FUJITSU

FUJITSU Storage
ETERNUS SF
Express V16.9A / Storage Cruiser V16.9A / AdvancedCopy Manager V16.9A

Glossary

Preface

Purpose of This Manual

This manual explains the terms used by the following products:

- ETERNUS SF Express (hereafter abbreviated as "Express")

- ETERNUS SF Storage Cruiser (hereafter abbreviated as "Storage Cruiser")

- ETERNUS SF AdvancedCopy Manager (hereafter abbreviated as "AdvancedCopy Manager")

Intended Readers

This manual is intended for the users reading manuals of Express, Storage Cruiser or AdvancedCopy Manager.

Conventions

- "FUJITSU Storage" and "Fujitsu Storage" are omitted from the names of the products and manuals.

- This manual abides by the conventions listed in "Conventions" in the *ETERNUS SF Express / Storage Cruiser / AdvancedCopy Manager Documentation Road Map*.

Export Controls

Exportation/release of this document may require necessary procedures in accordance with the regulations of your resident country and/or US export control laws.

Trademarks

- Microsoft, Windows, Windows Server, Internet Explorer, and Microsoft Edge are 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 name 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.

- Novell is a registered trademark of Novell Inc., and SUSE and the SUSE logo is a trademark, of SUSE LLC, in the United States and other countries.

- HP-UX is a trademark of Hewlett-Packard Company in the United States and other countries.

- AIX is a trademark or a registered trademark 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.

Revision History

Date of Publication	Revision	Document Part Number	
		PDF	HTML
September 2023	11	B1FW-6004-11ENZ0(00)	B1FW-6004-11ENZ2(00)
August 2021	10	B1FW-6004-10ENZ0(00)	B1FW-6004-10ENZ2(00)
November 2019	9	B1FW-6004-09ENZ0(00)	B1FW-6004-09ENZ2(00)
December 2018	8	B1FW-6004-08ENZ0(00)	B1FW-6004-08ENZ2(00)

Date of Publication	Revision	Document Part Number	
		PDF	HTML
December 2017	7	B1FW-6004-07ENZ0(00)	B1FW-6004-07ENZ2(00)
May 2017	6	B1FW-6004-06ENZ0(00)	B1FW-6004-06ENZ2(00)
October 2016	5	B1FW-6004-05ENZ0(00)	B1FW-6004-05ENZ2(00)
October 2015	4	B1FW-6004-04ENZ0(00)	B1FW-6004-04ENZ2(00)
July 2015	3.2	B1FW-6004-03ENZ0(02)	B1FW-6004-03ENZ2(02)
March 2015	3.1	B1FW-6004-03ENZ0(01)	B1FW-6004-03ENZ2(01)
January 2015	3	B1FW-6004-03ENZ0(00)	B1FW-6004-03ENZ2(00)
June 2014	2	B1FW-6004-02ENZ0(00)	B1FW-6004-02ENZ2(00)
May 2014	1.1	B1FW-6004-01ENZ0(01)	B1FW-6004-01ENZ2(01)
December 2013	1	B1FW-6004-01ENZ0(00)	B1FW-6004-01ENZ2(00)

Notes

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

- This manual is subject to change without advance notice.

Copyright Notice

Update History

Content of Update	Updated Section	Revision
The version information has been changed to 16.9A.	Cover page	11
Version information has been changed to 16.9.	Cover page	10
The description for Conventions is changed so that the *ETERNUS SF Express / Storage Cruiser / AdvancedCopy Manager Documentation Road Map* is referenced.	"Conventions" in Preface	9
The "Manual Organization and Reading Suggestions" section is deleted from Preface.	Preface	
The following terms are deleted: - Storage - SynfinityCLUSTER - SynfinityDISK - SynfinityFILE	Glossary	
Information related to the ETERNUS DX8900 S4 is added.	"Notation" in Preface	8
Information related to the ETERNUS DX500 S4/DX600 S4 is added.	"Notation" in Preface	7
Information related to the ETERNUS AF250 S2/AF650 S2 is added.	"Notation" in Preface	
Information related to the ETERNUS DX60 S4/DX100 S4/DX200 S4 is added.	"Notation" in Preface	6
The following term is added: - ETERNUS SF AdvancedCopy Manager SRA	Glossary	

Content of Update	Updated Section	Revision
Information related to the ETERNUS DX80/DX90 and the ETERNUS LT60 is deleted.	"Notation" in Preface	5
Information related to the ETERNUS AF250/AF650 is added.	"Notation" and "Others" in Preface	
The following term is added: - NAS Engine	Glossary	
The explanation of the following terms is modified: - Snap Data Pool (SDP) - Snap Data Volume (SDV)	Glossary	
The following terms are deleted: - Activation code - Antivirus function - Antivirus server - Pattern file - Scan engine	Glossary	
The following terms are added. - Dashboard - Detail View - Home Screen - Panel	Glossary	4
The explanation of the following terms is modified. - MPIO (Multi Path I/O) - msdsm - VSS (Volume Shadow copy Service)	Glossary	
Information related to the ETERNUS DX8700 S3/DX8900 S3 is added.	"Notation" in Preface	3.2
The term "VMware Virtual Volumes" is changed to "VMware vSphere Virtual Volumes" according to the terms used by VMware, Inc.	Throughout this manual	3.1
The following terms are added. - Backing Storage Container - VM Storage Policies - VVOL Metadata	Glossary	
Information related to the ETERNUS DX200F is modified.	"Others" in Preface	3
Information related to the ETERNUS LT260 is added.	"Notation" in Preface	
The following terms are added. - Activation code - Active-Side Continuous Copy session - Antivirus function - Antivirus server - Automatic Failback	Glossary	

Content of Update	Updated Section	Revision
- Balancing level - Clone backup - Clone backup history - Clone backup VVOL datastore - Pattern file - Scan engine - Single item restore - Snapshot backup - Snapshot backup history - Standby-Side Continuous Copy session - Storage Cluster Continuous Copy function - Storage Cluster Continuous Copy session - Tier pool balancing - VASA - VASA Provider - Virtual machine backup - Virtual Volume - VVOL access path - VVOL datastore		
The explanation of the following terms is modified. - Backup history - ETERNUS Web GUI - FC-AL (Fibre Channel Arbitrated Loop) - TFO pair	Glossary	
The following terms are added. - Automatic Failover - Bonding port - CA port pair - CNA (Converged Network Adapter) - Domain name - Force-Failover - FQDN (Fully Qualified Domain Name) - HLU number - Logical WWPN - Manual Failback - Manual Failover - Master port	Glossary	2

Content of Update	Updated Section	Revision
- Member port - MPxIO - NAS server name - NAS snapshot - NAS snapshot volume - NetBIOS domain name - Operating mode of bonding port - Port bonding - Primary Storage - QoS (Quality of Service) - Quota management - Scheduler - Scheduler task - Secondary Storage - SFP (Small Form factor Pluggable) - Storage Cluster - Storage Cluster Controller - TFOV - TFO group - TFO pair		
The explanation of the following terms is modified. - Eco-mode - HBA (Host Bus Adapter) - Point-to-point	Glossary	
The information related to ETERNUS DX200F is described.	"Others" in Preface	1.1
A term "ETERNUS Disk storage system" is deleted.	Glossary	

Contents

Glossary

Access path

A logical path for accessing storage from a server node. It is constructed by defining the host, Fibre Channel switch, storage, binding, and zoning settings.

Access volume

A volume in the ETERNUS Disk storage system. It is necessary for Express or AdvancedCopy Manager to be able to control the Advanced Copy function of the ETERNUS Disk storage system.

Active-Side Continuous Copy session

A Storage Cluster Continuous Copy session that exists in a storage device with an "Active" TFO status in a Storage Cluster environment.

Active site

An AdvancedCopy Manager backup environment that is normally active.

Active-Active connection

A type of connection format. Two ports are used, and an IP address is configured to each of these ports. This format enables continued operation even during the failure of a port.

Active-Standby connection

A type of connection format. Two ports are used, and an IP address is configured to one of these ports. This format enables continued operation even during the failure of a port.

Active Directory (AD)

A directory service provided with Windows. This service allows integrated administration of hardware resources such as servers, clients, and printers connected through a network, as well as information such as the attributes and access rights of users using such resources.

AdvancedCopy Manager's agent

A generic term referring to AdvancedCopy Manager-related services/daemons and applications used for backup or replication existing in a Managed Server.

AdvancedCopy Manager database

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

AdvancedCopy Manager's manager

A generic term referring to AdvancedCopy Manager-related services/daemons and applications existing in a Management Server.

Advanced Copy function

A generic name of hardware-based copy function included in the ETERNUS Disk storage system.

Affinity Group

A unit in which logical volumes in storage are grouped. This is used when a set of volumes accessed from a server are defined.

Aggregate

A physical storage pool attached to a RAID group and a volume so that the volume capacity can be flexible.

Allocation port

A port to which the NAS interface, for accessing the shared folder on the NAS, is assigned. This is simply displayed as "port" on Web Console.

Automatic Failback

This refers to the feature that will be automatically switched back storage device from a Secondary Storage to a Primary Storage in the case of recovery for the Primary Storage in the Storage Cluster function.

Automatic Failover

This refers to the feature that will automatically switch storage device from a Primary Storage to a Secondary Storage in the case of a failure on the Primary Storage in the Storage Cluster function.

Backing Storage Container

This refers to a datastore that is configured on a storage device in the VMware vSphere Virtual Volumes function. It is also called "VVOL datastore".

Backup history

Backup data and other backup related information that are managed by the backup management or virtual machine backup function.

Backup management files

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

Backup management window

The window of Web Console for backup management.

Backup server operation

The type of operation that uses a dedicated backup server that copies the backup volume (copy 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.

Balancing level

The degree of uniformity of the physically allocated capacity for the RAID groups within each sub-pool that configures a Tier pool.

Binding

Server node HBA function. This function defines the correspondence between information of storage Fibre Channel ports (connection destinations) and special server node files. A storage area that allows precise access from a server node can be defined.

Bonding port

A virtual port that consolidates multiple physical NAS ports into one port through port bonding.

In the ETERNUS Disk storage system, the representative port is called "master port" and the port that constitutes the port bonding is called "member port". A port bonding is set by specifying the member ports for the master port.

CA port pair

The combination of CA ports that have been paired in the Storage Cluster function.

Cascade connection function

The function connecting Fibre Channel switches physically, using fibre cable. This function automatically enables the Fibre Channel switches to communicate with one another, thereby enabling access through the Fibre Channel switches by the name server function.

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 target ETERNUS Disk storage system manuals for information on the cascade copy.

CCM Server

The server where the AdvancedCopy Manager Copy Control Module is installed.

Channel Adapter (CA)

The adapter card in an ETERNUS Disk storage system, used as interface with HBA/switch.

Clone backup

A backup with QuickOPC that is created with the virtual machine backup function of AdvancedCopy Manager. This shows the backup method and the backup data that was created.

Clone backup history

Clone backup data and other backup related information that are managed by the virtual machine backup function.

Clone backup VVOL datastore

A VVOL datastore that creates backup destination volumes for the clone backups.

Common Internet File System (CIFS)

A type of protocol used to allow shared access to a folder. This protocol is a developed version of SMB which is used in Windows file sharing, and allows the sharing of files from Windows.

Concatenated affinity group

Function for aggregating several existing affinity groups and manage them as one affinity group.

Concurrent OPC

A function of the ETERNUS Disk storage system and allows taking a snapshot from several logical volumes at once. Taking a copy of a database configured over several logical volumes while maintaining the data consistency and such similar operations are made easy.

Connection format

Connection formats, depending on the assignment method of the NAS interface, to ports used for accessing the shared folder. Comprises the formats listed below.

- Active-Active connection

- Active-Standby connection

- Single connection

Controller Module (CM)

A module of the ETERNUS Disk storage system containing the RAID control processor and cache memory.

Converged Network Adapter (CNA)

An adapter card for FCoE communications in a server, used as interface with CA/switch.
When the network with the server is an FCoE communication, replace the listing of HBA with CNA when reading through.

Copy command via LAN

A function for performing an Advanced Copy on the ETERNUS Disk storage system from the server over the LAN.

Copy command via SAN

A function for performing an Advanced Copy on the ETERNUS Disk storage system from the server over the SAN (SCSI) connection.

Copy Control Module (CCM)

A tool that enables backup using the Advanced Copy functions included in the ETERNUS Disk storage system.

When AdvancedCopy Manager is used, one advantage is that it can be used without installing the AdvancedCopy Manager's agent on the backup source server (the transaction server).

Copy Timestamp information display function

A function for displaying the timestamp of the latest Advanced Copy operation performed.

Dashboard

This is a screen that displays the summary of the information managed by this software. Dashboard is available in Version 16.3 or later. Dashboard has the following features:

- Multiple information that the system administrator requires during operations can be browsed on one screen

- New look & feel using HTML5

- Customizable for each user according to the operation

Database backup (SQL Server)

Backup of all the database files making up a database.

Database file (SQL Server)

File(s) containing database data. There are three types: primary data file, secondary data file and log file.

Database recovery (SQL Server)

Once the database restoration has been done, database is recovered to its most current status (or the status at a specified timestamp between the backup operation and the current status) using the database log.

Database restoration (SQL Server)

Database restoration from the database files that have been backed up.

Data Structure Instance (DSI)

Combined with the Data Structure Organization (DSO), this is a structure that allocates data logically (line and columns) in the database tables.
Refer to the *Symfoware Server RDB Operation Guide* for details.

Destination Access Permission

A function to change the access permission for the copy destination volume of EC or REC.

Detail View

This indicates the screens of Web Console for browsing with three panes (Category pane, Main pane, and Action pane) and screens for setting up with wizard.

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

Disaster recovery site

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

Domain name

In general, this refers to the Fully Qualified Domain Name (FQDN).
For example, "fujitsu.com".

Eco-mode

A function to reduce electric power consumption of the storage device by stopping the rotation of the spindles of the disk drives or disconnecting the power supply to the main unit of the disk drive through the disk drive operation schedule management.

Equivalency maintenance state

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

Equivalent Copy (EC)

This is one of the Advanced Copy functions included in the ETERNUS Disk storage system. This function maintains the mirror state between the disks in a storage device. When detach control is executed from software, a copy of such a disk is created.

ETERNUS

This is the brand name for Fujitsu storage systems.

ETERNUS Disk storage system

A generic term of the ETERNUS DX series.

ETERNUS Multipath Driver

A multipath driver for the ETERNUS Disk storage system.
By setting a single logical path out of multiple physical access paths, the driver ensures the access to an ETERNUS Disk storage system is alive even when one of the access paths fails.

ETERNUS SF AdvancedCopy Manager SRA

A Storage Replication Adapter (SRA) software for using ETERNUS disk storage systems with VMware Site Recovery Manager.

ETERNUS SF log

The following logs are generated by this software:

- Event log

- Operation History

- Login/Logout History

- Threshold monitoring Alarms

ETERNUS SF resource

A generic term for those listed below. The following resources are managed by this software:

- Disk storage systems

- Tape libraries

- Fibre Channel switches

- Servers

- VMware vCenter Servers

- Tiering policies of Automated Storage Tiering

ETERNUS SF role

A role defined in this software.
Two roles are "Administrator" (for storage system administration) and "Monitor" (for storage system monitoring).

ETERNUS SF role group

A group account to aggregate OS user accounts into roles.
Two group accounts are "ESFAdmin" (for storage system administration) and "ESFMon" (for storage system monitoring).

ETERNUS SF Web Console

The web browser window where the administrator performs operations for Express, Storage Cruiser, AdvancedCopy Manager, or the terminal (client PC) where the browser is displayed. It is connected to the Management Server and allows management and monitoring of the storage system environment.

ETERNUS VSS Hardware Provider

This is software that provides the ETERNUS Disk storage system service, based on the interface provided with the Microsoft Volume Shadow Copy Service (hereafter called "VSS"). Refer to the *ETERNUS VSS Hardware Provider User's Guide* for details.

In AdvancedCopy Manager, during backup of the Exchange Server database, ETERNUS VSS Hardware Provider function may be used to perform backup.

ETERNUS Web GUI

The Web GUI of the ETERNUS DX series, the ETERNUS All-Flash Arrays, and the ETERNUS DX200F.
The storage devices can be configured or managed by the GUI.

Extended Copy (XCOPY)

A copy that is provided as the Full Copy function of VMware vStorage APIs for Array Integration (VAAI).

Fabric

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

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 Arbitrated Loop (FC-AL)

Topology using the Fibre Channel interface. A Fibre Channel that now allows the connection between two or more nodes using a hub.

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 over Ethernet (FCoE)

The encapsulation protocol to transmit Fibre Channel protocol over Ethernet. It makes possible to use Ethernet as the base for SAN and LAN.

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.

FL port

The port of the fabric topology (Fibre Channel switch) connected to the NL port.

Flexible Tier

A function for optimizing performance and cost on a storage system by implementing Automated Storage Tiering, that is by automatically relocating data between tiers inside the storage system according to their access frequency.

Flexible Tier Pool (FTRP)

An FTRP is the collection of storage for use by the Automated Storage Tiering feature. It is made up of two or three layers, each defined as an FTSP.

Flexible Tier Pool Element (FTRPE)

An FTRPE is the basic allocation unit within the FTRP. The evaluation of the traffic (access status) on each FTRPE is used to perform the Automated Storage Tiering relocation of the FTRPE units between the FTSPs making up the FTRP.

Flexible Tier Sub Pool (FTSP)

An FTSP is a collection of one or more RAID groups making up one layer within an FTRP.

Flexible Tier Volume (FTV)

The virtual volume created by Automated Storage Tiering function.

Flex volume

Describes a volume with a flexible size that can be increased. Volume size can be increased freely by using an aggregate layer.

Force-Failover

This is the operation that forces the Secondary Storage to be activated in the Storage Cluster function in cases when Manual Failover cannot be executed due to such as severed communication between the Primary Storage and the Secondary Storage.

Forced Login

The fact of forcibly interrupting a same user login session and log in again.

Forced Logout

The fact of forcibly interrupting a user login session.

F port

The port of the fabric topology (Fibre Channel switch) connected to the N port.

Framework

A generic name referring to applications such as communication services and configuration management that form the foundation of the AdvancedCopy Manager.

Fully Qualified Domain Name (FQDN)

Refer to "Domain name".

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 "swstbkpolset" command.

GigaBit Interface Converter (GBIC)

It is used as a module of a Fibre Channel port, such as a Fibre Channel switch or HBA.

Group

The function to group several devices so that they can be handled as one in Storage Cruiser.

Guest OS

An operating system running on virtual machines.

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.

HDDV

Refer to "Hard disk driver".

HLU number

A Logical Unit number (LUN) that a host recognizes.

Home Screen

This is the screen displayed immediately after logging in to Web Console. The Home screen can be configured with either of the following screens:

- Dashboard

- Overview screen of the **Main** tab on Detail View

Host Affinity

Definition for associating an HBA in a server node set for a CA port on the storage side with an accessible area within storage. This function assigns a logical volume in a storage device presented to a host (HBA), and serves as a security function inside a storage device. This function is also called "Zone function".

Host Affinity group

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

Host Bus Adapter (HBA)

The adapter card for FC communications in a server, used as interface with CA/switch.
When the network with the server is an FCoE communication, replace the listing of HBA with CNA when reading through.

Host OS

The operating system where the virtualization software that executes virtual machines run.

Host response

Parameter managing the SCSI sense information processing for the connection between an ETERNUS Disk storage system and a server.

Hot spare disk

Alternate disk automatically brought online as a replacement when there is a disk drive failure.

Internet Small Computer System Interface (iSCSI)

Standard for SCSI protocol transport over a TCP/IP network,

Internet Storage Name Service (iSNS)

Name service and associated protocol for target node in the iSCSI network.

iSCSI name

Name to identify uniquely a node in the iSCSI network. The corresponding string is called iSCSI Qualified Name (IQN).

JNI

The company name of a Fibre Channel HBA vendor.

Kerberos

A type of authorization method that uses encryption. In a network such as the Internet where the safety of the route of communication is not guaranteed, this method is used for the purpose of confirming identities between the server and the client.

Legacy DSF

One of the formats for device special files used by the HP-UX operating system. The "Legacy" indicates that this is the format for device special files that were used with versions of HP-UX prior to HP-UX 11iv3, as opposed to "persistent DSF", which is the format that was introduced with HP-UX 11iv3.
Format for legacy DSF: /dev/[r]dsk/cXtYdZ[sN]

Lightweight Directory Access Protocol (LDAP)

A protocol used to access the directory service.

Load share

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

Logical copy

When a request for backup or restoration is issued by the server, the copy is logically ended before the actual physical copy is finished.
On the server side, after the logical copy is finished data level can be checked and updated on the copy destination.

Logical Device Expansion

A function for dynamically expanding the capacity for a RAID group by adding disks or changing the RAID level.

Logical node

Name of a logical server in a clustered system.

Logical volume

Logical volume defined inside a RAID group.

Logical WWPN

This is the logical WWPN that is assigned to the CA port by the pairing of CA ports in the Storage Cluster function. Due to the paired CA ports sharing the same logical WWPN, a transparent failover becomes possible.

Log backup (SQL Server)

Backup the SQL Server transaction log.

Logical Unit (LU)

Logical unit defined under a channel adapter on a storage device.

Logical Unit Number (LUN)

Refer to "Logical Unit (LU)".

LUN Mapping

The mapping between the Logical Unit number (LUN) recognized by the host and Logical Volume number in the storage device.

Managed Server

Server managed by the Management Server.

By installing a module with the agent function for Storage Cruiser and/or AdvancedCopy Manager on this server, storage connected to the server can be controlled from the Management Server.

Management Server

The server where the manager function of Express, Storage Cruiser, AdvancedCopy Manager is installed. The whole storage system can be managed from that server.

Manual Failback

This is the operation in the Storage Cluster function that switches the storage device being accessed from the business server from the Secondary Storage to the Primary Storage.

Manual Failover

This is the operation in the Storage Cluster function that switches the storage device being accessed from the business server from the Primary Storage to the Secondary Storage.

Master port

It is the representative port of the port bonding in the ETERNUS Disk storage system. The port name of the master port is set as the port name of the bonding port.

Maximum number of operations

Maximum number of operations that can be handled concurrently by the manager server.

Member port

It is a port other than the master port that constitutes the port bonding in the ETERNUS Disk storage system.

Monitor session

It is a copy session to measure the amount of the update written in a copy source area. The copy processing is not performed, and a copy destination area does not exist.

MPHD

Refer to "Multipath disk control".

MPLB

Refer to "Multi path disk control, load balance option".

MPxIO

It is Solaris I/O multipath function using the Fibre Channel driver (Leadville driver) of Solaris standard.

msdsm

It is standard Device Specific Module (DSM) on the Windows operating system.

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 storage device 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.

Multi Path I/O (MPIO)

The multipath disk control mechanism on the Windows operating system. The actual control is performed by a driver known as the Device Specific Module (DSM) driver, which is provided by storage vendors.

Multiple logins

Multiple logins to Management Server by the same user using Web Console.

NAS backup settings

A generic term for the settings of those listed below. Configuration of this setting enables backup of the NAS volume.

- NAS backup volume

- Copy pairs where the copy source is a NAS volume and the copy destination is a NAS backup volume

- Copy group comprising groups of the above copy pairs wherein the copy type is QuickOPC

NAS backup volume

The volume to be used as the destination for the backup of the NAS volume. This volume is created through configuration of the NAS backup settings.

NAS Engine

A service for NAS control within the CM of the ETERNUS Disk storage system.

NAS file system

A file system that allows file level access to the volume through NAS sharing.

NAS Interface

The definition information of the interface that has an IP address for accessing the shared folder and also administers information of ports to assign the IP address to.

NAS port

A port for NAS connection provided with Unified Storage.
Assigning a NAS Interface to a NAS Port enables access to the shared folder within the NAS volume.

NAS server name

It is a unique name set in the storage device subject to NAS management. By registering the NAS server name in the DNS server, it becomes possible to access to the shared folder through the name.

NAS snapshot

A snapshot function for NAS volumes. It becomes possible to collect the snapshots that follow a specified schedule automatically and view of the snapshots from a client.

NAS snapshot volume

A destination volume that collects the snapshots of NAS volume. It is created by making the NAS snapshot settings.

NAS system volume

A system volume for control of the NAS. This volume is configured with volumes listed below.

- System volume for CM

- System volume for file system management

NAS volume

A volume used to create a NAS file system on.

NAS volumes

A generic term for the volumes listed below.

- NAS volume

- NAS backup volume

- NAS system volume

Native multipath function

A control mechanism for multipath disks for the HP-UX operating system. The native multipath function was introduced with HP-UX 11iv3.

NetBIOS domain name

This is the domain name used with the NetBIOS. The name where the lower case letters of the domain name up to the first period is converted to upper case letters will be the NetBIOS domain name. It is possible to configure a separate name to the NetBIOS domain name.

For example, if the domain name is "fujitsu.com" and in cases when a separate name is not configured, the NetBIOS domain name will be "FUJITSU".

Network Attached Storage (NAS)

A storage device connected over a network. A direct connection is made to the TCP/IP network to access the NAS file system on a storage device.

Network File System (NFS)

A type of protocol used to allow shared access to a folder. This protocol is a protocol used between UNIX based OSs and enables sharing of files from a UNIX based platform.

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 ID Virtualization (NPIV)

N_Port ID virtualization. Allows having a logical volume direct access from several virtual machines by sharing one physical Fibre Channel adapter (HBA) between several virtual ports.

N port

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

Offloaded Data Transfer (ODX)

A function to off-load processing according to the copy or movement of the file into the storage device.

One Point Copy (OPC)

This is one of the Advanced Copy functions included in the ETERNUS Disk storage system. This function executes disk copy at high speeds at the storage device level. When software issues a copy request, a physical copy operation is performed by the storage device. However, the emulation function makes it look like the copy is completed at the software level.

Operating mode of bonding port

It is a method for deciding the NIC for communication use of the ports connected.

Oplocks Settings

A setting designed to prevent conflict during file access by multiple clients. By the client locking the file and caching the file data locally, conflict that occurs when another client makes changes to the file can be avoided.

Ordinary transaction volume

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

Panel

This is a window is displayed on Dashboard and divided by the information type.
Each panel can be added and deleted, the display position can be changed, and the displayed content can be customized.

Persistent DSF

One of the formats for device special files used by the HP-UX operating system. This format was introduced with HP-UX 11iv3.
Format of persistent DSF: /dev/[r]disk/diskX[_pY]

Physical copy

Actual copy operation performed inside the ETERNUS Disk storage system after the logical copy operation is finished.
The physical copy is performed as a background task, the server does not have to be aware of the physical copy task.

PID binding

One method of storage affinity (binding) of a server node HBA. The correspondence between Port IDs (PIDs) of storage Fibre Channel ports, which are connection destinations, and special server node files can be defined.

Point-to-point

Topology using the Fibre Channel interface. It is the topology of one-to-one connection of an N port.

Port bonding

It is a technology that treats multiple NAS ports virtually as one port for the purpose of enhancing the fault tolerance and communication bandwidth. It can be otherwise called "link aggregation".

Port zoning

Zoning of accessible areas for a Fibre Channel switch. An access path is set by specifying the port number of the Fibre Channel switch from the server node HBA connected to a port and storage CA.

Pre-processing or post-processing

Scripted processing that is executed immediately before or after Advanced Copy 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.

Prefetch

A function for reading disk array in advance. This function is effective for improving performance.

Primary Storage

This is the storage device configured as Primary in relation to the TFO group of the Storage Cluster function.

PRIMECLUSTER

This is software product that can construct a clustered system.

PRIMECLUSTER GD

This is software product that improves data integrity by mirroring disk units.
PRIMECLUSTER GDS is also described "PRIMECLUSTER GD" in the manuals of this product.

PRIMECLUSTER GD Snapshot

This is an optional product of PRIMECLUSTER GD. With this product, you can create a snapshot of a PRIMECLUSTER GD logical volume (i.e., a replica at a certain time). AdvancedCopy Manager supports the backup and replication operations of logical volumes in linkage with PRIMECLUSTER GD Snapshot.
PRIMECLUSTER GDS Snapshot is also described "PRIMECLUSTER GD Snapshot" in the manuals of this product.

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.

PV-LINK

A control mechanism for multipath disks that is provided by the Logical Volume Manager (LVM) for the HP-UX operating system. PV-LINK was introduced with HP-UX 10.0.

Quality of Service (QoS)

This refers to the QoS of the storage device.
This technology is used to maintain the performance of disk storage systems that are shared by multiple servers.

QuickOPC

This is one of the Advanced Copy functions included in the ETERNUS Disk storage system. This is a copy method generally used to copy only the data that is updated after a physical copy of all data by One Point Copy (OPC) is completed.
It is a suitable copy method for Disk to Disk backup.

Quota management

It is a function that controls the upper limit of the storage capacity that a user or group can use. It prevents in advance the depletion of overall resources through the over-use of disk resources by some users or groups.

RAID group

A number of disk drives configured in a RAID organization.

RAID Migration

This function allows transferring a volume from its current RAID group or Thin Provisioning Pool (TPP) to another RAID group or add it to TPP with available capacity.

RAID level

The RAID level is classified according to how data is allocated to disks or how redundancy is configured, such as RAID0, RAID1, RAID1+0, RAID5, RAID6, RAID5+0.

RAID Offload Engine (ROE)

This is responsible for encryption processing and parity generation processing for RAID5 and RAID6.

Raw Device Mapping (RDM)

The mechanism for accessing directly a LUN from a VM guest.

Recovery control file

File that is used when performing backup operations for Symfoware.

The data for recovery that was created during backup of Symfoware databases is stored in this file. The output directory of this file can be specified at the time of configuring the server environment (or by executing the "swstsvrset" command).

Redundancy

The fact to prepare supplementary hardware and mechanisms outside the normal configuration in order to respond to incidents and improve reliability.

Redundant Arrays of Inexpensive(Independent) Disks (RAID)

This is a technology that secures performance and fault-tolerance by distributing data to multiple hard disks.

Redundant Port

The port to be assigned as a redundant destination of the allocation port. In the case that the allocation port is down, the shared folder on the NAS can be accessed from the redundant port.

Registry

AdvancedCopy Manager environment definition file.

Remote Adapter (RA)

The adapter card for interfacing with the Remote Advanced Copy function of the ETERNUS Disk storage system.

Remote Equivalent Copy (REC)

This is one of the Advanced Copy functions included in the ETERNUS Disk storage system. The REC achieves EC between different ETERNUS Disk storage systems.

Replication between servers

Replication between source volumes and destination volumes attached to different servers.

Replication management files

A generic term referring to the files where replication management saves the usage information.
There are two or more kinds. It is kept for every Managed Server with a data repository.

Replication on a server

Replication between source volumes and destination volumes attached to one server.

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 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 when the manager program of this software is installed.

Routing Information Protocol Settings (RIP Settings)

A protocol used between routers for transferring information of communication routes. When RIP Settings are enabled, a routing table for automatic selection of access routes is dynamically created.

SAS address

Describes the World Wide Name (WWN) allocated to all SAS devices.

Scheduler

A scheduling function included in the manager program of this software. Specifying a date and time can execute scheduler tasks.

Scheduler task

This is a unit of task executed by the Scheduler.

SDX object

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

Secondary Storage

This is the storage device configured as Secondary in relation to the TFO group of the Storage Cluster function.

Secure Shell (SSH)

The protocol to perform the remote shell over the encrypting communication route.

Self Encrypting Drives (SED)

Self Encrypting Drive. Using an encryption key and the disk own encryption chip, data encryption/decryption process is done aboard the disk itself.

Session

Unit of copying execution that is performed by the Advanced Copy function.

Shared folder

A folder that is created under a NAS volume. This folder is publicized over the network, and can be accessed via the port to which the NAS Interface has been assigned.

Simple Mail Transfer Protocol (SMTP)

Protocol for sending E-mail.

Simple Network Management Protocol (SNMP)

The protocol for transmitting monitoring and management information regarding network connected devices over the IP network

Single connection

A type of connection format. one port is used, and an IP address is configured to this port. This format does not enable continued operation during the down time of a port.

Single item restore

A method that restores file units from the snapshot backups.

A method that copies the snapshot backup to a temporary volume different from the backup source volume, assign the temporary volume to a virtual machine and restores the files manually from the temporary volume.

Small Form factor Pluggable (SFP)

This is one of the optical communications modules necessary in order to communicate with optical fibers and is used as a module of the Fibre Channel port.

SMTP server

Server for sending E-mail.

Snap Data Pool (SDP)

This is a physical disk pool for the Snap Data Volume, which consists of multiple Snap Data Pool Volumes. Allows expansion of the physical capacity for the Snap Data Volume.

Snap Data Pool Volume (SDPV)

The logical volume belonging to the Snap Data Pool.

Snap Data Volume (SDV)

This is a volume that can be used as a copy destination volume of SnapOPC and SnapOPC+.

SnapOPC

This is one of the Advanced Copy functions included in the ETERNUS Disk storage systems. 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 is one of the Advanced Copy functions included in the ETERNUS Disk storage systems. 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.

Snapshot backup

A VMware snapshot created with the virtual machine backup function of AdvancedCopy Manager. This shows the backup method and the backup data that was created.

What is created is the same as the snapshot created from VMware vCenter Server. Snapshot backups created from the virtual machine backup function of AdvancedCopy Manager can also be operated as a normal snapshot from VMware vCenter Server.

Snapshot backup history

Snapshot backup data and other backup related information that are managed by the virtual machine backup function.

Snap shot type high-speed backup

Backup using the OPC function included in the ETERNUS Disk storage system.

SNMP Community name

The string used to allow access to information for a specific device when sending or receiving information over SNMP.

SNMP Trap

The event notification information sent by a device monitored through SNMP.

Solid State Drive (SSD)

The storage device built with Flash memory. It has advantages over a Hard Disk Drive (HDD) in access speed, power consumption, size, weight, reliability.

Storage Area Network (SAN)

This 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.

Standby-Side Continuous Copy session

A Storage Cluster Continuous Copy session that exists in a storage device with a "Standby" TFO status in a Storage Cluster environment.

Storage affinity

Refer to "LUN Mapping".

Storage Cluster

This refers to transparently performing the switching from a configuring component of an active system to the configuring components of a system on standby from an external operating environment, or the feature thereof. This refers to, for example, between two storage devices connected to a server, in the case that the Primary Storage has been suspended, transparently switching in order to continuously operate tasks.

Storage Cluster Continuous Copy function

A function of the ETERNUS Disk storage system that continues Advanced Copy even if a failover or failback occurs in a storage device during an Advanced Copy operation in a Storage Cluster environment.

Storage Cluster Continuous Copy session

A copy session that is operated with the Storage Cluster Continuous Copy function.

Storage Cluster Controller

This is the server established in order to utilize Automatic Failover in the Storage Cluster function. This server can be used as Management Server.

Storage Cruiser's agent

The agent of Storage Cruiser that is software to manage storage resources

Storage Cruiser's manager

The manager of Storage Cruiser that is software to manage storage resources

Storage Management Initiative Specification (SMI-S)

This is an interface standard for SAN management advocated by Storage Networking Industry Association (SNIA).

Storage Management Server

Refer to "Management Server".

Storage Server

Refer to "Managed Server".

Storage system

Describes a configuration with a business server and dedicated equipment for data storage.

Suspend specification

The act of specifying the -suspend option in the "swstbackup" command to back up using the Suspend/Resume function. The swstbackup command is a command of AdvancedCopy Manager.

Suspend/Resume

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.

Synchronous backup

This involves using the EC function included in the ETERNUS Disk storage system to perform backup.

Tape library

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.

TFOV

This is the volume that is subject to transparent switching in the Storage Cluster function.

TFO group

In the Storage Cluster function, this is the unit in which transparent switching takes place on a single device, and this is the group that centrally manages the connection configuration, policies, status, and maintenance for switching.

TFO pair

This is the combination of TFO groups or TFOVs that have been paired by and between two storage devices in the Storage Cluster function. This includes one or more CA port pairs.

Thin Provisioning

The function for allocating virtual storage in order to reduce the actual amount of physical storage needed.

Thin Provisioning Volume balancing

The function for rearranging physical resources between RAID groups that are configuring the Thin Provisioning Pool (TPP) in order to balance the capacity used by the Thin Provisioning Volume (TPV).

TID, Target ID

ID set for each SCSI bus port.

In systems using SCSI or FC-AL, this ID is generally set for each device. In an environment of Solaris Fabric connection, its value can be defined using software from the OS. (WWPN binding)

Tier pool balancing

For RAID groups within a sub-pool that configures the Tier pool, this function relocates the physically allocated areas so that the used capacity of each RAID group is uniform.

Thin Provisioning Pool (TPP)

A physical disk pool created by Thin Provisioning function.

Thin Provisioning Volume (TPV)

A virtual volume created by Thin Provisioning function.

Traditional volume

Current volume type, as opposed to Flex volume.

Unified Storage

A multi-protocol storage on which the block access interface (SAN) and the file access interface (NAS) are provided.

Unit

A generic name of the entire device. For greater detail, parts in a unit are called elements.

UnknownFC port

Information created by Storage Cruiser according to information about WWPNs, excluding WWPNs of storage HBAs and server node CAs, where the WWPNs are used for connections to Fibre Channel switch ports. Devices in a SAN environment not managed by Storage Cruiser can be identified. The information is manually embedded for individual HBAs and CAs.

VASA

An abbreviation for "VMware vSphere Storage APIs for Storage Awareness". An API used with vSphere/vCenter for obtaining and controlling device information by coordinating with the storage device.

VASA Provider

A program that coordinates with vSphere/vCenter to implement the VASA function.
Included in the ETERNUS VMware Support Package.

Virtual machine

A virtual computer that is created by virtualization software.

Virtual machine backup

A function that uses the Advanced Copy function included in the ETERNUS Disk storage system in an environment that uses VMware Virtual Volumes to execute high speed virtual machine unit snapshots, backups, and restores.

Virtual Machine File System (VMFS)

The cluster file system that multiple VM hosts can access at the same time.

Virtual Volume

A volume that is created by the VMware vSphere Virtual Volumes function.

VM guest

Refers to either a virtual machine or a guest OS.

VM host

Refers to either the virtualization software that executes virtual machines or the computer where the virtualization software runs.

VM Storage Policies

This refers to storage related policies in the VMware vSphere Virtual Volumes function. Defining policies can select a VVOL datastore that satisfies the policies and control created Virtual Volumes and Virtual machines all at one time.

Volume Shadow copy Service (VSS)

A function that provides a communications foundation for backup software, server applications and storage hardware. It is installed as standard with Windows operating system.

VSSHP

Refer to "ETERNUS VSS Hardware Provider".

VVOL access path

An access path that is required for the VMware vSphere Virtual Volumes function is used exclusively for Virtual Volumes to connect between the VM host and the ETERNUS Disk storage system.

VVOL datastore

A virtual area for storing Virtual Volumes.

VVOL Metadata

Configuration information of a Virtual Volume, including its name and identifier.

Web Console

An abbreviation of "ETERNUS SF Web Console".

Wide Striping Volume (WSV)

A volume in which two or more RAID groups are concatenated by striping.

World Wide Port Name (WWPN)

Unique name set for each Fibre Channel port (HBA, CA, Fibre Channel switch port, etc.). It is the IEEE MAC global address. A WWPN is used as an ID during Fibre Channel port login because no two Fibre Channel ports have the same WWPN. It is also called port WWN.

World Wide Node Name (WWNN)

Common name set for a Fibre Channel port of a node. The node definition varies depending on the manufacturer. A device is defined in some cases, and an adapter is defined in others. WWNN is also called "node WWN".

WWNN binding

One method of storage affinity (binding) of a server node HBA. The correspondence between WWNNs of storage Fibre Channel ports (connection destinations) and special server node files can be defined.

WWNN zoning

Zoning of accessible areas for a Fibre Channel switch. An access path is set by specifying the WWNN of a server node HBA and WWNN of a storage CA. This setting disables access through the Fibre Channel switch to every Fibre Channel port whose WWNN is not defined.

WWPN binding

One method of storage affinity (binding) of a server node HBA. The correspondence between WWPNs of storage Fibre Channel ports (connection destinations) and special server node files can be defined.

WWPN zoning

Zoning of accessible areas for a Fibre Channel switch. An access path is set by specifying the WWPN of a server node HBA and WWPN of a storage CA. This setting disables access through the Fibre Channel switch to every Fibre Channel port whose WWPN is not defined. In access path settings of this software product, access paths of Fibre Channel switches are controlled with WWPN zoning.

Zoning function

Fibre Channel ports connected to a Fibre Channel switch are grouped into zones. Access within individuals zones is restricted to implement security in Fibre Channel. There are several zoning types, including WWPN zoning, WWNN zoning, and port zoning.