

ETERNUS SF



ETERNUS SF

Express V15.3/

Storage Cruiser V15.3/

AdvancedCopy Manager V15.3



Release Notes

B1FW-5995-01ENZ0(00)
June 2013

Preface

Purpose

This manual describes the update information of 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 plan or perform the upgrade to this version from a previous version of these software products, or who perform the upgrade process (mainly for system administrators).

Organization

This manual is composed as follows:

[Chapter 1 Overview of New Functions](#)

This chapter describes the overview of new functions.

[Chapter 2 Compatibility Information](#)

This chapter describes the contents changed from the previous version.

[Chapter 3 Program Fix List](#)

This chapter describes the overview of applied fixes.

Notation

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

Operating systems

Product name	Notation	
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	

Product name	Notation	
Microsoft(R) Windows Server(R) 2008 R2 Foundation Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Datacenter	Windows Server 2008 R2	
Microsoft(R) Windows Server(R) 2012 Standard Microsoft(R) Windows Server(R) 2012 Datacenter	Windows Server 2012	
Microsoft(R) Windows(R) XP Professional Edition Microsoft(R) Windows(R) XP Home Edition	Windows XP	
Windows Vista(R) Home Basic Windows Vista(R) Home Premium Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate	Windows Vista	
Windows(R) 7 Home Basic Windows(R) 7 Home Premium Windows(R) 7 Professional Windows(R) 7 Enterprise Windows(R) 7 Ultimate	Windows 7	
Windows(R) 8 Windows(R) 8 Pro	Windows 8	
Solaris(TM) 9 Operating system	Solaris 9	Solaris or Solaris OS
Oracle Solaris 10	Solaris 10	
Oracle Solaris 11	Solaris 11	
Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T)	RHEL-AS4	Linux
Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T)	RHEL-ES4	
Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64)	RHEL5	
Red Hat(R) Enterprise Linux(R) 6 (for x86) Red Hat(R) Enterprise Linux(R) 6 (for Intel64)	RHEL6	
SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T	SUSE Linux Enterprise Server 11	
HP-UX 11.0 HP-UX 11i v1 HP-UX 11i v2 HP-UX 11i v3	HP-UX	
AIX 5L(TM) V5.1 AIX 5L(TM) V5.2 AIX 5L(TM) V5.3 AIX(R) V6.1 AIX(R) V7.1	AIX	
VMware(R) Infrastructure 3 Foundation VMware(R) Infrastructure 3 Standard VMware(R) Infrastructure 3 Enterprise	VMware Infrastructure 3	VMware
VMware vSphere(R) 4 Essentials Kit VMware vSphere(R) 4 Essentials Plus Kit VMware vSphere(R) 4 Standard Edition(TM) VMware vSphere(R) 4 Standard Plus Data Recovery	VMware vSphere 4	

Product name	Notation	
VMware vSphere(R) 4 Advanced Edition(TM) VMware vSphere(R) 4 Enterprise Edition(TM) VMware vSphere(R) 4 Enterprise Plus Edition(TM)		
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	ETERNUS Web GUI		
ETERNUSmgr			

Software products

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

Manuals

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

Others

- ETERNUS SF Web Console is abbreviated as "Web Console".

Export Administration Regulation Declaration

This document may contain specific technologies that are covered by International Exchange and International Trade Control Laws. In the event that such technology is contained, when exporting or providing the document to non-residents, authorization based on the relevant law is required.

Trademarks

- Microsoft, Windows, Windows Server, Windows Vista and Internet Explorer are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.
- UNIX is a registered trademark of The Open Group in the United States and other countries.
- Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.
- Linux is a registered trademark of Linus Torvalds.
- Red Hat and RPM are registered trademarks of Red Hat, Inc. in the U.S. and other countries.
- SUSE is a registered trademark of Novell, Inc., in the United States and other countries.
- HP-UX is a trademark of Hewlett-Packard Company in the United States and other countries.
- AIX and AIX 5L are trademarks or registered trademarks of International Business Machines Corporation in the United States and other countries.
- VMware, VMware logo, Virtual SMP, and VMotion are the registered trademarks or trademarks of VMware, Inc. in the United States and other countries.
- All other brand and product names are trademarks or registered trademarks of their respective owners.

Shipment date and revision history

Shipment date	Revision	Manual code
June 2013	1	B1FW-5995-01ENZ0(00) / B1FW-5995-01ENZ2(00)

Notes

- No part of this manual may be reproduced without permission.
- This manual is subject to change without advance notice.

Copyright

Copyright 2013 FUJITSU LIMITED

Manual organization and reading suggestions

Manual organization

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

When to read	Related manuals (abbreviated)	Related products (*1)			Explanation
		EXP	SC	ACM	
Before installation	Quick Reference	Yes	Yes	Yes	This manual is unique for each product. The following manuals are available: <ul style="list-style-type: none"> - Express Quick Reference - Storage Cruiser Quick Reference - AdvancedCopy Manager Quick Reference
	Release Notes	Yes	Yes	Yes	This manual is common for all products.
	Overview	-	-	Yes	This manual is unique for each product.
During installation	Installation and Setup Guide	Yes	Yes	Yes	This manual is common for all products.
	Cluster Environment Setup Guide	-	Yes	Yes	This manual is common for Storage Cruiser and AdvancedCopy Manager.
	Migration Guide	Yes	Yes	Yes	This manual is common for all products.
During operation	Operation Guide	Yes	Yes	Yes	This manual is unique for each product. The following manuals are available: <ul style="list-style-type: none"> - Express Operation Guide - Storage Cruiser Operation Guide - Storage Cruiser Operation Guide for Optimization Option - AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) - AdvancedCopy Manager Operation Guide (for Linux)

When to read	Related manuals (abbreviated)	Related products (*1)			Explanation
		EXP	SC	ACM	
					<ul style="list-style-type: none"> - AdvancedCopy Manager Operation Guide (for HP-UX) - AdvancedCopy Manager Operation Guide (for AIX) - AdvancedCopy Manager for Exchange Server Operation Guide
	Operation Guide for Copy Control Module	Yes	-	Yes	This manual is common for Express and AdvancedCopy Manager.
	Web Console Guide	Yes	Yes	Yes	This manual is common for all products.
Anytime	Event Guide	Yes	Yes	-	This manual is common for Express and Storage Cruiser.
	Messages	Yes	Yes	Yes	This manual is common for all products.
	Glossary	Yes	Yes	Yes	This manual is common for all products.

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

How to read manuals

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

Purpose	Related products (*1)	Manual	Main contents	How to read
Acquiring a product overview and basic operation knowledge	EXP	- Express Quick Reference	<ul style="list-style-type: none"> - Product overview - Installation decision 	Please read if you want to acquire a fundamental knowledge of the product and its operation in order to decide to install it or not.
	SC	- Storage Cruiser Quick Reference		
	ACM	- AdvancedCopy Manager Quick Reference	<ul style="list-style-type: none"> - Overview of the necessary tasks from installation to first use - Main functions - Linkable applications - Procedure overview for Advanced Copy of ETERNUS Disk storage system 	
		- AdvancedCopy Manager Overview		
Confirming the updated contents	common	- ETERNUS SF Release Notes	<ul style="list-style-type: none"> - New function overview - Incompatibilities with previous version - Fixed bugs 	Please read if you want to know the updated contents from a previous version and if you perform the upgrade.
Deciding if a version upgrade is required	common	- ETERNUS SF Migration Guide	<ul style="list-style-type: none"> - Notes and cautions about version upgrade - Version upgrade procedure 	Please read if you want to upgrade from a previous version.
Installing and correctly operating the product	common	- ETERNUS SF Installation and Setup Guide	<ul style="list-style-type: none"> - Operating environment - Installation procedure - Setup procedure 	Please read if you want to install and setup the product.

Purpose	Related products (*1)	Manual	Main contents	How to read
Setting up operating environment depending on purpose			- Uninstallation procedure	Please read if you want to install and setup the product on a clustered system.
	SC, ACM	- ETERNUS SF Cluster Environment Setup Guide	- Supported cluster software - Installation procedure for a clustered system - Setup procedure for a clustered system - Uninstallation procedure for a clustered system	
Administration and operation of the installed system	EXP	- Express Operation Guide	- Starting and stopping the software - Device monitoring - Data copy inside the storage system - Necessary tasks after an architectural modification of the system as well as product maintenance	Please read if you want to start or shutdown the system, monitor the operation status, do backup/restore operations, etc.
	SC	- Storage Cruiser Operation Guide	- Starting and stopping the software - Device monitoring - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference	
		- Storage Cruiser Operation Guide for Optimization Option	- Operating environment construction - Operating status monitoring - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference	
	EXP, ACM	- ETERNUS SF Operation Guide for Copy Control Module	- Starting and stopping the software	
ACM	- AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) - AdvancedCopy Manager Operation Guide (for Linux) - AdvancedCopy Manager Operation Guide (for HP-UX)	- Data backup/restore inside the storage system - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference		

Purpose	Related products (*1)	Manual	Main contents	How to read
		- AdvancedCopy Manager Operation Guide (for AIX)		
		- AdvancedCopy Manager for Exchange Server Operation Guide	- Restoring the Exchange Server database using the Restore Wizard	
	common	- ETERNUS SF Web Console Guide	- Operating environment - Screen layout description	Please read if you want to understand the ETERNUS SF Web Console.
Dealing with messages issued by the software	common	- ETERNUS SF Messages	- Messages and their explanations - Parameter (variable information) description - System action - Countermeasures	Please read if you want a practical way of investigating and dealing with messages issued by the software.
Dealing with events issued by the software	EXP, SC	- ETERNUS SF Event Guide	- Phenomenon of event - Countermeasures	Please read if you need to find a practical way of investigating and dealing with events.
Researching the meaning of specific terms related to the products and other important terms	common	- ETERNUS SF Glossary	- Product specific terminology explanation - Explanation of important terminology appearing in the manual - Synonyms and related terms - Proper form of abbreviated terms	Please read if you want to learn the meaning of important terms, product specific terms or abbreviations used in the manuals.

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

Contents

Chapter 1 Overview of New Functions.....	1
1.1 New functions of Express.....	1
1.1.1 QuickOPC auto select in copy range.....	1
1.2 New functions of Storage Cruiser.....	1
1.2.1 IPv6 support.....	1
1.2.2 ETERNUS LT270 S2 support.....	1
1.2.3 Data ONTAP 8.1.2 support.....	2
1.2.4 Performance management for Brocade VDX series.....	2
1.3 New functions of Storage Cruiser Optimization Option.....	2
1.3.1 IPv6 support.....	2
1.3.2 Simplification of Tiering policy specification.....	2
1.3.3 Specification of assigned CM and disk auto-select for Tier pool.....	2
1.3.4 Setting of FTV capacity quota ratio.....	3
1.4 New functions of AdvancedCopy Manager.....	3
1.4.1 IPv6 support.....	3
1.4.2 Symfoware backup server operation.....	3
1.4.3 Exchange Server database information display.....	3
1.4.4 QuickOPC auto select in copy range.....	3
1.4.5 VMware virtual machine auto backup/restore (script).....	4
1.4.6 Restore wizard for Exchange Server.....	4
Chapter 2 Compatibility Information.....	5
2.1 Incompatible information list.....	5
2.2 Incompatible information of Express.....	8
2.2.1 Changes for supported web browsers.....	8
2.2.2 Changes for supported operating systems.....	8
2.2.3 Administrator's belonging group.....	9
2.2.4 Troubleshooting information sending function.....	9
2.2.5 Copy group definition export/import function.....	9
2.2.6 RAID group automatic creation function.....	10
2.2.7 Different name setting function for device information.....	10
2.2.8 Web Console connection address.....	10
2.2.9 Changes to the license process.....	10
2.2.10 Messages and event logs.....	11
2.2.11 Express_diag command.....	11
2.2.12 Path name of storageadm perfdata command (for Windows).....	11
2.2.13 Name and path name of troubleshooting information collection command (for Windows).....	11
2.3 Incompatible information of Storage Cruiser.....	12
2.3.1 SN200 MDS (Cisco MDS) events.....	12
2.3.2 First argument value to be handed over to the event linkage function.....	12
2.3.3 Name and path name of daemon start/stop command (for Solaris).....	12
2.3.4 Cmdline resource path for clustered environment (for Solaris).....	12
2.3.5 Management method for VMware Infrastructure 3 Version 3.5.....	13
2.3.6 Displayed contents for LVM (for HP-UX).....	13
2.3.7 Message of communication recovery event.....	14
2.3.8 Ssmgr3228 message.....	14
2.3.9 SNMP Trap reception program specification.....	14
2.3.10 Default install path of programs (for Windows).....	15
2.3.11 Name and path name of troubleshooting information collection command.....	16
2.3.12 Changes for supported devices.....	16
2.3.13 Changes for supported operating systems.....	17
2.3.14 Supports of Storage Volume Configuration Navigator.....	18
2.3.15 Supports of GUI client.....	18
2.3.16 Changes for login account.....	18
2.3.17 Memo information table and Revolving light icon.....	18

2.3.18 Beacon function for Solaris server node.....	19
2.3.19 Display information of correlation management.....	19
2.3.20 Changes for performance management.....	19
2.3.21 Information required for ETERNUS Disk storage system registration.....	20
2.3.22 SNMP Trap setup function checking at the device registration.....	20
2.3.23 SNMP Trap setup after registering Fibre Channel switch.....	20
2.3.24 Icon of Thin Provisioning Pool threshold monitoring.....	20
2.3.25 Display method for Capacity Chart of Thin Provisioning Pool.....	20
2.3.26 Managed Server deletion process.....	21
2.3.27 VM host deletion procedure if VM guests exist on VM host.....	21
2.3.28 Displayed contents of End to End view.....	22
2.3.29 Changes for Map view.....	22
2.3.30 Output information of storageadm port command and storageadm iscsiport command.....	23
2.3.31 Firmware version notation of ETERNUS Disk storage system.....	24
2.4 Incompatible information of AdvancedCopy Manager.....	24
2.4.1 Registration method for remote ETERNUS Disk storage system using AdvancedCopy Manager Copy Control Module.....	24
2.4.2 Host affinity group list display command name of AdvancedCopy Manager Copy Control Module.....	24
2.4.3 Messages output by AdvancedCopy Manager Copy Control Module.....	25
2.4.4 Name of term used with AdvancedCopy Manager Copy Control Module.....	25
2.4.5 Supports of GUI client.....	26
2.4.6 Changes for supported storage devices.....	26
2.4.7 Changes for supported operating systems.....	26
2.4.8 Default install path of programs (for Windows).....	27
2.4.9 Command preview.....	27
2.4.10 Stgmgrinfobkup command processing at the -t option specification.....	28
2.4.11 Output information of stgenvdisp command.....	28
2.4.12 Swstbackup command processing (for Windows).....	28
2.4.13 Swsrpmake command and swsrpcancel comamnd processing (for Windows).....	29
2.4.14 Environment setup/deletion methods for PRIMECLUSTER (for Linux).....	30
2.4.15 Name and path name of troubleshooting information collection command.....	30
2.4.16 Swsrpmake command processing on combining cascade copy and Concurrent OPC.....	31
2.4.17 Acopc start command and acsnap start command processing.....	31
2.4.18 Environment setup/deletion methods for clustered systems (for Solaris, HP-UX).....	31
2.4.19 AdvancedCopy Manager Copy Control Module customization procedure.....	32
2.4.20 Copying progress rate of QuickOPC.....	32
2.4.21 Information to be displayed if a hardware error, etc. occurs.....	33
2.5 Incompatible information of common for all products.....	33
2.5.1 Counting method in Extended Copy sessions and default filter on session list screen.....	34
2.5.2 Setting method and minimum setting value for Copy Table Size.....	34
2.5.3 Screen refresh interval of Web Console and its display/input unit.....	35
2.5.4 Design of Help button of Web Console and online help display procedures.....	35
Chapter 3 Program Fix List.....	36

Chapter 1 Overview of New Functions

This chapter describes the overview of functions added in this version.

1.1 New functions of Express

1.1.1 QuickOPC auto select in copy range

In the acopc start command, a function (-auto option) is provided for automatic selection of full copy / differential copy in QuickOPC. Refer to "acopc start (OPC/QuickOPC copy start command)" in the *ETERNUS SF Operation Guide for Copy Control Module* for details.

Previous versions required specification of either full copy or differential copy in the acopc start command after confirming the copy status for the operation target copy group or copy pair. In this version, when the -auto option is specified at the time of acopc start command execution, full copy or differential copy is automatically selected, and therefore it is no longer necessary to confirm the copy status in advance.



To execute the acopc start command, an ETERNUS SF Local Copy License is required.

1.2 New functions of Storage Cruiser

1.2.1 IPv6 support

ETERNUS SF system supports IPv6 addressing for the following:

- Network to Storage Cruiser
- iSCSI connection of ETERNUS Disk storage system

Refer to the ETERNUS SF Storage Cruiser Operation Guide for details.



There is no change in the ETERNUS SF system support for IPv4. IPv6 addressing is not required.

1.2.2 ETERNUS LT270 S2 support

The following fault monitoring function (support level: E) can be used for ETERNUS LT270 S2.

- SNMP Trap receiving and analyzing
- Polling monitoring using the ping

Refer to "Support levels" in the *ETERNUS SF Storage Cruiser Operation Guide* for details.

Refer to "ETERNUS LT270 S2 Traps" in the *ETERNUS SF Event Guide* for information on the event traps notified from the device.

1.2.3 Data ONTAP 8.1.2 support

The event traps that are added for Data ONTAP(R) 8.1.2 can be notified.

Refer to "NetApp FAS Series and V-Series Events" in the *ETERNUS SF Event Guide* for information on the notified event traps.

1.2.4 Performance management for Brocade VDX series

The performance management for Brocade VDX series is available. Refer to "Support levels" in the *ETERNUS SF Storage Cruiser Operation Guide* for details.



To use this function, the firmware version must be NOS v3.0.1 or later.

1.3 New functions of Storage Cruiser Optimization Option

In Storage Cruiser Optimization Option, the following functions are expanded.

1.3.1 IPv6 support

ETERNUS SF system supports IPv6 addressing for the following:

- Network to Storage Cruiser
- iSCSI connection of ETERNUS Disk storage system

Refer to the *ETERNUS SF Storage Cruiser Operation Guide* for details.



- There is no change in the ETERNUS SF system support for IPv4. IPv6 addressing is not required.
- Storage Cruiser Optimization Option is an optional licensed product of Storage Cruiser. The supported range is same with Storage Cruiser.

1.3.2 Simplification of Tiering policy specification

The IOPS value range setting specified in each Tiering policy can now be abbreviated. As a result, a Tiering policy can be created without being aware of IOPS value range settings. In addition, by setting default values separately from the policy name, a Tiering policy can be created simply by specifying a policy name.

Refer to "Setting of Tiering policy" in the *ETERNUS SF Storage Cruiser Operation Guide for Optimization Option* for details.

1.3.3 Specification of assigned CM and disk auto-select for Tier pool

The assigned CM and disk auto-select can be specified when performing the following operations.

- Creating Tier pools
- Expanding the Sub Pool capacity

Refer to "Setting of Tier pool" in the *ETERNUS SF Storage Cruiser Operation Guide for Optimization Option* for details.

1.3.4 Setting of FTV capacity quota ratio

You can set the quota ratio for the capacity of each Sub Pool in the Tier pool when creating or making changes to FTV. Refer to "Setting of FTV" in the *ETERNUS SF Storage Cruiser Operation Guide for Optimization Option* for details.

For FTV with a set quota ratio, relocation to each Sub Pool is carried out according to the quota ratio.

For FTV for which a quota ratio has not been specified, relocation is carried out according to the Tiering policy specified in the Tier pool.

1.4 New functions of AdvancedCopy Manager

1.4.1 IPv6 support

ETERNUS SF system supports IPv6 addressing for the following:

- Network to manage AdvancedCopy Manager

Refer to the *ETERNUS SF AdvancedCopy Manager Operation Guide* for details.



Information

.....
There is no change in the ETERNUS SF system support for IPv4. IPv6 addressing is not required.
.....

1.4.2 Symfoware backup server operation

Symfoware backup operation supports backup server operation. In backup server operation, the disks connected to the backup server can be specified in the backup volume. Refer to "Symfoware Backup Server Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for details.

1.4.3 Exchange Server database information display

In the `swsrpdevdisp_exchange` command, a function (-reg option) is provided that can display all database information registered in the `swsrpdbinfo_exchange` command. Refer to "`swsrpdevdisp_exchange` (Exchange device display command)" in the *ETERNUS SF AdvancedCopy Manager Operation Guide (for Windows)* for information on the command.

1.4.4 QuickOPC auto select in copy range

In the `acopc start` command, a function (-auto option) is provided for automatic selection of full copy / differential copy in QuickOPC. Refer to "`acopc start` (OPC/QuickOPC copy start command)" in the *ETERNUS SF Operation Guide for Copy Control Module* for details.

Previous versions required specification of either full copy or differential copy in the `acopc start` command after confirming the copy status for the operation target copy group or copy pair. In this version, when the -auto option is specified at the time of `acopc start` command execution, full copy or differential copy is automatically selected, and therefore it is no longer necessary to confirm the copy status in advance.

1.4.5 VMware virtual machine auto backup/restore (script)

A VMware virtual machine environment automatic backup/restore script is provided that uses the AdvancedCopy Manager Copy Control Module. Refer to "VMware Virtual Machine Automatic Backup/Restore (Script)" in the *ETERNUS SF Operation Guide for Copy Control Module* for details.

1.4.6 Restore wizard for Exchange Server

A wizard is provided to enable easy restore of the Exchange Server database from the Web Console. Refer to the *ETERNUS SF AdvancedCopy Manager for Exchange Server Operation Guide* for details.



Information

.....
To use this function, an ETERNUS SF AdvancedCopy Manager for Exchange Server License is required.
.....

Chapter 2 Compatibility Information

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

2.1 Incompatible information list

The contents changed from the previous version of each product are shown below.

Table 2.1 Incompatible information list of Express

Functions and compatibility issues	Version before Migration			
	14.2 or earlier	15.0	15.1	15.2
2.2.1 Changes for supported web browsers	I	C	C	C
2.2.2 Changes for supported operating systems	I	C	C	C
2.2.3 Administrator's belonging group	I	C	C	C
2.2.4 Troubleshooting information sending function	I	C	C	C
2.2.5 Copy group definition export/import function	I	C	C	C
2.2.6 RAID group automatic creation function	I	C	C	C
2.2.7 Different name setting function for device information	I	C	C	C
2.2.8 Web Console connection address	I	C	C	C
2.2.9 Changes to the license process	I	C	C	C
2.2.10 Messages and event logs	I	C	C	C
2.2.11 Express_diag command	I	C	C	C
2.2.12 Path name of storageadm perfdata command (for Windows)	I	C	C	C
2.2.13 Name and path name of troubleshooting information collection command (for Windows)	I	C	C	C
2.5.1 Counting method in Extended Copy sessions and default filter on session list screen	C	I	C	C
2.5.2 Setting method and minimum setting value for Copy Table Size	C	I	C	C
2.5.3 Screen refresh interval of Web Console and its display/input unit	C	I	I	C
2.5.4 Design of Help button of Web Console and online help display procedures	C	I	I	C

Key

C: Compatible. No known compatibility issues.

I: Incompatible. Possible compatibility issues.

Table 2.2 Incompatible information list of Storage Cruiser

Functions and compatibility issues	Version before Migration								
	13.0	13.1	13.2, 13.3	13.4	14.0, 14.1	14.2	15.0	15.1	15.2
2.3.1 SN200 MDS (Cisco MDS) events	I	C	C	C	C	C	C	C	C
2.3.2 First argument value to be handed over to the event linkage function	I	I	C	C	C	C	C	C	C
2.3.3 Name and path name of daemon start/stop command (for Solaris)	I	I	C	C	C	C	C	C	C

Functions and compatibility issues	Version before Migration								
	13.0	13.1	13.2, 13.3	13.4	14.0, 14.1	14.2	15.0	15.1	15.2
2.3.4 Cmdline resource path for clustered environment (for Solaris)	I	I	C	C	C	C	C	C	C
2.3.5 Management method for VMware Infrastructure 3 Version 3.5	I	I	I	C	C	C	C	C	C
2.3.6 Displayed contents for LVM (for HP-UX)	I	I	I	C	C	C	C	C	C
2.3.7 Message of communication recovery event	I	I	I	I	C	C	C	C	C
2.3.8 Ssmgr3228 message	C	C	C	C	I	C	C	C	C
2.3.9 SNMP Trap reception program specification	I	I	I	I	I	I	I	I	I
2.3.10 Default install path of programs (for Windows)	I	I	I	I	I	I	C	C	C
2.3.11 Name and path name of troubleshooting information collection command	I	I	I	I	I	I	C	C	C
2.3.12 Changes for supported devices	I	I	I	I	I	I	C	C	C
2.3.13 Changes for supported operating systems	I	I	I	I	I	I	C	C	C
2.3.14 Supports of Storage Volume Configuration Navigator	C	I	I	I	I	I	C	C	C
2.3.15 Supports of GUI client	I	I	I	I	I	I	C	C	C
2.3.16 Changes for login account	I	I	I	I	I	I	C	C	C
2.3.17 Memo information table and Revolving light icon	I	I	I	I	I	I	C	C	C
2.3.18 Beacon function for Solaris server node	I	I	I	I	I	I	C	C	C
2.3.19 Display information of correlation management	I	I	I	I	I	I	C	C	C
2.3.20 Changes for performance management	I	I	I	I	I	I	C	C	C
2.3.21 Information required for ETERNUS Disk storage system registration	I	I	I	I	I	I	C	C	C
2.3.22 SNMP Trap setup function checking at the device registration	I	I	I	I	I	I	C	C	C
2.3.23 SNMP Trap setup after registering Fibre Channel switch	I	I	I	I	I	I	C	C	C
2.3.24 Icon of Thin Provisioning Pool threshold monitoring	C	C	C	C	I	I	C	C	C
2.3.25 Display method for Capacity Chart of Thin Provisioning Pool	C	C	C	C	I	I	C	C	C
2.3.26 Managed Server deletion process	I	I	I	I	I	I	C	C	C
2.3.27 VM host deletion procedure if VM guests exist on VM host	C	C	C	I	I	I	C	C	C
2.3.28 Displayed contents of End to End view	I	I	I	I	I	I	I	C	C
2.3.29 Changes for Map view	I	I	I	I	I	I	I	C	C
2.3.30 Output information of storageadm port command and storageadm iscsiport command	C	C	C	C	C	I	I	C	C
2.3.31 Firmware version notation of ETERNUS Disk storage system	I	I	I	I	I	I	I	I	C
2.5.1 Counting method in Extended Copy sessions and default filter on session list screen	C	C	C	C	C	C	I	C	C

Functions and compatibility issues	Version before Migration								
	13.0	13.1	13.2, 13.3	13.4	14.0, 14.1	14.2	15.0	15.1	15.2
2.5.2 Setting method and minimum setting value for Copy Table Size	C	C	C	C	C	C	I	C	C
2.5.3 Screen refresh interval of Web Console and its display/input unit	C	C	C	C	C	C	I	I	C
2.5.4 Design of Help button of Web Console and online help display procedures	C	C	C	C	C	C	I	I	C

Key

C: Compatible. No known compatibility issues.

I: Incompatible. Possible compatibility issues.

Table 2.3 Incompatible information list of AdvancedCopy Manager

Functions and compatibility issues	Version before Migration					
	14.0 or earlier	14.1	14.2	15.0	15.1	15.2
2.4.1 Registration method for remote ETERNUS Disk storage system using AdvancedCopy Manager Copy Control Module	I	I	C	C	C	C
2.4.2 Host affinity group list display command name of AdvancedCopy Manager Copy Control Module	I	I	C	C	C	C
2.4.3 Messages output by AdvancedCopy Manager Copy Control Module	I	I	C	C	C	C
2.4.4 Name of term used with AdvancedCopy Manager Copy Control Module	I	I	I	C	C	C
2.4.5 Supports of GUI client	I	I	I	C	C	C
2.4.6 Changes for supported storage devices	I	I	I	C	C	C
2.4.7 Changes for supported operating systems	I	I	I	C	C	C
2.4.8 Default install path of programs (for Windows)	I	I	I	C	C	C
2.4.9 Command preview	I	I	I	C	C	C
2.4.10 Stgmgrinfobkup command processing at the -t option specification	I	I	I	C	C	C
2.4.11 Output information of stgenvdsp command	I	I	I	C	C	C
2.4.12 Swstbackup command processing (for Windows)	I	I	I	C	C	C
2.4.13 Swsrpmake command and swsrpcancel comamnd processing (for Windows)	I	I	I	C	C	C
2.4.14 Environment setup/deletion methods for PRIMECLUSTER (for Linux)	I	I	I	C	C	C
2.4.15 Name and path name of troubleshooting information collection command	I	I	I	C	C	C
2.4.16 Swsrpmake command processing on combining cascade copy and Concurrent OPC	C	C	C	I	C	C
2.4.17 Acopc start command and acsnap start command processing	C	C	C	I	C	C
2.4.18 Environment setup/deletion methods for clustered systems (for Solaris, HP-UX)	I	I	I	I	C	C
2.4.19 AdvancedCopy Manager Copy Control Module customization procedure	C	C	C	I	C	C
2.4.20 Copying progress rate of QuickOPC	I	I	I	I	C	C
2.4.21 Information to be displayed if a hardware error, etc. occurs	I	I	I	I	I	C

Functions and compatibility issues	Version before Migration					
	14.0 or earlier	14.1	14.2	15.0	15.1	15.2
2.5.1 Counting method in Extended Copy sessions and default filter on session list screen	C	C	C	I	C	C
2.5.2 Setting method and minimum setting value for Copy Table Size	C	C	C	I	C	C
2.5.3 Screen refresh interval of Web Console and its display/input unit	C	C	C	I	I	C
2.5.4 Design of Help button of Web Console and online help display procedures	C	C	C	I	I	C

Key

C: Compatible. No known compatibility issues.

I: Incompatible. Possible compatibility issues.

2.2 Incompatible information of Express

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

2.2.1 Changes for supported web browsers

The following web browsers are no longer supported from Version 15.0.

- Internet Explorer 7
- Firefox 3.5



See

.....

Refer to "Supported web browsers" in the *ETERNUS SF Web Console Guide* for the version level of the supported web browsers.

.....

2.2.2 Changes for supported operating systems

The following operating systems are no longer supported from Version 15.0.

- Windows Server 2003, Standard Edition (non-SP)
- Windows Server 2003, Standard x64 Edition (non-SP and SP2)
- Windows Server 2003, Enterprise Edition (non-SP)
- Windows Server 2003, Enterprise x64 Edition (non-SP and SP2)
- Windows Server 2003 R2, Standard Edition (non-SP)
- Windows Server 2003 R2, Standard x64 Edition (non-SP and SP2)
- Windows Server 2003 R2, Enterprise Edition (non-SP)
- Windows Server 2003 R2, Enterprise x64 Edition (non-SP and SP2)

If Express Version 14.2 or earlier is installed in the above operating systems, the upgrade to Version 15.0 or later from Version 14.2 or earlier cannot be performed. If you use Express Version 15.0 or later, it is necessary to install it newly in the operating systems supported by Express.



See

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

2.2.3 Administrator's belonging group

The administrator's belonging group has been changed.

Version	Details
14.2 or earlier	System administrator: User in the Administrators group Business administrator: User in the Administrators group
15.0 or later	System administrator: User in the ESFAdmin role group Business administrator: User in the ESFMon or ESFAdmin role group

2.2.4 Troubleshooting information sending function

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 or later	The function is no longer supported.

2.2.5 Copy group definition export/import function

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

Version	Details
14.2 or earlier	It is possible to use the copy group definition export/import 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 or later	The copy group definition export/import 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

Refer to the following manuals for information on the forced cancel or forced suspend of remote copy sessions on the Version 15.0 or later:

- "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*

2.2.6 RAID group automatic creation function

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

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

2.2.7 Different name setting function for device information

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

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

2.2.8 Web Console connection address

The address to connect to the Management Server has been changed as follows.

Version	Details
14.2 or earlier	<code>https://ipAddress:portNumber/express/</code>
15.0 or later	<code>https://ipAddress:portNumber/</code>



See

.....
Refer to "How to start Web Console" in the *ETERNUS SF Web Console Guide* for details.
.....

2.2.9 Changes to the license process

The license management process has been 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 or later	<ul style="list-style-type: none">- The Advanced Copy license can be set from the Web Console and command.- Product upgrades to Storage Cruiser and AdvancedCopy Manager are possible only through software license registration of the relevant products.



See

Refer to "License Management" in the *ETERNUS SF Installation and Setup Guide* for details.

2.2.10 Messages and event logs

The messages and event logs have been changed as follows.

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

2.2.11 Express_diag command

The `express_diag` command is no longer supported.

Version	Details
14.2 or earlier	It is possible to use <code>express_diag</code> command.
15.0 or later	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.

2.2.12 Path name of storageadm perfdata command (for Windows)

The path name of the `storageadm perfdata` command has been changed as follows.

Version	Details
14.2 or earlier	<code>installDir\Express\Manager\bin (*1)</code>
15.0 or later	<code>installDir\ESC\Manager\opt\FJSVssmgr\sbin (*2)</code>

*1: The `installDir` is "Program Directory" specified at the Express installation.

*2: The `installDir` is "Program Directory" specified at the ETERNUS SF Manager installation.

2.2.13 Name and path name of troubleshooting information collection command (for Windows)

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

Version	Details
14.2 or earlier	<code>installDir\Express\Manager\bin\express_managersnap (*1)</code>
15.0 or later	<code>installDir\Common\bin\esfsnap (*2)</code>

*1: The `installDir` is "Program Directory" specified at the Express installation.

*2: The `installDir` is "Program Directory" specified at the ETERNUS SF Manager installation.

2.3 Incompatible information of Storage Cruiser

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

2.3.1 SN200 MDS (Cisco MDS) events

The event message when the status of the fiber channel port changed has been changed as follows.

Version	Details
13.0 or earlier	The status of the port has changed to <i>state/status</i>
13.1 or later	The status of the port has changed to <i>state/status fc slotNumber/portNumberInsidePort(portNumber)</i>



Refer to "SN200 MDS (Cisco MDS) Events" in the *ETERNUS SF Event Guide* for information on new message formats.

2.3.2 First argument value to be handed over to the event linkage function

In the trouble message handed by first argument, the product name of SN200 has been changed as follows.

Version	Details
13.1 or earlier	"SilkWorm <i>productName</i> "
13.2 or later	" <i>productName</i> "



- For Version 13.1 or earlier:

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

- For Version 13.2 or later:

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

2.3.3 Name and path name of daemon start/stop command (for Solaris)

The name and install path of daemon start/stop command have been changed as follows.

Version	Details
13.1 or earlier	/opt/FJSVrcxmr/sbin/rcxmgrctl
13.2 or later	/opt/FJSVssmgr/sbin/managerctl

2.3.4 Cmdline resource path for clustered environment (for Solaris)

The Cmdline resource path for clustered environment has been changed as follows.

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

2.3.5 Management method for VMware Infrastructure 3 Version 3.5

The management method for VMware Infrastructure 3 Version 3.5 has been changed as follows.

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 Storage Cruiser, the IP address of host operating system is required. On the correlation management screen, ext2 and ext3 filesystem are displayed.
13.4 or later	Manages VMware infrastructure without installing a Storage Cruiser's agent on the host operating system. To register VMware Infrastructure with Storage Cruiser, the IP address of VM host, user name and password to login to VM host are required. On the correlation management screen, ext2 and ext3 filesystem are not displayed.

If the Storage Cruiser's agents from Version 13.3 or earlier are still used even after migrating the Storage Cruiser's 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 Storage Cruiser's manager to Version 13.4, then delete the settings for the servers where the Storage Cruiser's agent has been installed from this software and register the servers again using the new management method.



See

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

2.3.6 Displayed contents for LVM (for HP-UX)

The integration icon name and basic information for LVM logical/physical volume have been changed as follows.

Item	Version	Details
Integration icon name for logical volume	13.3 or earlier	PVLink Logical Volumes(<i>volumeName</i>)
	13.4 or later	LVM Logical Volumes(<i>volumeName</i>)
Basic information of integration icon for logical volume	13.3 or earlier	PVLink Logical Volumes(<i>volumeName</i>)
	13.4 or later	LVM Logical Volumes(<i>volumeName</i>)
Basic information of integration icon for physical volume	13.3 or earlier	PVLink Physical Volumes(<i>volumeName</i>)
	13.4 or later	LVM Physical Volumes(<i>volumeName</i>)

Basic information of integration icon is displayed by clicking **Basic information** tab in property screen for the integration icon.

Example

- For 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)

- For 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)

2.3.7 Message of communication recovery event

For the Managed devices using the "Communication status check" polling method, the messages of communication recovery event have been changed as follows.

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

See

Refer to "Device Polling" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on the polling methods.

2.3.8 Ssmgr3228 message

The ssmgr3228 message output by storage management commands has been changed as follows.

Version	Details
14.1 or earlier	The specified raid group number is used in the Thin Provisioning Pool.
14.2 or later	The specified raid group cannot operate.

2.3.9 SNMP Trap reception program specification

The SNMP Trap reception program specification has been changed as follows.

For Windows

Version	Details
14.1 or earlier	<ul style="list-style-type: none">- SystemWalker MpWksttr is used as the SNMP Trap monitoring service.- If in use with ServerView AlarmService, the mpmsts ON command must be executed.- If in use with Systemwalker Centric Manager, no special settings are required.

Version	Details
14.2 or later	<ul style="list-style-type: none"> - The OS standard SNMP Trap monitoring service is used. For Windows Server 2003: SNMP Trap Service For Windows Server 2008 or later: SNMP Trap - If in use with ServerView AlarmService, the mpmsts ON command need not be executed. - If in use with Systemwalker Centric Manager, the settings indicating coexistence with ServerView AlarmService are required at the Systemwalker Centric Manager side.

For Linux

Version	Details
14.1 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 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 Version 2.1.1 to 2.1.3, no special settings are required.
14.2 or later	<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 the snmptrapd. - If in use with ServerView AlarmService, the ServerView trap transfer program (SMAWtrpsv) is not required. - If in use with any of the Systemwalker Centric Manager versions or with ServerView Resource Coordinator VE Version 2.1.1 to 2.1.3, the settings indicating use with ServerView AlarmService are required at the Systemwalker Centric Manager or ServerView Resource Coordinator VE side.

For Solaris

Version	Details
15.2 or earlier	<ul style="list-style-type: none"> - If in use with Systemwalker Centric Manager Version 13.5 or earlier, no special settings are required. - The coexistence with Systemwalker Centric Manager Version 13.6 or later cannot be done.
15.3 or later	<ul style="list-style-type: none"> - The coexistence with Systemwalker Centric Manager Version 13.5 or earlier cannot be done. - If in use with Systemwalker Centric Manager Version 13.6 or later, no special settings are required.

2.3.10 Default install path of programs (for Windows)

The default install path for programs that include manager functions has been changed as follows.

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

Example

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

- For Version 14.2 or earlier:

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

- For Version 15.0 or later:

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



2.3.11 Name and path name of troubleshooting information collection command

The name and path name of the troubleshooting information collection command for the Storage Cruiser's manager have been changed as follows.

For Windows

Version	Details
14.2 or earlier	<i>installDir</i> \Manager\opt\FJSVssmgr\sbin\managersnap (*1)
15.0 or later	<i>installDir</i> \Common\bin\esfsnap (*2)

*1: The *installDir* is "Program Directory" specified at the Storage Cruiser's manager installation.

*2: The *installDir* is "Program Directory" specified at the ETERNUS SF Manager installation.

For Solaris

Version	Details
13.1 or earlier	/opt/FJSVrcxmr/sbin/rcxmgrsnap
13.2 to 14.2	/opt/FJSVssmgr/sbin/managersnap
15.0 or later	/opt/FJSVesfcm/bin/esfsnap

For Linux

Version	Details
14.2 or earlier	/opt/FJSVssmgr/sbin/managersnap
15.0 or later	/opt/FJSVesfcm/bin/esfsnap

2.3.12 Changes for supported devices

The following devices are no longer supported from Version 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



Refer to "Supported devices" in the *ETERNUS SF Installation and Setup Guide* for information on the devices that can be managed by this version of Storage Cruiser.

2.3.13 Changes for supported operating systems

The following operating systems are no longer supported from Version 15.0.

- Storage Cruiser's manager
 - Windows Server 2008 R2 Foundation (non-SP and SP2)
 - Windows Server 2003, Standard Edition (non-SP)
 - Windows Server 2003, Enterprise Edition (non-SP)
 - Windows Server 2003 R2, Standard Edition (non-SP)
 - Windows Server 2003 R2, Standard x64 Edition (non-SP and SP2)
 - Windows Server 2003 R2, Enterprise Edition (non-SP)
 - Windows Server 2003 R2, Enterprise x64 Edition (non-SP and SP2)
- Storage Cruiser's agent
 - Windows Server 2008 for Itanium-Based Systems (non-SP and SP2)
 - Windows Server 2003, Standard Edition (non-SP)
 - Windows Server 2003, Standard x64 Edition (non-SP)
 - Windows Server 2003, Enterprise Edition (non-SP)
 - Windows Server 2003, Enterprise x64 Edition (non-SP)
 - Windows Server 2003, Enterprise Edition for Itanium-based Systems SP2
 - Windows Server 2003 R2, Standard Edition (non-SP)
 - Windows Server 2003 R2, Standard x64 Edition (non-SP)
 - Windows Server 2003 R2, Enterprise Edition (non-SP)
 - Windows Server 2003 R2, Enterprise x64 Edition (non-SP)
 - Solaris 8 Operating System
 - Red Hat Enterprise Linux 5 (for Intel Itanium)
 - Red Hat Enterprise Linux AS (v.4 for Itanium)
 - Red Hat Enterprise Linux AS (v.3 for x86)
 - Red Hat Enterprise Linux ES (v.3 for x86)
 - SUSE Linux Enterprise Server 9 for EM64T

If Storage Cruiser Version 14.2 or earlier is installed in the above operating systems, the upgrade to Version 15.0 or later from Version 14.2 or earlier cannot be performed. If you use Storage Cruiser Version 15.0 or later, it is necessary to install it newly in the operating systems supported by 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* for the operating systems supported by this version of Storage Cruiser.

2.3.14 Supports of Storage Volume Configuration Navigator

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 or later	Storage Volume Configuration Navigator is no longer supported.

2.3.15 Supports of GUI client

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 or later	When operating the Storage Cruiser function with a GUI, the operation is performed from a web browser.



See

.....
Refer to the *ETERNUS SF Web Console Guide* for information on the usable web browsers and how to use the Web Console.
.....

2.3.16 Changes for login account

The login account has been changed as follows.

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

2.3.17 Memo information table and Revolving light icon

The memo information table and the revolving light icon are no longer supported.

Version	Details
14.2 or earlier	<ul style="list-style-type: none">- Display and edition of memo information is possible.- The revolving light icon is displayed on the Resource view.
15.0 or later	<ul style="list-style-type: none">- Display and edition of memo information is not possible. The memo information created with previous versions cannot be restored in the new version.- The revolving light icon is not displayed.

2.3.18 Beacon function for Solaris server node

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

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

2.3.19 Display information of correlation management

The correlation management display has been changed as follows.

Version	Details
14.2 or earlier	<ul style="list-style-type: none">- It is possible to display the detailed relational management configuration within the device as a separate window element.
15.0 or later	<ul style="list-style-type: none">- List view is possible but not as a separate window element.- The following items relative to correlation 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 driver display- Raw Device display- IOB display- Router display- DE display- Battery display- Element integrated display- Connection display- Configuration information saving

2.3.20 Changes for performance management

The performance management processing has changed as follows.

Version	Details
14.2 or earlier	<ul style="list-style-type: none">- The processing for threshold monitoring of performance management function displays the condition report.- The content displaying in the performance management graph is available to output as a JPEG file.
15.0 or later	<ul style="list-style-type: none">- The processing for threshold monitoring of performance management function does not display the condition report.- The content displaying in the performance management graph is not available to output as a JPEG file.

2.3.21 Information required for ETERNUS Disk storage system registration

The information necessary for device registration of ETERNUS Disk storage system has been changed as follows.

Version	Details
14.2 or earlier	It is not necessary to specify an account of ETERNUS Disk storage system.
15.0 or later	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- ETERNUS DX8000 S2 series For models besides those listed above, it is necessary to specify an account holding ETERNUS Disk storage system Administrator privileges.

2.3.22 SNMP Trap setup function checking at the device registration

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	The automatic setting function for SNMP Trap destination address is checked by default.
15.0 or later	The automatic setting function for SNMP Trap destination address is not checked by default.



2.3.23 SNMP Trap setup after registering Fibre Channel switch

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

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

2.3.24 Icon of Thin Provisioning Pool threshold monitoring

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 or later	Displays "  ".

2.3.25 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 Duration: <ul style="list-style-type: none"> - Past 1 month - Past n year (n : 1 - 10) <p>- Two or more graph windows of Thin Provisioning Pool can be displayed with one direction.</p>
15.0 or later	<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"> - Past 1 month - Past 1 Year - Past 10 years <p>- One graph window of Thin Provisioning Pool can be displayed with one direction.</p>

2.3.26 Managed Server deletion process

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

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

2.3.27 VM host deletion procedure if VM guests exist on VM host

The process for deleting a VM host if VM guests exist under this VM host has been changed as follows.

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

2.3.28 Displayed contents of End to End view

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

Displayed contents		Version of Storage Cruiser	
Category	Item	15.0 or earlier	15.1 or later
Server	Name	Displayed	Displayed
	Type	Displayed	Displayed
	Mount Point	Not displayed	Displayed
	Multipath Driver Device	Not displayed	Displayed
	Interface Type	Displayed	Displayed
	HBA WWPN	Displayed	Displayed
	HBA iSCSI Name / IP Address	Displayed	Displayed
Switch (connected to Server)	Name	Displayed	Displayed
	Port	Displayed	Displayed
Switch (connected to Storage)	Name	Displayed	Displayed
	Port	Displayed	Displayed
Storage	Name	Displayed	Displayed
	Port	Displayed	Displayed
	AG	Displayed	Displayed
	LUN	Displayed	Displayed
	Volume	Displayed	Displayed
	TPP	Displayed	Displayed
	RG	Displayed	Displayed
	RG (Concatenated)	Displayed	Displayed

Note

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

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

2.3.29 Changes for Map view

The map view function has been changed as follows.

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

Version	Details
15.1 or later	A map display and a list display are available. The map display allows for display of connecting lines between icons, statuses of access paths, and physical lines that are forming access paths. Drag-and-drop setting of access paths is not available.

2.3.30 Output information of storageadm port command and storageadm iscsiport command

The output information of the storageadm port command and storageadm iscsiport command for the following devices has been changed as follows.

Device name	Number of CMs per Device	Number of ports per CM	Remarks
ETERNUS DX60/DX60 S2	1	2	
ETERNUS DX80	2	1	
ETERNUS DX90	1	4	The storageadm port command only
ETERNUS2000	1	2	

Output information of the storageadm port command:

Version	Details
15.0 or earlier	Absent port information is displayed. The command execution example is as follows: # /opt/FJSVssmgr/sbin/storageadm port info -ipaddr 1.2.3.4 -csv PORT ID,PORT NAME,STATUS,TYPE,AFFINITY,PORT ADDRESS,SUPPLEMENT INFORMATION 00,CM0Port0,Online,FC-CA,On,1234567890ABCDEE,- 01,CM0Port1,Undefined,FC-CA,Off,0000000000000000,- 10,CM1Port0,Online,FC-CA,On,1234567890ABCDEF,- 11,CM1Port1,Undefined,FC-CA,Off,0000000000000000,-
15.1 or later	Absent port information is not displayed. The command execution example is as follows: # /opt/FJSVssmgr/sbin/storageadm port info -ipaddr 1.2.3.4 -csv PORT ID,PORT NAME,STATUS,TYPE,AFFINITY,PORT ADDRESS,SUPPLEMENT INFORMATION 00,CM0Port0,Online,FC-CA,On,1234567890ABCDEE,- 10,CM1Port0,Online,FC-CA,On,1234567890ABCDEF,-

Output information of the storageadm iscsiport command:

Version	Details
15.0 or earlier	Absent port information is displayed. The command execution example is as follows: # /opt/FJSVssmgr/sbin/storageadm iscsiport info -ipaddr 1.2.3.4 -csv PORT ID,NAME,STATUS,TYPE,AFFINITY,ISCSI NAME,IP ADDRESS 00,CM0Port0,Online,iSCSI-CA,On,iqn.2000-09.com.fujitsu:storage-system.e2000:0000000029,172.16.4.40 01,CM0Port1,Undefined,iSCSI-CA,Off,,- 10,CM1Port0,Online,iSCSI-CA,On,iqn.2000-09.com.fujitsu:storage-system.e2000:0000000029,172.16.4.41 11,CM1Port1,Undefined,iSCSI-CA,Off,,-
15.1 or later	Absent port information is not displayed. The command execution example is as follows: # /opt/FJSVssmgr/sbin/storageadm iscsiport info -ipaddr 1.2.3.4 -csv PORT ID,NAME,STATUS,TYPE,AFFINITY,ISCSI NAME,IP ADDRESS

Version	Details
	00,CM0Port0,Online,iSCSI-CA,On,iqn.2000-09.com.fujitsu:storage-system.e2000:0000000029,172.16.4.40 10,CM1Port0,Online,iSCSI-CA,On,iqn.2000-09.com.fujitsu:storage-system.e2000:0000000029,172.16.4.41

2.3.31 Firmware version notation of ETERNUS Disk storage system

The firmware version notation of ETERNUS Disk storage system has been changed as follows.

Version	Details	Remarks
15.1 or earlier	VxxLyyPzzzz	xx: Version yy: Level zzzz: Release
15.2 or later	VxxLyy-zzzz	

2.4 Incompatible information of AdvancedCopy Manager

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

2.4.1 Registration method for remote ETERNUS Disk storage system using AdvancedCopy Manager Copy Control Module

In AdvancedCopy Manager Copy Control Module, the method for registering remote ETERNUS Disk storage system has been changed as follows.

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

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

2.4.2 Host affinity group list display command name of AdvancedCopy Manager Copy Control Module

In AdvancedCopy Manager Copy Control Module, the name of the host affinity group list display command has been changed as follows.

Version	Details
14.1 or earlier	acinq hag
14.2 or later	acinq hostag

2.4.3 Messages output by AdvancedCopy Manager Copy Control Module

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

Message ID	14.1 or earlier	14.2 or later
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>arrayName</i>	The specified disk array is already registered. disk array= <i>arrayName</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>copyPair</i>	The specified copy pair is already registered. copy group= <i>copyGroup</i> , pair= <i>copyPair</i>
ccm3004	An invalid pair is specified. pair= <i>copyPair</i> , detail= <i>detail</i>	An invalid copy pair was specified. pair= <i>copyPair</i> , detail= <i>detail</i>
ccm4001	The disk array does not exist. disk array= <i>arrayName</i>	The specified disk array does not exist. disk array= <i>arrayName</i>
ccm4002	The disk array does not exist. disk array= <i>boxID</i>	The specified disk array does not exist. disk array= <i>boxID</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>
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>copyPair</i>	The specified copy pair was not found. copy group= <i>copyGroup</i> , pair= <i>copyPair</i>
ccm4006	The logical volume is not found. logical volume= <i>volumeName</i>	The specified logical volume was not found. logical volume= <i>volumeName</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>deviceName</i>	An invalid device was specified. device= <i>deviceName</i>

2.4.4 Name of term used with AdvancedCopy Manager Copy Control Module

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

Version	Details
14.2 or earlier	Access path
15.0 or later	Access volume

2.4.5 Supports of GUI client

The GUI client has been replaced with the Web Console.

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 or later	When operating the AdvancedCopy Manager function with a GUI, the operation is performed from a web browser.



See

.....
Refer to the *ETERNUS SF Web Console Guide* for information on the usable web browsers and how to use the Web Console.
.....

2.4.6 Changes for supported storage devices

The following devices are no longer supported from Version 15.0.

- ETERNUS4000 model 100
- ETERNUS3000 (all models)
- ETERNUS6000 (all models)
- ETERNUS GR series



See

.....
Refer to "Supported devices" in the *ETERNUS SF Installation and Setup Guide* for information on the devices that can be managed by this version of AdvancedCopy Manager.
.....

2.4.7 Changes for supported operating systems

The following operating systems are no longer supported from Version 15.0.

- AdvancedCopy Manager's manager
 - Windows Server 2003, Standard Edition (SP1)
 - Windows Server 2003, Enterprise Edition (SP1)
 - Windows Server 2003 R2, Standard Edition (non-SP)
 - Windows Server 2003 R2, Enterprise Edition (non-SP)
- AdvancedCopy Manager's agent
 - Windows Server 2008 for Itanium-Based Systems (non-SP and SP2)
 - Windows Server 2003, Standard Edition (SP1)
 - Windows Server 2003, Standard x64 Edition (SP1)
 - Windows Server 2003, Enterprise Edition (non-SP)
 - Windows Server 2003, Enterprise x64 Edition (non-SP)
 - Windows Server 2003, Enterprise Edition for Itanium-based Systems (non-SP and SP2)
 - Windows Server 2003 R2, Standard Edition (non-SP)
 - Windows Server 2003 R2, Standard x64 Edition (non-SP)
 - Windows Server 2003 R2, Enterprise Edition (non-SP)

Windows Server 2003 R2, Enterprise x64 Edition (non-SP)
Solaris 8 Operating System
Red Hat Enterprise Linux 5 (for Intel Itanium)
Red Hat Enterprise Linux AS (v.4 for Itanium)

- AdvancedCopy Manager Copy Control Module

Windows Server 2008 for Itanium-Based Systems (non-SP and SP2)
Windows Server 2003, Standard Edition (SP1)
Windows Server 2003, Standard x64 Edition (SP1)
Windows Server 2003, Enterprise Edition (non-SP)
Windows Server 2003, Enterprise x64 Edition (non-SP)
Windows Server 2003, Enterprise Edition for Itanium-based Systems (non-SP and SP2)
Windows Server 2003 R2, Standard Edition (non-SP)
Windows Server 2003 R2, Enterprise Edition (non-SP)
Windows Server 2003 R2, Standard x64 Edition (non-SP)
Windows Server 2003 R2, Enterprise x64 Edition (non-SP)

If AdvancedCopy Manager Version 14.2 or earlier is installed in the above operating systems, the upgrade to Version 15.0 or later from Version 14.2 or earlier cannot be performed. If you use AdvancedCopy Manager Version 15.0 or later, it is necessary to install it newly in the operating systems supported by AdvancedCopy Manager.



See

Refer to the following sections in the *ETERNUS SF Installation and Setup Guide* for the operating systems supported by this version of AdvancedCopy Manager:

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

2.4.8 Default install path of programs (for Windows)

The default install path for programs that include manager functions has been changed as follows.

Version	Details
14.2 or earlier	C:\Win32app\AdvancedCopyManager
15.0 or later	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:

- For Version 14.2 or earlier:

C:\Win32app\AdvancedCopyManager\bin\stgcmmodnode

- For Version 15.0 or later:

C:\ETERNUS_SF\ACM\bin\stgcmmodnode

2.4.9 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 or later	There is no command preview.

See

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

2.4.10 Stmgrinfobkup command processing at the -t option specification

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

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

Information

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

2.4.11 Output information of stgenvdisp command

The information displayed on the Management Server has changed as follows.

Version	Details
14.2 or earlier	Displays "Authentication feature" and "IP address for GUI".
15.0 or later	Does not display "Authentication feature" and "IP address for GUI".

2.4.12 Swstbackup command processing (for Windows)

For Windows, the swstbackup command processing under the following conditions has been 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	Locks the transaction volume.
15.0 or later	Flushes the file system buffer for the transaction volume.

Information

For Windows, the relation between the -Xflush option of the swstbackup command and the transaction volume locking specification file for backups is 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 or later	Not specify	Flush	Lock	Flush	Flush
	Specify	Flush	Flush	Flush	Flush

Lock: Locks the transaction volume.

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

2.4.13 Swsrpmake command and swsrpcancel comamnd processing (for Windows)

For Windows, the swsrpmake command processing and swsrpcancel command processing under the following conditions have been 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	Locks the copy source volume.
15.0 or later	Flushes the file system buffer for the copy source volume.

Information

For Windows, the relation between the -Xflush option of the swsrpmake/swsrpcancel commands and the copy source volume locking specification file is 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 or later	Not specify	Flush	Lock	Flush	Flush
	Specify	Flush	Flush	Flush	Flush

Lock: Locks the copy source volume.

Flush: Flushes 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.

2.4.14 Environment setup/deletion methods for PRIMECLUSTER (for Linux)

The methods for environment setup/deletion to PRIMECLUSTER for Linux have been changed as follows.

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

2.4.15 Name and path name of troubleshooting information collection command

The name and path name of the troubleshooting information collection command for the AdvancedCopy Manager's manager have been changed as follows.

Version	Details
14.2 or earlier	<ul style="list-style-type: none"> - For Windows <i>installDir</i>\bin\acmcapture (*1) - For Solaris or Linux /opt/FJSVswstf/bin/acmcapture
15.0 or later	<ul style="list-style-type: none"> - For Windows <i>installDir</i>\Common\bin\esfsnap (*2) - For Solaris or Linux /opt/FJSVesfcm/bin/esfsnap

*1: The *installDir* is "Program Directory" specified at the AdvancedCopy Manager's manager installation.

*2: The *installDir* is "Program Directory" specified at the ETERNUS SF Manager installation.

The name and path name of the troubleshooting information collection command for the AdvancedCopy Manager Copy Control Module have been changed as follows.

Version	Details
14.2 or earlier	<ul style="list-style-type: none"> - For Windows <i>installDir</i>\bin\acmcapture (*1) - For Solaris or Linux /opt/FJSVccm/bin/acmcapture
15.0 or later	<ul style="list-style-type: none"> - For Windows <i>installDir</i>\Common\bin\esfsnap (*2) - For Solaris or Linux /opt/FJSVesfcm/bin/esfsnap

*1: The *installDir* is "Program Directory" specified at the AdvancedCopy Manager Copy Control Module installation.

*2: The *installDir* is "Program Directory" specified at the ETERNUS SF Manager installation.

2.4.16 Swsrpmake command processing on combining cascade copy and Concurrent OPC

The swsrpmake command processing under the following conditions has been changed.

- A volume used by cascade copy has been specified as a copy source, and
- The -Xconcur-opc option has been specified.

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



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

2.4.17 Acopc start command and acsnap start command processing

The acopc start command processing and acsnap start command processing under the following conditions have been changed.

- A volume used by cascade copy has been specified as a copy source, and
- The -concur option has been specified.

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



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

2.4.18 Environment setup/deletion methods for clustered systems (for Solaris, HP-UX)

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

- For Solaris
 - SafeCLUSTER and PRIMECLUSTER
 - VERITAS Cluster Server
 - Sun Cluster

- For HP-UX
 - MC/ServiceGuard (A.11.17 or earlier)
 - VERITAS Cluster Server

Version	Details
15.0 or earlier	<p>The following commands serve to set and delete environments for clustered systems:</p> <ul style="list-style-type: none"> - stgclset_safe command - stgclset_vcs command - stgclset_sun command - stgclset_mcsmsg command - stgclset_hpves command - stgclunset_safe command - stgclunset_vcs command - stgclunset_sun command - stgclunset_mcsmsg command - stgclunset_hpves command
15.1 or later	<p>Above commands are not supported. Refer to "Applying Clusters for Solaris/Linux/HP-UX Version" in the <i>ETERNUS SF Cluster Environment Setup Guide</i> to set and delete environments for clustered systems.</p>

2.4.19 AdvancedCopy Manager Copy Control Module customization procedure

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

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

2.4.20 Copying progress rate of QuickOPC

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

- AdvancedCopy Manager commands
 - For all platforms
 - The **Execute** column of swstbackstat command
 - The **Execute** column of swsthistdisp command
 - The **Execute** column of swstexecstat command
 - The **Execute** column of swstrkstat command
 - The **Execute** column of swsrpstat command

- For Windows only
 - The **Execute** column of swsrpshadowadm_exchange command
 - The **Execute** column of swsrpvrq advcopy query command
- AdvancedCopy Manager Copy Control Module command
 - The **Progress** column of acopc query command

Version	Details
15.0 or earlier	If you write data onto a copy source volume while physical copying of QuickOPC is in progress, the displayed progress rate will not reach 100% after completing physical copying.
15.1 or later	In the following ETERNUS Disk storage systems, if you write data onto a copy source volume while physical copying of QuickOPC is in progress, a progress rate of 100% will be displayed after completing physical copying. <ul style="list-style-type: none"> - ETERNUS DX80 S2/DX90 S2 (Firmware version is V10L30 or later) - ETERNUS DX400 S2 series (Firmware version is V10L30 or later) - ETERNUS DX8000 S2 series (Firmware version is V10L30 or later)

2.4.21 Information to be displayed if a hardware error, etc. occurs

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

- "Status" column of the swstbackstat command
- "Status" column of the swstrestore command
- "Status" column of the swsthistdisp command
- "Status" column of the swstsyncstat command
- "Execute" column of the swstexecstat command
- "Status" column of the swstrkstat command

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



See

Refer to "Troubleshooting: Hardware error during backup" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for details.

2.5 Incompatible information of common for all products

This section describes the changes from the previous version of common for all products.

2.5.1 Counting method in Extended Copy sessions and default filter on session list screen

On the AdvancedCopy Overview screen of the Web Console, the counting method for the number of copy sessions in the **Session** and **Local Copy Session Count** columns has been changed as follows.

Also, on the session list screen, the filter item for Copy Type that is selected by default when opening the screen has been changed as follows.

Version	Details
15.0	<ul style="list-style-type: none"> - The Extended Copy sessions are included in the Sessions and Local Copy Session Count columns. - On the session list screen, "All" is selected as the filter item for Copy Type by default when opening the screen.
15.1 or later	<ul style="list-style-type: none"> - The Extended Copy sessions are not included in the Sessions and Local Copy Session Count columns. - On the session list screen, "All Local or REC" is selected as the filter item for Copy Type by default when opening the screen.

Information

How to display the AdvancedCopy Overview screen

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

How to display the session list screen

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

2.5.2 Setting method and minimum setting value for Copy Table Size

On the Advanced Copy Configuration Wizard screen of Web Console, the method for specifying the custom Copy Table Size and the minimum value to be set in the custom Copy Table Size are changed.

In addition, on the Remote Copy Configuration wizard screen, the minimum value to be set in the Copy Table Size is changed.

Version	Details
15.0	<p>The custom Copy Table Size can be specified by a pull-down list.</p> <p>The minimum value that can be set is 0.</p>
15.1 or later	<p>The custom Copy Table Size can be specified by a spin button or direct input.</p> <p>The minimum value that can be set is 8.</p>

Information

How to display the Advanced Copy Configuration Wizard screen

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

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

How to display the Remote Copy Configuration Wizard screen

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

2.5.3 Screen refresh interval of Web Console and its display/input unit

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

Version	Details
15.1 or earlier	<ul style="list-style-type: none"> - The shortest screen refresh interval is 1 minute. - Display/input unit of the screen refresh interval is "minute".
15.2 or later	<ul style="list-style-type: none"> - The shortest screen refresh interval is 30 seconds. - Display/input unit of the screen refresh interval is "second".

2.5.4 Design of Help button of Web Console and online help display procedures

For the Web Console, the design of Help button in the menu area and online help display procedures have been changed.

Version	Details
15.1 or earlier	<ul style="list-style-type: none"> - The "Help" link to display the online help exists in the menu area. - To display the online help, click "?" icon or the "Help" link in the menu area.
15.2 or later	<ul style="list-style-type: none"> - The "Help" link to display the online help does not exist in the menu area. - To display the online help, click "?" icon in the menu area, and click Help displayed in drop-down list.

Chapter 3 Program Fix List

This version fixes the following problems that occurred in previous versions.

No.	Version Problem Reported	Problem report number	Problem	Product name		
				EXP	SC	ACM
1	13.0	PG91420	The swsrpvssbackup_exchange command outputs the swsrp0678 message and terminates abnormally.	-	-	Yes
2	15.0	PG91627	A "Complete" status log is not output to the operation history in response to troubleshooting export actions.	Yes	Yes	Yes
3		PG91628	Accurate information is not displayed in the Disks column of [Hardware Components] on the storage device overview screen.	Yes	Yes	Yes
4		PG91629	In the storage device license registration screen, when the X (Close) button is clicked in the license normal registration dialog box, the screen continues in a grayed out state and the system does not go to the license management screen. The same kind of phenomenon also occurs in the license normal delete dialog box that is displayed when a license is deleted.	Yes	Yes	Yes
5		PG91630	In the network devices overview screen, when a product name is entered in the Product Name field of the Filter Setting, filtering does not occur with that product name.	-	Yes	-
6		PG91631	When the capacity of the Thin Provisioning Volume is being extended, and the user complies with the error message "Field Volume Capacity must be an integer and be more than <i>minimum Value</i> and be less than or equal to <i>maximum Value</i> ." specifies a permissible volume capacity and re-executes, there are cases when the error message "ERROR:ssmgr3527 The specified value reaches the upper bound." is output and the capacity extension fails.	Yes	Yes	-
7		PG91634	In the threshold monitoring change screen, the initial status of the Used the Rearm Setting checkbox in the Rearm is incorrect.	-	Yes	-
8		PG91638	In the device discover/reload procedure's 4th step, [Changed Devices] on the confirm screen, some of the changed devices are not displayed.	-	-	Yes
9		PG93776	In the Web Console, there are cases when the REC path cannot be set up.	Yes	Yes	-
10		15.1	PG93662	The acec suspend command outputs the ccm5004 message and terminates abnormally.	Yes	-
11	PG93875		In the ETERNUS Disk storage system registration process or in the setup reload process, the message "escs02015 An error occurred while executing the operation." is output.	Yes	Yes	Yes
12	PG93935		In the Map View's Device Mapper multi-path device name display, only one device is displayed even if there are multiple devices.	-	Yes	-
13	PG95411		When the ETERNUS SF system service is stopped, a warning message (not authorized) is output.	-	Yes	Yes
14	PG95412		When a service stop operation is performed as the ETERNUS SF system service is being started up, the service does not stop correctly.	Yes	Yes	Yes

No.	Version Problem Reported	Problem report number	Problem	Product name		
				EXP	SC	ACM
15	15.2	PG93806	In the backup source/destination volumes mapping screen of the backup wizard, the path of the volume mounted on the folder is not displayed correctly.	-	-	Yes
16		PG93807	In the backup wizard, when a server is deleted, the esgui04009 message is output with a server name different from the name of the deleted server.	-	-	Yes
17		PG93812	The name of the log file displayed in the backup wizard does not match the display of the swsrpdevdisp_exchange command.	-	-	Yes
18		PG93832	Even when multiple databases are selected, the backup wizard's completion screen displays an execution script for the backup of one database only.	-	-	Yes
19		PG93877	When the Exchange Server is being upgraded to a different version, the esgui04000 message is sometimes output during the backup wizard execution.	-	-	Yes
20		PG94130	In the database selection screen of the backup wizard, the esgui04009 message is output.	-	-	Yes
21		PG94687	When the Next button is clicked in the confirm screen of the backup wizard, the esgui04014 message is output.	-	-	Yes
22		PG94933	The swsrpsetvol command outputs the swsrp0687 message and terminates abnormally.	-	-	Yes
23		PG95051	When the "Reload Conf." operation is performed on the Web Console, the swstf5412 message is sometimes output. Or, the AdvancedCopy Manager command outputs the swstf5412 message and terminates abnormally.	-	-	Yes
24		PG95102	On the backup source/destination volume mapping screen of the backup wizard, the backup source volume information is not displayed.	-	-	Yes
25		PG95183	In the threshold monitoring setup screen, the information area displays "translation missing: en,i_".	-	Yes	-
26		PG95226	When the following operation is performed on the Web Console for a storage device that is already registered, there are cases when the escs02015 message is output and processing terminates abnormally. - "Reload Conf." is executed - In the Optimization Option screen, "Reload Status" is executed	-	Yes	-
27		PG95300	Clicking the help button of the backup wizard screen does not display the accurate help information.	-	-	Yes
28		PG95307	The end port status of the Brocade VDX series is not displayed correctly.	-	Yes	-
29	PG95354	There are cases when the new functions of the Optimization Option in Storage Cruiser Version 15.2 cannot be used.	-	Yes	-	
30	PG95499	The check point file is not displayed on the backup wizard screen.	-	-	Yes	
31	PG95653	In the Web Console Thin Provisioning Pool display, there are cases when a volume is displayed that does not exist in the ETERNUS Disk storage system.	Yes	Yes	-	

No.	Version Problem Reported	Problem report number	Problem	Product name		
				EXP	SC	ACM
32		PG95654	When an access path deletion operation is performed on the Web Console, there are cases when the ETERNUS DX80 S2/DX90 S2, ETERNUS DX400 S2 series and ETERNUS DX8000 S2 series read-in process improvements are not effective.	Yes	Yes	-
33		PG95743	In the domain authentication environment, the esfsnap command outputs the escs90013 message and terminates abnormally.	Yes	Yes	Yes
34		PG96472	<p>Performing the following operations may output the swstf5003 message and terminate the processing abnormally:</p> <ul style="list-style-type: none"> - On the server registration screen or server change screen of the Web Console, perform the operation selecting Yes for Use AdvancedCopy Manager field. - Execute the AdvancedCopy Manager command. <p>Or when starting the operating system, the AdvancedCopy Manager service or daemon may not be automatically started.</p>	-	-	Yes

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