

ETERNUS SF

AdvancedCopy Manager 14.0



Glossary

Preface

Purpose

This manual describes the terminology used in the ETERNUS SF AdvancedCopy Manager manuals.

Intended Readers

This manual is intended for a system administrator who performs storage management using ETERNUS SF AdvancedCopy Manager.

Related Manuals

This ETERNUS SF AdvancedCopy Manager manual is included in the following series of manuals:

- ETERNUS SF AdvancedCopy Manager Overview
Provides an overview of ETERNUS SF AdvancedCopy Manager.
- ETERNUS SF AdvancedCopy Manager Installation Guide
Describes the installation procedure for ETERNUS SF AdvancedCopy Manager.
- ETERNUS SF AdvancedCopy Manager Operator's Guide
Describes the operating procedures for ETERNUS SF AdvancedCopy Manager.
A different operator's guide is provided for each supported operating system.
- ETERNUS SF AdvancedCopy Manager GUI User's Guide
Describes the operating procedures for the GUI Client of ETERNUS SF AdvancedCopy Manager.
- ETERNUS SF AdvancedCopy Manager Message Guide
Explains the messages output by ETERNUS SF AdvancedCopy Manager and the associated troubleshooting.
- ETERNUS SF AdvancedCopy Manager Operator's Guide for Cluster Environment
Describes the installation and customization procedures for ETERNUS SF AdvancedCopy Manager in a cluster environment.
- ETERNUS SF AdvancedCopy Manager Operator's Guide for Tape Backup Option
Describes the operating procedures for tape backup with ETERNUS SF AdvancedCopy Manager.
- ETERNUS SF AdvancedCopy Manager Operator's Guide for Copy Control Module
Describes the operating procedures for the ETERNUS SF AdvancedCopy Manager Copy Control Module.
- ETERNUS SF AdvancedCopy Manager Glossary
This document

Users are recommended to read the ETERNUS SF AdvancedCopy Manager Overview first to gain an understanding of the general concepts of this software before reading the other manuals as necessary.

Conventions

- Microsoft(R) Windows Server(R) 2003, Standard Edition, Microsoft(R) Windows Server(R) 2003, Enterprise Edition, Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems are abbreviated as Windows Server 2003.
- Microsoft(R) Windows Server(R) 2008 Standard, Microsoft(R) Windows Server(R) 2008 Enterprise, Microsoft(R) Windows Server(R) 2008 Datacenter, and Microsoft(R) Windows Server(R) 2008 for Itanium-Based Systems are abbreviated as Windows Server 2008.
- Microsoft(R) Windows(R) XP Professional and Microsoft(R) Windows(R) XP Home Edition are abbreviated as Windows XP.
- Microsoft(R) Windows Vista(R) Home Basic, Microsoft(R) Windows Vista(R) Home Premium, Microsoft(R) Windows Vista(R) Business, Microsoft(R) Windows Vista(R) Enterprise, and Microsoft(R) Windows Vista(R) Ultimate are abbreviated as Windows Vista.

- Solaris (TM) Operating System is referred to as Solaris.
- "ETERNUS SF AdvancedCopy Manager" is abbreviated as "AdvancedCopy Manager".
- Manager of ETERNUS SF AdvancedCopy Manager is abbreviated as Manager of AdvancedCopy Manager.
- Agent of ETERNUS SF AdvancedCopy Manager is abbreviated as Agent of AdvancedCopy Manager.
- ETERNUS DX60, ETERNUS DX80, ETERNUS2000, ETERNUS3000, ETERNUS4000, ETERNUS6000, ETERNUS8000, and ETERNUS GR series are referred to as ETERNUS storage system.

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Glossary

The special terms used in this manual are explained below.

Access path

Path required by a server to access disks in an ETERNUS storage system

Active site

The ACM backup environment that is normally active

Advanced copy function

Hardware-based copy function of ETERNUS storage systems. This is a generic name of EC and OPC.

AdvancedCopy Manager agent

Generic term referring to the daemons and applications used for backup or replication.

AdvancedCopy Manager client

Generic term referring to the GUI Client that operate in a storage management client.

AdvancedCopy Manager database

Generic term referring to management information such as registry, repository and management files for AdvancedCopy Manager.

AdvancedCopy Manager manager

Generic term referring to AdvancedCopy Manager-related services and applications existing in a Storage Management Server.

AdvancedCopy Manager tape agent

Generic term referring to the applications used for tape backup

AdvancedCopy Manager tape manager

Generic term referring to the Tape Server daemons and applications related to AdvancedCopy Manager in the Tape Server

Affinity Group

Management information on the ETERNUS storage system that shows the association between the Logical Unit Number (LUN) that can be recognized by the host, and the Logical Volume Number managed within the ETERNUS storage system.

Authentication management files

Generic term for the file where authentication management saves information on users and usage.

There are two or more types and it is kept for every Storage Server with a repository.

Backup history

Backup data that is managed by backup management, and other backup related information

Backup management files

Generic term for files used during backup operations containing management information such as volume and server details. These files are stored in each Storage server and can be backed up by the resource backup command.

Backup management screen

GUI Client screen for backup management.

Backup server operation

The type of operation that uses a dedicated backup server that copies the copies destination volume to a tape device. The server is only connected to the copy destination volumes.

Backup synchronous processing

The process of synchronizing the contents of a transaction volume and a backup volume in preparation for synchronous backup operations.

CA (Channel adapter)

The adapter card used as an interface with server HBA/switch found in a Storage Server.

Cascade Copy

Group two or more concurrent copy processes by assuming the copy destination of one to be a copy origin of another.

Refer to the SA/SE handbook of the ETERNUS Series for the requirement of the cascade copy.

CCM Server

The server where the Copy Control Module is installed.

CM (Controller module)

The controller that manages devices within ETERNUS. The CM to be used as the access route (the CM in charge) is set separately for each RAID group in order to achieve load balancing.

Copy Control Module (CCM)

A tool that enables backup using the Advanced Copy function of the ETERNUS storage system.

One advantage is that it can be used without installing the AdvancedCopy Manager Agent on the backup source server (the transaction server).

COS

The service class of the fibre channel. Classes 2 and 3 are general now, and the difference between classes 2 and 3 is that only class 2 requires the acceptance confirmation for frame notice assignment.

Day management backup

Backup operation that manages backups according to a specified number of preservation days. This backup operation is available only for backing up data to tape.

Device map file

File that describes both the relationship between transaction volumes and backup volumes for backup management, and the relationship between copy source volumes and copy destination volumes for replication management

Differential OPC

This is a previously used term for QuickOPC. Refer to the paragraph on QuickOPC for an explanation.

Disaster Recovery site

An environment prepared at a different location to be used for data recovery after a disaster.

EC

This is an abbreviation for Equivalent Copy. It is one of the copy functions of the hardware devices in the ETERNUS storage systems. This function maintains the mirror state between the disks in a hardware device. When detach control is executed from software, a copy of such a disk is created.

Equivalency maintenance state

A state in which the EC function maintains the contents of a transaction volume and backup volume in precise equivalence.

ETERNUS

Brand name for Fujitsu's storage systems

AdvancedCopy Manager provides high-speed backup and replication functions by linking with the following devices:

- ETERNUS storage system
(ETERNUS DX60/DX80/ETERNUS2000/ETERNUS3000/ETERNUS4000/ETERNUS6000/ETERNUS8000/ETERNUS GR series)
- ETERNUS NR1000F series Network attached storage
- ETERNUS tape library (ETERNUS LT series)

ETERNUS GR series

Generic name for Fujitsu's disk array devices (GR720/730/740/820/840).

ETERNUS VSS Hardware Provider

The ETERNUS VSS Hardware Provider (hereafter called "VSSHP") is software that provides the ETERNUS storage system service, based on the interface provided with the Microsoft Volume Shadow Copy Service (hereafter called "VSS").

In AdvancedCopy Manager, during backup of the Exchange database, the VSSHP function may be used to perform backup.

For details on VSSHP, refer to the "ETERNUS VSS Hardware Provider software manual".

ETERNUSmgr (ETERNUS Manager)

Software product for monitoring and displaying the status of the ETERNUS DX60/DX80/ETERNUS2000/ETERNUS3000/ETERNUS4000/ETERNUS6000/ETERNUS8000 machine and for setup and maintenance

Fabric

Topology using the fibre channel interface. A fibre channel switch is used and two or more communications between nodes can be performed simultaneously.

FC-AL (Fibre Channel Arbitrated Loop)

Topology using the fibre channel interface. A fibre channel that now allows the connection between two or more nodes using a hub. This topology is mostly used for 1 to 1 connectivity between devices. A port that is connected to the fibre channel is either an NL port or an L port.

Fibre channel

One of the interfaces used to perform serial transfer of data. High-speed forwarding of data and the long distance transmission with the server are features of this transfer type.

Fibre channel hub

This is a hub that is only used for fibre channel networks. It is a device that connects two or more fibre channel node devices in a loop. It operates with the FC-AL topology.

Fibre channel switch

This is a switch used only on fibre channel networks. Its primary function is to facilitate communication between two or more fibre channel nodes at the same time. It exceeds a fibre channel hub in performance and reliability and operates with the fabric topology.

File unit backup

Direct specification that performs backup to tape of only the specified data in a directory or file on a disk that is mounted on the backup target server

File unit backup agent

Software that performs backups on a file basis.

Starts the TSM client and specifies file unit backup or restore to a tape

FL port

The port of the fabric topology (fibre channel switch) connected to the NL port.

F port

The port of the fabric topology (fibre channel switch) connected to the N port.

Framework

Generic name referring to applications such as communication services and configuration management that form the foundation of the AdvancedCopy Manager product suite.

GDS Snapshot

Abbreviation of PRIMECLUSTER GDS Snapshot, which is an optional product of PRIMECLUSTER GDS (hereinafter referred to as GDS). With this product, you can create a snapshot of a GDS logical volume (ie, a replica at a certain time). AdvancedCopy Manager supports the backup and replication operations of logical volumes in linkage with GDS Snapshot.

Generation management backup

Backup operation that performs management with the specified number of preservation generations

Generation overflow

This is the situation that arises when the number of backups specified as backup generations have already been used. If the next backup is performed, the backup volume having the oldest backup history is deleted from the generation management. This is called generation overflow. The actual number of backup generations is specified by the backup policy configuration command.

GR Manager, GRmgr

Storage management software of GR720/730/740.

Hard disk driver

Hard disk driver software of a host server. Controls a disk array unit instead of the sd driver. This driver must be installed to perform multipath control.

HBA (Host bus adapter)

The adapter card used as an interface with the storage port/switch CA carried in a server.

HDDV

See "Hard disk driver."

Inter-server replication

Replication in which the source and destination are volumes connected to different servers

Host Affinity Group

Management information on the ETERNUS storage system that shows the association between the World Wide Name of the host and the Affinity Group.

Load share

One of the operation modes of a cluster system. It enables systems that are structured from multiple active nodes to be handled logically as one database.

Logical node

Name of a logical server in a cluster system

LUN

Abbreviation for Logical Unit Number. The logical unit is defined under a channel adapter on a storage unit.

LUN Mapping

Assigns and sets up a LUN which shows a Logical unit LUN (Logical Unit Number) defined as the channel adapter subordinate in GR720/GR730/GR740 storage equipment from the HOST side, and real LUN (mapping). Therefore, HOST to LUN0 and visible Logical unit can be set up with real Logical unit LUNxx.

MPHD

See "Multipath disk control."

MPLB

See "Multipath disk control, load balance option."

Multipath disk control

Driver software that performs multipath disk control of the host server.

Failover driver software that merges two physical access paths into one logical path to avoid stopping access to a disk array unit because of the failure of one physical access path.

Multi path disk control, load balance option

Driver software that performs multipath disk control of the host server. This driver has both load balance (path load distribution) and multipath (two to eight paths) functionality in addition to the multipath disk control failover function. It is superior in terms of reliability, operability, and performance and is the most suitable driver software for a SAN operation server.

NAS backup

The TSM backup function that uses the NDMP functions of the NAS device to back up the data on a NAS device without sending the data via a network

NAS device

The network attached storage device of the ETERNUS NR1000F series

NAS directory

A directory created under a NAS volume

NAS volume

A disk volume on a NAS device.

Disk volumes are defined under /vol, and take the form /vol/vol0, /vol/vol1, and so on.

NDMP

NDMP (Network Data Management Protocol) is a communications protocol that manages data on an NAS device.

NL-Private port

The port of the FC-AL topology which has not made a fibre channel switch connection.

NL-Public port

The port of the FC-AL topology which is making a fibre channel switch connection.

N port

The port used by Fabric topology (switch environment) or Point-to-Point in a fibre channel.

OPC

This is an abbreviation of the term "one point copy" which is a hardware function of ETERNUS storage systems. This function executes disk copy at high speeds at the hardware level. When software issues a copy request, a physical copy operation is performed by the hardware. However, the emulation function makes it look like the copy is completed at the software level.

Ordinary transaction volume

Volume to be backed up and not provided with a database space.

Point-to-point

Topology using the fibre channel interface. Although it is the topology of 1 to 1 connection of an N port, the main part of the present 1 to 1 connection is the 1 to 1 connection of FC-AL.

Pre-processing or post-processing

Scripted processing that is executed immediately before or after advanced copying at the time of backup or replication. The pre-processing and post-processing scripts are called as part of the command processing of backup or replication management.

PRIMECLUSTER

Software product for cluster configuration

PRIMECLUSTER GDS

Software product that improves data integrity by mirroring disk units

PRIMECLUSTER GFS

Software product that creates a multivolume file system that offers robustness and improves data availability. This file system is completely compatible with UFS, which is the standard API of UNIX.

QuickOPC

This is a copy method generally used to copy only the data that is updated after a physical copy of all data by OPC is completed.

It is a suitable copy method for Disk to Disk backup.

Differential OPC is an old name for QuickOPC.

REC

Abbreviation for "Remote Equivalent Copy". REC uses a hardware function of ETERNUS storage systems to achieve EC (Equivalent Copy) between different cabinets.

Registry

AdvancedCopy Manager environment definition file.

Replication management files

Generic term referring to the files where replication management saves the usage information.

There are two or more kinds. It is kept for every Storage Server with a data repository.

Repository

The repository contains all management and operational information required by AdvancedCopy Manager and its domain.

It is comprised of data contained in a management database hosted in a Storage Management Server.

The information on the device to be managed, and information on backup and replication management, etc. are all stored in a repository.

This repository is created at the time of installation of AdvancedCopy Manager.

RMI daemon

The RMI server to an AdvancedCopy Manager client.

ROPC

Abbreviation of "Remote One Point Copy". ROPC uses a hardware function of ETERNUS storage systems to achieve OPC between different cabinets.

SafeFILE

Software product that creates a multivolume file system that offers robustness and improves data availability. SafeFILE extends the UNIX file system (UFS) and improves availability and performance.

SAN (storage area network)

Abbreviation for "Storage Area Network". It is a server storage network. Broadly speaking, this also refers to the implementation of centralized storage, data sharing among different servers, and integrated storage management.

SDX object

Virtual resource managed by PRIMECLUSTER GDS or SynfinityDISK. It is a general term for classes, groups, disks, volumes, and slices. An SDX object is sometimes called an "object."

Session

Unit of copying execution that is performed by the advanced copy function

Snap Data Disk

This is a disk for storing the copy used as the SnapOPC destination. It is necessary to define a Snap Data Disk in advance of SnapOPC being invoked.

SnapOPC

A copy method used when updating data. This method copies the pre-update status of the data parts that are to be updated, and matches the original non-updated parts to preserve the pre-update status (a copy-on-write copy method).

This method can be used for efficient data copying since it reduces the data size at the copy destination.

This copy method is suited to backing up file servers.

SnapOPC+

This method copies only the pre-update status of the data parts that are to be updated, and saves the data in snap generation units (a copy-on-write copy method).

This method can be used for efficient data copying since it reduces the data size at the copy destination and data can be saved in snap generation units. This copy method is suited to backing up file servers.

Snap shot type high-speed backup

Backup using the one point copy (OPC) function of ETERNUS storage systems.

Storage

A generic name of external storage devices such as disk array devices and tape units. These devices include ETERNUS storage systems, F649x series and Spectris/Platinum.

Storage management client

This term refers to a client machine that the AdvancedCopy Manager GUI Client is operated.

Storage Management Server

Server in which AdvancedCopy Manager's Manager exists.

Storage Server

Server in which AdvancedCopy Manager's Agent exists.

Suspend/Resume function

This function sets Suspend or Resume for the EC equivalency maintenance status. The synchronous backup operation can be made faster because the function can create a differential copy from the Suspend state.

Suspend specification

The act of specifying the -suspend option in the backup execution command (swstbackup) to back up using the Suspend/Resume function

Synchronous backup

This involves using the Equivalent Copy (EC) function of the disk array GR series to perform backup.

Tape library unit

A device that holds a large number of magnetic tapes and uses the controller in the device to automatically replace magnetic tapes in order to gain access to the tapes. It includes ETERNUS LT270 and ETERNUS LT230.

Tape Server

Backup Tape Server for processing requests regarding tape backup operations

TOC

The backup data table of contents provided from a NAS device in parallel with NAS backup operations. TSM uses the obtained TOC to restore data when executing NAS disk unit restore or NAS file unit restore.

TSM

The abbreviation of file backup management product "Tivoli Storage Manager". Tape servers deliver a backup management function by calling TSM internally.

TSM client GUI

Starts the TSM client and issues file unit backup and restore instructions to a tape.

Commands and a GUI are provided for the TSM client, and processing instructions can be issued from the GUI interface.

TSM Web backup/archive client

A TSM processing interface that enables use of a Web browser to connect from an operations terminal to a TSM client.

This enables backup and restore instructions to be issued from an operations terminal to a tape.

Volume Shadow Copy Service

The Volume Shadow Copy Service is a function that provides a communications foundation for backup software, server applications and storage hardware. It is installed as standard with Windows Server 2003.

VSS

Refer to "Volume Shadow Copy Service".

VSSHHP

Refer to "ETERNUS VSS Hardware Provider".