ETERNUS
Disk storage systems
Server Connection Guide
(Fibre Channel)
for Egenera BladeFrame
Preface

This document briefly explains the operations that need to be performed by the user in order to connect an ETERNUS2000 model 100 or 200, ETERNUS4000 model 300, 400, 500, or 600, or ETERNUS8000 model 700, 800, 900, 1100, 1200, 2100, or 2200 Disk storage system to a server via Fibre Channel using the Egenera BladeFrame.

This document should be used in conjunction with any other applicable user manuals, such as those for the ETERNUS2000 model 100 or 200, ETERNUS4000 model 300, 400, 500, or 600, or ETERNUS8000 model 700, 800, 900, 1100, 1200, 2100, or 2200 Disk storage system, server, OS used, Fibre Channel cards, drivers, etc.

Note that this manual refers the following documents.

- ETERNUS Disk storage systems Server Connection Guide (Fibre Channel) ETERNUS Disk Storage System Settings
- ETERNUS Disk storage systems Server Connection Guide (Fibre Channel) Fibre Channel Switch Settings
- ETERNUSmgr Install Guide
- ETERNUSmgr User Guide

Also, note that in this document the ETERNUS2000 models 100 and 200, ETERNUS4000 models 300, 400, 500, and 600, and ETERNUS8000 models 700, 800, 900, 1100, 1200, 2100, and 2200 Disk storage systems are collectively referred to as ETERNUS Disk storage systems.

The Contents and Structure of this Manual

This document is composed of the following nine chapters.

- Chapter 1 Notes
  This describes issues that should be noted when connecting the ETERNUS Disk storage system and server.

- Chapter 2 Workflow
  This describes how to connect the ETERNUS Disk storage system to a server.

- Chapter 3 Installing and Setting Up ETERNUSmgr
  This describes how to install ETERNUSmgr.

- Chapter 4 Setting Up the ETERNUS Disk Storage System
  This describes how to set up the ETERNUS Disk storage system.

- Chapter 5 Setting Up the Egenera BladeFrame
  This describes how to set up the Egenera BladeFrame in a multipath environment.
Preface

• Chapter 6  Setting the Fibre Channel Switches
  This describes the settings of a Fibre Channel switch.

• Chapter 7  Connecting the Egenera BladeFrame to an ETERNUS Disk storage system
  This describes how to configure a multipath connection between the Egenera BladeFrame
  and an ETERNUS Disk storage system.

• Chapter 8  Recognizing the ETERNUS Disk Storage System LUNs
  This describes how to confirm the multipath configuration settings.

• Chapter 9  Setting Up the pServer
  This describes how to set up the pServer.

Safe Use of this Product

■ Using this manual

This manual contains important information to ensure the safe use of this product. Be sure to
thoroughly read and understand its contents before using the product. After reading, store this
manual in a safe place for future reference.
FUJITSU has made every effort to ensure the safety of the users and other personnel, and to
prevent property damage. When using this product, carefully follow the instructions described in
this manual.

Acknowledgments

• Linux is a trademark or registered trademark of Linus Torvalds in the USA and other
countries.
• Egenera BladeFrame and Egenera PAN Manager are trademarks or registered trademarks of
Egenera, Inc. in the USA and other countries.
• The company names, product names and service names mentioned in this document are
registered trademarks or trademarks of their respective companies.
Naming Conventions

■ Other names

- "Channel Adapter" (CA) refers to the Fibre Channel interface modules used in the ETERNUS Disk storage systems to connect to the servers.
- "Fibre Channel card" refers to the Fibre Channel interface modules normally used in the servers. A "Host Bus Adapter" (HBA) or "Channel Adapter" (CA) may be used instead, depending on the server.
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This chapter describes issues that should be noted when connecting an ETERNUS Disk storage system and server.

- Refer to the Egenera website and manuals for detailed information about the Egenera BladeFrame.
- Refer to the Egenera website and manuals for detailed information about the Egenera PAN Manager.
- Contact Egenera for which versions of Egenera software support connection of an Egenera BladeFrame to an ETERNUS Disk storage system.
Chapter 2  Workflow

The workflow is shown below.

Perform the following steps when connecting an Egenera BladeFrame to an ETERNUS Disk storage system.

Documents required in the workflow:
- Server Support Matrix
- ETERNUS Disk storage systems Server Connection Guide (Fibre Channel)
- ETERNUS Disk Storage System Settings
- ETERNUS Disk storage systems Server Connection Guide (Fibre Channel) Fibre Channel Switch Settings
- ETERNUS Disk storage systems Server Connection Guide (Fibre Channel) for Egenera BladeFrame
- ETERNUSmgr Install Guide
- ETERNUSmgr User Guide
- Manuals supplied with the server, Multipath Driver, and LAN card

Workflow

ETERNUSmgr Installation and ETERNUS Disk storage system's Setup

If ETERNUSmgr is to be used, install it and set up the ETERNUS Disk storage system.

Refer to:
- "Chapter 3 Installing and Setting Up ETERNUSmgr" (page 11)
- "Chapter 4 Setting Up the ETERNUS Disk Storage System" (page 12)
- Install ETERNUSmgr.
  - ETERNUSmgr Install Guide
- Check ETERNUSmgr operation.
  - ETERNUSmgr User Guide
- Set up the ETERNUS Disk storage system.
  - ETERNUS Disk storage systems Server Connection Guide (Fibre Channel)
  - ETERNUS Disk Storage System Settings
Chapter 2  Workflow

Set up the Egenera BladeFrame
Set up the cBlade.

Refer - “Chapter 5 Setting Up the Egenera BladeFrame” (page 13)

Setup the Fibre Channel Switch
If a Fibre Channel switch is to be used, set it up and connect it now.

Refer - “Chapter 6 Setting the Fibre Channel Switches” (page 14)
- Set up the Fibre Channel switch.
  • ETERNUS Disk storage systems Server Connection Guide (Fibre Channel) Fibre Channel Switch Settings
  • Check the Fibre Channel switch connection requirements.
    • Server Support Matrix for FC-SWITCH

Connect the Egenera BladeFrame to the ETERNUS Disk storage systems
Connect the Egenera BladeFrame and ETERNUS Disk storage system with Fibre Channel cables.

Set the Egenera BladeFrame to Recognize the Logical Units
Set up the Egenera BladeFrame to recognize the ETERNUS Disk storage system's LUNs. Confirm the setting via Egenera PAN Manager.

Refer - “Chapter 8 Recognizing the ETERNUS Disk Storage System LUNs” (page 17)
Set up the Logical Server (pServer)

Set up the pBlade.

- "Chapter 9 Setting Up the pServer" (page 18)
Chapter 3  Installing and Setting Up ETERNUSmgr

If ETERNUSmgr is to be used, install it according to the directions given in the "ETERNUSmgr Install Guide". After the installation, set up ETERNUSmgr following the instructions in the "ETERNUSmgr User Guide".
Chapter 4    Setting Up the ETERNUS Disk Storage System

Set up the ETERNUS Disk storage systems using ETERNUSmgr.

ETERNUS Disk storage systems’ setup can be performed independently of server setup. For details on how to perform these settings, refer to the "ETERNUS Disk storage systems Server Connection Guide (Fibre Channel) ETERNUS Disk Storage System Settings" and "ETERNUSmgr User Guide".
Chapter 5   Setting Up the Egenera BladeFrame

5.1 Egenera PAN Manager

Egenera PAN Manager software is used to assign, configure and monitor the physical resources and logical resources of an Egenera BladeFrame group.

Refer to the Egenera website and manuals for detailed information.

5.2 Egenera BladeFrame Components

5.2.1 cBlade (Control Blade)

The cBlade controls management task and functions, and performs external I/O processing.

- Setting up the cBlade

Perform the following settings.

- Network Setting
  Specify the network settings using the Egenera PAN Manager.

5.2.2 pBlade (Processing Blade)

The pBlade provides processing power for the applications and services.
The pServer should be set up after the ETERNUS Disk storage system LUNs have been recognized.

Refer to the Egenera website and manuals for pBlade settings.
Chapter 6  Setting the Fibre Channel Switches

The following describes the required settings when connecting the server and the ETERNUS Disk storage systems using a Fibre Channel switch. Follow the procedures given in "ETERNUS Disk storage systems Server Connection Guide (Fibre Channel) Fibre Channel Switch Settings".

**Caution**  
When setting the access path using the ETERNUS SF Storage Cruiser, Host Response No. will be set to default values. Set the Host Response No. after setting the access path using the ETERNUS SF Storage Cruiser.
Chapter 7  Connecting the Egenera BladeFrame to an ETERNUS Disk storage system

Connect the Egenera BladeFrame and ETERNUS Disk storage system with Fibre Channel cables.

7.1 Optimal Egenera BladeFrame Multipath Connection

Egenera BladeFrame provides a multipath function. The cBlade has multiple Fibre Channel ports and a failover function to switch between them. When connecting an ETERNUS Disk storage system, the Fibre Channel ports of a given cBlade should each be connected to a different ETERNUS Disk storage system CM.

This is shown in the following Egenera BladeFrame ES and ETERNUS2000 connection example.

BladeFrame ES

<table>
<thead>
<tr>
<th>cBlade-A</th>
<th>cBlade-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCSI 3</td>
<td>SCSI 4</td>
</tr>
<tr>
<td>SCSI 3</td>
<td>SCSI 4</td>
</tr>
</tbody>
</table>

ETERNUS2000

<table>
<thead>
<tr>
<th>CM 0</th>
<th>Port 0</th>
<th>Port 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM 1</td>
<td>Port 0</td>
<td>Port 1</td>
</tr>
</tbody>
</table>

Fibre Channel cables (a) and (b) constitute one multipath connection, while Fibre Channel cables (c) and (d) constitute another multipath connection. For this configuration, the ports of each multipath connected ETERNUS Disk storage system CM must be assigned the same LUN settings. If different LUNs are set, the Egenera BladeFrame multipath function cannot be used.
7.2 Rebooting the Egenera BladeFrame

After connecting the devices, reboot the Egenera BladeFrame to allow it to recognize the ETERNUS Disk storage system LUNs.
Chapter 8  Recognizing the ETERNUS Disk Storage System LUNs

Use the Egenera PAN Manager to confirm that the Egenera BladeFrame can see the ETERNUS Disk storage system LUNs. Use the following procedure to confirm that the Egenera BladeFrame recognizes the ETERNUS Disk storage system LUNs.

**Procedure**

2. All the PAN disks (LUNs) are displayed on the [SCSI Disks] page.
3. Click the SCSI ID in the [ID] column to select a disk (LUN).
4. On the [disk_name] page, confirm that the [Vendor] and [Model] values shown in the [Type] field are correct for the selected disk (LUN).

(Example)

For ETERNUS2000 connections:
[Vendor]: FUJITSU
[Model]: E2000

For ETERNUS4000 connections:
[Vendor]: FUJITSU
[Model]: E4000

For ETERNUS8000 connections:
[Vendor]: FUJITSU
[Model]: E8000

End of procedure
Chapter 9  Setting Up the pServer

Configure the pServer (a logical server) using the pBlade and ETERNUS Disk storage system LUNs and operating system.
Refer to the Egenera website and manuals for pServer configuration procedures.
ETERNUS Disk storage systems
Server Connection Guide (Fibre Channel) for Egenera BladeFrame

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