, do not delete the files and folders when operating the Upgrade Installation.

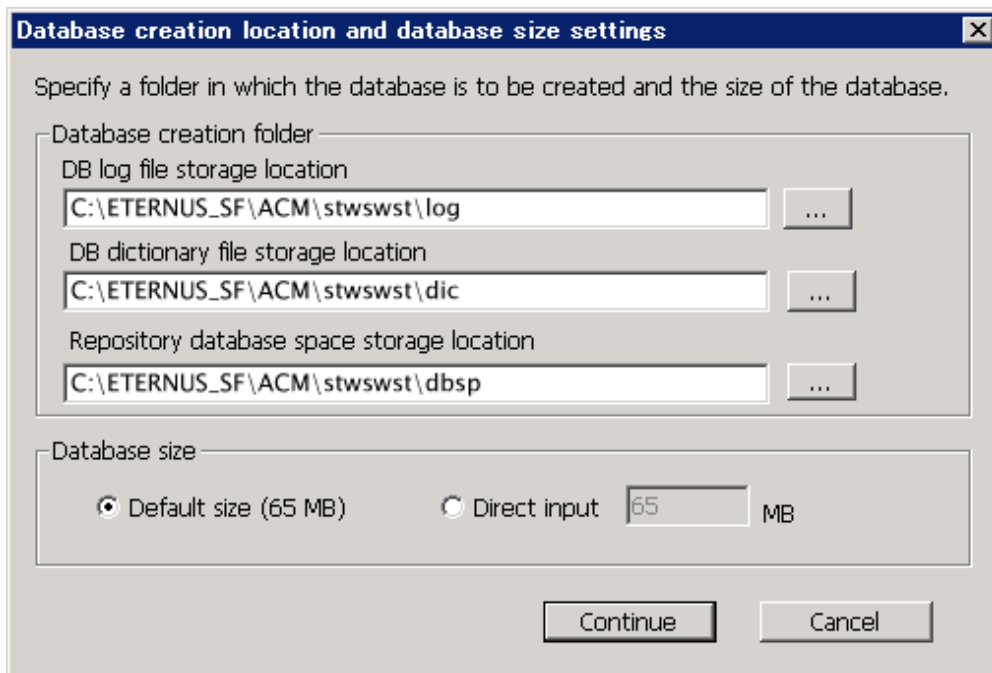
14. Once the previous version uninstallation is completed, the copy of the new program version is started.

During the process, the file copy completion status is displayed in the [Setup Status] screen.

15. Once the copy process ends, the system configuration is updated. Wait for the configuration update process to finish.



16. Enter the requested information for the repository database creation in the following screen. After the input, click the [Continue] button.



Database creation folder

This is the folder where the database will be created.

Enter the path, including the drive name, for each of the following database directories. The specified folders must be new NTFS folders. If a folder specified is not a NTFS folder or if it already exists, choose another name.

The default of the folders to store the repository database is displayed in each field. Change if 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 the shared folder as the folder where the database will be created.
- The number of characters in a folder name must be between 4 and 80. The blank space and the following characters [" | : * ? / . < > , % & ^ = ! ; # ' @] cannot be used in folder names.
- Do not check 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.
Overhead is greater to a compressed and/or encrypted drive. Access errors may occur in low OS resource conditions.
If the encryption property is checked, access errors may occur when decryption cannot be performed.

Database size

The database size is entered in MB. The size to enter is the result of the calculation performed before installation as described in "4.1.1.5 Database size estimation". To use the default value, check the [Default size (65 MB)] box.

17. The following screen is displayed for the IP address and the database user settings.
Once the input is finished, click the [Settings] button.

The default value is displayed in the screen. Change if necessary.

IP address

Enter the IP address of the Management Server (own system).

If the previous version level of AdvancedCopy Manager has been installed, specify the IP address of the Management Server used with the previous production.

Note

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.

Repository access user

Enter username and password for the database access user.

The usernames entered here must have local login or domain login permissions at the OS level.

For the default value of username and password, confirm with a Fujitsu system engineer.

However, use other than default value because of security reasons.

The following conditions apply for the usernames and passwords:

- Username and password must be compatible with the underlying operating system.
- Username and password must be no longer than 18 characters (bytes).

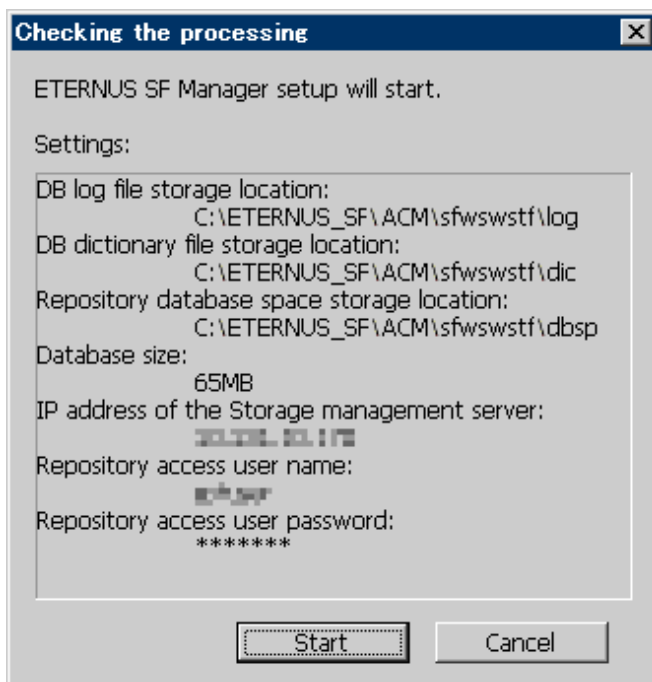


- If the user name specified here is not yet registered to the system, perform the registration, and add either local login or domain login privileges. Refer to the table below and specify a user that corresponds to the server type being used.

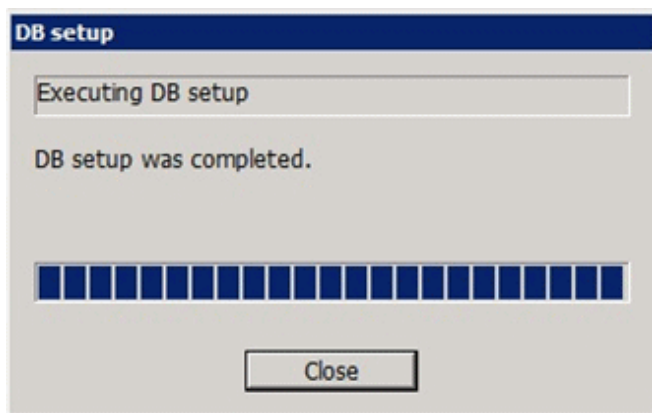
Server type	User to be specified
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (not belong to the domain)	

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

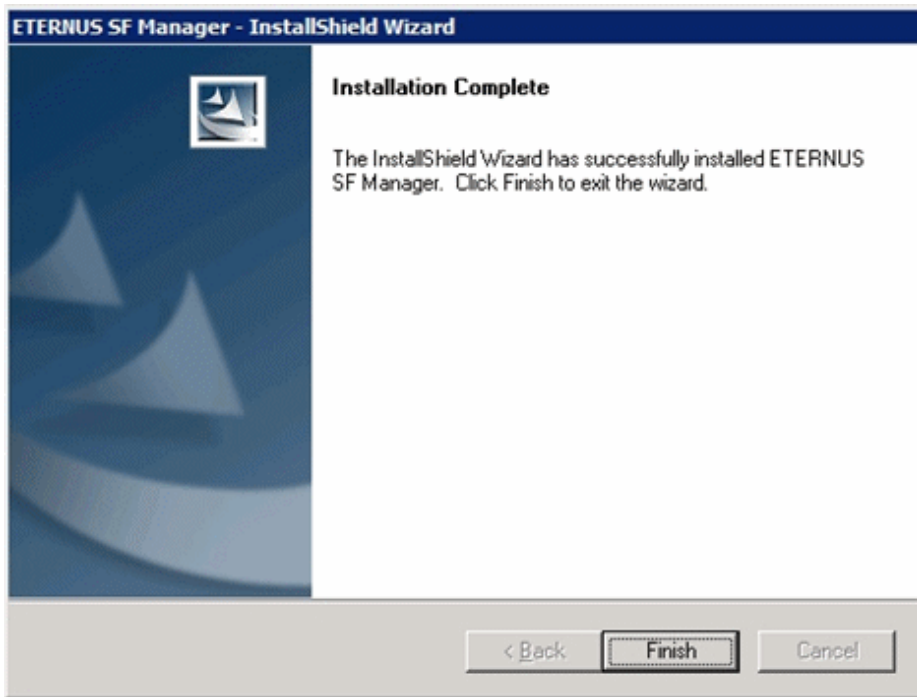
18. The following screen is displayed. Check the contents and click the [Start] button.



19. The database setup process starts. When the process is finished, the following screen is displayed. Click the [Close] button.



20. The following screen is displayed. The Upgrade Installation process is finished, click the [Finish] button.



21. Eject the DVD-ROM from the DVD-ROM drive.

The Upgrade installation of the Windows versions of Storage Cruiser's manager ends at this point.

In the case of non-cluster operation, perform the "4.1.4 Post-upgrade Installation tasks" afterwards.

In the case of cluster operation, 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 level to setup the cluster operation. Perform "4.1.4 Post-upgrade Installation tasks" afterwards.

4.1.3 Upgrade installation (for Solaris, Linux)

There are two methods of performing the Upgrade Installation for Solaris and Linux.

- Default installation

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

- Installation destination

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

- Port numbers for the various communication services

The following ports are used:

Service	Service Name	Used port number	Display name on the [Port Registration] screen
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	22004/tcp	Repository_service_1

Service	Service Name	Used port number	Display name on the [Port Registration] screen
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	8005/tcp	Internal_port_1
	esfmanagertomcat2	8009/tcp	Internal_port_2
	esfmanagertomcat3	18443/tcp	Internal_port_3
	sscruiserm	24916/tcp	Internal_port_4
	astm	24917/tcp	Internal_port_5

- Custom installation

The Install parameter file is provided on the DVD-ROM "ETERNUS SF SC/ACM/Express V15.0 Mediapack Manager Program". Copy this file in a convenient location, modify the installation information (port number for the communications service, character codepage, etc), and use when doing the install.

- Location of the install parameter files

```
<Mount_directory>/Manager_unix/omitDialogue.txt
```

- Install parameters

The install parameters inside the parameter file are described below.

Parameter name	Content	Default value
Install_function_type	When installation ETERNUS SF Manager, set to [1].	1
Character_code_number	Contains the character encoding used in AdvancedCopy Manager. For Solaris, the value is [1] (EUC) or [2] (SJIS), for Linux the value is [1] (UTF8) or [2] (EUC)	1
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	22004
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	8005
Internal_Port_2		8009
Internal_Port_3		18443

Parameter name	Content	Default value
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/db/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 (NOTE)	None.

NOTE: 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.

Note

Make sure to perform the followings when the previous version level of AdvancedCopy Manager has been installed and the Management Server has two or more IP addresses.

- Perform the custom installation.
- Specify the IP address of the Management Server used with the previous production to 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 for the Management Server is set automatically during the installation. After the installation is completed, change the IP address if required. For the information on how to change an IP address, refer to "Changing the IP address of Management Server" in "ETERNUS SF AdvancedCopy Manager Operation Guide" for the operating system of the Management Server.

The Upgrade Installation procedure is performed as follow:

1. Log in the server where the upgrade will be performed as root.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express V15.0 Mediapack Manager Program" into the DVD-ROM drive.
For details on the DVD-ROM structure and detailed contents, refer to "DVD-ROM contents" in the "ETERNUS SF Installation and Setup Guide" for this version level.

3. Mount the DVD-ROM. If the drive is automount, this step is not necessary.
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 installation shell script.

Example of a default installation:

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

Example of a custom installation:

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

<Install parameter file> is the path where the modified install parameter file is stored.

6. The installation information is displayed with a confirmation message. To continue with the installation, enter "y". To cancel at this point, enter "q". Hit the enter key to proceed.

```
+-----+
|                ETERNUS SF V15.0                |
|                |                                |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012 |
|                |                                |
+-----+

Setting of installation parameter file.

Install_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: 22004
Repository_service_2: 15432
Remote_access_service: 9851
Exclusive_control_service: 9852
Internal_Port_1: 8005
Internal_Port_2: 8009
Internal_Port_3: 18443
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:

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

7. The following message asks for confirmation before uninstalling the previous version. To uninstall the previous version and proceed with the new version installation, type "y". To cancel installation process, type "q". Hit the Enter key.

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



.....
For the inquiry for uninstalling of the previous version, type "y" so as to continue the uninstallation. When the uninstalling is cancelled, the Upgrade Installation is interrupted. When re-execute the installation after restart the computer, the installation is treated as new one.
.....

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

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

9. Change to a directory outside of the DVD-ROM.

Example:

```
# cd
```

10. Unmount the DVD-ROM.

Example:

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

11. Eject the DVD-ROM from the DVD-ROM drive.

The Upgrade installation of the Solaris and Linux versions of Storage Cruiser's manager ends at this point.

In the case of non-cluster operation, perform the "[4.1.4 Post-upgrade Installation tasks](#)" afterwards.

In the case of cluster operation, 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 level to setup the cluster operation. Perform "[4.1.4 Post-upgrade Installation tasks](#)" afterwards.

4.1.4 Post-upgrade Installation tasks

Once the Storage Cruiser's manager Upgrade Installation has been completed, the following tasks need to be performed.

4.1.4.1 Restoration from previous version

Refer to the following parts in the "ETERNUS SF Storage Cruiser Operation Guide" to restore the operational environment backed up in "[4.1.1.1 Backup of the previous version](#)".

- For Windows environment

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

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

2. Perform Step 5 to 11 in "Restoring Windows Manager". In Step 5, perform the "Upgrade from a previous version".

3. Execute the following batch file to restart the service of ETERNUS SF Manager.

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

- For Solaris, Linux environment

1. Execute the following shell script to stop the daemon of ETERNUS SF Manager.

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

2. Perform Step 5 to 11 in "Restoring Solaris OS Manager". In Step 5, perform the "Upgrade from a previous version".

3. Execute the following shell script to restart the daemon of ETERNUS SF Manager.

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

AdvancedCopy Manager operational environment

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

Note

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

1. Restore the repository data

Execute `stgrepcnv` (Repository data migration command) to restore the repository data and then convert it for use with the current version of the repository. For details on the command, refer to "`stgrepcnv` (Repository data migration command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" for this version level.

In case of a Storage Management Server which also serves as a Storage Server in Windows environment, restore the files from the data backed up in "[4.1.1.1 Backup of the previous version](#)" after recovering the repository data. Restore to the following location by using copy command on the command prompt screen.

- In case of a non-cluster environment
`<Environment Directory after upgrading>\etc\device.ini`
- In case of a cluster environment
`<Drive letter of shared disk for shared data after upgrading of AdvancedCopy Manager>:\etc\opt\swstorage\etc\device.ini`

2. Change the server information

To ensure data consistency, use `stgxfwcmmodsrv` (Server information change command) to perform the server information change processing.

When executing `stgxfwcmmodsrv` (Server information change command), specify the Management Server name to the `-n` option. For details on the command, refer to "`stgxfwcmmodsrv` (Server Information change command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" for this version level.

Check the [Server] column of `stgxfwcmdisprsv` (Server information display command) execution result for the Management Server name specified to the `-n` option.

3. Restore the management information (Management Server which also serves as a Managed Server only.)

Refer to "[5.2.8 Restoration of the management information](#)" and restore the management information.

When performing a replication operation, restore the management information by using `swsprcoverres` (Resource adjustment command) with the `-r` option.

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, restore the operational environment backed up in "[4.1.1.1 Backup of the previous version](#)".

See

For details on the restoration method, refer to "Restoring environment settings files" in the "ETERNUS SF Operation Guide for Copy Control Module" for this version level.

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 using `esflm restore` command. For details of `esflm restore` command, refer to the "ETERNUS SF Installation and Setup Guide" for this version level.

Example of executing `esflm restore` command is as below. The `<file_name>` is the file name specified when the backup data was created.

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

4.1.4.2 Import of the Configuration information

Import the Configuration information from the previous version by executing the configuration information import command (esfimportdevconf) with administrator permissions.

Check that the targeted devices can be accessed before executing the configuration information import command.

- For Windows environment

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

- For Solaris, Linux environment

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

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



See

Refer to "7.2 Command reference" for details about the each import command.

4.1.4.3 Setting up user account

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



See

For details on how to set up, refer to "Setting up user account" in the "ETERNUS SF Installation and Setup Guide" for this version level.

4.1.4.4 Setting up for using Web Console

If you set up firewalls between the PC on which the Web Console is launched and the Management Server, make settings so as to allow transmission to pass the firewalls.



See

For details on how to set up, refer to "Setting up for using Web Console" in the "ETERNUS SF Installation and Setup Guide" for this version level.

4.1.4.5 Set account information that can access to ETERNUS Disk storage system

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



See

For details on how to set up, refer to "Set and change the information of the account who can access ETERNUS Disk storage system" in "ETERNUS SF Web Console Guide".

4.1.4.6 License registration

Register the appropriate licenses.



See

For settings, refer to "License Management" in "ETERNUS SF Installation and Setup Guide".

4.1.4.7 Redefinition of the missing information

- iSCSI HBA information

If iSCSI was defined before the upgrade, redefine it with the following procedure:

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

- AdvancedCopy Manage Copy Control Module configuration information

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



See

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

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

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

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

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

- Remove all of registered ETERNUS Disk storage system by using "acarray remove (ETERNUS Disk storage system registration information deletion command)".

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

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

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

Point

When the ETERNUS Disk storage system was registered by specifying 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.

- Reload the Configuration information

See

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

4.1.5 Resuming operations

Upon completion of the tasks above, upgrade installation of Storage Cruiser's manager is complete. The next task is the reconstruction of the operational environment of Storage Cruiser's manager. Refer to the following manual for this version level:

- "Setup of ETERNUS SF Manager" in "ETERNUS SF Installation and Setup Guide"

4.2 Upgrade for Storage Cruiser's agent

The following shows the upgrade procedure for Storage Cruiser's agent.

- Back up the Storage Cruiser's agent settings information of the previous version.
 - For Windows environment:

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, backup is not required.

- For Solaris, Linux and HP-UX environments:

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, backup is not required.

2. Uninstall the previous version of the Storage Cruiser's agent.

For details on how to uninstall, refer to the "ETERNUS SF Storage Cruiser Installation Guide" for the relevant previous version.

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

For details on how to install, refer to "Installation of Storage Cruiser's agent" in the "ETERNUS SF Installation and Setup Guide" for this version level.

4. Set up the Storage Cruiser's agent.

For details on how to set up, refer to "Setup of Storage Cruiser's agent" in the "ETERNUS SF Installation and Setup Guide" for this version level.

5. Restore the Storage Cruiser's agent settings information backed up in step 1.

- For Windows environment:

- 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 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 work is not required if the file was not backed up in step 1.

- For Solaris, Linux and HP-UX environments:

- 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 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 work is not required if the file was not backed up in step 1.

6. Reload server information using Web Console.



For details of reloading server information, refer to "Reload the server configuration information" in the "ETERNUS SF Web Console Guide" for this version level.

Chapter 5 Upgrade for AdvancedCopy Manager

This chapter describes the upgrade procedure for AdvancedCopy 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

- With 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, as with previous versions, it is necessary to uninstall the previous version of the program and then install this version of the program.

For details, refer to "[5.2 Upgrade for AdvancedCopy Manager's agent](#)".

- If upgrading AdvancedCopy Manager, make sure that the AdvancedCopy Manager's manager version level is the same or higher than the AdvancedCopy Manager's agent version level.
- When upgrading AdvancedCopy Manager, the following information cannot be imported:
 - Account for using the GUI client
- If AdvancedCopy Manager and AdvancedCopy Manager Copy Control Module are both installed on the same server, when upgrading one, both of AdvancedCopy Manager and AdvancedCopy Manager Copy Control Module will be upgraded. Therefore it is necessary to perform backups of the previous versions before starting the upgrade procedure.

5.1 Upgrade for AdvancedCopy Manager's manager

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

To upgrade to this version, it is necessary to install the ETERNUS SF Manager program.

5.1.1 Before installation

The following preparation work must be done before starting the Upgrade Installation for AdvancedCopy Manager's manager.

5.1.1.1 Backup of the previous version

Back up the operational environment of AdvancedCopy Manager's manager for the previous version level.

In case of a Storage Management Server which also serves as a Storage Server in Windows environment, backup the following files after backing up the operational environment. Execute backup process by using copy command on the command prompt screen.

- In case of a non-cluster environment
<Environment Directory>\etc\device.ini
- In case of a cluster environment
<Drive letter of shared disk for shared data for AdvancedCopy Manager>:\etc\opt\swstorage\etc\device.ini

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

Server type	OS	Reference
Storage Management Server	Windows	A.1 Backup of repository data (for Windows)
	Solaris Linux	A.2 Backup of 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 Backup of repository data (for Windows) A.3 Backup of management information (for Windows)
	Solaris Linux	Perform the steps in the following order: <ol style="list-style-type: none"> A.2 Backup of repository data (for Solaris, Linux) A.4 Backup of management information (for Solaris, Linux)

AdvancedCopy Manager Copy Control Module operational environment

When AdvancedCopy Manager Copy Control Module is installed, backup the operational environment of AdvancedCopy Manager for the previous version level.



See

.....
For details on the backup method for the operational environment, refer to "[A.6 Backup of the environment setting files](#)".
.....

License information

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

Backup the license management database of ETERNUS SF License Manager by using esflm backup command. For details of esflm backup command, refer to the "ETERNUS SF AdvancedCopy Manager Installation and Setup Guide" for the previous version level.

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

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

5.1.1.2 Available disk space verification

Make sure that there is enough available disk space on the server where the Upgrade Installation will be performed.

The required disk space for the upgrade is calculated as the required disk space for the new version to be installed minus the required disk space of the previous version.

Required disk space for the new version

This space is required to install this version of the ETERNUS SF Manager program.

For details on the required space, refer to "Operating environment of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.

Required disk space for the previous version

This space is required to install the previous version of the AdvancedCopy Manager's manager program.

For details on the required space, refer to the relevant "ETERNUS SF AdvancedCopy Manager Installation and Setup Guide" for the previous version.

5.1.1.3 Incompatible software uninstallation

Check if any incompatible software for this version of the ETERNUS SF Manager program is installed on the server where the Upgrade Installation will be performed.

If the incompatible software is found, refer to that software manual and uninstall it before starting the Upgrade Installation.



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

5.1.1.4 Symfoware verification

Symfoware product is bundled with this product. If Symfoware is already installed on the server where the Upgrade Installation will be performed, it is necessary to check the Symfoware environment before starting the Upgrade Installation.



.....
For details on how to check, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

If Symfoware is not installed, this verification is not necessary.

5.1.1.5 Database size estimation

A database is necessary to operate AdvancedCopy Manager of this version.
The database size must be estimated before starting the Upgrade Installation.



.....
For details on how to check, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.
.....

5.1.1.6 Registration of access user for repository database (for Solaris, Linux)

For operations for AdvancedCopy Manager's manager of this version level, registration of access user for repository database is required. Therefore, register the access user for repository database before starting Upgrade Installation.



.....
For details about registering user, confirm with a Fujitsu system engineer.
.....

5.1.1.7 Kernel parameter tuning (for Solaris, Linux)

For operations for AdvancedCopy Manager's manager of this version level, Kernel parameter tuning is required. Therefore, perform Kernel parameter tuning before starting Upgrade Installation.



See

For details on the tuning method, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.

5.1.1.8 Confirmation of Port number for Communication service (for Solaris, Linux)

For operations for AdvancedCopy Manager's manager of this version level, the ports to be used are added compared to the previous version level.

Therefore, make sure the port to be used is vacant before starting Upgrade Installation.



See

For details on the port number to be used, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.

5.1.1.9 Preparation for uninstallation of the previous version level

Before starting the Upgrade Installation, the following work must be done as the preparation for uninstallation of the previous version level.

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

Cancel the configuration information of the web server as follows.

1. Login to the system in which you want to uninstall the AdvancedCopy Manager.
The login user must have Administrator privileges for the terminal to be uninstalled the previous version level.
2. If you configured the web server during installation, cancel the configuration information of the Web server.
Execute the following command on the command prompt screen.

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

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

2. Stop daemon. (for Solaris and Linux environments only)

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

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

3. Execution of DB unsetup.

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

- For Windows environment
"A.7 Unsetup of database"
- For Solaris, Linux environment
"A.8 Cancel of repository settings"

In case of Cluster operation

Under cluster operation, the user must execute cluster unsetup before uninstallation.



See

For the procedure for cluster unsetup, 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 level.

5.1.2 Upgrade installation (for Windows)

There are two methods of performing the Upgrade Installation.

- Default installation

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

- Installation destination

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

- Port numbers for the various communication services

11 port numbers are used, as follow:

Service	Display name on the [Port Registration] screen	Used 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	5432
Remote access service	Remote access service	9851
Exclusive control service	Exclusive control service	9852
Internal use	Internal Port 1	8005
	Internal Port 2	8009
	Internal Port 3	8443
	Internal Port 4	24916

- Custom installation

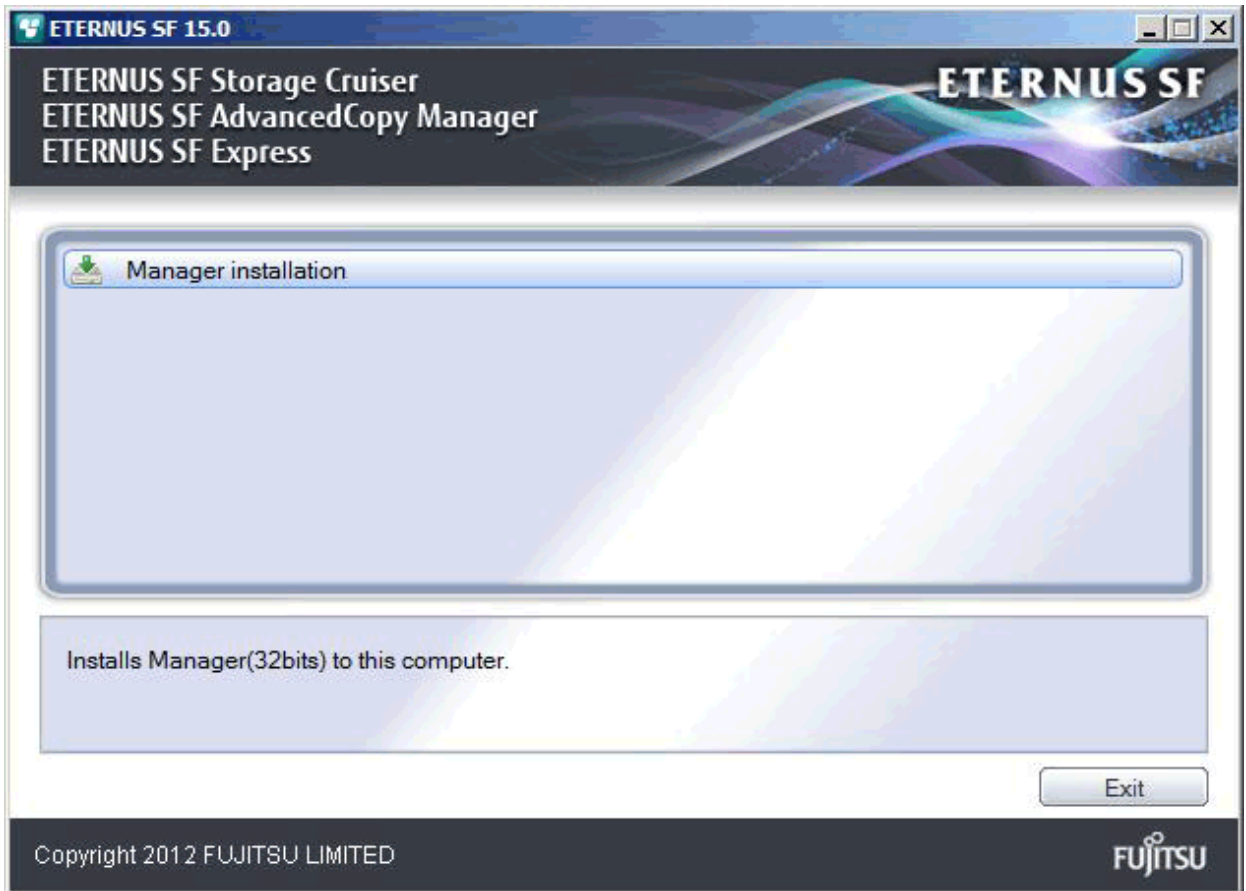
Upgrade is done by entering the configuration information on the screen (installation destination, communication service port numbers).

The Upgrade Installation procedure is performed as follow:

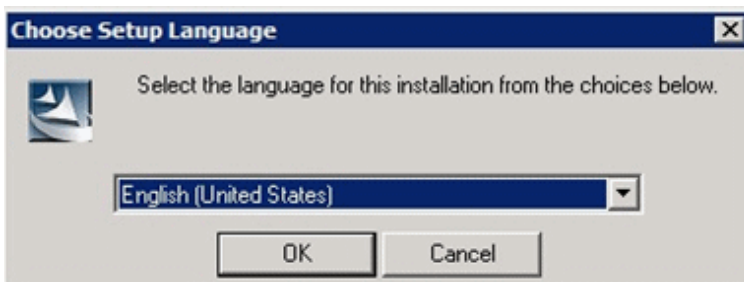
1. Using an account with Administrator privileges, log in the server where the upgrade will be performed.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express V15.0 Mediapack for Windows (Manager Program)" into the DVD-ROM drive.

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

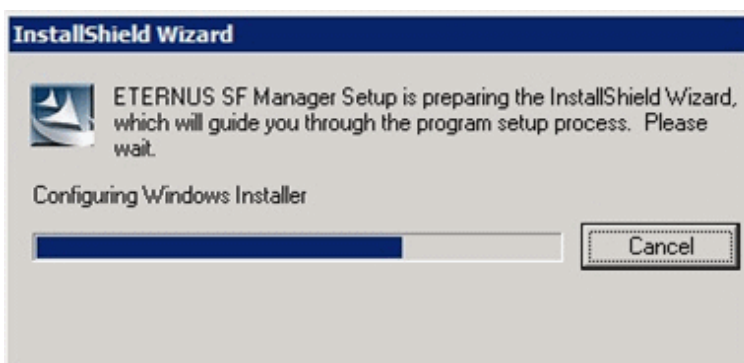
3. The following screen is displayed. Click the [Manager installation] button.
To cancel the Upgrade Installation at this point, click the [Exit] button.



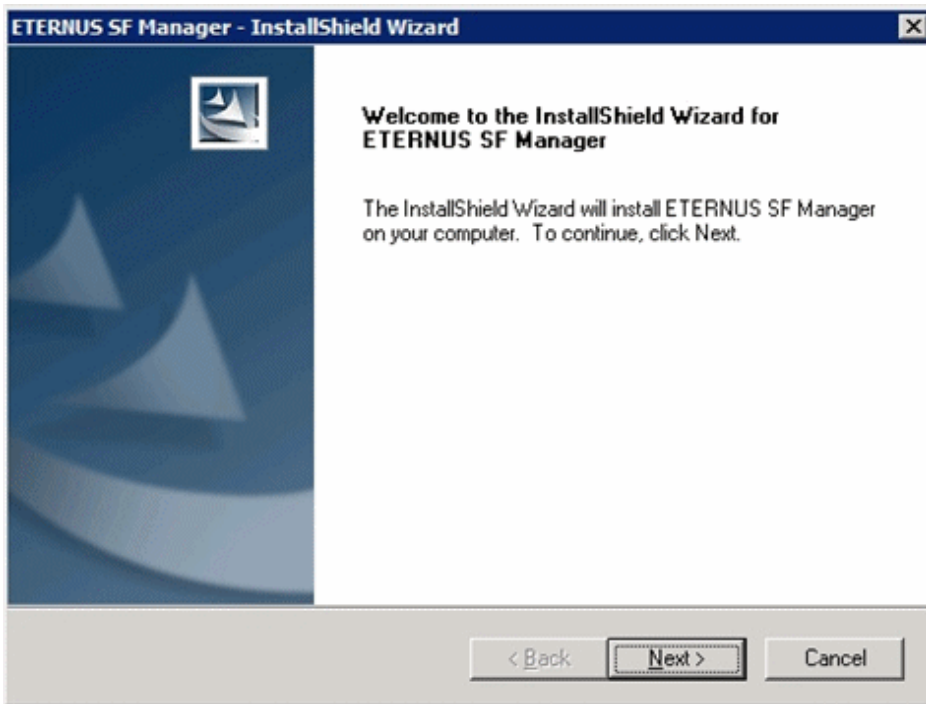
4. The [Choose Setup Language] screen is displayed. Select the language to be used for the installation and click the [OK] button.
The language selected in this screen is used during the installation, and also during the uninstallation.



5. The following screen is displayed. To cancel the Upgrade Installation at this stage, click the [Cancel] button.

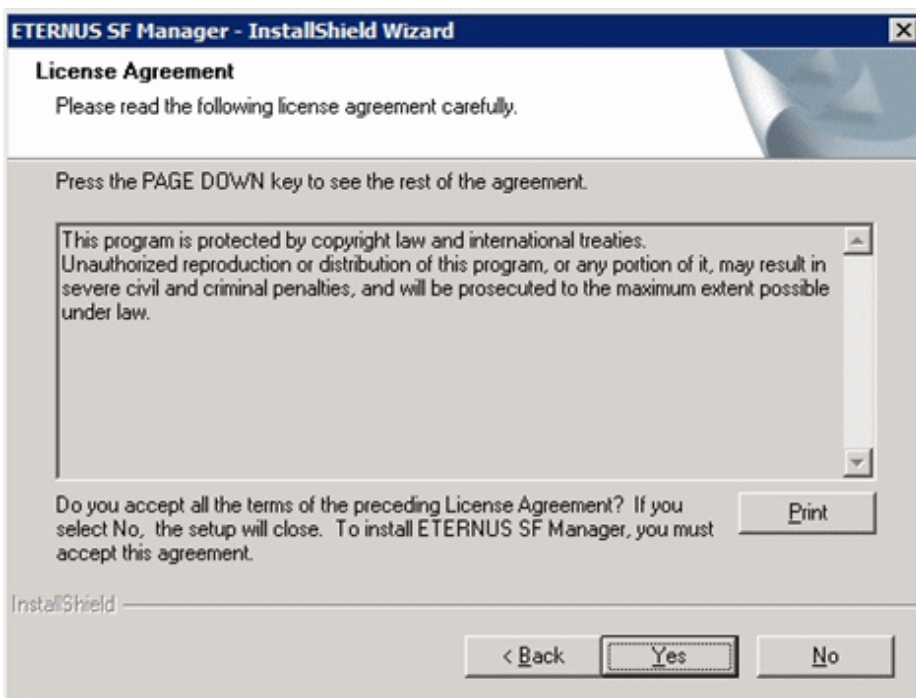


6. The following screen is displayed. After checking the screen contents, click the [Next] button.

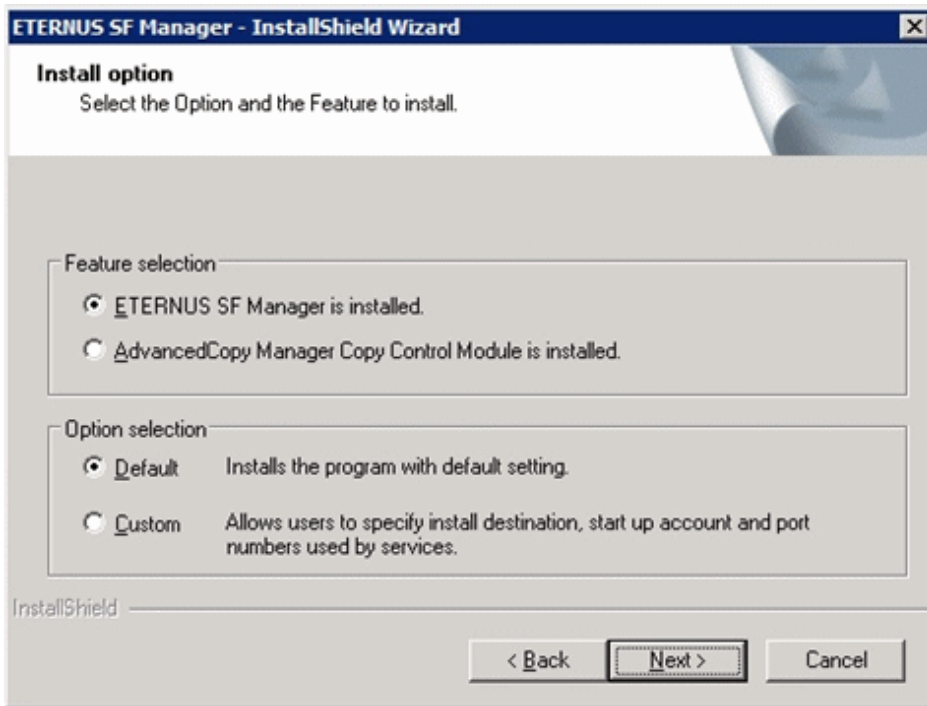


7. Read the terms and conditions in the [License Agreement] screen.

After reading the contents, if the conditions are agreed click the [Yes] button.



8. Select the functions to install and the options in the [Install option] screen.



Feature selection

Select [ETERNUS SF Manager is installed.].

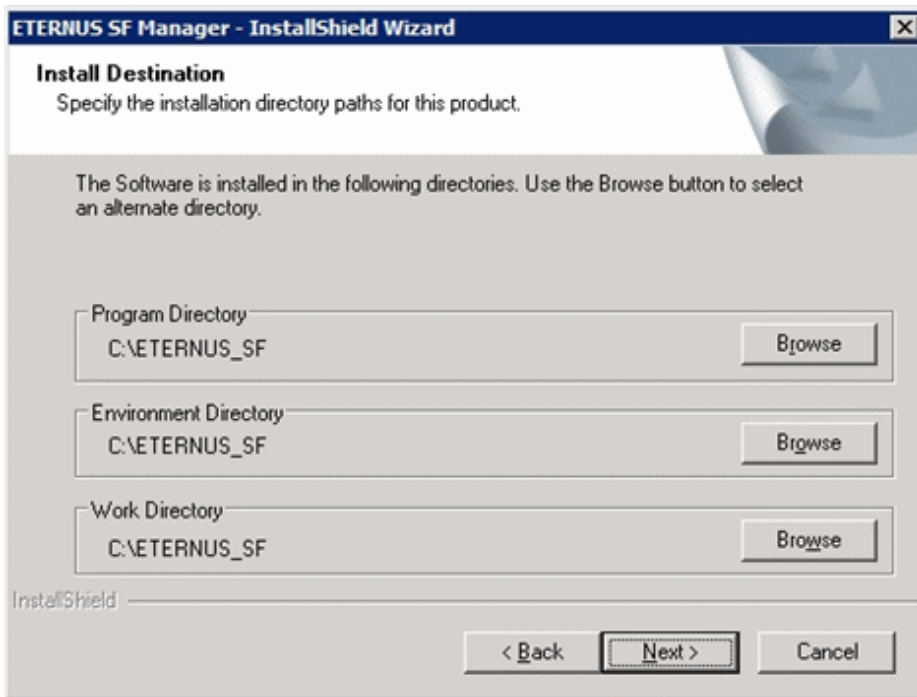
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	<p>Changing values in the [Installation Destination] screen and [Port Registration] screen is optional and can be omitted. In that case, the steps 9 and 10 can be skipped.</p> <p>In this installation method, the following checks are automatically performed regarding the information provided as a 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 is displayed. If no error is detected, the [Start Copying Files] screen is displayed.</p>
Custom	The installation information must be entered in the screens from step 9 and later.

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

If installing to a directory besides the directory displayed by default, click the [Browse] button and change the install location. After designating all of the directories, click the [Next] button.



Note

- Do not specify the shared directory as the installation directory.
- The blank space and the following characters [" | : * ? / . < > , % & ^ = ! ;] cannot be used in 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] screen.

Service	Port Number
ETERNUS SF Manager Apache service	9855
Communications service 1	1226
Communications service 2	4917
Repository service 1	2004
Repository service 2	5432
Remote access service	9851
Exclusive control service	9852

For Internal Use	
Internal Port 1	8005
Internal Port 2	8009
Internal Port 3	8443
Internal Port 4	24916

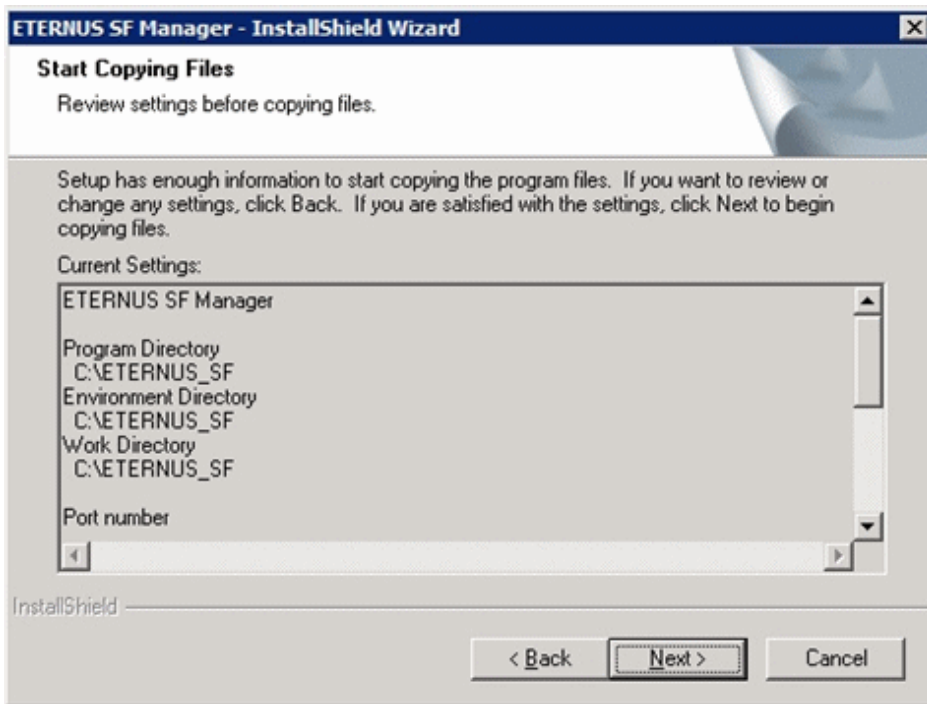
The values displayed at the screen opening are default values. If necessary, enter replacement port numbers matching your environment. Values between 5001 and 32767 are valid.

After finishing input, click the [Next] button. If one of the entered values is already in use, the input screen will be displayed again.

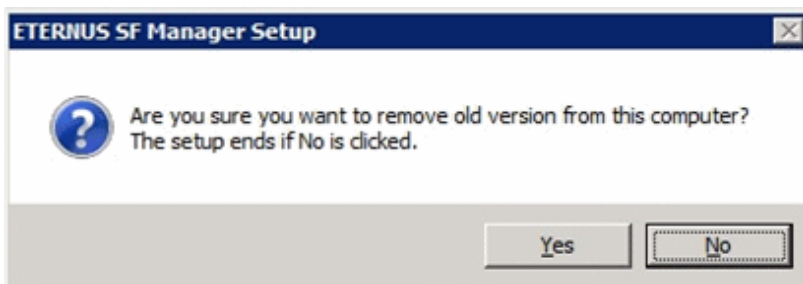
11. Check the settings information in the [Start Copying Files] screen.

If the settings are correct, click the [Next] button.

To go back and change a setting, click the [Back] button.



12. The following screen is displayed. To proceed with the uninstallation of the previous version, click the [Yes] button.



13. The previous version uninstallation is started.

The uninstallation program is executed.

Answer to the question in each screen.

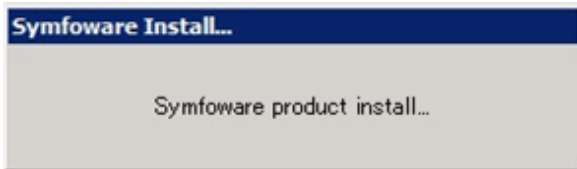
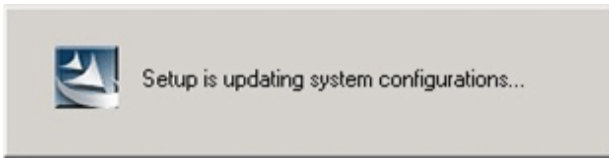
Point

- For the question regarding restart to the computer, click the [No] button. When clicking the [Yes] button, the Upgrade Installation is interrupted. When clicking [Yes], the Upgrade Installation is interrupted. When re-execute the installation after restart the computer, the installation is treated as new one.
- When the uninstallation of the previous version completes successfully, the [Uninstallation was completed successfully] screen may be displayed. Although the instruction on the screen indicates the deletion of the files and folders, do not delete the files and folders when operating the Upgrade Installation.

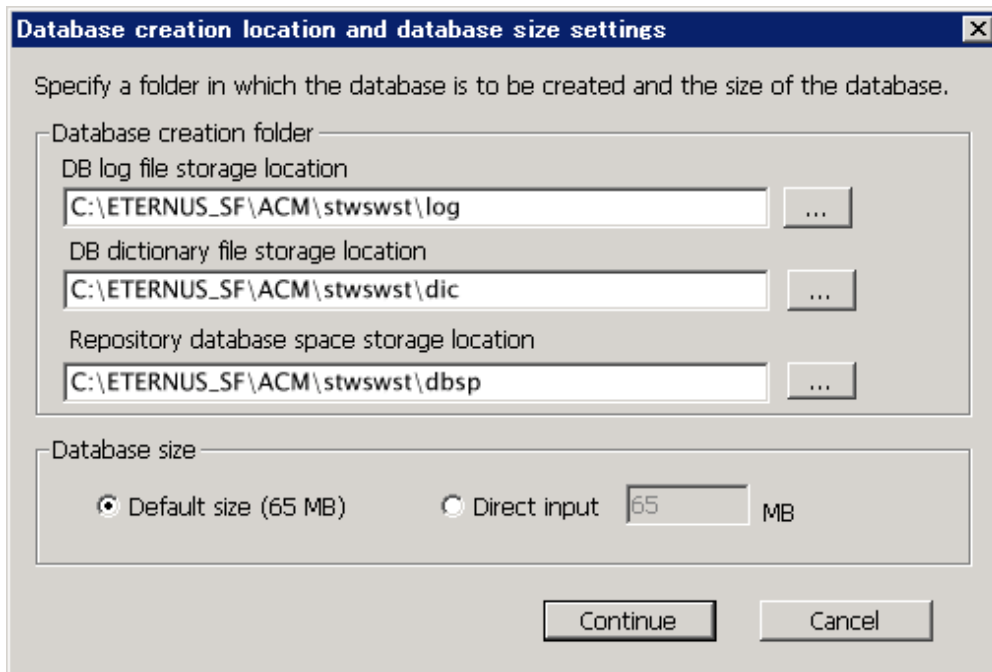
14. Once the previous version uninstallation is completed, the copy of the new program version is started.

During the process, the file copy completion status is displayed in the [Setup Status] screen.

15. Once the copy process ends, the system configuration is updated. Wait for the configuration update process to finish.



16. Enter the requested information for the repository database creation in the following screen. After the input, click the [Continue] button.



Database creation folder

This is the folder where the database will be created.

Enter the path, including the drive name, for each of the following database directories. The specified folders must be new NTFS folders. If a folder specified is not a NTFS folder or if it already exists, choose another name.

The default of the folders to store the repository database is displayed in each field. Change if 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 the shared folder as the folder where the database will be created.

- The number of characters in a folder name must be between 4 and 80. The blank space and the following characters [" | : * ? / . < > , % & ^ = ! ; # ' @] cannot be used in folder names.
- Do not check 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. Overhead is greater to a compressed and/or encrypted drive. Access errors may occur in low OS resource conditions. If the encryption property is checked, access errors may occur when decryption cannot be performed.

Database size

The database size is entered in MB. The size to enter is the result of the calculation performed before installation as described in "5.1.1.5 Database size estimation". To use the default value, check the [Default size (65 MB)] box.

17. The following screen is displayed for the IP address and the database user settings. Once the input is finished, click the [Settings] button.

The default value is displayed in the screen. Change if necessary.

IP address

Enter the IP address of the Management Server (own system).
Specify the IP address of the Management Server used with the previous production.

Repository access user

Enter username and password for the database access user.
The usernames entered here must have local login or domain login permissions at the OS level.

For the default value of username and password, confirm with a Fujitsu system engineer.

However, use other than default value because of security reasons.

The following conditions apply for the usernames and passwords:

- Username and password must be compatible with the underlying operating system.
- Username and password must be no longer than 18 characters (bytes).



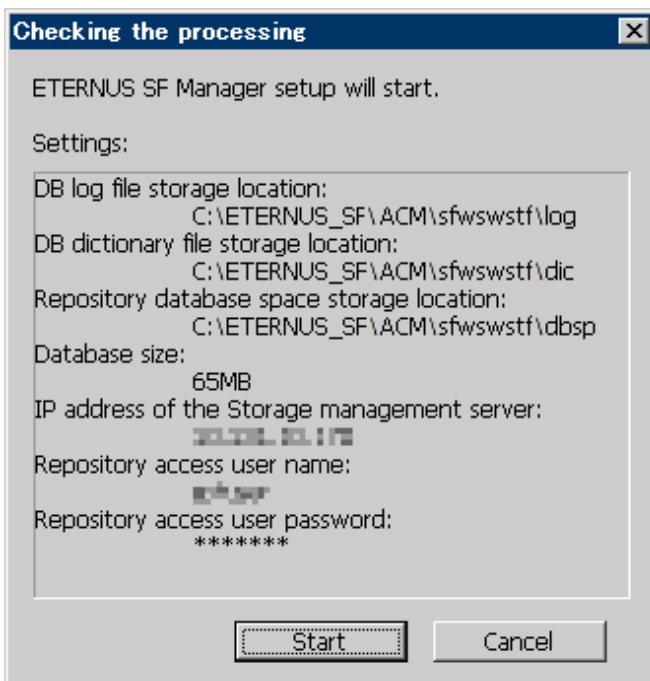
See

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

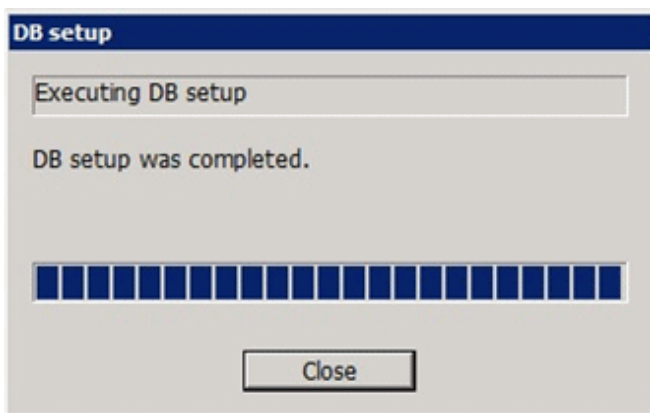
Server type	User to be specified
Domain Controller	Domain user
Machine that belongs to the domain	Local user
WORKGROUP (not belong to the domain)	

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

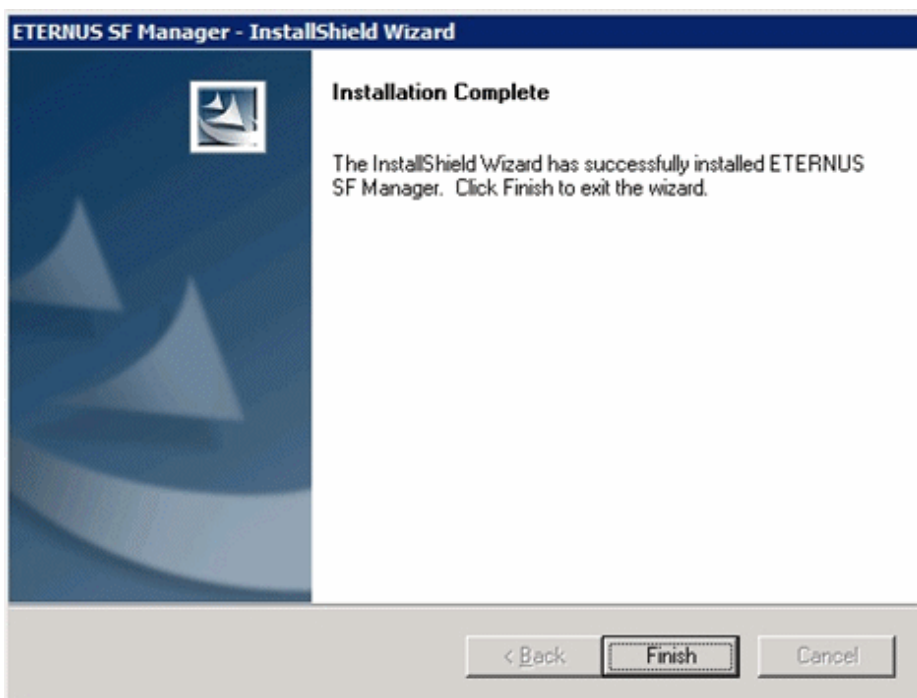
18. The following screen is displayed. Check the contents and click the [Start] button.



19. The database setup process starts. When the process is finished, the following screen is displayed. Click the [Close] button.



20. The following screen is displayed. The Upgrade Installation process is finished, click the [Finish] button.



21. Eject the DVD-ROM from the DVD-ROM drive.

The Upgrade installation of the Windows versions of AdvancedCopy Manager's manager ends at this point.

In the case of non-cluster operation, perform the "5.1.4 Post-upgrade Installation tasks" afterwards.

In the case of cluster operation, 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 level to setup the cluster operation. Perform "5.1.4 Post-upgrade Installation tasks" afterwards.

5.1.3 Upgrade installation (for Solaris, Linux)

There are two methods of performing the Upgrade Installation for Solaris and Linux.

- Default installation

The following configuration is used without the need to input any value

- Installation destination

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

- Port numbers for the various communication services

The following ports are used:

Service	Service Name	Used port number	Display name on the [Port Registration] screen
Web Console service	esfmanagerweb	9855/tcp	ETERNUS_SF_Manager_ap ache_service
communication service 1	stgxfws	1226/tcp	Communications_service_1
communication service 2	sscruisera	4917/tcp	Communications_service_2
Repository service 1	rdaswstf	22004/tcp	Repository_service_1

Service	Service Name	Used port number	Display name on the [Port Registration] screen
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	8005/tcp	Internal_port_1
	esfmanagertomcat2	8009/tcp	Internal_port_2
	esfmanagertomcat3	18443/tcp	Internal_port_3
	sscruiserm	24916/tcp	Internal_port_4
	astm	24917/tcp	Internal_port_5

- Custom installation

The Install parameter file is provided on the DVD-ROM "ETERNUS SF SC/ACM V15.0 Mediapack for Solaris (Manager Program)" or "ETERNUS SF SC/ACM/Express V15.0 Mediapack for Linux 64bit (Manager Program)".

Copy this file in a convenient location, modify the installation information (port number for the communications service, character codepage, etc), and use when doing the install

- Location of the install parameter files

```
<Mount_directory>/Manager_unix/install_parameter.txt
```

- Install parameters
- The install parameters inside the parameter file are described below

Parameter name	Content	Default value
Install_function_type	When installation ETERNUS SF Manager, set to [1].	1
Character_code_number	Contains the character encoding used in AdvancedCopy Manager. For Solaris, the value is [1] (EUC) or [2] (SJIS), for Linux the value is [1] (UTF8) or [2] (EUC)	1
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	22004
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	8005
Internal_Port_2		8009
Internal_Port_3		18443
Internal_Port_4		24916

Parameter name	Content	Default value
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/db/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	None.

Note

Make sure to perform the followings when the Management Server has two or more IP addresses.

- Perform the custom installation.
- Specify the IP address of the Management Server used with the previous production to 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 for the Management Server is set automatically during the installation. After the installation is completed, change the IP address if required. For the information on how to change an IP address, refer to "Changing the IP address of Management Server" in "ETERNUS SF AdvancedCopy Manager Operation Guide" for the operating system of the Management Server.

The Upgrade Installation procedure is performed as follow:

1. Log in the server where the upgrade will be performed as root.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM V15.0 Mediapack for Solaris (Manager Program)" or "ETERNUS SF SC/ACM/Express V15.0 Mediapack for Linux 64bit (Manager Program)" into the DVD-ROM drive.

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

3. Mount the DVD-ROM. If the drive is automount, this step is not necessary.

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 installation shell script.

Example of a default installation:

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

Example of a custom installation:


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

<Install parameter file> is the path where the modified install parameter file is stored.

6. The installation information is displayed with a confirmation message. To continue with the installation, enter "y". To cancel at this point, enter "q". Hit the enter key to proceed.

```
+-----+
|                ETERNUS SF V15.0                |
|                                                  |
| All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012 |
+-----+

Setting of installation parameter file.

Install_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:              22004
Repository_service_2:              15432
Remote_access_service:             9851
Exclusive_control_service:         9852
Internal_Port_1:                   8005
Internal_Port_2:                   8009
Internal_Port_3:                   18443
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:

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

7. The following message asks for confirmation before uninstalling the previous version. To uninstall the previous version and proceed with the new version installation, type "y". To cancel installation process, type "q". Hit the Enter key.

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



.....

For the inquiry for uninstalling of the previous version, type "y" so as to continue the uninstallation.

When the uninstalling is cancelled, the Upgrade Installation is interrupted. When re-execute the installation after restart the computer, the installation is treated as new one.

.....

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

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

9. Change to a directory outside of the DVD-ROM.

Example:

```
# cd
```

10. Unmount the DVD-ROM.

Example:

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

11. Eject the DVD-ROM from the DVD-ROM drive.

The Upgrade installation of the Solaris and Linux versions of AdvancedCopy Manager's manager ends at this point.

In the case of non-cluster operation, perform the "5.1.4 Post-upgrade Installation tasks" afterwards.

In the case of cluster operation, 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 level to setup the cluster operation. Perform "5.1.4 Post-upgrade Installation tasks" afterwards.

5.1.4 Post-upgrade Installation tasks

Once the AdvancedCopy Manager Upgrade Installation has been completed, the following tasks need to be performed.

5.1.4.1 Restoration from previous version

Restore the operational environment backed up in "5.1.1.1 Backup of the previous version".



See

For details on the restoration method, refer to "ETERNUS SF AdvancedCopy Manager Operation Guide" for this version level.

AdvancedCopy Manager operational environment

The following procedure is required to restore the operational environment backed up in "5.1.1.1 Backup of the previous version".



Note

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

1. Restore the repository data

Execute `stgrecpncv` (Repository data migration command) to restore the repository data and then convert it for use with the current version of the repository. For details on the command, refer to "stgrecpncv (Repository data migration command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" for this version level.

In case of a Storage Management Server which also serves as a Storage Server in Windows environment, restore the files from the data backed up in "5.1.1.1 Backup of the previous version" after recovering the repository data. Restore to the following location by using `copy` command on the command prompt screen.

- In case of a non-cluster environment
`<Environment Directory after upgrading>\etc\device.ini`
- In case of a cluster environment
`<Drive letter of shared disk for shared data after upgrading of AdvancedCopy Manager>:\etc\opt\swstorage\etc\device.ini`

2. Change the server information

To ensure data consistency, use `stgxfwcmmodsrv` (Server information change command) to perform the server information change processing.

When executing `stgxfwcmmodsrv` (Server information change command), specify the Management Server name to the `-n` option. For details on the command, refer to "stgxfwcmmodsrv (Server Information change command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" for this version level.

Check the [Server] column of `stgxfwcmdispsrv` (Server information display command) execution result for the Management Server name specified to the `-n` option.

3. Restore the management information (Management Server which also serves as a Managed Server only.)

Refer to "[5.2.8 Restoration of the management information](#)" and restore the management information.

When performing a replication operation, restore the management information by using `swsprecoverres` (Resource adjustment command) with the `-r` option.

AdvancedCopy Manager Copy Control Module operational environment

Restore the operational environment backed up in "[5.1.1.1 Backup of the previous version](#)".



See

For details on the restoration method, refer to "Restoring environment settings files" in the "ETERNUS SF Operation Guide for Copy Control Module" for this version level.

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 using `esflm restore` command. For details of `esflm restore` command, refer to the "ETERNUS SF Installation and Setup Guide" for this version level.

Example of executing `esflm restore` command is as below. The `<file_name>` is the file name specified when the backup data was created.

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

5.1.4.2 Import of the Configuration information

Import the Configuration information from the previous version by executing the configuration information import command (`esfimportdevconf`) with administrator permissions.

Check that the targeted devices can be accessed before executing the configuration information import command.

- For Windows environment

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

- For Solaris, Linux environment

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

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



See

Refer to "7.2 Command reference" for details about the each import command.

5.1.4.3 Setting up user account

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



See

For details on how to set up, refer to "Setting up user account" in the "ETERNUS SF Installation and Setup Guide" for this version level.

5.1.4.4 Setting up for using Web Console

If you set up firewalls between the PC on which the Web Console is launched and the Management Server, make settings so as to allow transmission to pass the firewalls.



See

For details on how to set up, refer to "Setting up for using Web Console" in the "ETERNUS SF Installation and Setup Guide" for this version level.

5.1.4.5 License registration

Register the appropriate licenses.



See

Refer to "License Management" in "ETERNUS SF Installation and Setup Guide" for this version level about the settings.

5.1.4.6 Redefinition of the missing information

- Server information

When Management Server (Storage Managed Servers) and Managed Servers (Storage Servers) are the same, the operation management server is registered in the server.



See

Refer to "Register the server" in "ETERNUS SF Web Console Guide" for this version level about 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.

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



See

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

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

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

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

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

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

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

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

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



Point

When the ETERNUS Disk storage system was registered by specifying 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.

5.1.5 Resuming operations

Upon completion of the tasks above, Upgrade installation and setup of AdvancedCopy is complete. The next task is the reconstruction of the operational environment of AdvancedCopy Manager's manager. Refer to the following manual for this version level:

- "Setup of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide"

5.2 Upgrade for AdvancedCopy Manager's agent

The following shows the upgrade procedure for AdvancedCopy Manager's agent.

1. [5.2.1 Backup of repository data](#)
2. [5.2.2 Backup of the management information](#)
3. [5.2.3 Releasing of backup and Restore in Exchange Database \(for Windows\)](#)
4. [5.2.4 Uninstallation of the previous version](#)
5. [5.2.5 Installation of this version](#)
6. [5.2.6 Restoration of repository data](#)
7. [5.2.7 Changing server information](#)
8. [5.2.8 Restoration of the management information](#)
9. [5.2.9 Setting of backup and Restore in Exchange Database \(for Windows\)](#)
10. [5.2.10 Updating the version information](#)

5.2.1 Backup of repository data

Backup the repository data and files.

- Back up the repository data on the Management Server. (Only when the Managed Server is operated in a cluster configuration)

Back up the repository data by referring to the following sections:

- For Windows environment:

"[A.1 Backup of repository data \(for Windows\)](#)"

- For Solaris or Linux environment:

"[A.2 Backup of repository data \(for Solaris, Linux\)](#)"

- Backup files on the Managed Server. (Windows environment only)

Backup the following files by using copy command on the command prompt screen.

- In case of a non-cluster environment

<Environment Directory>\etc\device.ini

- In case of a cluster environment

<Drive letter of shared disk for shared data for AdvancedCopy Manager>:\etc\opt\swstorage\etc\device.ini

5.2.2 Backup of the management information

Back up the management information on the Management Server by referring to the following table.

OS type of Managed Server	Reference
Windows	A.3 Backup of management information (for Windows)
Solaris Linux	A.4 Backup of management information (for Solaris, Linux)
HP-UX AIX	A.5 Backup of management information (for HP-UX, AIX)



Note

There is incompatibility in the copy source volume locking specification file between Version 14.2 or earlier and Version 15.0. Change the settings of file by referring to "[Changes to the processing of the swsrpmake \(Replication creation command\) and swsrpcancel \(Replication cancellation command\)](#)" in "[2.3.1 Changes for Version 15.0](#)", and then perform the backup.

5.2.3 Releasing of backup and Restore in Exchange Database (for Windows)

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

- For Windows Server 2003 environment:

"Backup and Restore of an Exchange Database in a Windows Server 2003 Environment" 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 environment:

"Backup and Restore of an Exchange Server Database in a Windows Server 2008 Environment" 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

5.2.4 Uninstallation of the previous version

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

In the case of non-cluster operation



Note

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

- For Windows environment:

- For AdvancedCopy Manager Version 13.1 or later:

Perform the procedures following "Uninstall procedure" described in "Windows Platform" under the section "Uninstall of Agent", in the "ETERNUS SF AdvancedCopy Manager Installation Guide" or "ETERNUS SF AdvancedCopy Manager Installation and Setup Guide".

- For AdvancedCopy Manager Version 13.0:

Perform the procedures following "Deleting applications or programs" under the section "Details of Agent of AdvancedCopy Manager uninstallation" in the "ETERNUS SF AdvancedCopy Manager Installation Guide".

- For Solaris, Linux, HP-UX and AIX environments:
 - For AdvancedCopy Manager Version 13.1 or later:

Perform the procedures following "Daemon deactivation" described in "Solaris/Linux/HP-UX/AIX Platform" under the section "Uninstall of Agent", in the "ETERNUS SF AdvancedCopy Manager Installation Guide" or "ETERNUS SF AdvancedCopy Manager Installation and Setup Guide".
 - For AdvancedCopy Manager Version 13.0:

Perform the procedures following "Daemon deactivation" under the section "Storage server uninstallation" in the "ETERNUS SF AdvancedCopy Manager Installation Guide" relevant to the OS of the Managed Server.

In the case of cluster operation

If cluster operations are used for Managed Servers as Managed Server transactions, it is necessary to perform the un-setup of cluster settings before performing uninstallation.



See

.....

For procedures for the un-setup of cluster settings, refer to "Deleting Storage Management Server transactions and Storage Server transactions" in the "ETERNUS SF AdvancedCopy Manager Operator's Guide for Cluster Environment" for the previous version.

.....

5.2.5 Installation of this version

Install the AdvancedCopy Manager's agent of this version, and setup the operating environment.

About installation

- In the case of non-cluster operation:

Refer to "Installation of AdvancedCopy Manager's agent" in the "ETERNUS SF Installation and Setup Guide" for this version level, and install the AdvancedCopy Manager's agent.
- In the case of cluster operation:

Refer to "Installation of ETERNUS SF Agent" in the "ETERNUS SF Cluster Environment Setup Guide" for this version level, and install the AdvancedCopy Manager's agent.

Setting up the operating environment

- In the case of non-cluster operation:

Refer to "Setup of AdvancedCopy Manager's agent" in "ETERNUS SF Installation and Setup Guide" for this version level, and setup the AdvancedCopy Manager's agent.

Afterwards, start the AdvancedCopy Manager's agent on the Managed Server. For the start procedure, refer to "Starting and Stopping Daemons" or "Starting and Stopping Services" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" relevant to the OS of the Managed Server.
- In the case of cluster operation:

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

5.2.6 Restoration of repository data

Restore the repository data and files.

- Restore the backed up repository data on the Management Server. (Only when the Managed Server is operated in a cluster configuration)

Execute `stgprepocnv` (Repository data migration command) to restore the repository data and then convert it for use with the current version of the repository.

Note

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

- Restore files on the Managed Server. (Windows environment only)

Restore the files from the data backed up in "5.2.1 Backup of repository data". Restore to the following location by using copy command on the command prompt screen.

- In case of a non-cluster environment
`<Environment Directory after upgrading>\etc\device.ini`
- In case of a cluster environment
`<Drive letter of shared disk for shared data after upgrading of AdvancedCopy Manager>:\etc\opt\swstorage\etc\device.ini`

See

For details on the command, refer to "`stgprepocnv` (Repository data migration command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" relevant to the OS of the Management Server.

5.2.7 Changing server information

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

If executing `stgxfwcmmodsrv` (Server Information change command), specify the Managed Server name to the `-n` option. Also, this command is to be performed on the Management Server.

See

For details on the command, refer to "`stgxfwcmmodsrv` (Server Information change command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" relevant to the OS of the Management Server.

5.2.8 Restoration of the management information

Restore the following management information previously backed up.

- If performing a backup operation:
 - Backup management list
 - Transaction volume locking specification file for backups (Windows environment only)
 - Backup volume locking specification file for backups (Windows environment only)
 - Backup-restored volume locking specification file (Windows environment only)

- If performing a replication operation:
 - Replication management list
 - Copy source volume locking specification file (Windows environment only)
 - Copy destination volume locking specification file (Windows environment only)
 - Timeout value setting file for the concurrent suspend function

If using Backup and the restoration function of the Exchange Database, back up the following Management Information:

- Drive character map file
- Device definition file(Windows Server 2003 environment only)



See

For the restoration procedures of the backup management list and the replication management list, refer to the following parts of the "Making individual backups of databases" under the section "Maintenance of Database" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" relevant to the OS of the Managed Server.

- Restoring a backup management list
- Restoring a replication management list
 - In cases that the Managed Server operates also as the Management Server or the Management Server's upgrade has been already completed, the repository is restored in the process of the Management Server's upgrade operation. Therefore, execute only the swsrprecoverres (Resource adjustment command) without restoring the repository for restoring the replication management list.
 - If the Managed Server is a cluster operation, the repository is restored in the process of the version upgrade. Therefore, execute only the swsrprecoverres (Resource adjustment command) without restoring the repository for restoring the replication management list.

For other management information, restore by using the copy command.



Note

The following management information (pre-processing and post-processing scripts) is not restored.

- If performing a backup operation:
 - Pre-processing and post-processing scripts for backup management function
- If performing a replication operation:
 - Pre-processing and post-processing scripts for replication management function

Pre-processing and post-processing scripts may change as a result of an upgrade. If they have been customized before the upgrade, then they must be customized again after it, with reference to the backed up pre-processing and post-processing scripts.



Note

Caution regarding the AdvancedCopy Manager's agent in Linux environment

For environments in which udev devices exist, prioritize and use the following udev device names after upgrade.

- normal device
- PRIMECLUSTER GDS SDX object (operating time of slice unit only)

For details of udev device names, refer to "Managing a Device on AdvancedCopy Manager" in the "ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)".

After the upgrade, perform the following actions in accordance with the device names used for operations:

- For operations that use compatible device names:

Use `stgxfwcmsetmode` (Information collection mode configuration command) to change the information collection mode such that `udev` device names are not used.

For details of changing the information collection mode, refer to "Managing a Device on AdvancedCopy Manager" in the "ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)".

- For operations that use `udev` device names:

Delete the backup management definition information and replication management definition information, and fetch the `udev` device names. Then, it is necessary to redefine the backup and replication using `udev` device names.

For the procedures, refer to "Changing the device configuration" in the "ETERNUS SF AdvancedCopy Manager Operation Guide (for Linux)".



Caution regarding the AdvancedCopy Manager's agent in HP-UX environment

- If using HP-UX 11i v2 or earlier:

Fetch the device information. If new devices, modified devices or deleted devices are detected, perform the reflective operation if necessary. For details on how to fetch device information, refer to "Fetching device information on a Managed Server" in the "ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)".

- If using HP-UX 11i v3 or later:

In HP-UX 11i v3 or later, as a device format, there are two device names: new format and legacy format. For details on device names, refer to "Managing a Device on AdvancedCopy Manager" in the "ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)". Depending on the device format, perform the procedure below.

- If using a different format device name before and after upgrade:

Before upgrading, set the device format using `stgxfwcmsetmode` (Information collection mode configuration command), and then delete the definition for the backup management and replication management. After that, set the device format used after upgrading using `stgxfwcmsetmode` (Information collection mode configuration command), and then fetch the device information and redefine the backup management and replication management.

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

For details on backup management and replication management, refer to "Changing the device configuration" in the "ETERNUS SF AdvancedCopy Manager Operation Guide (for HP-UX)".

- If using the same format device name before and after upgrade:

Even if using the same format device name as before upgrade, always set up the device format being used by executing the `stgxfwcmsetmode` (Information collection mode configuration command).

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

5.2.9 Setting of backup and Restore in Exchange Database (for Windows)

Reconfigure the backup and restoration functions of the Exchange database for which the setting has been released in reference to the manual of this version level.

- For Windows Server 2003 environment:

"Backup and Restore of an Exchange Database in a Windows Server 2003 Environment" 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 environment:
- "Backup and Restore of an Exchange Server Database in a Windows Server 2008 Environment" 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

5.2.10 Updating the version information

If not using cluster operation, and moreover, if the restoration of repository data has already been performed with the restoration of the replication management list, use the Web Console or stgxfwcmmodsrv (Server information change command) to update the version information for the Managed Server.

If executing stgxfwcmmodsrv (Server Information change command), specify the Managed Server name to the -n option. Also, this command is to be performed on the Management Server.



See

- For details on the command, refer to "stgxfwcmmodsrv (Server Information change command)" in the "ETERNUS SF AdvancedCopy Manager Operation Guide" relevant to the OS of the Management Server.
- For details about reloading the server information using Web Console, refer to "Reload the server configuration information" in the "ETERNUS SF Web Console Guide".

5.3 Upgrade for AdvancedCopy Manager Copy Control Module

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

5.3.1 Before installation

The following preparation work must be done before starting the Upgrade Installation for AdvancedCopy Manager Copy Control Module.

5.3.1.1 Selection of the install program

There are following two methods of performing the upgrade for the AdvancedCopy Manager Copy Control Module:

- **[Method 1]** Install the ETERNUS SF Manager program and use the AdvancedCopy Manager Copy Control Module included with the ETERNUS SF Manager program.
- **[Method 2]** Install and use the AdvancedCopy Manager Copy Control Module program.

Point

For **Method 1**, in addition to the command line interface, it is also possible to perform the operations related to the AdvancedCopy Manager Copy Control Module from the Web Console. However, this approach has the following drawbacks.

- The available disk space required for program installation is greater than that for **Method 2**.
- There is more incompatible software as compared to **Method 2**.
- Symfoware verification becomes necessary (only if Symfoware is installed onto the server onto which this operation is being performed)
- Database size estimation becomes necessary.

Upon understanding the above, please select the program to install.

5.3.1.2 Backup of the environment setting files

Back up the operational environment for the previous version level.

See

For details about the backup method, refer to "[A.6 Backup of the environment setting files](#)".

License information

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

Backup the license management database of ETERNUS SF License Manager by using esflm backup command. For details of esflm backup command, refer to the "ETERNUS SF AdvancedCopy Manager Installation and Setup Guide" for the previous version level.

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

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

5.3.1.3 Available disk space verification

Make sure that there is enough available disk space on the server where the Upgrade Installation will be performed.

The required disk space for the upgrade is calculated as the required disk space for the new version to be installed minus the required disk space of the previous version.

Amount of space required for this version level

The required amount of space for installing ETERNUS SF Manager program or AdvancedCopy Manager Copy Control Module program. Refer to the following parts in the "ETERNUS SF Installation and Setup Guide" for this version level about the required amount of space.

- For using AdvancedCopy Manager Copy Control Module in ETERNUS SF Manager program.

"Operating environment of ETERNUS SF Manager"

- For installing AdvancedCopy Manager Copy Control Module program

"Operating environment of AdvancedCopy Manager CCM"

Amount of space required for the previous version level

The required amount of space for installing AdvancedCopy Manager Copy Control Module program of the previous version level. Refer to "Operating Environment" in the "ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module" for the relevant previous version.

5.3.1.4 Incompatible software uninstallation

Check if any incompatible software for AdvancedCopy Manager Copy Control Module of this version level is installed on the server where the Upgrade Installation will be performed.

If the incompatible software is found, refer to that software manual and uninstall it before starting the Upgrade Installation.



See

For details on the incompatible software, refer to "Operating Environment" in the "ETERNUS SF Installation and Setup Guide" for this version level.

5.3.1.5 Symfoware verification

Symfoware product is bundled with the ETERNUS SF Manager program. If the two following conditions are met, it is necessary to check the Symfoware environment before starting the Upgrade Installation.

- If Symfoware is already installed to the server to which the Upgrade Installation is performed. Moreover,
- The ETERNUS SF Manager program is being installed.



See

For details on how to check, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.

5.3.1.6 Database size estimation

For installing the ETERNUS SF Manager, a database is necessary.

The database size must be estimated before starting the Upgrade Installation.



See

For details on how to check, refer to "Before installation" under the chapter "Installation of ETERNUS SF Manager" in the "ETERNUS SF Installation and Setup Guide" for this version level.

5.3.2 Upgrade installation (for Windows)

If using the AdvancedCopy Manager Copy Control Module included in the ETERNUS SF Manager program

Perform the Upgrade Installation by referring to "5.1.2 Upgrade installation (for Windows)".

After the Upgrade Installation has completed, refer to the following manual for this version level and set up the AdvancedCopy Manager Copy Control Module.

- "Setup of AdvancedCopy Manager CCM" in the "ETERNUS SF Installation and Setup Guide"

If installing and using the AdvancedCopy Manager Copy Control Module program

There are two methods of performing the Upgrade Installation.

- Default installation

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

- Installation destination

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

- Custom installation

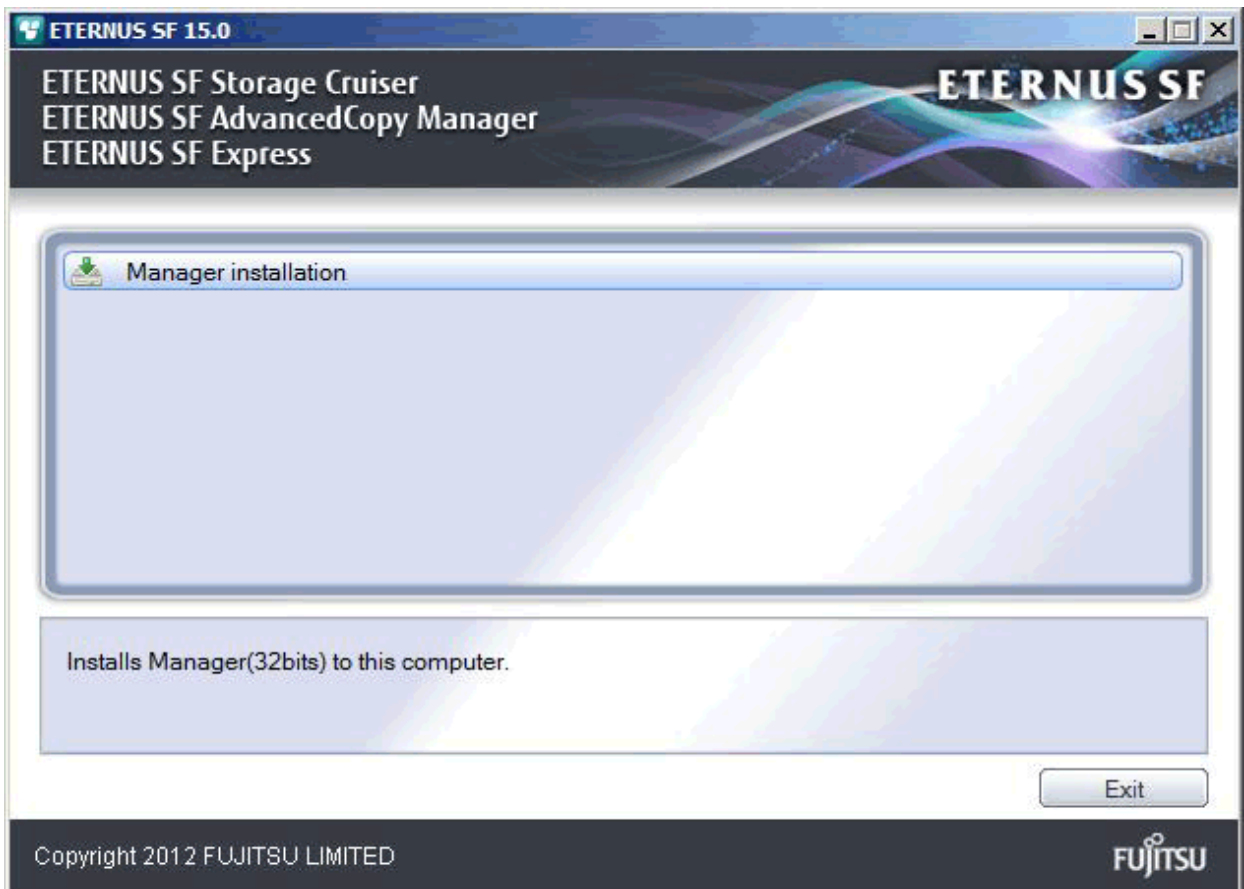
Upgrade is done by entering the configuration information on the screen (installation destination).

The Upgrade Installation procedure is performed as follow:

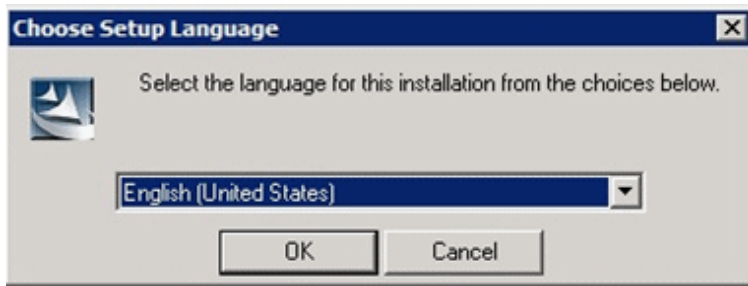
1. Using an account with Administrator privileges, log in the server where the upgrade will be performed.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM/Express V15.0 Mediapack for Windows (Manager Program)" into the DVD-ROM drive.

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

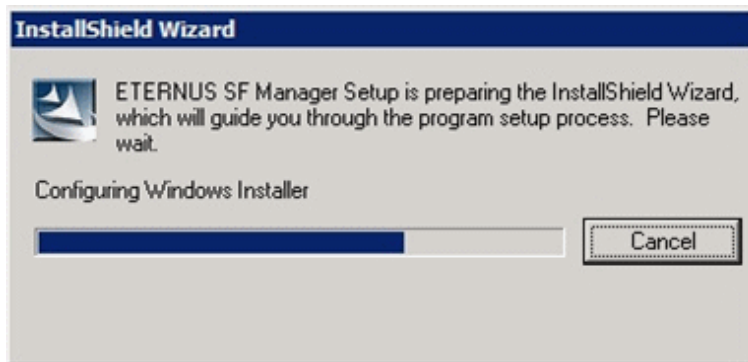
3. The following screen is displayed. Click the [Manager installation] button.
To cancel the Upgrade Installation at this point, click the [Exit] button.



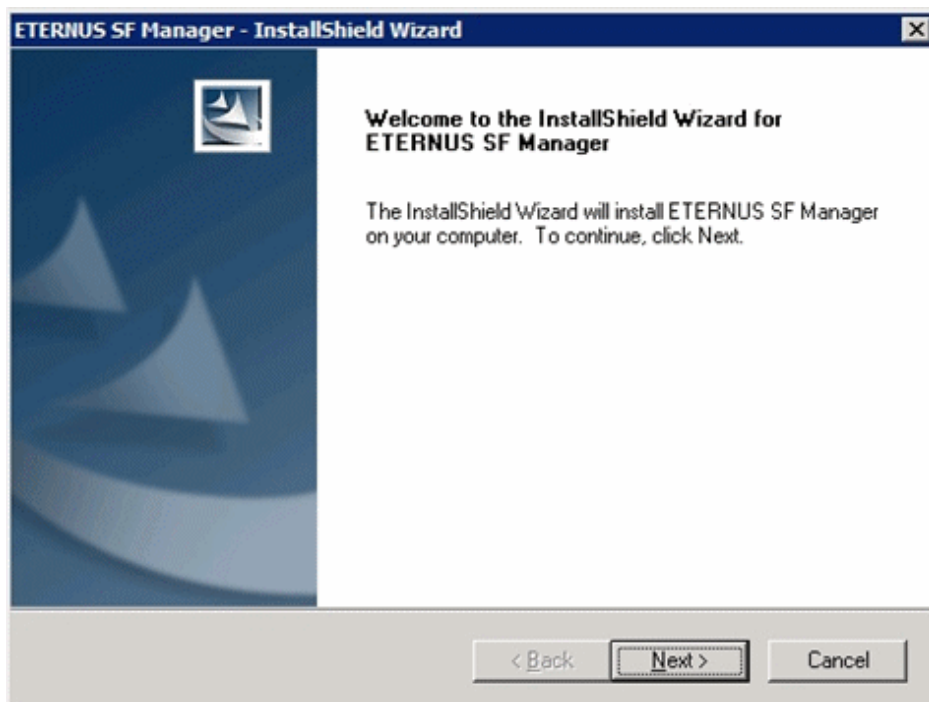
4. The [Choose Setup Language] screen is displayed. Select the language to be used for the installation and click the [OK] button. The language selected in this screen is used during the installation, and also during the uninstallation.



5. The following screen is displayed. To cancel the Upgrade Installation at this stage, click the [Cancel] button.

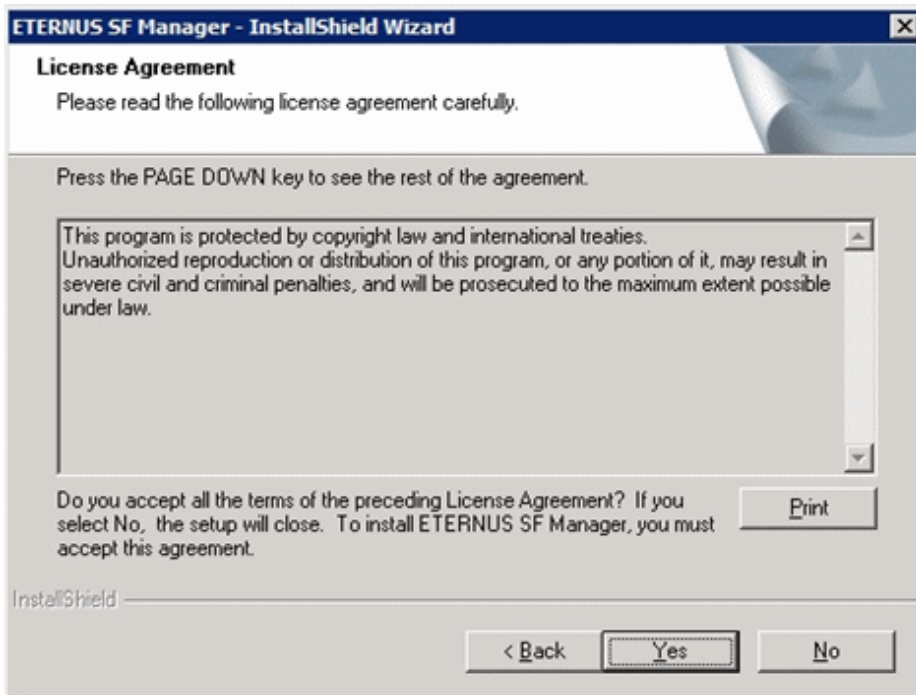


6. The following screen is displayed. After checking the screen contents, click the [Next] button.

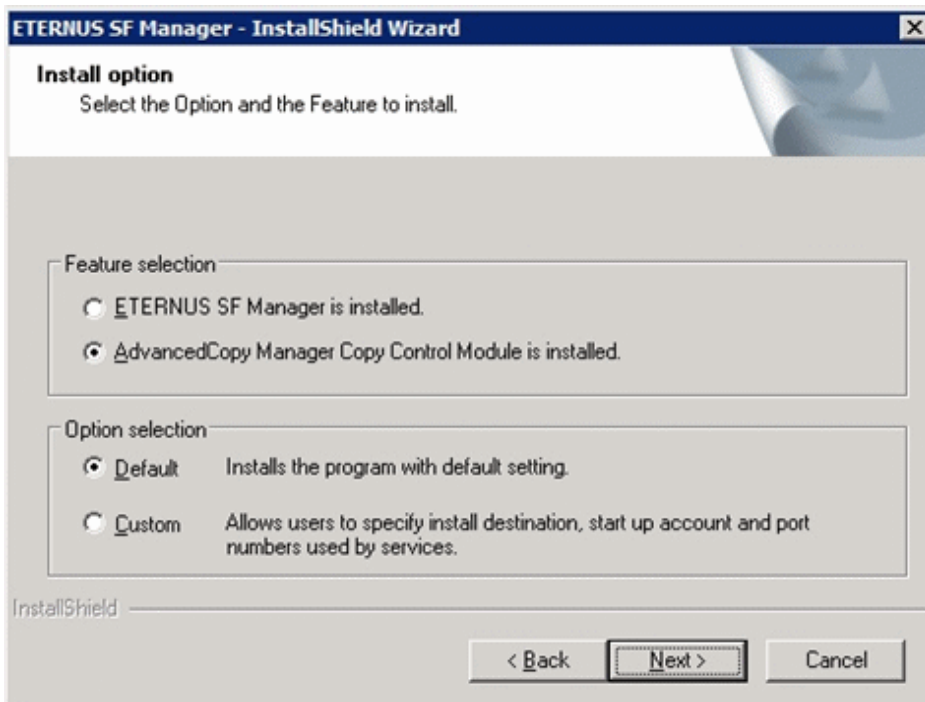


7. Read the terms and conditions in the [License Agreement] screen.

After reading the contents, if the conditions are agreed click the [Yes] button.



8. Select the functions to install and the options in the [Install option] screen.



Feature selection

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

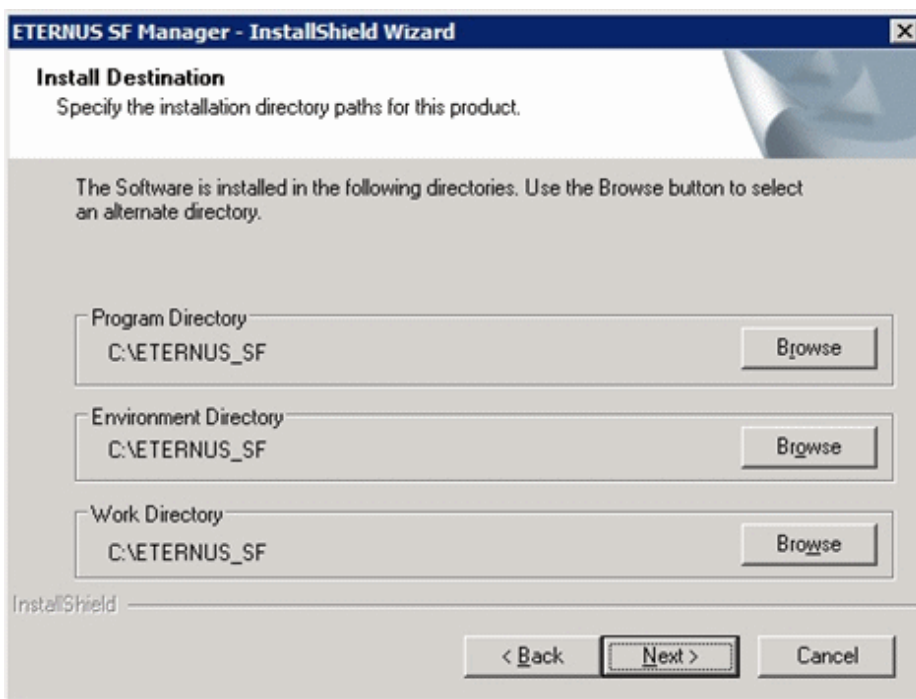
Option selection

Select the desired options according to the following information.

Install option	Explanation
Default	<p>Changing values in the [Installation Destination] screen is optional and can be omitted. In that case, the step 9 can be skipped.</p> <p>In this installation method, the following checks are automatically performed regarding the information provided as a 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 is displayed. If no error is detected, the [Start Copying Files] screen is displayed.</p>
Custom	The installation information must be entered in the screens of step 9.

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

If installing to a directory besides the directory displayed by default, click the [Browse] button and change the install location. After designating all of the directories, click the [Next] button.



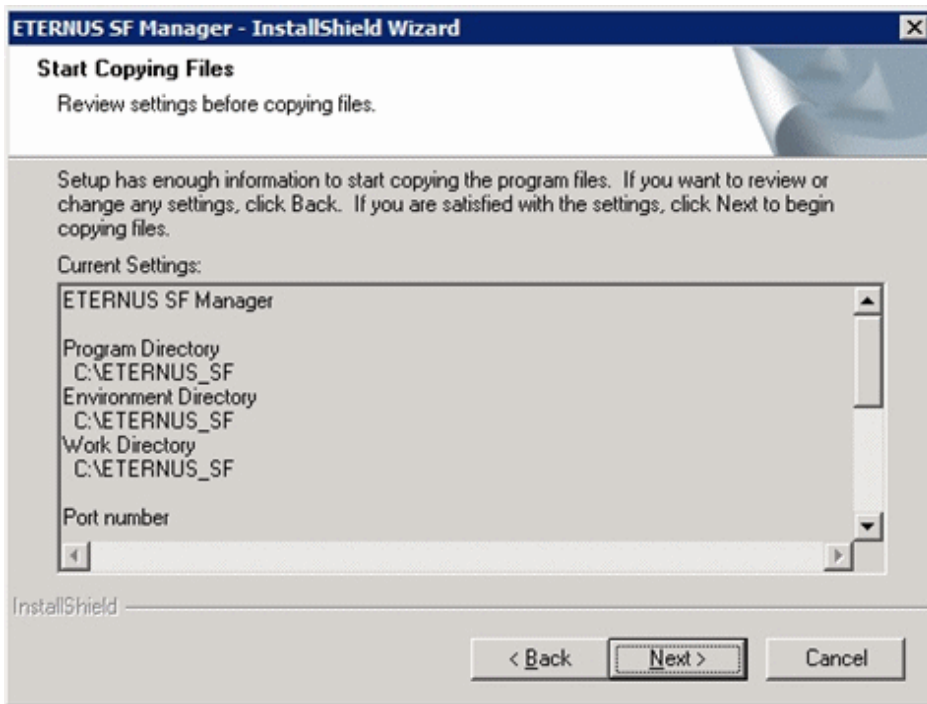
Note

- Do not specify the shared directory as the installation directory.
- The blank space and the following characters [" | : * ? / . < > , % & ^ = ! ;] cannot be used in directory names.
- The number of characters in a directory name must be between 4 and 70.

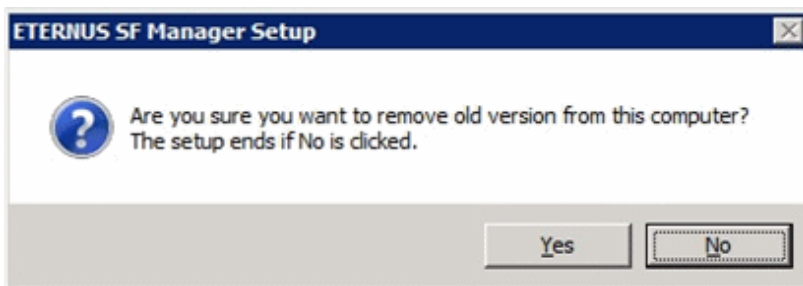
10. Check the settings information in the [Start Copying Files] screen.

If the settings are correct, click the [Next] button.

To go back and change a setting, click the [Back] button.



11. The following screen is displayed. To proceed with the uninstallation of the previous version, click the [Yes] button.



12. The previous version uninstallation is started.

The uninstallation program is executed.

Answer to the question in each screen.

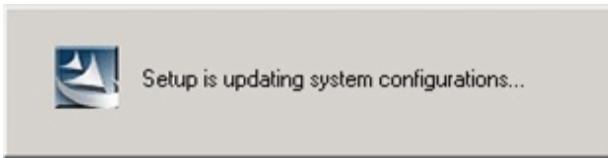
Point

- For the question regarding restart to the computer, click the [No] button.
When clicking the [Yes] button, the Upgrade Installation is interrupted. When clicking [Yes], the Upgrade Installation is interrupted. When re-execute the installation after restart the computer, the installation is treated as new one.
- Do not delete the files and folders that are output after uninstallation completes successfully.

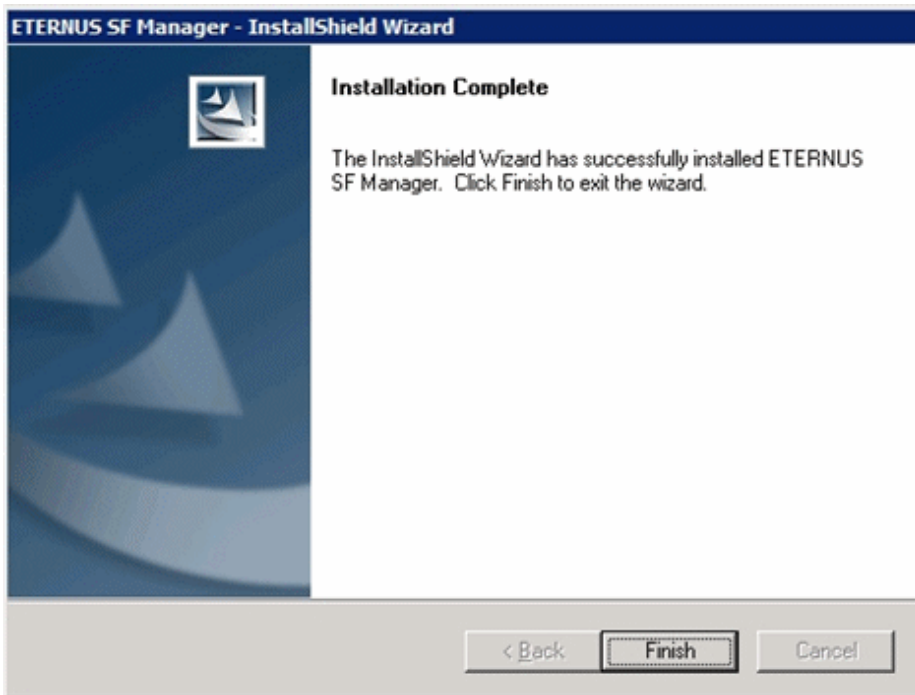
13. Once the previous version uninstallation is completed, the copy of the new program version is started.

During the process, the file copy completion status is displayed in the [Setup Status] screen.

14. Once the copy process ends, the system configuration is updated. Wait for the configuration update process to finish.



15. The following screen is displayed. The Upgrade Installation process is finished, click the [Finish] button.



16. Eject the DVD-ROM from the DVD-ROM drive.

The Upgrade installation of the Solaris and Linux versions of AdvancedCopy Manager's manager ends at this point. Perform the ["5.3.4 Post-upgrade Installation tasks"](#) afterwards.

5.3.3 Upgrade installation (for Solaris, Linux)

There are two methods of performing the Upgrade Installation for Solaris and Linux.

1. Log in the server where the upgrade will be performed as root.
2. Insert the DVD-ROM "ETERNUS SF SC/ACM V15.0 Mediapack for Solaris (Manager Program)" or "ETERNUS SF SC/ACM/Express V15.0 Mediapack for Linux 64bit (Manager Program)" into the DVD-ROM drive.

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

3. Mount the DVD-ROM. If the drive is automount, this step is not necessary.
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 installation shell script.

Install parameter file is the path where the modified install parameter file is stored.

Example:

```
# ./esfinstall.sh -s /mnt/dvd/Manager_unix/install_parameter_ccm.txt
```

6. The installation information is displayed with a confirmation message. To continue with the installation, enter "y". To cancel at this point, enter "q". Hit the enter key to proceed.

```
+-----+
|                ETERNUS SF V15.0                |
|  All Rights Reserved, Copyright (C) FUJITSU LIMITED 2012  |
+-----+

Install_function_type:   CCM

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

7. If the installation completes successfully, the following message is displayed.

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

8. Change to a directory outside of the DVD-ROM.

Example:

```
# cd
```

9. Unmount the DVD-ROM.

Example:

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

10. Eject the DVD-ROM from the DVD-ROM drive.

The Upgrade installation of the Solaris and Linux versions of AdvancedCopy Manager's manager ends at this point. Perform the ["5.3.4 Post-upgrade Installation tasks"](#) afterwards.

5.3.4 Post-upgrade Installation tasks

This explains the operations that should be done after performing the Upgrade Installation.

5.3.4.1 Restore of the environment setting files

Restore the environment setup file previously backed up during ["5.3.1.2 Backup of the environment setting files"](#).

For the procedure, refer to "Restoring environment settings files" in the "ETERNUS SF Operation Guide for Copy Control Module" for this version level.

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 using esflm restore command. For details of esflm restore command, refer to the "ETERNUS SF Installation and Setup Guide" for this version level.

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

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

5.3.4.2 Reconfiguration of device information

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

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

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

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray list

Name   BOX-ID                                     IP Address
-----
E4000  00E4000M3#####E450S20A#####KD4030639004## 10.124.6.251
E8000  00E8000M9#####E890S20A#####KO4070639003## 10.124.6.241
```

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

```
C:\>acarray detail -a E4000

Disk Array Name : E4000
BOX-ID          : 00E4000M3#####E450S20A#####KD4030639004##
IP Address      : 10.124.6.251
Admin User      : ****
Access Volume   : X:

C:\>C:\ETERNUS_SF\CCM\bin\acarray detail -a E8000

Disk Array Name : E8000
BOX-ID          : 00E8000M9#####E890S20A#####KO4070639003##
IP Address      : 10.124.6.241
Admin User      : ****
Access Volume   : Y:
```

3. Remove all o registered ETERNUS Disk storage system by using "acarray remove (ETERNUS Disk storage system registration information deletion command)".

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray remove -a E4000
Successful completion.

C:\>acarray remove -a E8000
Successful completion.
```

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

```
C:\>C:\ETERNUS_SF\CCM\bin\acarray add -a E4000 -ip 10.124.6.251 -user **** -password **** -path
X:
Successful completion.

C:\>C:\ETERNUS_SF\CCM\bin\acarray add -a E8000 -ip 10.124.6.241 -user **** -password **** -path
```

```
Y:
Successful completion.
```

Point

.....

When the ETERNUS Disk storage system was registered by specifying 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.

.....

5.3.4.3 License registration

Register the appropriate licenses.

See

.....

Refer to "License Management" in the "ETERNUS SF Installation and Setup Guide" for this version level about the license settings.

.....

5.3.5 Resuming operations

Upon completion of the tasks above, Upgrade installation and setup of AdvancedCopy Manager Copy Control Module is complete. The next task is the reconstruction of the managed environment in AdvancedCopy Manager. Refer to the following manual for this version level:

- "Setup of AdvancedCopy Manager CCM" in the "ETERNUS SF Installation and Setup Guide"

Chapter 6 Troubleshooting

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

The troubleshooting method differs according to the way the upgrade fails.
Please use the appropriate method according to the problem type.

In case of a problem during the uninstallation of the previous version:

After the problem has been diagnosed and solved, restart the Upgrade Installation process from the beginning.

Point

- When an error message is displayed, refer to the following manuals and perform the action for relevant message.

Target for upgrade	Reference
Express	"Messages" in the "ETERNUS SF Express User's Guide" for the previous version level
Storage Cruiser	"ETERNUS SF Storage Cruiser Message Guide" for the previous version level
AdvancedCopy Manager	"ETERNUS SF AdvancedCopy Manager Message Guide" for the previous version level
AdvancedCopy Manager Copy Control Module	"Messages for AdvancedCopy Manager CCM" in the "ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module" for the previous version level

- When no error message is displayed, refer to the following manuals to collect the troubleshooting information and then contact your Fujitsu system engineer.

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

In case of a problem during the installation of this version:

The uninstallation of the previous version has succeeded.

After the installation problem has been diagnosed and solved, install this version by referring to the "ETERNUS SF Installation and Setup Guide".

Point

- When an error message is displayed, refer to the following manuals and perform the action for relevant message.

Target for upgrade	Reference
Express	"ETERNUS SF Messages"
Storage Cruiser	

Target for upgrade	Reference
AdvancedCopy Manager	
AdvancedCopy Manager Copy Control Module	

- When no error message is displayed, refer to the following manuals to collect the troubleshooting information and then contact your Fujitsu system engineer.

Target for upgrade	Reference
Express	"Trouble analysis" in the "ETERNUS SF Express Operation Guide"
Storage Cruiser	"Troubleshooting information" in the "ETERNUS SF Storage Cruiser Operation Guide"
AdvancedCopy Manager	"Collecting maintenance information" in the "ETERNUS SF AdvancedCopy Manager Operation Guide"
AdvancedCopy Manager Copy Control Module	"How to collect data" in the "ETERNUS SF Operation Guide for Copy Control Module"



Chapter 7 Configuration import

This chapter describes the commands used for the upgrade process.

7.1 Devices supported by the configuration import command

The devices supported by the configuration import command are listed in the following table.

- Storage devices

Type	Device name	Notes
Disk array devices	ETERNUS DX60/DX60 S2/DX80/DX80 S2/DX90/DX90 S2 ETERNUS DX400/DX400 S2 series ETERNUS DX8000/DX8000 S2 series ETERNUS2000 ETERNUS4000 ETERNUS8000	Automatic registration only
Fibre channel switches	ETERNUS SN200 series (except model 250M) ETERNUS SN200 MDS Brocade Fibre Channel switches McDATA Fibre Channel switches PRIMEGRY Fibre Channel switch blades	Automatic registration only
Tape library	ETERNUS LT250 ETERNUS LT270	Automatic registration only
	ETERNUS LT20/LT20 S2 ETERNUS LT40/LT40 S2 ETERNUS LT60/LT60 S2 ETERNUS LT200 ETERNUS LT210 ETERNUS LT220 ETERNUS LT230	Manual registration only
Other devices	ETERNUS VS850/VS850 S2 ETERNUS CS800 NetApp FAS Series	Manual registration

- Servers

The migration judge depends on the server configuration of the previous version level. The migration pattern for the previous version level configuration information to ETERNUS SF Version 15.0 is shown below.

Register on the Web Console, if the server cannot be migrated.

- If only Storage Cruiser's agent is registered on the configuration information in the previous version level.

No.	Server type in the previous level	ETERNUS SF Version 15.0	
		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 level.

No.	Server type in the previous level (Note)	ETERNUS SF Version 15.0	
		Server type	Function level
1	Storage Management Server	Cannot be migrated	
2	Storage Server	Stand -alone	AdvancedCopy Manager

Note: Listed name is the one used in the previous version level.

- If Storage Cruiser's agent and AdvancedCopy Manager's agent are registered on the configuration information in the previous version level.

No.	Server type in the previous level		ETERNUS SF Version 15.0	
	Storage Cruiser	AdvancedCopy Manager (Note 1)	Server type	Function level
1	VMware Host	-	VMware Host	Storage Cruiser (Note2)
2	VMware Guest	Storage Management Server	VMware Guest	No Agent
3		Storage Server		- No Agent (VMware Tool is in startup status) - AdvancedCopy Manager (VMware Tool is not started)
4	Server registered automatically	Storage Management Server	Cannot be migrated	
5		Storage Server	Stand -alone	Storage Cruiser AdvancedCopy Manager
6	Server registered manually	Storage Management Server	Stand -alone	No Agent
7		Storage Server		AdvancedCopy Manager
8	Server unregistered	Storage Management Server	Cannot be migrated	
9		Storage Server		

Note 1: Listed name is the one used in the previous version level.

Note 2: In ETERNUS SF Version 15.0, the AdvancedCopy Manager's agent cannot be registered to a server in which VMware host is registered.

7.2 Command reference

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

7.2.1 esfimportdevconf (Configuration import command)

Name

esfimportdevconf - import the configuration information from the previous version for the devices in the system.

Format

Windows environment

```
$INS_DIR\Common\bin\esfimportdevconf
```

(\$INS_DIR is the program directory from the ETERNUS SF Manager installation.)

Solaris environment, Linux environment

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

Function description

A request for the configuration information from the previous version for the devices in the system is issued to ETERNUS SF. OS Administrator permissions are required in order to execute the command.

When the command is executed, ETERNUS SF Version 15.0 starts asynchronously to import and convert the configuration information from the previous version.

Return value

=0 : Normal end

Example of execution

Windows environment

```
> C:\ETERNUS_SF\Common\bin\esfimportdevconf
escs90000 Operation is accepted.
```

Solaris environment, Linux environment

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

Cautions and limitations

- Check that the targeted devices can be accessed from ETERNUS SF Version 15.0 before executing the import command. Refer to ["7.1 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 ["7.3 What to do when configuration import is not possible"](#) about the alternative options for these configurations.
- Operation is not possible on the targeted devices during the command execution.
- Imported configuration information is based on the configuration information that was registered in the previous version. If imported devices do not exist anymore in the new configuration, remove them using the Web Console. To remove a device, refer to the "Delete ETERNUS Disk storage system" from the "ETERNUS SF Web Console Guide".
- Import time for a storage device is approximately 10 minutes. For an estimate of the total import time, do the following calculation:

$[\text{Total import time}] = \text{number of storage systems} \times 10 \text{ minutes}$

- 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, execute the [Device re-reading] operation after the message has been output in the Operation History.
- Make sure that ETERNUS SF Manager Tomcat service is running before executing the configuration information import command. If it is not running, the configuration information cannot be imported but the execution of the command is issued. Restart the ETERNUS SF Manager Tomcat service before executing the command again. If the service is not restarted, the message "escs90010 Operation has already been accepted." is output and the command cannot be executed.

7.2.2 esfimportdisplay (configuration import status display command)

Name

esfimportdisplay - Displays the status of operation of configuration information from the previous Version.

Format

Windows environment

```
$INS_DIR\Common\bin\esfimportdisplay
```

(\$INS_DIR is the program directory from the ETERNUS SF Manager installation.)

Solaris environment, Linux environment

```
/opt/FJSVesfcm/bin/esfimportdisplay
```

Function description

Display the import status of the devices configuration information from the previous version into ETERNUS SF Version 15.0. OS Administrator permissions are required in order to execute the command.

The information displayed is as follows:

- ETERNUS SF Version 15.0 import process status

The status of the process of configuration information import into ETERNUS SF Version 15.0 is displayed.

Title	Displayed contents
IMPORT STATUS	ETERNUS SF Version 15.0 Configuration information import status Request : the configuration import request has been received Execute : the configuration information import process is executing Complete : the configuration information import is complete

- Specified device import status

The importation status for the configuration information of the specified device from the previous version is displayed.

Title	Displayed contents
CATEGORY	Device category. storage : storage fcswitch : fibre channel switch server : server library : tape library
DEVICE NAME	Name of the device
IP ADDRESS	IP address of the device
REGISTER MODE	Device registration mode Auto : Automatic registration Manual : Manual registration
STATUS	Import status for the specified device Wait : Paused Execute : Executing Complete : Completed Failed : Failed (Note)

Note: For details, refer to the Web Console Operation History.

Return value

=0 : Normal end

Example of execution

Windows environment

```
> C:\ETERNUS_SF\Common\bin\esfimportdisplay
```

```
-----  
IMPORT STATUS  
-----  
Complete  
-----
```

```
-----  
CATEGORY    DEVICE NAME      IP ADDRESS      REGISTER MODE  STATUS  
-----  
server      WIN-IJP9VFKMUQQ 10.xxx.xxx.xxx  Manual        Complete  
server      fujitsu-7370c8b 10.xxx.xxx.xxx  Auto          Complete  
storage     ETERNUSDx80     10.xxx.xxx.xxx  Auto          Complete  
storage     DX90S2          10.xxx.xxx.xxx  Auto          Complete  
storage     EMJ3#13         10.xxx.xxx.xxx  Auto          Complete  
storage     DX410S2         10.xxx.xxx.xxx  Auto          Complete  
storage     DX440S2         10.xxx.xxx.xxx  Auto          Complete  
storage     DX90_6_5        10.xxx.xxx.xxx  Auto          Complete  
fcswitch    sn200_6_8       10.xxx.xxx.xxx  Auto          Complete  
fcswitch    SN200_02        10.xxx.xxx.xxx  Auto          Complete  
fcswitch    Switch          10.xxx.xxx.xxx  Auto          Complete  
library     LT270           10.xxx.xxx.xxx  Auto          Complete  
-----
```

7.3 What to do when configuration import is not possible

When the configuration information cannot be imported with the command, they can be registered as described below:

No.	Information that cannot be imported	Action
1	User name/password	Register the username and password with the following procedure: <ol style="list-style-type: none">1. Log into the Web Console.2. Select the specified device, and click [Reset Password] in the Action pane. Register the username and password for the device.
2	AdvancedCopy Manager Copy Control Module configuration	Register the configuration information with the following procedure: <ol style="list-style-type: none">1. Delete the existing registered information with the <code>acarray remove</code> command.2. Register the ETERNUS storage system in AdvancedCopy Manager Copy Control Module with the <code>acarray add</code> command. Set the ETERNUS storage system name as the ETERNUS name.3. Log into the Web Console.4. If the username and password are not set for the specified device, click [Reset Password] in the Action pane and register the username and password.5. Execute the [Reload Conf.] command in the Action pane.
3	iSCSI HBA information	Register the iSCSI HBA information with the following procedure.

No.	Information that cannot be imported	Action
		<ol style="list-style-type: none"> 1. Log into the Web Console. 2. Select the server where the iSCSI HBA is configured, click [Add] under [HBA] in the Action pane and set the HBA information.



See

- Refer to "Web Console Operation Method" in the "ETERNUS SF Web Console Guide" for details on the instructions regarding the Web Console operations.
- Refer to "Commands" in the "ETERNUS SF Operation Guide for Copy Control Module" for details on the acarray remove command and acarray add command.

7.4 What to do when an error occurs

The results of the import process are output in the Web Console Operation History. To try and import again the devices for which the import process has failed, execute the [Device re-reading] operation after the message has been output in the Operation History.

If the import status does not change or nothing is displayed, there is a possibility of ETERNUS SF malfunctioning. Check that there is no error message in the Web Console Event log.

Appendix A Operation for Previous Version Environment

A.1 Backup of repository data (for Windows)

Save the repository data to the specified directory all at once.
Perform this operation on the Storage Management Server.

Note

- Create a directory in which data will be saved in advance.
- Terminal service (via a remote desktop connection)

If the operating system for the Storage Management Server is Windows Server 2003, the Terminal Service must be used by making a console session connection to it. Refer to the following links for information on how to make console session connections:

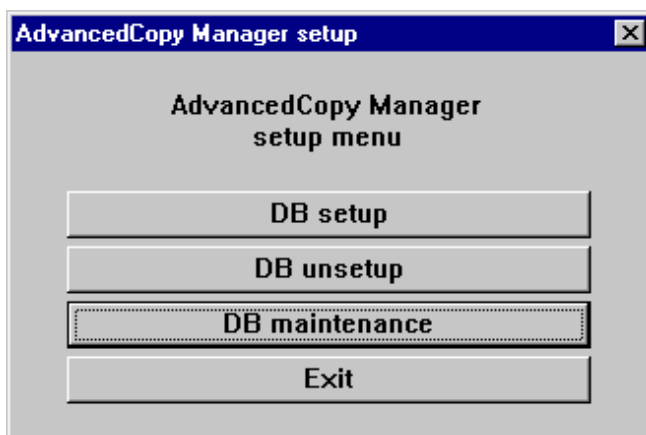
<http://support.microsoft.com/kb/947723>

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

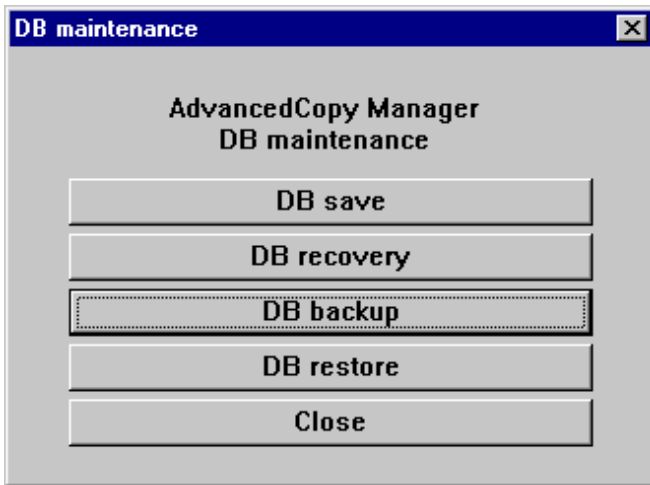
- Do not use the telnet server service.
Using the telnet server service causes malfunctions.

The procedure is shown below:

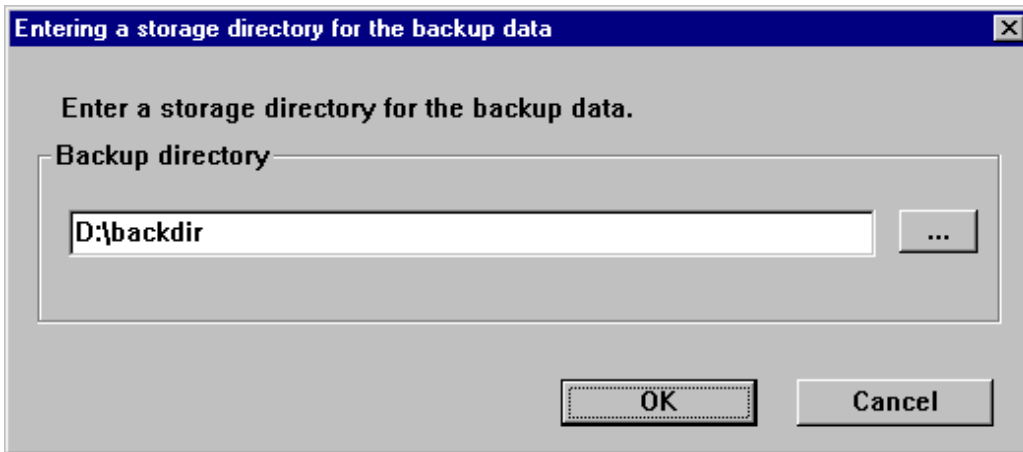
1. Click the [Start] button and select [Programs] -> [AdvancedCopy Manager] -> [DB Setup].
2. The following screen is displayed.
Click the [DB maintenance] button.



- The following screen is displayed.
Click the [DB backup] button.



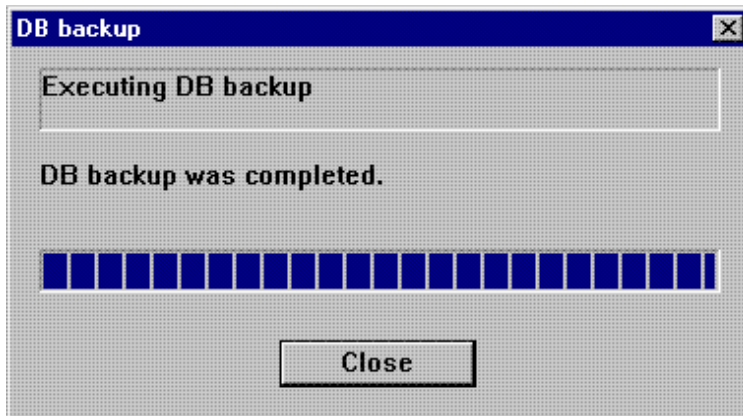
- The following screen is displayed.
Enter a backup directory and click the [OK] button.



- The following screen is displayed.
Check that the displayed information is correct and click the [Start] button.



- The following screen is displayed after the process is completed.
Click the [Close] button.



- Click the [Close] button displayed in step 3 to complete the DB maintenance.
- Click the [Exit] button 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 Backup of repository data (for Solaris, Linux)

Save the repository data to the specified directory all at once.
Perform this operation on the 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 Storage Management Server. If Symfoware has been installed in advance, perform this operation with the locale specified at the time of installing Symfoware.

The procedure is shown below:

- Execute the following command.

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

- The following message is displayed.
To continue processing, enter "y". To stop processing, enter "n".

```

////////////////////////////////////
AdvancedCopy Manager Storage Management Server ( **** )
Database backup
////////////////////////////////////

+-----+
|
| All of the stored data will be saved in an external file.
|
| [Notes]
| Prepare a directory for storing the data to be saved.
|
+-----+

```

```
Do you want to continue with processing? [y/n] ==> y
```

- The following message is displayed.
Enter the absolute path name of the directory for storing the data to be saved.

```
////////////////////////////////////  
AdvancedCopy Manager Storage Management Server ( **** )  
Database backup  
////////////////////////////////////  
  
Enter the absolute path name of the directory  
for storing the data to be saved.  
  
Enter ==> /storage/backdir
```

Note

If the saved data exists in the directory, the processing is not performed.
Delete the saved data in the directory or specify another directory to retry the processing.

- The following message is displayed.
Enter "y" to continue processing or "n" to stop processing.
When you enter "n", the screen returns step 2.

```
////////////////////////////////////  
AdvancedCopy Manager Storage Management Server ( **** )  
Database backup  
////////////////////////////////////  
  
Directory containing the saved data : /storage/backdir  
  
Do you want to continue with processing? [y/n] ==> y
```

- The processing is performed and the execution results are displayed on the screen.
The following example is for the execution result.

```
///// AdvancedCopy Manager database backup /////  
  
=====
```

```
DB data backup will start.  
=====
```

```
....  
Unloading of data is complete.(base)  
...  
Unloading of data is complete.(backup)  
.  
Unloading of data is complete.(repl)
```

```
=====
```

```
Backup of DB data is complete.  
=====
```

```
Database backup ended normally.  
  
#
```

- Check that the backup of database has been completed successfully.
Make sure that the file with ".unl" extension is created in the specified directory.

A.3 Backup of management information (for Windows)

Save the management information which exists in the 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 Storage Server is in a non-cluster environment:
`<Environment directory>\etc\backup\data`
 - If the Storage Server is in a cluster environment:
`<Drive letter of shared disk for shared data for AdvancedCopy Manager>:\etc\opt\swstorage\etc\backup\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:

```
C:\> <Program directory>\bin\swstresback <save directory>
```



For details on the command, refer to "swstresback (Resource backup command)" in the "ETERNUS SF AdvancedCopy Manager Operator's Guide" for the relevant previous version.

3. 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

In the case of non-cluster operation

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

In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for backup management function	<code><shared disk>:\etc\opt\swstorage\etc\backup\scripts\OpcBackupPre.js</code> <code><shared disk>:\etc\opt\swstorage\etc\backup\scripts</code> <code>\OpcBackupPost.js</code> <code><shared disk>:\etc\opt\swstorage\etc\backup\scripts\OpcRestorePre.js</code> <code><shared disk>:\etc\opt\swstorage\etc\backup\scripts</code> <code>\OpcRestorePost.js</code>
Transaction volume locking specification file for backups	<code><shared disk>:\etc\opt\swstorage\etc\backup\data\BTRANLOCK.INI</code>

File for save	File name
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 replication management list.

The replication management list is stored in the repository on the Storage Management Server. For this reason, if the repository data has been saved when migrating the Storage Management Server, this step is not required.

If the repository data on the Storage Management Server has not been saved, perform the operation with reference to the following:

- If the Storage Management Server is in Windows environment:

"[A.1 Backup of repository data \(for Windows\)](#)"

- If the Storage Management Server is in Solaris, Linux environment:

"[A.2 Backup of repository data \(for Solaris, Linux\)](#)"

2. Save the following files by using the copy command:

- Pre-processing and post-processing scripts for replication management function
- Copy source volume locking specification file
- Copy destination volume locking specification file
- Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

In the case of non-cluster operation

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

In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	<shared disk>:\etc\opt\swstorage\etc\repl\scripts\RepSrcPre.js <shared disk>:\etc\opt\swstorage\etc\repl\scripts\RepDstPre.js <shared disk>:\etc\opt\swstorage\etc\repl\scripts\RepSrcPost.js <shared disk>:\etc\opt\swstorage\etc\repl\scripts\RepDstPost.js
Copy source volume locking specification file	<shared disk>:\etc\opt\swstorage\etc\repl\data\SRLOCK.INI
Copy destination volume locking specification file	<shared disk>:\etc\opt\swstorage\etc\repl\data\DSTLOCK.INI

File for save	File name
Timeout value setting file for the concurrent suspend function	<shared disk>:\etc\opt\swstorage\etc\repl\data\DEFAULT\check.ini

3. If using the backup and the restoration function of the Exchange Database, save the following management information:

- Drive letter map file
- Device definition file (Windows Server 2003 environment only)

File for save	File name
Drive letter map file	<Environment directory>\etc\repl\data\EXDMAP.INI
Device definition file	<Environment directory>\etc\eternus_hardope.def

A.4 Backup of management information (for Solaris, Linux)

Save the management information which exists in the 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 Storage Server is in a non-cluster environment:
/etc/opt/FJSVswsts/data
- If the Storage Server is in a cluster environment:
/etc/opt/FJSVswsts/<logical-node-name>/data

Point

When you use the directory which has been saved as the save directory before, at least three times greater than the size calculated above is required.

2. Save the backup management list.

Specify the directory which can store the data size checked in step 1 and execute the following command:

```
# /opt/FJSVswsts/bin/swstresback <save directory>
```

See

For details on the command, refer to "swstresback (Resource backup command)" in the "ETERNUS SF AdvancedCopy Manager Operator's Guide" for the relevant previous version.

3. Save the following files by using the cp command:

- Pre-processing and post-processing scripts for backup management function

In the case of non-cluster operation

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

In the case of cluster operation

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

If a replication operation has been done

1. Save the replication management list.

The replication management list is stored in the repository on the Storage Management Server. For this reason, if the repository data has been saved when migrating the Storage Management Server, this step is not required.

If the repository data on the Storage Management Server has not been saved, perform the operation with reference to the following:

- If the Storage Management Server is in Windows environment:

"[A.1 Backup of repository data \(for Windows\)](#)"

- If the Storage Management Server is in Solaris, Linux environment:

"[A.2 Backup of repository data \(for Solaris, Linux\)](#)"

2. Save the following files by using the cp command:

- Pre-processing and post-processing scripts for replication management function
- Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

In the case of non-cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/sh/RepSrc.pre /etc/opt/FJSVswsrp/sh/RepDst.pre /etc/opt/FJSVswsrp/sh/RepSrc.post /etc/opt/FJSVswsrp/sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/data/DEFAULT/check.ini

In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/<logical-node-name>/sh/RepSrc.pre /etc/opt/FJSVswsrp/<logical-node-name>/sh/RepDst.pre /etc/opt/FJSVswsrp/<logical-node-name>/sh/RepSrc.post /etc/opt/FJSVswsrp/<logical-node-name>/sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/<logical-node-name>/data/DEFAULT/check.ini

A.5 Backup of management information (for HP-UX, AIX)

Save the management information which exists in the 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 Storage Server is in a non-cluster environment:

/etc/opt/FJSVswsts/data

- If the Storage Server is in a cluster environment:
/etc/opt/FJSVswsts/<logical-node-name>/data

2. Save the backup management list.

Specify the directory which can store the data size checked in step 1 and execute the following command:

```
# /opt/FJSVswsts/bin/swstresback <save directory>
```



For details on the command, refer to "swstresback (Resource backup command)" in the "ETERNUS SF AdvancedCopy Manager Operator's Guide" for the relevant previous version.

3. Save the following files by using the cp command.

- Pre-processing and post-processing scripts for backup management function

In the case of non-cluster operation

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

In the case of cluster operation

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

If a replication operation has been done

1. Save the replication management list.

The replication management list is stored in the repository on the Storage Management Server. For this reason, if the repository data has been saved when migrating the Storage Management Server, this step is not required.

If the repository data on the Storage Management Server has not been saved, perform the operation with reference to the following:

- If the Storage Management Server is in Windows environment:
"A.1 Backup of repository data (for Windows)"
- If the Storage Management Server is in Solaris, Linux environment:
"A.2 Backup of repository data (for Solaris, Linux)"

2. Save the following files by using the cp command:

- Pre-processing and post-processing scripts for replication management function
- Timeout value setting file for the concurrent suspend function (for AdvancedCopy Manager Version 13.4 or later only)

In the case of non-cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/sh/RepSrc.pre /etc/opt/FJSVswsrp/sh/RepDst.pre

File for save	File name
	/etc/opt/FJSVswsrp/sh/RepSrc.post /etc/opt/FJSVswsrp/sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/data/DEFAULT/check.ini

In the case of cluster operation

File for save	File name
Pre-processing and post-processing scripts for replication management function	/etc/opt/FJSVswsrp/<logical-node-name>/sh/RepSrc.pre /etc/opt/FJSVswsrp/<logical-node-name>/sh/RepDst.pre /etc/opt/FJSVswsrp/<logical-node-name>/sh/RepSrc.post /etc/opt/FJSVswsrp/<logical-node-name>/sh/RepDst.post
Timeout value setting file for the concurrent suspend function	/etc/opt/FJSVswsrp/<logical-node-name>/data/DEFAULT/check.ini

A.6 Backup of the environment setting files

Save the environment setting files for AdvancedCopy Manager Copy Control Module.

Copy the following files to any directory.

It is unnecessary to save files which are not listed in the following table.

For Windows environment

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 any files exist.
- \$INS_DIR\var\micc\database\DeviceRegList.xml	

\$INS_DIR is the "Program Directory" as specified during AdvancedCopy Manager CCM installation.

For Solaris, Linux environment

File name	Remarks
- /etc/opt/FJSVccm/db/eternus.xml - All files under /etc/opt/FJSVccm/db/cg directory	
- /etc/opt/FJSVccm/prop/user.properties - /etc/opt/FJSVccm/accc/etc/stxc.alias - /etc/opt/FJSVccm/accc/etc/stxcvolinf	Only when any files exist.
- /var/opt/FJSVccm/micc/database/DeviceRegList.xml	

A.7 Unsetup of database

Perform the database unsetup to delete the database, its environment or cancel the repository settings.

Note

- Terminal service (via a remote desktop connection)

If the operating system for the Storage Management Server is Windows Server 2003, the Terminal Service must be used by making a console session connection to it. Refer to the following links for information on how to make console session connections:

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

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

- Do not use the telnet server service.
Using the telnet server service causes malfunctions.
- 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. Log on the server where the database unsetup will be performed.

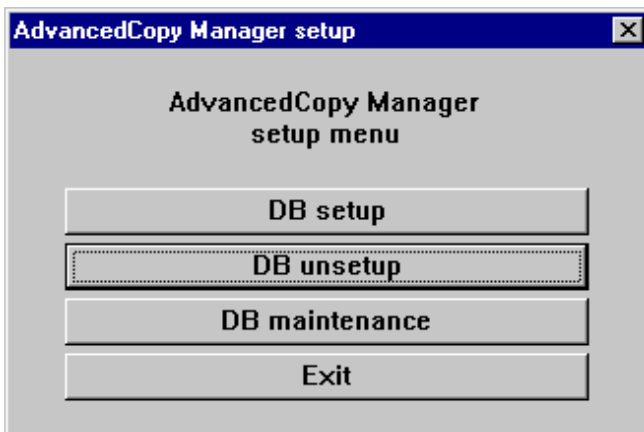
For installing AdvancedCopy Manager of the previous version level, log on the server as the user that has been specified when setting the database information.

If you log on the server with another user, this operation may fail.

2. Click the [Start] button and select [Programs] -> [AdvancedCopy Manager] -> [DB Setup].

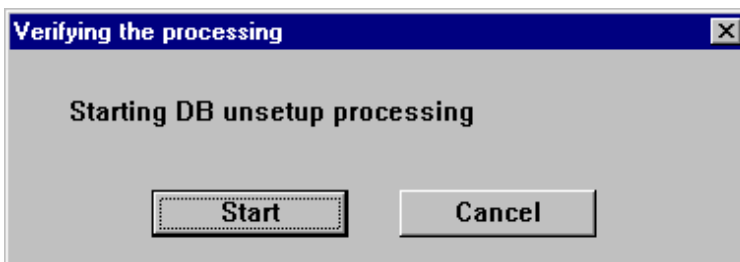
3. The following screen is displayed.

Click the [DB unsetup] button.

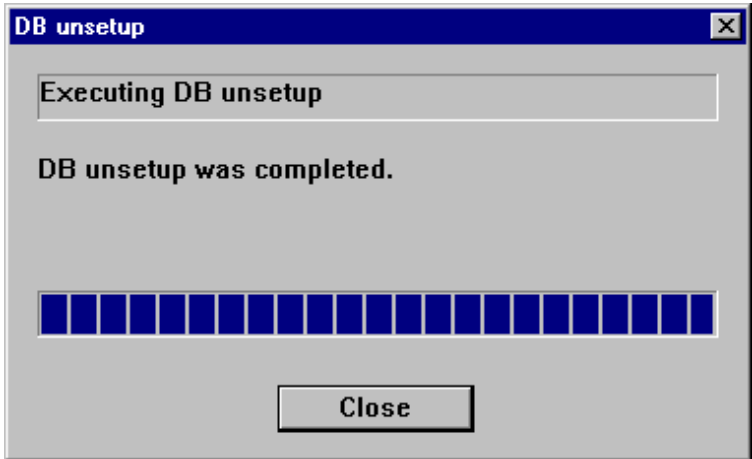


4. The following screen is displayed.

Click the [Start] button.



- When the processing is completed, the following screen is displayed.
Click the [Close] button.



- Finish the database unsetup by clicking the [Exit] button on the screen displayed in step 3.

A.8 Cancel of repository settings

Delete the database and its environment to cancel the repository configurations.

Note

- Perform this operation as a root user.
- When the Storage Management Server is operated on the clustered system, the repository configurations are cancelled by deleting the Storage Management Server transaction. Therefore, it is unnecessary to carry out this operation.
- Perform this operation with the locale specified when you installed the Storage Management Server. If Symfoware has been installed in advance, perform this operation with the locale specified at the time of installing Symfoware.
- When another software is monitoring Symfoware, stop Symfoware monitoring before executing the database unsetup. During Symfoware monitoring, the database unsetup may fail.

The procedure is shown below:

- Execute the following command:

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

- The following message is displayed.

To continue processing, enter "y". To stop processing, enter "n".

```

////////////////////////////////////
AdvancedCopy Manager Storage management server ( **** )
Database unsetup
////////////////////////////////////

+-----+
| All of database environments of AdvancedCopy Manager |
| will be deleted. |
| |
| [Notes] |
| Once processing has started, all stored data is discarded. |
| Make sure that the environment allows execution |
+-----+

```

```
| before proceeding. |
| | |
+-----+
Do you want to continue with processing? [y/n] ==>
```

- 3. Deletion of the Storage 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.
```