ETERNUS SF

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ETERNUS SF
AdvancedCopy Manager V15.2

Quick Reference

Preface

Purpose

This manual describes the pre-installation requirements, installation procedure, configuration procedure, as well as the first use of ETERNUS SF AdvancedCopy Manager. ETERNUS SF AdvancedCopy Manager is part of the 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 people planning AdvancedCopy Manager installation or installing AdvancedCopy Manager for the first time. A basic knowledge of clustered systems and server virtualization is advised to fully understand this manual.

In the case of upgrade from a previous version to the latest version, refer to the *ETERNUS SF Migration Guide*.

Organization

This manual is composed as follows:

Chapter 1 Overview of AdvancedCopy Manager

> This chapter is an overview of AdvancedCopy Manager.

Chapter 2 System Design before Installation

> This chapter explains the installation requirements for AdvancedCopy Manager.

Chapter 3 Installation and Setup of Agent-based operation model

> This chapter explains how to install and setup the Agent-based operation model.

Chapter 4 Configuration of Agent-based Operation Model Environment

> This chapter explains how to configure the Agent-based operation model.

Chapter 5 Start using Agent-based Operation Model

> This chapter explains how to start using the Agent-based operation model.

Chapter 6 Installation and Setup of Agent-less operation model

> This chapter explains how to install and setup the Agent-less operation model.

Chapter 7 Configuration of Agent-less Operation Model Environment

> This chapter explains how to configure the Agent-less operation model.

Chapter 8 Start using Agent-less Operation Model

> This chapter explains how to start using the Agent-less operation model.

Notation

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

Operating systems

Formal name	Abbreviation	
Microsoft(R) Windows Server(R) 2003, Standard Edition Microsoft(R) Windows Server(R) 2003, Standard x64 Edition	Windows Server 2003	Windows

Formal name	Abbreviation	
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		
Microsoft(R) Windows Server(R) 2008 Standard (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(TM) (32-bit) (64-bit) Microsoft(R) Windows Server(R) 2008 Enterprise (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(TM) (32-bit) (64-bit) Microsoft(R) Windows Server(R) 2008 Datacenter (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(TM) (32-bit) (64-bit)	Windows Server 2008	
Microsoft(R) Windows Server(R) 2008 R2 Foundation Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Datacenter	Windows Server 2008 R2	
Microsoft(R) Windows Server(R) 2012 Standard Microsoft(R) Windows Server(R) 2012 Datacenter	Windows Server 2012	
Microsoft(R) Windows(R) XP Professional Edition Microsoft(R) Windows(R) XP Home Edition	Windows XP	
Windows Vista(R) Home Basic Windows Vista(R) Home Premium Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate	Windows Vista	
Windows(R) 7 Home Basic Windows(R) 7 Home Premium Windows(R) 7 Professional Windows(R) 7 Enterprise Windows(R) 7 Ultimate	Windows 7	
Windows(R) 8 Windows(R) 8 Pro	Windows 8	
Solaris(TM) 9 Operating System	Solaris 9	Solaris or Solaris OS
Oracle Solaris 10	Solaris 10	
Oracle Solaris 11	Solaris 11	
Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T)	RHEL-AS4	Linux
Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T)	RHEL-ES4	
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	

Formal name	Abbreviation	
HP-UX 11.0 HP-UX 11i HP-UX 11i v2 HP-UX 11i v3	HP-UX	
AIX 5L(TM) V5.1 AIX 5L(TM) V5.2 AIX 5L(TM) V5.3 AIX(R) V6.1 AIX(R) V7.1	AIX	
VMware(R) Infrastructure 3 Foundation VMware(R) Infrastructure 3 Standard VMware(R) Infrastructure 3 Enterprise	VMware Infrastructure 3	VMware
VMware vSphere(R) 4 Essentials Kit VMware vSphere(R) 4 Essentials Plus Kit VMware vSphere(R) 4 Standard Edition(TM) VMware vSphere(R) 4 Standard Plus Data Recovery VMware vSphere(R) 4 Advanced Edition(TM) VMware vSphere(R) 4 Enterprise Edition(TM) VMware vSphere(R) 4 Enterprise Plus Edition(TM)	VMware vSphere 4	
VMware vSphere(R) 5 Essentials Kit VMware vSphere(R) 5 Essentials Plus Kit VMware vSphere(R) 5 Standard Edition(TM) VMware vSphere(R) 5 Standard Plus Data Recovery VMware vSphere(R) 5 Enterprise Edition(TM) VMware vSphere(R) 5 Enterprise Plus Edition(TM)	VMware vSphere 5	

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

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

Formal name	Abbreviation			
ETERNUS DX60/DX60 S2 ETERNUS DX80/DX80 S2 ETERNUS DX90/DX90 S2	-		ETERNUS DX series	ETERNUS Disk storage system
ETERNUS DX410 ETERNUS DX440	ETERNUS DX400 series	ETERNUS DX400/DX400 S2 series		
ETERNUS DX410 S2 ETERNUS DX440 S2	ETERNUS DX400 S2 series			
ETERNUS DX8100 ETERNUS DX8400 ETERNUS DX8700	ETERNUS DX8000 series	ETERNUS DX8000/DX8000 S2 series		
ETERNUS DX8100 S2 ETERNUS DX8700 S2	ETERNUS DX8000 S2 series			
ETERNUS2000 ETERNUS4000 ETERNUS8000	-			
Web GUI of ETERNUS DX series	ETERNUS Web GUI			
ETERNUSmgr				
ETERNUS LT20/LT20 S2 ETERNUS LT40/LT40 S2 ETERNUS LT60/LT60 S2 ETERNUS LT220	ETERNUS Tape library			

Formal name	Abbreviation
ETERNUS LT230 ETERNUS LT250 ETERNUS LT270	

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

Manuals

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

Others

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

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December 2012	4	B1FW-5967-04ENZ0(00) / B1FW-5967-04ENZ2(00)

Notes

- No part of this manual may be reproduced without permission.

- This manual is subject to change without advance notice.

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Update history

Content of update	Updated section	Revision
Added Oracle Solaris 11, AIX V6.1 and AIX V7.1 in the operating systems.	Notation in Preface	3
Added the information about Symfoware backup operation.	1.3.3, 2.2.1	
Added Windows Server 2012 and Windows 8 in the operating systems.	Notation in Preface	4

Manual organization and reading suggestions

Manual organization

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

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

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

How to read manuals

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

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

Purpose	Related products (**NOTE**)	Manual	Main contents	How to read
			- Command reference	
		- Storage Cruiser Operation Guide for Optimization Option	- Operating environment construction - Operating status monitoring - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference	
	EXP, ACM	- ETERNUS SF Operation Guide for Copy Control Module	- Starting and stopping the software - Data backup/restore inside the storage system - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference	
	ACM	- AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) - AdvancedCopy Manager Operation Guide (for Linux) - AdvancedCopy Manager Operation Guide (for HP-UX) - AdvancedCopy Manager Operation Guide (for AIX)		
	common	- ETERNUS SF Web Console Guide	- Operating environment - Screen layout description	Please read if you want to understand the 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	Please read if you want to learn the meaning of important terms, product specific terms or abbreviations used in the manuals.

Purpose	Related products (**NOTE**)	Manual	Main contents	How to read
			- Proper form of abbreviated terms	

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

Contents

Chapter 1 Overview of AdvancedCopy Manager

This chapter is an overview of AdvancedCopy Manager.

1.1 Function overview

AdvancedCopy Manager is the storage management software for using the Advanced Copy functions of the ETERNUS Disk Storage System.
The Advanced Copy function allows copying the data from a business volume to another volume at a given time in a very short duration.

AdvancedCopy Manager provides the following functions with the purpose of performing high-speed and high-reliability backup/replication operations.

- Advanced Copy functions

    - Snapshot high-speed copy

    - Synchronous high-speed copy

- Backup management functions

- Replication management functions

- Backup functions using the AdvancedCopy Manager Copy Control Module (hereafter referred to as "AdvancedCopy Manager CCM")

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AdvancedCopy Manager provides a function called "Web Console" in order to manage AdvancedCopy Manager operating environment from a Web browser.
For a detailed explanation of the operating environment and screens of the Web Console, refer to the *ETERNUS SF Web Console Guide*.
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See
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For details on the main functions provided by AdvancedCopy Manager, refer to "Overview of AdvancedCopy Manager" in the *ETERNUS SF AdvancedCopy Manager Overview*.
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1.2 Product structure

AdvancedCopy Manager is made of the following program.

Table 1.1 AdvancedCopy Manager software components and supported OS

No.	Program name	Function overview	Supported operating systems (A=Available, N/A=Not Available)				
			Windows	Solaris	Linux	HP-UX	AIX
1	ETERNUS SF Manager	Data management of storage systems with Agent-based operation model	A	A	A	N/A	N/A
2	AdvancedCopy Manager's agent	Management of backup and replication	A	A	A	A	A

No.	Program name	Function overview	Supported operating systems (A=Available, N/A=Not Available)				
			Windows	Solaris	Linux	HP-UX	AIX
3	AdvancedCopy Manager CCM	Data Management of storage systems with Agent-less operation model	A	A	A	N/A	N/A

In this manual, the server where ETERNUS SF Manager is installed is described as the "Management Server", while the server where the AdvancedCopy Manager Control Module is described as the "CCM Server". Also, the server managed by the Management Server or CCM Server is described as "Managed Server".

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After installation of ETERNUS SF Manager, if ETERNUS SF Manager is set up as the AdvancedCopy Manager's manager, it is possible to use AdvancedCopy Manager.
For details about the version level of the supported operating systems, refer to "Operating Environment" in the *ETERNUS SF Installation and Setup Guide*.
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1.3 Supported hardware and middleware

The following hardware and middleware can be managed with AdvancedCopy Manager:

1.3.1 Supported disk storage systems

The disk storage systems supported by AdvancedCopy Manager are as follows.

Table 1.2 Supported disk storage systems

Disk storage system name
ETERNUS DX series ETERNUS2000 ETERNUS4000 ETERNUS8000

1.3.2 Supported devices

AdvancedCopy Manager can manage devices by disk partitions (slices) or by Logical Units (disks).

See
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For details, refer to "Managing a Device on AdvancedCopy Manager" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
. . . .

1.3.3 Linkable applications

AdvancedCopy Manager can be linked up with the applications listed below.

Application name	Linkable function	
	Backup / Restore	Replication
Oracle	A	A
SQL Server	A	A
Exchange Server	N/A	A
Symfoware	A	N/A
DB2	A	A
Hyper-V	N/A	A

(A=Available, N/A=Not Available)

See

For details, refer to the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system on which each application is running.

1.4 Operating environment models

AdvancedCopy Manager can manage several ETERNUS Disk storage systems.
Moreover, AdvancedCopy Manager also supports virtual server environments in addition to physical environments.

The operating environment model of AdvancedCopy Manager is described below.

Figure 1.1 AdvancedCopy Manager operating environment models
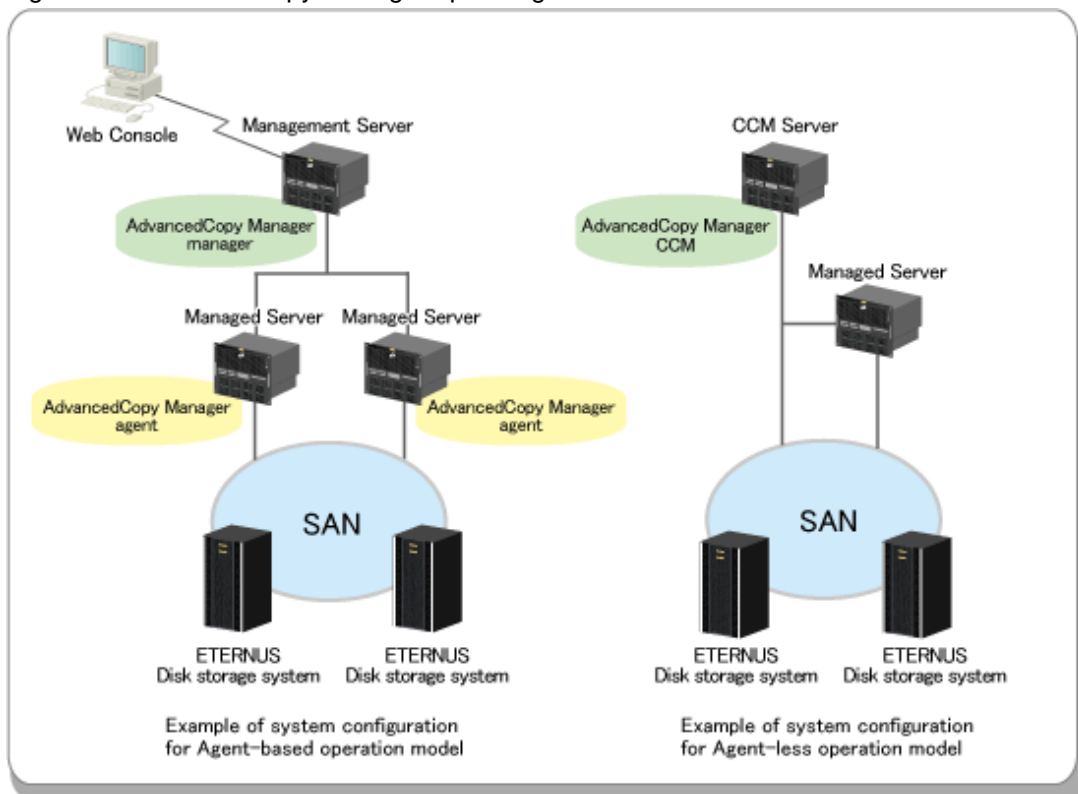
About whether perform the installation of AdvancedCopy Manager's agent or not, refer to "2.1 Choice of operating model".

Installation in a clustered system

To increase the availability of AdvancedCopy Manager, manager or agent of AdvancedCopy Manager can be installed on a clustered system for redundancy.

- AdvancedCopy Manager's manager installation

  A system cannot be managed by more than one AdvancedCopy Manager's managers.

- AdvancedCopy Manager's agent installation

  Register the logical node names (unique names in a cluster configuration) of the clustered system as Managed Servers. When the cluster real node names are registered as Managed Servers, the clustered system cannot be correctly managed.

See
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For details about installation on a clustered system, refer to the *ETERNUS SF Cluster Environment Setup Guide*.
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Chapter 2 System Design before Installation

This chapter explains the system design required before the AdvancedCopy Manager installation.

Before reading this chapter, check the cautions and limitations mentioned in the software guide.

2.1 Choice of operating model

With AdvancedCopy Manager, the following 2 operating modes are available:

Agent-based operating model

> This operating model requires the installation of ETERNUS SF Manager and the AdvancedCopy Manager's agent.
> Use of this operating model requires that the installed ETERNUS SF Manager be set up as the AdvancedCopy Manager's manager.
>
> Application data copy is possible on a server where a business application is installed (hereafter "business server"). As a function to trigger scripts before and after the copy operation is provided, scripts can be customized to conform to the administration policies and allow flexible and optimized operations.

Agent-less operating model

> This operating model requires the installation of AdvancedCopy Manager CCM.
>
> There is no need to install either ETERNUS SF Manager or AdvancedCopy Manager's agent, therefore the time to get ready to start is shorter compared to Agent-based operating model. Moreover, as all the operations can be done directly on the server where the CCM has been installed, there are no requirements about the OS environment of the business server.
>
> Unlike the copy operation with an agent, the copy is done per disk rather than per partition or slice. For this reason, the copy destination resource must be larger. Also, as copy is done without relation to the application running on the business server, the operator must ensure the integrity of the copied data. (for example, by performing the copy when the data is inactive).

Decide which operating model to use by considering the following criteria.

Operating model	Choice criteria
Agent-based	- If you want to use functions available when the AdvancedCopy Manager's agent is installed. For example, if you want to use advanced copy operations such as multiple generation backup/restore functions, interaction with a DBMS on a business server, volume shadow copy service (VSS Volume Shadow Copy Service function), etc.

Agent-less	- If there are many business servers and you want to reduce the cost of installation and start operation as soon as possible.
	
	 - If the OS on the business server is not supported by the AdvancedCopy Manager's manager or the AdvancedCopy Manager's agent.
	
	 - If the AdvancedCopy Manager's agent cannot be installed on the business server.
	
	  For example, if installation of applications is not permitted on the business server outside a restricted set of applications, or if an incompatible software application is already installed on the server.
	
	 - If you want to reduce the maintenance tasks on the business server.
	
	  For example, if you want to avoid having to apply patches on the software.

📭 Note

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It is possible to have operating models with Agent-based and Agent-less at the same time, but when operated in parallel, the copy data of both operating models must not have common areas.
If the copy data of both operating models have common areas, there is a possibility of data loss when copy operations use the mutual areas.

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See

Refer to the following sections of the *ETERNUS SF Installation and Setup Guide* for details about incompatible software with AdvancedCopy Manager.

- Agent-based operating model:

  "Operating environment of ETERNUS SF Manager" and "Operating environment of AdvancedCopy Manager's agent"

- Agent-less operating model:

  "Operating environment of AdvancedCopy Manager CCM"

2.2 System design for Agent-based operating model

This section explains the required tasks to perform before the installation and configuration of Agent-based operating model.

2.2.1 Selecting function to use

With Agent-based operating model, the following two functions are available:

- Backup and restore function

  This function allows maintaining multiple generations of the copied data.
  Unlike the data copied with the replication function, the data copied with backup cannot be used outside this function.

  By setting a backup policy, the backup can be performed according to that policy.
  This function creates multiple generations of the copied data. When performing a restoration, any one of the backup generations can be chosen and restored.

  However, this function does not support data copy to a different ETERNUS Disk storage system. To copy data over to a different ETERNUS Disk storage system, use the replication function.

- Replication function

  This function allows using the copy data differently from a backup (for example, using the copied data in a business application, etc).
  Copy to a different ETERNUS Disk storage system, including a remote location, is possible.

  A replication data source and destination areas are defined as a pair, and data are copied inside this pair. As multi-generation data management is not supported by the replication function, several pairs must be defined for one data source and multiple data destinations.

Please refer to the following selection criteria and decide the function to use.

Function	Choice criteria
Backup and restore function	- If you need to keep multiple generations of the data copied in AdvancedCopy Manager. - If you want to perform backups with Symfoware Server Advanced Backup Controller.
Replication function	- If you want to use the copied data outside a backup dataset. - If you want to copy between volumes that are connected to different servers - If you want to copy between volumes that are residing on different ETERNUS Disk storage systems. - If you want to backup data from Microsoft Exchange Server. The backup and restore function does not support copying data from Microsoft Exchange Server.

Function	Choice criteria
	- If you want to backup data from a Hyper-V Guest OS. The backup and restore function does not support copying data from Hyper-V Guest OS.

2.2.2 Choosing Management Server

AdvancedCopy Manager's manager has to process requests from the Web Console as well as various events and data acquisition coming from the managed hardware. To avoid interferences from other software or insufficient physical resources and ensure smooth operations, it is recommended to install AdvancedCopy Manager's manager on its own dedicated server.

If a dedicated server cannot be secured, the Management Server should be chosen according to the following requirements:

Impact on business applications

On a server running business applications (hereafter described as "business server"), AdvancedCopy Manager's manager operations will likely have an impact on other applications performance. If the candidate server is a mission critical server running financial, distribution or public utilities applications, the decision to install AdvancedCopy Manager's manager must be evaluated with extra caution.

Impact on other guest OS (in case of a virtual server environment)

In a virtual server environment, the physical server resources (CPU, memory, and network) are shared by multiple guest OS. Therefore, the operations of a guest OS have an impact on the other guest OS performance. Before installing AdvancedCopy Manager's manager on a guest OS, usage of physical resources and role of other guest OS must be evaluated carefully.

Incompatible software

AdvancedCopy Manager's manager cannot run on the same server concurrently to certain other software (hereafter described as "incompatible software"). A server with no incompatible software must be selected.

See
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For details of the incompatible software, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide*.
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2.2.3 Collecting information required for installation

When AdvancedCopy Manager is installed, the following information items are required:

Required information	Server necessary for information collection
Information for installation destination server - OS type and version level - IP address - Cluster configuration information	- Server to which ETERNUS SF Manager is to be installed - Server to which AdvancedCopy Manager's agent is to be installed
Disk space needed for installation	- Server to which ETERNUS SF Manager is to be installed - Server to which AdvancedCopy Manager's agent is to be installed
Port numbers availability for operation	- Server to which ETERNUS SF Manager is to be installed - Server to which AdvancedCopy Manager's agent is to be installed
Disk space of the database needed for operation	- Server to which ETERNUS SF Manager is to be installed
Required disk space and memory needed for operation	- Server to which ETERNUS SF Manager is to be installed - Server to which AdvancedCopy Manager's agent is to be installed

Required information	Server necessary for information collection
Software license for the use of AdvancedCopy Manager	The AdvancedCopy Manager software licenses are based on the ETERNUS Disk storage system to be managed. Please prepare the license(s) for each of the ETERNUS Disk storage systems to be managed. Each ETERNUS Disk storage system to be managed may have a local and/or remote copy license.

See

For details on the information required for installation, refer to the following sections in the *ETERNUS SF Installation and Setup Guide*.

- "Operating environment of ETERNUS SF Manager"

- "Operating environment of AdvancedCopy Manager's agent"

- "License Management"

2.3 System design for Agent-less operating model

This section explains the required tasks to perform before the installation and configuration of Agent-less operating model.

2.3.1 Choosing CCM Server

AdvancedCopy Manager CCM has to process requests from the Web Console as well as various events and data acquisition coming from the managed hardware. To avoid interferences from other software or insufficient physical resources and ensure smooth operations, it is recommended to install AdvancedCopy Manager CCM on its own dedicated server.

If a dedicated server cannot be secured, the server should be chosen according to the following requirements:

Impact on business applications

On a server running business applications (hereafter described as "business server"), AdvancedCopy Manager CCM operations will likely have an impact on other applications performance. If the candidate server is a mission critical server running financial, distribution or public utilities applications, the decision to install AdvancedCopy Manager CCM must be evaluated with extra caution.

Impact on other guest OS (in case of a virtual server environment)

In a virtual server environment, the physical server resources (CPU, memory, and network) are shared by multiple guest OS. Therefore, the operations of a guest OS have an impact on the other guest OS performance. Before installing AdvancedCopy Manager CCM on a guest OS, usage of physical resources and role of other guest OS must be evaluated carefully.

Incompatible software

AdvancedCopy Manager CCM cannot run on the same server concurrently to certain other software (hereafter described as "incompatible software"). A server with no incompatible software must be selected.

See

For details of the incompatible software, refer to "Operating environment of AdvancedCopy Manager CCM" in the *ETERNUS SF Installation and Setup Guide*.

2.3.2 Selecting program to install

AdvancedCopy Manager CCM can be installed using 2 methods.

- [Method 1] Install the ETERNUS SF Manager program and use the AdvancedCopy Manager CCM included in the ETERNUS SF Manager program

- [Method 2] Install and use the AdvancedCopy Manager CCM program only

🅿 Point
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With the method 1, in addition to the Command Line Interface, AdvancedCopy Manager CCM can be operated from the Web Console. However, it has the following demerits:

- The required disk space for installation is larger than method 2.

- There are more incompatible software applications than method 2.

- Symfoware verification is necessary (only if Symfoware is installed on the server)

- An estimate of the database size is required.

Select the program to install after considering these issues.
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2.3.3 Selecting Advanced Copy control method

In AdvancedCopy Manager CCM, the CM Server sends a command to ETERNUS Disk storage system to perform an Advanced Copy function. There are two available methods for sending the copy command:

- Sending a command to ETERNUS Disk storage system to perform an Advanced Copy function from the server over the SAN (hereafter referred to as "Copy command via SAN")

- Sending a command to ETERNUS Disk storage system to perform an Advanced Copy function from the server over the LAN (hereafter referred to as "Copy command via LAN")

With AdvancedCopy Manager CCM, the ETERNUS Disk storage systems listed below can use Copy command via SAN and via LAN.

Table 2.1 ETERNUS Disk storage systems that can be operated by Copy command via SAN or via LAN

Device name	Copy command via SAN		Copy command via LAN	
	Operation	Firmware version	Operation	Firmware version
ETERNUS DX60/DX60 S2/DX80/DX90	A	All versions	N/A	-
ETERNUS DX80 S2/DX90 S2	A	All versions	A	All versions
ETERNUS DX400 series	A	All versions	N/A	-
ETERNUS DX400 S2 series	A	All versions	A	All versions
ETERNUS DX8000 series	A	All versions	N/A	-
ETERNUS DX8000 S2 series	A	All versions	A	All versions
ETERNUS2000 models 100 and 200	A	V10L50 or later	N/A	-
ETERNUS4000 models 300 and 500	A	V11L50 or later	N/A	-
ETERNUS4000 models 400 and 600	A	All versions	N/A	-
ETERNUS8000 models 700, 900, 1100 and 2100	A	V11L50 or later	N/A	-
ETERNUS8000 models 800, 1200 and 2200	A	All versions	N/A	-

(A=Available, N/A=Not Available)

When using the Copy command via SAN method, a logical volume that can be accessed from the CCM Server is needed in ETERNUS Disk storage system. In this manual, this logical volume is called "access volume". One logical volume of ETERNUS Disk storage system must be assigned to CCM Server as the access volume.

Figure 2.1 Example of system configuration using Copy command via SAN
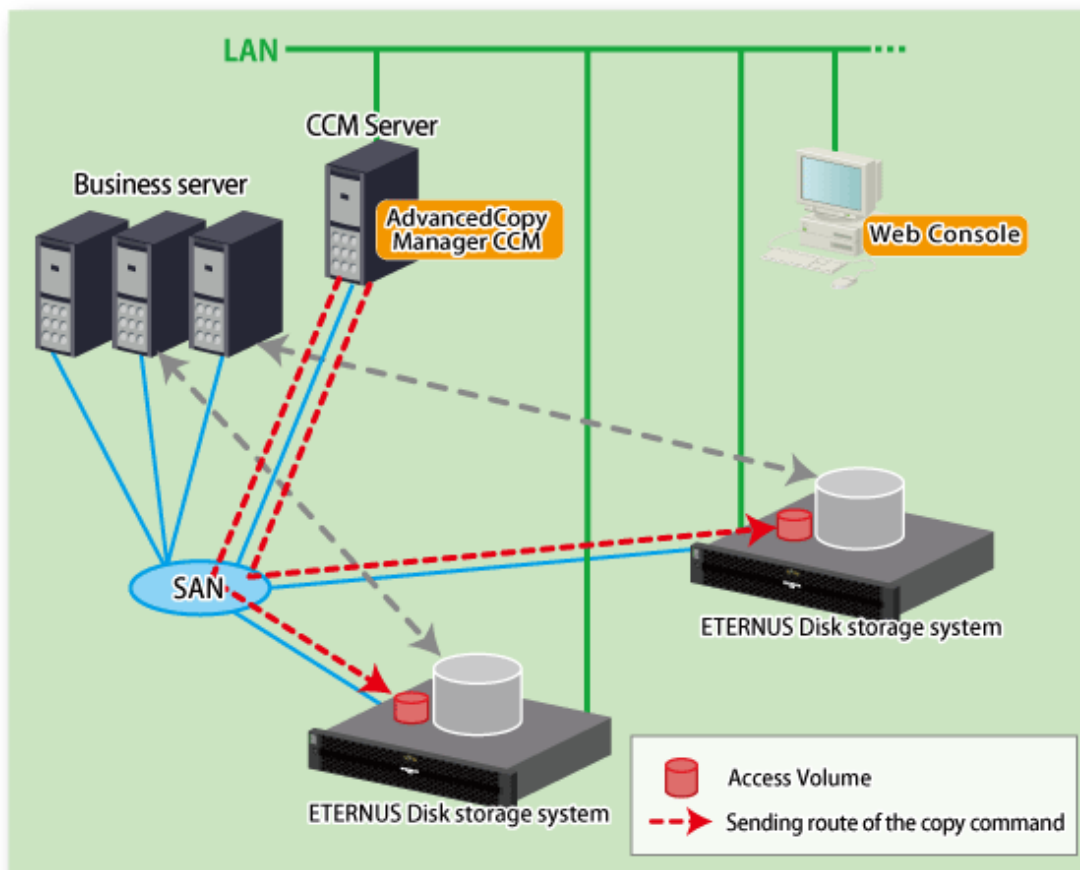
When using the Copy command via LAN method, no access volume is needed.

Figure 2.2 Example of system configuration using Copy command via LAN
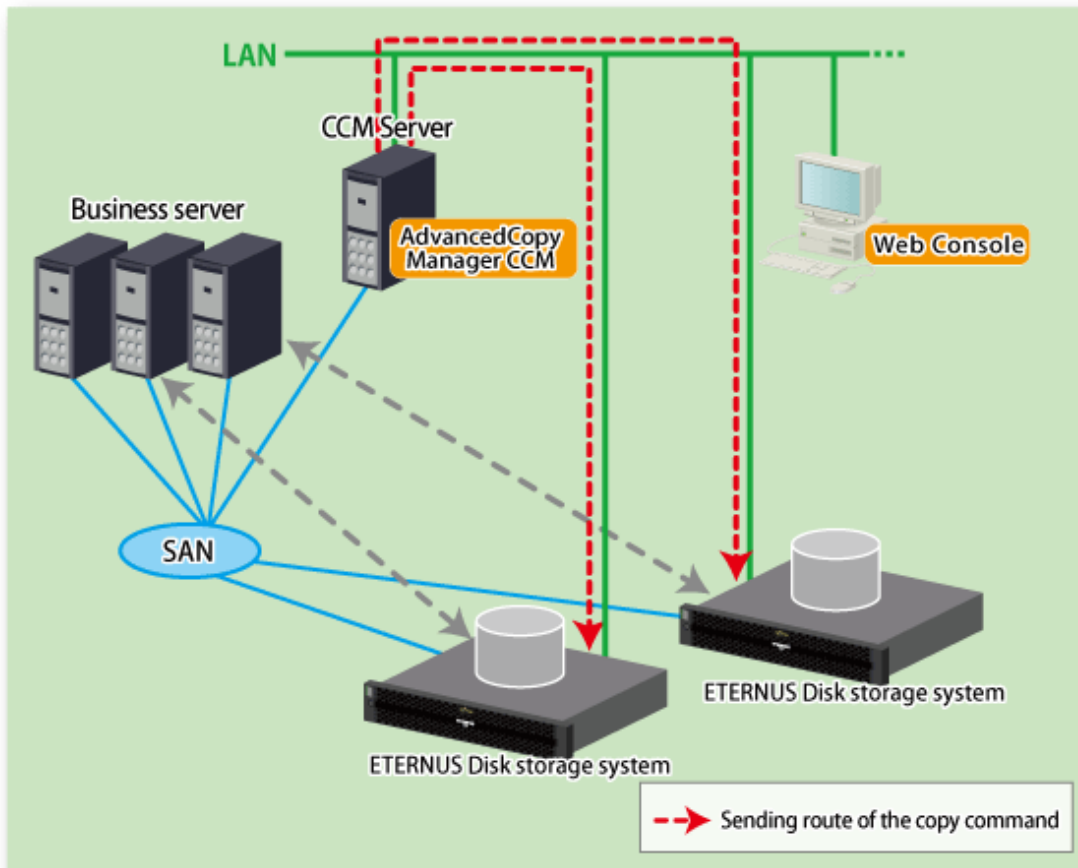
Information

Among the ETERNUS Disk storage systems described in "Table 2.1 ETERNUS Disk storage systems that can be operated by Copy command via SAN or via LAN", some models do not support the Copy command via LAN. In case of a system environment where not all managed ETERNUS Disk storage systems support the Copy command via LAN, it is recommended to use only the Copy command via SAN.

2.3.4 Collecting information required for installation

When AdvancedCopy Manager CCM is installed, the following information items are required:

Required information	Necessary for information collection	
	Using AdvancedCopy Manager CCM included in ETERNUS SF Manager	Using AdvancedCopy Manager CCM to be install individually
Information for installation destination server - OS type and version level - IP address - Cluster configuration information	Necessary	Necessary
Disk space needed for installation	Necessary	Necessary

Required information	Necessary for information collection	
	Using AdvancedCopy Manager CCM included in ETERNUS SF Manager	Using AdvancedCopy Manager CCM to be install individually
Port numbers availability for operation	Necessary (**Note1**)	No necessary
Disk space of the database needed for operation	Necessary (**Note1**)	No necessary
Required disk space and memory needed for operation	Necessary	Necessary
Software license for the use of AdvancedCopy Manager (**Note2**)	Necessary	Necessary

Note1: This information is required for ETERNUS SF Manager.

Note2: Please prepare the license for the ETERNUS Disk storage system to be managed.

See

For details on the information required for installation, refer to the following sections in the *ETERNUS SF Installation and Setup Guide*.

- If using AdvancedCopy Manager CCM included in ETERNUS SF Manager:

  - "Operating environment of ETERNUS SF Manager"

  - "License Management"

- If using AdvancedCopy Manager CCM to be installed individually:

  - "Operating environment of AdvancedCopy Manager CCM"

  - "License Management"

Chapter 3 Installation and Setup of Agent-based operation model

This chapter explains the installation and setup procedures of Agent-based operation model.

In case of update from a previous version to the latest version, refer to the *ETERNUS SF Migration Guide*.

3.1 Installation of ETERNUS SF Manager

The ETERNUS SF Manager must be installed to use AdvancedCopy Manager's manager functions.
The overview of the installation procedure of ETERNUS SF Manager is shown below.

1. Check if the target server satisfies the hardware and software requirements for the ETERNUS SF Manager installation.

   ### 📗 See
   ....
   For details of each condition, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide*.
   ....

2. Install the ETERNUS SF Manager.

   ### 📗 See
   ....
   For details of installation procedure, refer to "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide*.
   ....

📗 See
....
For the procedures of the Installation to a clustered system, refer to the *ETERNUS SF Cluster Environment Setup Guide*.
....

3.2 Setup of ETERNUS SF Manager

The overview of the procedure for setting up the ETERNUS SF Manager as the AdvancedCopy Manager's manager is shown below.
For details on the setup procedure, refer to "Setup of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide*.

1. Create and register a user account that will be using AdvancedCopy Manager.

   The possible operations by the user are dependent on the level of permissions the user account is given. The following table describes the differences:

ESF Admin Role	OS administrator privilege	
	Yes	No
Yes	Operations are possible from the Web. Console and the command line.	Operations are possible only from the Web Console.
No	Operations are possible only from the command line.	Operations are neither possible from the Web Console nor from the command line.

Point

- On systems using Single Sign-on, a created user account should be registered in the corresponding account authentication system so that the user can login to the Management Server.
  For example, on the Windows environment, if the Management Server belongs to an Active Directory domain, the user must be added to the Active Directory domain.

- The commands of AdvancedCopy Manager can be executed only by the following users.

    - For Windows environment

      Local users belonging to the Administrators group or domain users belonging to the Domain Admins group

    - For Solaris or Linux environment

      Users who have OS administrator privilege (root user)

2. Set up the firewall.

   The firewall must be set up so that the remote PC where the Web Console will be used can connect to the Management Server.

3. Launch the Web Console, and then check that the user registered by step 1 can login to the Management Server from the Web Console.

See

For the version level of the supported web browsers, refer to "Supported web browsers" in the *ETERNUS SF Web Console Guide*.

Point

From the "Chapter 4 Configuration of Agent-based Operation Model Environment" chapter on, the described tasks are supposed to be performed from the Web Console. Before proceeding, it is therefore important to check that AdvancedCopy Manager can actually be operated from the Web Console.

4. Register the AdvancedCopy Manager licenses with the license management commands for all the ETERNUS Disk storage systems managed by AdvancedCopy Manager.

See

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

3.3 Installation of AdvancedCopy Manager's agent

The overview of the installation procedure of AdvancedCopy Manager's agent is shown below.

1. Check if the target server satisfies the hardware and software requirements for the AdvancedCopy Manager's agent installation.

See

For details of each condition, refer to "Operating environment of AdvancedCopy Manager's agent" in the *ETERNUS SF Installation and Setup Guide*.

2. Install the AdvancedCopy Manager's agent.

See
.... - 15 - ....
For details of installation procedure, refer to "Installation of AdvancedCopy Manager's agent" in the *ETERNUS SF Installation and Setup Guide*.
....

See
....
For the procedures of the Installation to a clustered system, refer to the *ETERNUS SF Cluster Environment Setup Guide*.
....

3.4 Setup of AdvancedCopy Manager's agent

To setup the AdvancedCopy Manager's agent, services and hardware configuration is required.
The items and procedures necessary for setup vary according to OS.

Refer to the part detailing one's OS in "Setup of AdvancedCopy Manager's agent" in the *ETERNUS SF Installation and Setup Guide*.

Chapter 4 Configuration of Agent-based Operation Model Environment

This chapter explains how to configure the Agent-based operation model environment.

4.1 Configuration of environment using backup/restore function

This section describes the procedure for configuring the operating environment for backup and restore function.

1. Managed Server registration

   Register each Managed Server on the Management Server.

   ### 🔖 See
   ....
   For details about the procedure, refer to "Registering a Managed Server" in "Backup Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
   ....

2. Device information collection

   Collect the information about the devices connected to the Managed Server.

   ### 🔖 See
   ....
   For details about the procedure, refer to "Fetching device information on a Managed Server" in "Backup Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
   ....

3. Backup server environment configuration

   Decide and configure on which server the backup operations will be performed.

   ### 🔖 See
   ....
   For details about the procedure, refer to "Configuring the environment for a backup operation server" in "Backup Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
   ....

4. Volume type settings

   Set the type for volumes to be managed by AdvancedCopy Manager from among volumes fetched in step 2.
   Choose one of the following types for each volume:

   - Transaction volume

     This is a volume to be backed up (copy data source).

   - Backup volume

     This is a volume that will keep the backed up data (copy data destination).

   ### 🔖 See
   ....
   For details about the procedure, refer to "Setting the operation type for a device" in "Backup Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
   ....

5. Backup policy settings

   Set the backup policy for each of the transaction volumes set up in step 4.

- Preservation generations

- Interval days

See
....
For details about the procedure, refer to "Setting a backup policy" in "Backup Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
....

6. Pre-processing and post-processing scripts customization

If the specific pre-processing and post-processing is needed, customize the pre-processing and post-processing scripts for backup.

See
....
For details about the procedure, refer to "Pre-processing and Post-processing of Backup and Restoration" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
....

4.2 Configuration of environment using replication function

This section describes the procedure for configuring the operating environment for replication function.

1. Managed Server registration

Register each Managed Server on the Management Server.

See
....
For details about the procedure, refer to "Registering a Managed Server" in "Replication" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
....

2. Device information collection

Collect the information about the devices connected to the Managed Server.

See
....
For details about the procedure, refer to "Fetching device information on a Managed Server" in "Replication" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
....

3. Settings of volumes for replication

Set the copy source and destination volumes used with the replication operation.

See
....
For details about the procedure, refer to "Configuring the source volume and replica volume" in "Replication" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.
....

4. Pre-processing and post-processing scripts customization

If in one of the following 2 situations, customize the pre-processing and post-processing scripts for replication:

- Specific processing needs to be added before or after replication.

- The standard processing before or after the replication needs to be modified.

See

For details about the procedure, refer to "Pre-processing and Post-processing of Replication" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system of the Managed Server.

4.3 Backing up the setup information

AdvancedCopy Manager setting information should be backed up to prevent its loss in case of a failure of the Management Server.

See

For details about the procedure, refer to "Maintenance of Database" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system to be used.

Chapter 5 Start using Agent-based Operation Model

This chapter explains how to start using Agent-based operation model.

5.1 Starting the operation using backup/restore function

This section explains how to do data backup using the backup and restore function.

5.1.1 Executing the backup

Perform a backup of the business data in the transaction volume by executing an Advanced Copy.

The backup volume is automatically selected.
However, it is possible to configure the relation between source volumes and destination volumes by using the "device map file".

See
. . . .
- For details about the procedure, refer to the following sections under the chapter "Backup Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system to be used.

    - "Performing snapshot high-speed backup"

    - "Performing synchronized high-speed backup"

- For details about the device map file, refer to "Preparing a device map file" under the chapter "Backup Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system to be used.
. . . .

5.1.2 Checking the copy status and cancelling the operation

When Advanced Copy is running, it is possible to check the copy progress status or cancel the copy operation.

See
. . . .
For details about the procedure, refer to "Managing a backup history" in "Backup Operation" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system to be used.
. . . .

5.2 Starting the operation using replication function

This section explains how to copy data using the replication function.

5.2.1 Executing the replication

Copy from a source volume to a destination volume is possible by executing an Advanced Copy.
A data copy created with the replication function can also be used as a backup.

See

- For details about the procedure, refer to the following sections under the chapter "Replication" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system to be used.

  - "Executing snapshot replication"

  - "Executing synchronized replication"

5.2.2 Checking the copy status and cancelling the operation

When Advanced Copy is running, it is possible to check the copy progress status or cancel the copy operation.

See

- For details about the procedure, refer to the following sections under the chapter "Replication" in the *ETERNUS SF AdvancedCopy Manager Operation Guide* for the operating system to be used.

  - "Executing snapshot replication"

  - "Executing synchronized replication"

  - "Stopping the Operation"

Chapter 6 Installation and Setup of Agent-less operation model

This chapter explains the installation and setup procedures of Agent-less operation model.

In case of update from a previous version to the latest version, refer to the *ETERNUS SF Migration Guide*.

6.1 Installation of AdvancedCopy Manager CCM

There are two possible methods to install AdvancedCopy Manager CCM, as mentioned in "2.3.2 Selecting program to install".

When using AdvancedCopy Manager CCM included in ETERNUS SF Manager

Install ETERNUS SF Manager.
The overview of the installation procedure of ETERNUS SF Manager is shown below.

1. Check if the target server satisfies the hardware and software requirements for the ETERNUS SF Manager installation.

   ### 📇 See
   ....
   For details of each condition, refer to "Operating environment of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide*.
   ....

2. Install the ETERNUS SF Manager.

   ### 📇 See
   ....
   For details of installation procedure, refer to "Installation of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide*.
   ....

When using AdvancedCopy Manager CCM to be install individually

Install ETERNUS SF Manager.
The overview of the installation procedure of ETERNUS SF Manager is shown below.

1. Check if the target server satisfies the hardware and software requirements for the AdvancedCopy Manager CCM installation.

   ### 📇 See
   ....
   For details of each condition, refer to "Operating environment of AdvancedCopy Manager CCM" in the *ETERNUS SF Installation and Setup Guide*.
   ....

2. Install the AdvancedCopy Manager CCM.

   ### 📇 See
   ....
   For details of installation procedure, refer to "Installation of AdvancedCopy Manager CCM" in the *ETERNUS SF Installation and Setup Guide*.
   ....

6.2 Setup of AdvancedCopy Manager CCM

The overview of the procedure for setting up the AdvancedCopy Manager CCM is shown below.

When using AdvancedCopy Manager CCM included in ETERNUS SF Manager

The overview of the procedure for setting up the ETERNUS Manager as the AdvancedCopy Manager CCM is shown below.
For details on the setup procedure, refer to "Setup of ETERNUS SF Manager" in the *ETERNUS SF Installation and Setup Guide*.

1. Create and register a user account that will be using AdvancedCopy Manager CCM.

   The possible operations by the user are dependent on the level of permissions the user account is given. The following table describes the differences:

ESF Admin Role	OS administrator privilege	
	Yes	No
Yes	Operations are possible from the Web. Console and the command line.	Operations are possible only from the Web Console.
No	Operations are possible only from the command line.	Operations are neither possible from the Web Console nor from the command line.

   ### 🅿 Point
   ....

   - On systems using Single Sign-on, a created user account should be registered in the corresponding account authentication system so that the user can login to the Management Server (also used as CCM Server).
     For example, on the Windows environment, if the Management Server belongs to an Active Directory domain, the user must be added to the Active Directory domain.

   - The commands of AdvancedCopy Manager CCM can be executed only by the following users.

     - For Windows environment

       Local users belonging to the Administrators group or domain users belonging to the Domain Admins group

     - For Solaris or Linux environment

       Users who have OS administrator privilege (root user)
   ....

2. Set up the firewall.

   The firewall must be set up so that the remote PC where the Web Console will be used can connect to the Management Server.

3. Launch the Web Console, and then check that the user registered by step 1 can login to the Management Server from the Web Console.

   ### 📖 See
   ....

   For the version level of the supported web browsers, refer to "Supported web browsers" in the *ETERNUS SF Web Console Guide*.
   ....

   ### 🅿 Point
   ....

   From the "Chapter 4 Configuration of Agent-based Operation Model Environment" chapter on, the described tasks are supposed to be performed from the Web Console. Before proceeding, it is therefore important to check that AdvancedCopy Manager can actually be operated from the Web Console.
   ....

4. Register the AdvancedCopy Manager licenses with the license management commands for all the ETERNUS Disk storage systems managed by AdvancedCopy Manager CCM.

See

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

When using AdvancedCopy Manager CCM to be install individually

The overview of the procedure for setting up AdvancedCopy Manager CCM is shown below.
For details on the setup procedure, refer to "Setup of AdvancedCopy Manager CCM" in the *ETERNUS SF Installation and Setup Guide*.

1. Create and register a user account that will execute AdvancedCopy Manager CCM commands.

   The AdvancedCopy Manager CCM commands can be executed only by users with Administrator permissions or users belonging to the Administrators group. Take this requirement into account when creating and registering a user.

Point

. . . .
On systems using Single Sign-on, a created user account should be registered in the corresponding account authentication system so that the user can login to the CCM Server.
For example, if the CCM Server belongs to an Active Directory domain, the user must be added to the Active Directory domain.
. . . .

2. Register the AdvancedCopy Manager licenses with the license management commands for all the ETERNUS Disk storage systems managed by AdvancedCopy Manager CCM.

See

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

Information

. . . .
When the AdvancedCopy Manager CCM program is installed, AdvancedCopy Manager CCM functions cannot be operated from the Web Console. Therefore, registration of a user for operating the Web Console or firewall settings is not required.
. . . .

Chapter 7 Configuration of Agent-less Operation Model Environment

This chapter explains how to configure the Agent-less operation model environment.

7.1 Access volume settings

When sending a command to ETERNUS Disk storage system to perform an Advanced Copy function from the CCM Server by using Copy command via SAN, this setting must be performed on each ETERNUS Disk storage system.

When using the Copy command via SAN, a logical volume that can be accessed by the CCM Server must be defined in the ETERNUS Disk storage system, according to "Figure 2.1 Example of system configuration using Copy command via SAN". In this manual, this logical volume is called "access volume". One logical volume of ETERNUS Disk storage system must be assigned to CCM Server as the access volume.

See

For details about the procedure, refer to "Access Volume Settings" in the *ETERNUS SF Operation Guide for Copy Control Module*.

7.2 Storage device registration

The ETERNUS Disk storage system where Advanced Copy operations will be performed with AdvancedCopy Manager CCM must be registered in AdvancedCopy Manager CCM with the following information.

- Name of ETERNUS Disk storage system

- IP address of ETERNUS Disk storage system

- User name and password of users who access the ETERNUS Disk storage system

- Access Volume set in "7.1 Access volume settings" (only for using Copy command via SAN)

See

For details about the procedure, refer to "Registering ETERNUS Disk storage system" in the *ETERNUS SF Operation Guide for Copy Control Module*.

7.3 Copy group creation

Create copy groups.

The combination of the copy source and destination logical volume is called "copy pair". Several copy pairs can be grouped into what is called "copy group".

When creating a copy group, ETERNUS Disk storage system to be used and the type of Advanced Copy must be set.

See

For details about the procedure, refer to "Creating copy groups" in the *ETERNUS SF Operation Guide for Copy Control Module*.

7.4 Copy pair creation

The copy pairs must be registered in a copy group.
To register a copy pair, the following information is required.

- Name of the copy source ETERNUS Disk storage system

- Logical volume number of the copy source volume

- Name of the copy destination ETERNUS Disk storage system

- Logical volume number of the copy destination volume

See
. . . .
For details about the procedure, refer to "Adding copy pairs" in the *ETERNUS SF Operation Guide for Copy Control Module*.
. . . .

7.5 Backing up the setup information

AdvancedCopy Manager CCM setting information should be backed up to prevent its loss in case of a failure of the CCM Server.

See
. . . .
For details about the procedure, refer to "Backing up environment settings files" in the *ETERNUS SF Operation Guide for Copy Control Module*.
. . . .

Chapter 8 Start using Agent-less Operation Model

This chapter explains how to start using Agent-less operation model.

8.1 Executing the backup

Perform a backup of the data in the business volume by executing an Advanced Copy.

🔖 See
....
For details about the procedure, refer to "Executing Advanced Copy" in the *ETERNUS SF Operation Guide for Copy Control Module*.
....

8.2 Checking the copy status and cancelling the operation

When Advanced Copy is running, it is possible to check the copy progress status or cancel the copy operation.

🔖 See
....
For details about the procedure, refer to "Executing Advanced Copy" in the *ETERNUS SF Operation Guide for Copy Control Module*.
....