



N8800-128F, EXP320J

NEC Express5800/320Fd-LR

N8800-129F, EXP320K

NEC Express5800/320Fd-MR

User's Guide (Setup)

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Keep this User's Guide handy for quick reference when necessary.

Safety Indications




To use NEC Express5800 series safely, follow the instructions in this User's Guide.

This guide explains components that pose a danger, types of dangers caused by failing to follow the instructions, and actions taken to prevent them; such components are labeled warning.


This guide and warning labels use "WARNING" and "CAUTION" to indicate a danger depending on the degree. These terms are defined as follows:

	Indicates a danger that could lead to a death or serious injury.
	Indicates a danger that could lead to a burn, other injuries or damage to physical assets.


This guide uses the following three types of symbols to give indications and precautions against a danger. They are defined as follows:

	Indicates that there is a risk of a danger. Each image symbolizes a particular type of danger. (Attention)
	Indicates what you must not do. Each image symbolizes a particular type of prohibition. (Prohibited actions)
	Indicates what you must do. Each image symbolizes a particular type of action necessary to avoid a danger. (Mandatory actions)

(Example)



Symbol indicating a prohibited action (may not always be indicated)



Symbol to draw attention
Term indicating a degree of danger









High temperature.
Immediately after the power-off, system components such as hard disk are very hot. Wait the server to cool down completely before adding/removing some component.

Symbol indicating a prohibited action (may not always be indicated)







Description of a danger

Symbols and its descriptions used in this User’s Guide and warning labels are as follows:



Attention

	Indicates a risk of an electric shock.
	Indicates a risk of a personal injury due to heat.
	Indicates a risk of catching your fingers.
	Indicates a risk of a fire or smoke.
	Indicates a general precaution or warning that is not defined herein.
	Indicates a risk of losing eyesight due to laser beam.
	Indicates a risk of an explosion.
	Indicates a risk of a personal injury.

Prohibited actions

	Indicates a general prohibition that is not defined herein.
	Do not touch the indicated area. There is a risk of an electric shock or fire.
	Do not touch with wet hands. There is a risk of an electric shock.
	Keep from flame. There is a risk of a fire.
	Avoid using water or liquid nearby. If it spills on the equipment, there is a risk of an electric shock or fire.
	Do not disassemble, repair, or modify the equipment. There is a risk of an electric shock or fire.

Mandatory actions

	Unplug the server. There is a risk of an electric shock or fire.
	Indicates a general action to take that is not defined herein. Make sure to follow the instructions.

For detailed notes to set up the machine safely, refer to “NOTES FOR SAFE HANDLING” on page 1-2.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

이 기기는 업무용으로 전자파적합등록을
한 기기이오니 판매자 또는 사용자는
이 점을 주의하시기 바라며 만약 잘못
판매 또는 구입하였을 때에는 가정용으
로 교환하시기 바랍니다.

This class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

CE Statement

Warning: This is a Class A product. In residential environment, this product may cause radio interference, in which case the user may be required to take adequate measures (EN55022).

CLASS 1 LASER PRODUCT

This system is classified as a CLASS 1 LASER PRODUCT. This label id located on the internal DVD-ROM installed in your system.

NOTE: This product provides resistance against hardware faults with its redundant hardware modules. However, this does not mean complete fault-tolerance is assured. For example, there is a risk of system down when:

- A fatal fault occurs in software.
- Both modules within a redundant hardware pair break down.
- A fatal fault occurs in a non-redundant component, such as the clock generator circuitry or the interconnect backplane.
- The entire system is cut off from AC power.



安全注意事項

安全標示




請參考本用戶指南中的指示以安全使用NEC Express5800系列伺服器。

本用戶指南說明了設備何處有危險、危險類型、如何避免危險等。在設備可預計到的危險之處或其附近貼有警告標籤。

用戶指南及警告標籤中，根據危險程度不同，使用“警告”、“注意”等詞，含義如下：

 WARNING	表示如不遵守該指示，可能引發人員傷亡。
 CAUTION	表示如不遵守該指示，可能發生燒傷等身體損傷或造成物質損失。


對危險的提示表示有如下三種符號，具體含義如下所述：

	表示該處可能發生危險。符號為危險內容的圖案。（注意）
	表示禁止行爲。符號中或其附近的圖案為禁止行爲內容。（禁止行爲）
	表示強制行爲。符號中的圖案為強制必須做的行爲內容。即為避免危險必需的行爲。（強制行爲）

（用戶指南中範例）

注意符號

表示危險程度的用語







	⚠ CAUTION
	注意高溫。 本產品關閉電源後，內置硬碟等內部設備仍然處於高溫狀態。請在充分冷卻之後進行拆裝。

禁止行爲的提示符號（有可能沒有此類提示）







危險提示內容

本書及警告標籤中使用的符號



注意

	表示有觸電的危險。
	表示有因高溫而負傷的危險。
	表示有手指等被夾住的危險。
	表示有冒煙或者著火的危險。
	表示非特定的一般的提醒警告。
	表示有因雷射導致失明的危險。
	表示有爆炸的危險。
	表示有受傷的危險。

禁止行爲

	表示非特定的一般禁止。
	不要觸摸指定區域。有觸電或著火的危險。
	不要用濕手觸摸。有觸電的危險。
	遠離火源。有著火的危險。
	遠離液體。如果沾到液體，有觸電或著火的危險。
	請不要對本設備進行拆卸、修理、改造。有觸電和發生火災的危險。

強制行爲

	請將本設備的電源插頭從伺服器上拔下。有發生火災和觸電的危險。
	對非特定的一般使用者的行爲進行指示。請按照說明進行操作。

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

CLASS 1 LASER PRODUCT

這是CLASS 1 LASER PRODUCT。該標籤貼於系統的內部光碟。

注意：本產品通過多餘的硬體模組提供硬體容錯性能。但是這並不表示能夠保證完全容錯。如，在以下情況下可能發生宕機：

- 軟體發生致命故障。
- 多餘硬體雙方均發生故障，不能運行。
- 時鐘產生器線路或內部連接背板等非多餘元件發生致命故障。
- 切斷了整個系統的AC電源

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N8815/006, ft remote management card, adopts the DVC technology of Avocent US.

The patent numbers for the DVC technology of Avocent US.

US Patent Number: 5,732,212/5,937,176/6,633,905/6,681,250/6,701,380 (others patents pending)

Taiwanese Patent Number: 173784

European Patent Number: 0 740 811

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Preface

Welcome to the NEC Express5800/ft series.

NEC Express5800/ft series is a “fault-tolerant (ft)” server focusing on “high reliability” in terms of fault-tolerance, in addition to “high performance,” “scalability,” and “general versatility” provided by NEC Express5800 series. In the event of trouble, its dual configuration will allow the system to instantaneously isolate the failed parts to assure non-stop running; operation will be moved smoothly from one module to the other, minimizing damage to it. You can use NEC Express5800/ft series in a mission-critical system where high availability is required. By the use of VMware, it also provides outstanding openness for general-purpose applications, etc.

To make the best use of these features, read this User's Guide thoroughly to understand how to operate NEC Express5800/ft series.

開始

這次，請購買敝社の Express5800/ft 服務器，實在謝謝。

Express5800/ft 服務器系列 Express5800 系列的「高性能」，是「擴展性」，「通用性」的特長之外又加上，考慮與耐故障性出色的「高(貴)的可靠性」，被開發了的「Fault Tolerant 服務器」。在要求是把向從不給予由於在萬一障礙的發生中根據也雙重化，把障礙地方做為瞬間割開的事業務影響繼續做動作，一邊的組件已經一方的組件業務交待順暢地進行，業務給予的損壞做為最小限度控制住的事可能的系統的本裝置，高(貴)的可用性的基幹業務中也可以放心使用。同時，根據 Windows 操作系統的採用，能適用通用應用軟件等，開放性也出色。為了到最大限度拉出本裝置有的機能，很好地變成使用之前正式文本為念，充分地裝置的對待也請理解。

About This User's Guide

This User's Guide helps a user to properly setup and use the product. Consult this guide when you set up the product.

Keep this manual and the separate volume of User's Guide handy.

This User's Guide is intended for users who have a good knowledge on the basic use of VMware ESX Server and general I/O devices such as a keyboard and mouse.

How to Use This User's Guide

This guide explains the procedures you should perform before you begin system operation after you purchased the product. Read the guide in order from Chapter 1. If you perform procedures according to this guide, you will set up the product properly.

Chapter 4 describes how to install the operating system. Chapter 5 describes post-installation procedures. Chapter 6 explains how to troubleshoot if you cannot set up the product properly. Refer to "SYSTEM REPAIR" on page 6-2 for details about system configurations and repairs of this product. Refer to "TROUBLESHOOTING" on page 6-13 if you feel you failed to set up the product.

See this User's Guide for details of this product's operation, and functions and operations of the hardware and the system.

Additional Symbols

The following symbols are used throughout this User's Guide in addition to the caution symbols described at the beginning.

IMPORTANT:	Important points or instructions to keep in mind when using the server or software
CHECK:	Something you need to make sure when using the server or software
TIPS:	Helpful information, something useful to know

About our Web Service

Information on NEC Express5800/ft series including modification modules is also available on our web site, NEC Express5800 Web Site Asia Pacific:

<http://www.nec.co.jp/express/index.html>

關於正式文本

使正式文本，是為了確實安裝本裝置，能使用的輔導。進行安裝的時候請利用。使正式文本及另冊的用戶指南請經常放置在實體旁邊無論什麼時候能看。

正式文本，作為所說的關於 Windows 等的操作系統和鍵盤，鼠標一般的輸入輸出設備等的基本的處理有了充分的知識的用戶對象被記載。

正式文本讀方法

正式文本，本裝置的購買後，關於到能為止的系統的運用次序說明著。如果做從 1 章順序讀，隨著被記載的說明的操作，確實能安裝本裝置。4 章，如果把安裝被本裝置編入的操作系統與(第一次把電源做為 ON 的時候的安裝次序)重新重新安裝操作系統的重新安裝(OS 的時候的安裝次序)分成購買的時候說明著。安裝的目的合起讀請分開。5 章，說明著對安裝完成後必要的各種工作的次序。還 6 章「故障嗎？想的時候」那麼，不能很好地安裝的情況的應對方法被記載。本裝置的系統設定和有關修復的信息「系統的修復」(6-2 頁)，「安裝失敗了嗎？如果有」隨心的事，請看「故障查找」(6-15 頁)。再者，卷末有索引。按照必要請有效的利用。

本裝置的運用和硬件及系統具體的機能·操作的說明請參照另冊的用戶指南。

關於本文中的記號

除了正式文本卷頭表現了的安全有關的注意記號以外使用著 3 種記號。變成這些的記號和意義為理解，請確實處理裝置。

重要:

使用服務器或者軟件的時候預先記的重要的要點又指示

檢查:

需要你服務器或者使用軟件的時候，確實做(製作)的什麼

暗示:

有用的信息，暗示

關於正式文本的再購買

如果被遺失了正式文本，最近的銷售店，或購買的銷售店請諮詢。能從用戶指南，和添加的光碟收納的在線文獻的一部分，下面的主頁下載。

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Chapter 1

Before Using

This chapter includes information necessary for proper and safe operation of the server, the main unit and its accessories. Go through this chapter before you start setup of the product.

在使用前

為了把本裝置做為安全確實變成使用必要的關於信息，實體及附屬品等記載著。在安裝實體之前，必定請讀。同時，關於本文中的名稱請參照用戶指南的「與各部分的名稱功能」的項

NOTES FOR SAFE HANDLING

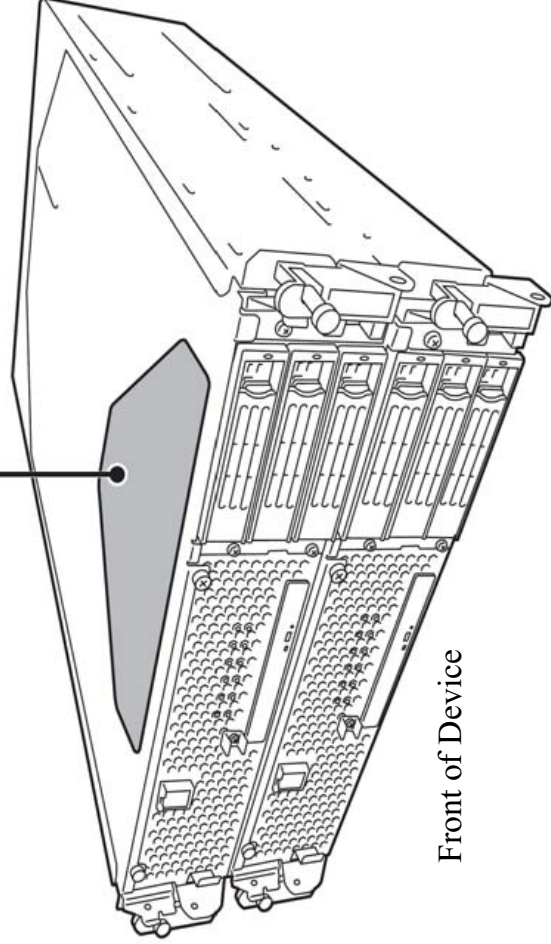
The following section describes necessary information to use the product properly and safely.

Warning Label

Warning label is placed in the certain part of the system so that the user stays alert to possible risks. Do not remove or damage the label.

If this label is missing, about to peel off, or illegible, contact your sales agent.

The figures below show the location of this label on the server.



Front of Device

1-4 Before Using

爲了把有爲了安全對待的注

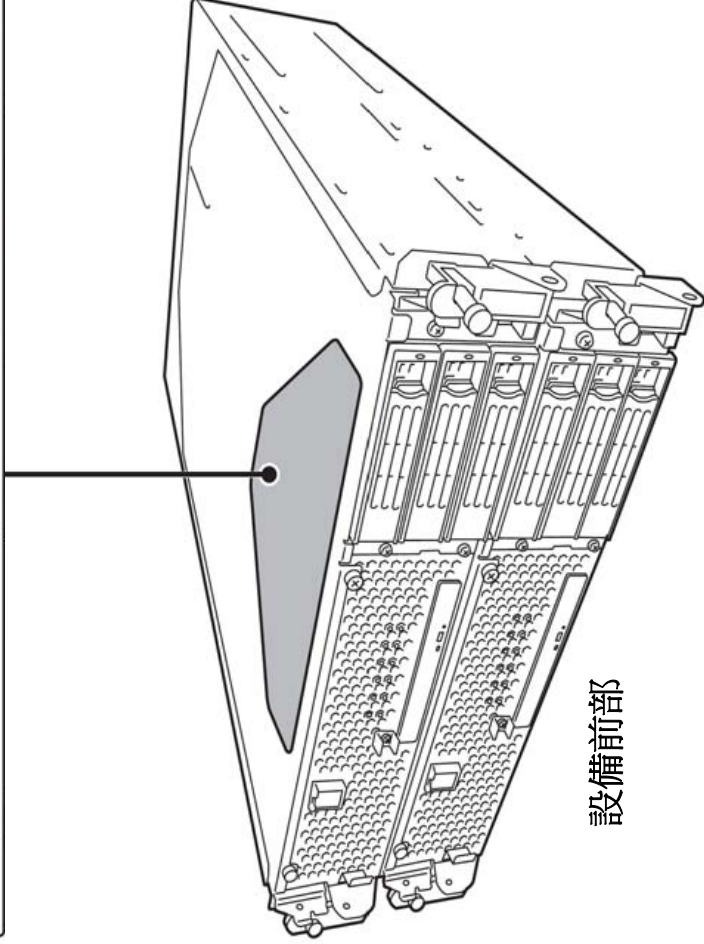
意的本裝置做爲安全確實變成使用必要的信息被記載。

關於警告標籤

隱藏實體內的危險性的零部件和那個週邊警告標籤被粘貼。這個是爲了請操縱本裝置的時候，經常在顧客裡(上)認識能考慮的危險性的東西(揭下標籤，請別弄髒)。如果這個標籤沒被粘貼，剝落懸掛著，髒等做不能辨認的時候購買的銷售店請聯絡。

對以下表現被本產品粘貼的標籤的位置。

<p>△ 注意 CAUTION</p> <p>感電の危険があります。開けないでください。故障止 止後電源は、必ずOFFにし、</p> <p>Risk of electric shock. Do not open.</p> <p>電圧があるコンパネ、パーツを開かないでください。故障止 後電源は、必ずOFFにし、</p> <p>コンポーネントの内部の部品を開かずしてください。</p> <p>警告 注意</p> <p>警告 注意</p> <p>有的部材可能会达到高温。请注意其冷却之后再进行操作。 请务必先阅读各部件相关的说明手册。 As some components may become very hot during system operation, give ample time to allow cooling as well as use precaution when handling internal components immediately after powering down. Some internal components may still be operational on battery power. Refer to instruction manuals for this system as well as options prior to maintenance.</p> <p>本ヘッドのオプションケーブルの接続の際は、必ずユーザーガイドを参照し、正しく接続してください。誤った接続は、誤作動の原因となります。 オプションのケーブルは、取付け時は電源プラグをコンセントから抜き、外部電源と接続しているケーブルをを外してください。 接続ケーブル及び周辺設備時、请务必参照“ユーザー指南”、進行正確接続。接続错误、有可能造成故障或火灾。 请务必把电源插头从插座中拔出，并取下与外部设备连接的线缆，并取下与外部设备连接的线缆。 Refer to the "User's Guide" when option board or peripherals are installed. Disconnect all AC power cords from both system and external peripherals prior to installing/removing options.</p> <p>本ヘッドは本体内部へ蓋をしない限り、十分に注意して下さい。 請一定注意不要在無蓋狀態下操作主機內部。 Do not drop any screws inside the system.</p> <p>蓋ははたき、ごみは入れないでください。 To avoid the risk of personal injury, be careful when accessing the inside of the system.</p> <p>蓋の底面を上げ、接続の際は、接続されているケーブルはしっかりと握り、慎重に持ち上げてください。 Firmly hold the bottom of the system when required to lift and carry the system.</p>		<p>△ △ △ △ △</p> <p>重畳物注意 注意重物</p> <p>WARNING: HEAVY ITEM</p> <p> ぎっくり腰や落下事故防止のため、移動のさいは2人以上で行ってください。 为了防止腰肌劳损以及物体失手落下，移动设备时请一定由2人以上进行。 To avoid the risk of personal injury or damage to the unit, move the unit with at least three or more people.</p>
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設備前部

PRECAUTIONS FOR SAFETY

This section provides precautions for using the server safely. Read this section carefully to ensure proper and safe use of the server. For symbol meanings, see “Safety Indications” described in the previous section.

General

WARNING



Do not use the server in an operation where human lives are involved or high reliability is required.

This equipment is not intended for use in controlling or use with facilities or systems where human lives are involved or high reliability is required, including medical devices or nuclear, aerospace, transportation, and traffic control facilities. NEC assumes no liability for any accidents or damage to physical assets resulting from the use of this equipment in such systems or facilities.



Do not continue to use the server if you detect smoke, odor, or noise.

If the server emits smoke, odor, or noise, immediately flip off the POWER switch, unplug the cords, and contact your sales agent. There is a risk of a fire.



Do not insert a wire or metal object.

Do not insert a wire or metal objects into a vent or disk drive slot. There is a risk of an electric shock.

CAUTION



Prevent water or foreign objects from getting into the server.

Do not let water or foreign objects (e.g., pins or paper clips) enter the server. There is a risk of a fire, electric shock, and breakdown. When such things accidentally enter the server, immediately turn off the power and unplug the cords. Contact your sales agent instead of trying to disassemble it yourself.

Use of Power Supply and Power Cord

WARNING



Do not handle power plugs with a wet hand.

Do not plug/unplug power cords with a wet hand. There is a risk of an electric shock.



Do not connect the ground wire to a gas pipe.

Never connect the ground wire to a gas pipe. There is a risk of a gas explosion.

CAUTION



Do not plug the cords in nonconforming outlets.

Use wall outlets with specified voltage and power type. There is a risk of a fire or current leakage.

Avoid installing the server where you may need extension cords. If the cords do not meet the power specifications, there is a risk of overheating that could lead to a fire.



Do not plug too many cords in a single outlet.

If the rated current is exceeded, there is a risk of overheating that could lead to a fire.



Do not plug the cords insecurely.

Insert the plug firmly into an outlet. There is a risk of heat or fire due to poor contact. If dust settles on the slots and it absorbs moisture, there is also a risk of heat or fire.



Do not use nonconforming power cords.

AC cord is to spend the thing of the next specifications:

You also have to observe the following prohibitions to prevent an electric shock or fire caused by damage to the cords.

Do not pull on the cords.

Do not pinch the cords.

Do not bend the cords.

Keep chemicals away from the cords.

Do not twist the cords.

Do not place any object on the cords.

Do not use cords as bundled.

Do not alter, modify, or repair the cords.

Do not staple the cords.

Do not use any damaged cord. (Replace it with a new one of the same specifications. For replacement procedures, contact your sales agent.)

Installation, Relocation, Storage and Connection

CAUTION



Do not install the server in an unsuitable place.

Install the server in such a place as specified in this User's Guide. Avoid the following locations. There is a risk of a fire.

- a dusty place
- a humid place located near a boiler, etc
- a place exposed to direct sunlight
- an unstable place



Do not use or store this product in a corrosive environment.

Avoid the usage or storage of this product in an environment which may be exposed to corrosive gases, such as those including but not limited to : sulfur dioxide, hydrogen sulfide, nitrogen dioxide, chlorine, ammonia and/or ozone. Avoid installing NEC Express5800/ft series in a dusty environment or one that may be exposed to corrosive materials such as sodium chloride and/or sulfur. Avoid installing this product in an environment that may have excessive metal flakes or conductive particles in the air.

Such environments may cause corrosion or short circuits within this product, resulting in not only damage to this product, but may even lead to be a fire hazard. If there are any concerns regarding the environment at the planned site of installation or storage, please contact your sales agent.



Do not use any non-designated interface cable.

Use only interface cables designated by NEC; identify which component or connector to attach beforehand. If you use a wrong cable or make a wrong connection, there is a risk of short-circuit that could lead to a fire.

You also have to observe the following prohibitions about handling and connecting interface cables:

- Do not use any damaged cable connector.
- Do not step on the cable.
- Do not place any object on the cable.
- Do not use the server with loose cable connections.
- Do not use damaged cables.

Cleaning and Handling of Internal Devices

WARNING



Do not disassemble, repair, or alter the server.

Unless described herein, never attempt to disassemble, repair, or alter the server. There is a risk of an electric shock or fire as well as malfunction.



Do not look into the DVD-ROM drive.

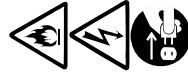
The DVD-ROM drive uses a laser beam. Do not look or insert a mirror inside while the system is on. A laser beam is invisible; if your eyes get exposed to it, there is a risk of losing eyesight.



Do not detach a lithium battery yourself.

This equipment has a lithium battery. Do not detach it yourself. If the battery is exposed to fire or water, it could explode.

When the lithium battery is running down and the server does not work correctly, contact your sales agent instead of disassembling, replacing or recharging it yourself.



Disconnect the power plugs before cleaning the server.

Even though built-in options for the server can be replaced while the power cords are connected to power source, be sure to follow the instructions described in this User's Guide. Do not touch any internal device of the server unless instructed by this User's Guide. There is a risk of an electric shock.

Make sure to power off the server and disconnect the power plug from a power outlet before cleaning or installing/removing internal optional devices. Touching any internal device of the server with its power cords connected to power source may cause an electric shock even if the server is off-powered.

Disconnect the power plug from the outlet occasionally and clean the plug with a dry cloth. Heat will be generated if condensation is formed on a dusty plug, which may cause a fire.

CAUTION



High temperature

Immediately after powering off the system, system components such as hard disk may be very hot. Wait for the server to cool down completely before adding/removing components.



Make sure to completely insert cables and boards.

Completely insert all power cords, interface cables and/or boards. An incompletely inserted component may cause a contact failure, resulting in fire and/or smoke.

⚠ CAUTION



Protect the unused connectors with the protective cap.

The unused power cord connectors are covered with the protective cap to prevent short circuits and electrical hazards. When removing the power cord connector from the internal devices, attach the protective cap to the connector. Failure to follow this warning may cause a fire or an electric shock.

During Operation

⚠ CAUTION



Keep animals away.

Keep animals away from the server. Animal's waste or hair may get inside the server to cause a fire or electric shock.



Do not place any object on top of the server.

The object may fall off to cause injuries, damage to hardware and/or a fire.



Do not leave the DVD tray ejected.

Dust may get in the server to cause malfunction. The ejected tray may also become a cause of injuries.



Do not touch the server when it thunders.

Unplug the server when it threatens to thunder. If it starts to thunder before you unplug the server, do not touch the server or cables. There is a risk of a fire or electric shock.

Rack-mount Model

WARNING



Do not install the server on a nonconforming rack.

Install the server on a 19-inch rack conforming to the EIA standard. Do not use the server without a rack or install it on a nonconforming rack. The server may not function properly, and there is a risk of damage to physical assets or injuries. For suitable racks, contact your sales agent.



Do not use the server in an unsuitable place.

Do not install a server rack in an unsuitable environment. Other systems also may be affected, and the rack may fall over to cause a fire or injuries. For details about installation environment and quake-resistant engineering, see the attached manual or contact your sales agent.

CAUTION



Be careful not to hurt your fingers.

Exercise great care not to hurt your fingers on the rail when you mount/dismount the server into/from the rack.



Carry or install the server by more than 3 people.

To avoid a risk of injuries, users should not attempt to carry or install the server into a rack. Installation should be performed by trained maintenance personnel.



Do not install the server in such a manner that its weight is imposed on a single place.

To distribute the weight, use stabilizers or attach two or more racks. Unstable rack may fall down to cause injuries.



Do not assemble parts alone.

It takes at least two people to mount doors and trays to a rack. If you handle them alone, you may drop some parts to cause a breakage or injuries.



Do not pull a device out of the rack if the rack is unstable.

Before pulling out a device, make sure that the rack is fixed (by stabilizers or quake-resistant engineering).



Do not leave more than one device pulled out from the rack.

If you pull out more than one device, the rack may fall down. You can only pull out one device at a time.

⚠ CAUTION



Do not install excessive wiring.

To prevent burns, fires, and damage to the server, make sure that the rated load of the power branch circuit is not exceeded. For more information on installation and wiring of power-related facilities, contact your electrician or local power company.








Do not pull out a device during operation.

Do not pull out or remove a device while it is running. There is a risk of malfunction and a device may be detached from a rack to cause injuries.





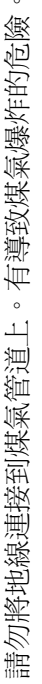
安全注意事項




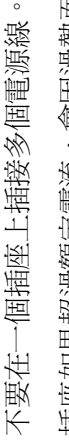

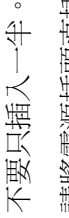
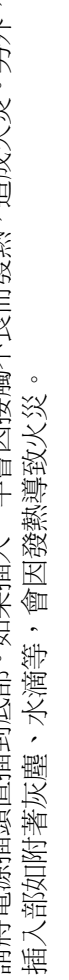
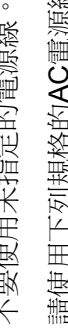
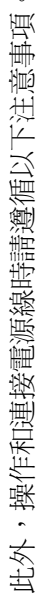
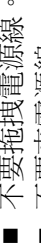
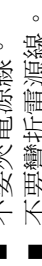

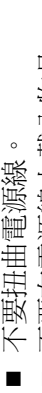
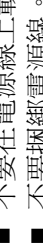
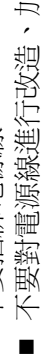
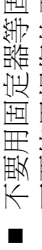

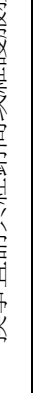

本節講述安全使用本伺服器所需的注意事項。為了您正確安全地使用本伺服器，請仔細閱讀該節內容。符號的相關說明請參考“安全標示（SAFETY INDICATIONS）”說明。

一般注意事項

▲ WARNING	
	<p>不要用於危及人命和需要高度可靠性的操作上。</p> <p>本產品不要安裝在醫療設備、原子能設備、航空宇宙機器、運輸設備等會危及人命以及需要高度可靠性的設備和機器上，也不要使用本產品來控制這些機器。如果將本產品用於這類系統的設備及機器，造成人身事故及財產損失等後果，本公司概不負責。</p>
	<p>發生冒煙、異味、雜音時不要使用。</p>
	<p>發生冒煙、異味、雜音等時，請直接關閉電源POWER，並將電源插頭從插座上拔下。然後請與經銷商或維護服務公司聯繫。繼續使用會導致火災。</p> <p>不要插入鐵絲和金屬片。</p> <p>不要將金屬片和鐵絲等異物插入通氣孔或軟碟機、光碟機的縫隙。有觸電的危險。</p>
▲ CAUTION	
	<p>在海外不使用。</p> <p>本裝置，是日本國內專用的裝置。在海外不能使用。在海外使用這個裝置的話成爲火災和觸電的原因。</p>
	<p>設備內不要進水和異物。</p> <p>設備內不要進入水、針、夾子等異物。有可能導致火災和觸電。一旦進入異物，請立即關閉電源，將電源插頭從插座上拔下來。不要自行拆卸，請與經銷商或維護服務公司聯繫。</p>

使用電源及電源線注意事項

 WARNING	
	不要用手拿電源插頭。
	不要用濕手插拔電源插頭。有觸電的危險。
	不要把地線連接到煤氣管道上。
	請勿將地線連接到煤氣管道上。有導致煤氣爆炸的危險。

 CAUTION	
	不要插入未指定的插座。
	電源請使用指定電壓及電源的壁式插座。使用未指定的電源會造成火災和漏電。請避免使用延長線安裝設備。如果連接與本產品電源規格不相符的電線，會因過熱而導致火災。
	不要在一個插座上插接多個電源線。
	插座如果超過額定電流，會因過熱而導致火災的危險。
	不要只插入一半。
	請將電源插頭直插到底部。如果插入一半會因接觸不良而發熱，造成火災。另外，插入部如附著灰塵、水滴等，會因發熱導致火災。
	不要使用未指定的電源線。
	請使用下列規格的AC電源線。 此外，操作和連接電源線時請遵循以下注意事項。
	■ 不要拖拽電源線。
	■ 不要夾電源線。
	■ 不要彎折電源線。
	■ 不要使電源線靠近化學藥品。
	■ 不要扭曲電源線。
	■ 不要在電源線上載入物品。
	■ 不要捆綁電源線。
	■ 不要對電源線進行改造、加工、修復。
	■ 不要用固定器等固定電源線。
	■ 不要使用損傷的電源線。（損傷的電源線要立即更換為相同規格的電源線。更換事宜請與經銷商或維護服務公司聯繫）





3極點用的電源插座以外不使用。

被本裝置添加的電源編碼拿第3大頭針 (earth pin) 的3極點插頭被裝備。這個插頭，只3極點用的電源插座能使用。使用那個以外的電源插座的話，有觸電的可能。其他的裝置和用途不使用添加的電源編碼

添加的電源編碼作為目的被設計連接本裝置，使用的事，那個安全性被確認。請別絕對對其他的裝置和用途使用。有成為火災和觸電的原因的可能。

安裝，移動，保管及連接注意事項

⚠ CAUTION	
	<p>不要安裝或存放在未指定的場所。</p> <p>不要將本設備放置在如下場所和本書未指定的場所，有導致火災的危險。</p> <ul style="list-style-type: none">■ 灰塵較多的場所■ 熱水器旁等濕氣較高的場所■ 陽光直射的場所■ 不平整的場所
	<p>不要在腐蝕性環境中使用或存放設備。</p> <p>不要在有腐蝕性氣體（如二氧化硫、氯化硫、氮、氫、氨或臭氧等）的環境中使用或存放本產品。</p> <p>不要將本產品安裝在灰塵較多或含有腐蝕性物質如氟化鈉或硫磺等的地方。</p> <p>不要將本產品安裝在空氣中含有過量金屬碎末或傳導粒子的地方。</p> <p>上述環境可能導致本產品腐蝕或短路，因而損壞產品，甚至引起火災。</p> <p>對產品安裝或存放環境有任何疑問，請與經銷商或維修服務公司聯繫。</p>

⚠ CAUTION











不要使用未指定的信號線。

使用NEC指定的信號線，並在確認連接設備和介面後進行連接。使用未指定信號線或連接錯誤等會造成短路、導致火災。

信號線的操作和連接，須遵守以下注意事項：

- 不要使用任何損壞的信號線接頭。
 - 不要踩踏信號線。
 - 不要在信號線上載入物品。
 - 信號線接鬆動時不要使用。
- 不要使用任何損壞的信號線。

整理及操作內部設備時的注意事項

 WARNING	
	<p>不要自行拆卸、修理或改造本伺服器。</p> <p>除本書記載的情況外，不要進行拆卸、修理、改造。否則，不但可能導致設備不能進行正常運行，還有發生觸電和火災的危險。</p>
	<p>不要看光碟機內部。</p> <p>光碟機使用了雷射，請不要在電源打開的狀態下觀看內部或插入鏡子等。雷射射入眼睛有導致失明的危險（雷射肉眼眼看不見）。</p>
	<p>不要擅自拆除鋰電池。</p> <p>本產品內部安裝有鋰電池。請不要拆下電池。鋰電池靠近火或浸水均有可能發生爆炸。</p> <p>由於電池使用期限而導致設備不能正常運行時，不要自行拆卸、更換、充電等，請與經銷商或維護服務公司聯繫。</p>
	<p>清潔伺服器前請拔下電源插座。</p> <p>整理或拆裝本設備內部的選購配置時，要切斷設備電源，並拔下電源插頭。即使已關閉電源，但連接著電源線，接觸到任何內部設備也有觸電的危險。</p> <p>另外，請經常拔下電源插頭，用乾布擦拭灰塵和附著物。有灰塵或水滴等附著時會發熱，有導致火災的危險。</p>
 CAUTION	
	<p>注意高溫</p> <p>本產品關閉電源後，內置硬碟等內部設備仍然處於高溫狀態。請在充分冷卻之後進行拆裝。</p>
	<p>確認安裝完畢。</p> <p>電源線和信號線、配件板要確實安裝妥當。 安裝不牢有可能引起接觸不良，可能造成冒煙和著火。</p>

⚠ CAUTION



請用保護蓋保護好未使用的介面。

請用保護蓋保護好未使用的電源線介面以防止短路或觸電。從內部設備上拔下電源插頭時，用保護蓋蓋好介面，否則有導致火災或觸電的危險。

操作注意事項

⚠ CAUTION



不要在打雷時觸摸機器。

打雷時請拔下電源插頭。如來不及拔下電源插頭，請不要觸摸設備及線纜等，防止發生火災或觸電。



不要讓寵物靠近。

寵物的排泄物和毛髮進入設備可能導致火災和觸電。



設備上不要放置物品。







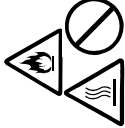


物品倒下可能引起傷亡，破壞硬體或導致火災。



不要將光碟機托盤拉出放置。

防止托盤中進入灰塵引起運轉錯誤。同時防止因碰撞等造成托盤損傷。

機架式伺服器的注意事項

⚠ CAUTION	
	<p>不要將設備安裝在未指定的機架上。</p> <p>請將設備安裝在符合EIA標準的19英寸機架上。一定要將設備安裝在指定的機架上才能使用。否則設備可能無法正常使用，並有可能損壞機器零部件或導致人身傷害。關於合適的機架，請與您的經銷商聯繫。</p>
	<p>請不要自行安裝本設備。</p> <p>爲了避免人身傷害，請不要自行將本機器安裝到機架上。應該由受過專業訓練的維護人員來安裝。</p>
	<p style="text-align: center;"><僅供維護人員閱讀></p> <p>安裝機器時不能將機器的所有重量由一個地方來承載。</p> <p>爲了分散重量，應該加裝固定器或者同時安裝兩個或更多的機架，否則機架可能會傾倒導致人身傷害。</p>
	<p>不要擅自組裝零部件。</p> <p>將前門和托架安裝到機架上至少需要兩人共同完成，否則可能會因爲零部件跌落而導致損壞或者人身傷害。</p>
	<p>不要從不牢固的機架中抽出設備。</p> <p>在抽出設備之前請確認機架已經被穩固器或者通過抗震技術固定。</p>
	<p>不要從機架抽出兩個或者兩個以上的設備。</p> <p>同時抽出兩個或者兩個以上的設備可能導致機架傾倒。一次只能抽出一個設備。</p>
	<p>不要裝配過多電線。</p> <p>爲了避免火災和設備損壞，請務必確保不要超過線路的額定負載。有關電力設備的安裝和電線的更多資訊請聯繫電工或者當地的電力公司。</p>
	<p>請小心不要夾住或碰傷手指。</p> <p>將本機器安裝到機架上或者從機架上卸載的時候，請務必小心以免被滑軌劃傷手指。</p>
	<p>一個人不做搬送設置</p> <p>架的搬送設置請以3人以上上去。架倒下成爲傷和周圍的破損的原因。特別有高度的架(44U架等)對不穩定的狀態有根據穩定器等沒被固定的時候。必定以3人以上一邊支撐架一邊請做搬送設置。</p>

UNPACKAGING

This product and various accessories are in the special shipping box. Take them out from the box and check the individual items. Store the box and unused accessories in a safe place.

Accessories

This product is shipped with various accessories. See the packing list to make sure everything is included and check the individual items. If any component is missing or damaged, contact your sales agent.

- Keep the accessories in a safe place. You will need them when you perform setup, addition of options, or replacement of failed components.
- To check NEC EXPRESSBUILDER components, see the attached list.
- Be sure to fill out and mail the software registration card that is shipped with the operating system.
- Make backup copies of included floppy disks, if any. Keep the original disks as the master disks; use these copies in operation.
- Improper use of an included floppy disk or DVD may alter your system environment. If you find something unclear, stop using them and contact your sales agent.

確認箱子的內容的

本產品和附屬品進入著專用的捆包箱子。從箱子取出各自檢點。捆包箱子和有餘了的附屬品請最後一幕保管。關於附屬品本

關於附屬品本

產品的捆包箱子的其中，對實體以外種種的附屬品進入著。確認參照添加的構成品表全部齊(整)的事，請各自檢査。萬一不足的如果有東西和損傷的東西，請與購買的銷售店聯繫。

- 附屬品因爲到做安裝的時候和選擇的增設，本裝置出現故障了的時候必要最後一幕請保管。
- 關於附屬品的「EXPRESSBUILDER」的構成品，請參照包裝中有的構成品表。
- 操作系統添加的軟件登記卡，請所定事項記入之後，必定投進郵筒。
- 如果軟盤被添加，請採用軟盤的接應。同時，作爲 master disc 最後一幕保管添加的軟盤，請使用備份盤。
- 附屬的軟盤再光碟機，有在使用方法上犯錯誤的話變更了顧客的系統環境的可能。如果關於使用有不明的點，不做困難的操作請對購買的銷售店，或保守服務公司詢問。

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Chapter 2

About Operating System

This chapter gives essential information on the Linux system supported by the server and how to install it.

Vmware ESX Server 3.0.2ft

When installing VMware ESX Server 3.0.2ft on the NEC Express5800/ft series, follow the procedure in “Setup procedure to install ESX Server” (page 4-3) to setup.

Supported OS

You need to install VMware ESX Server 3.0.2ft, hereinafter called as “ESX Server”, for using the NEC Express5800/ft series. The following is the Operating System executable in the virtual machines of the ESX Server (hereinafter called as “Guest OS”). The following shows the status as of September 2008. Refer to our website for the latest information.

Windows 2000 Server
Windows 2000 Advanced Server
Windows Server 2003 R2 Standard Edition
Windows Server 2003 R2 Enterprise Edition
Red Hat Enterprise Linux 4.6 AS
Red Hat Enterprise Linux 4.6 ES
Red Hat Enterprise Linux 5.1 Advanced Platform
Red Hat Enterprise Linux 5.1

IMPORTANT:

- The NEC Express5800/ft series is a precision instrument. It is recommended to ask maintenance personnel for a set up.
-

Chapter 3

Installing Server

This chapter describes requirements for using the product properly and safely, the setup procedures to make NEC Express5800/ft series ready for use, and how to connect peripherals.

INSTALLATION

This section describes installation of NEC Express5800/ft series.

Rack-mount Model

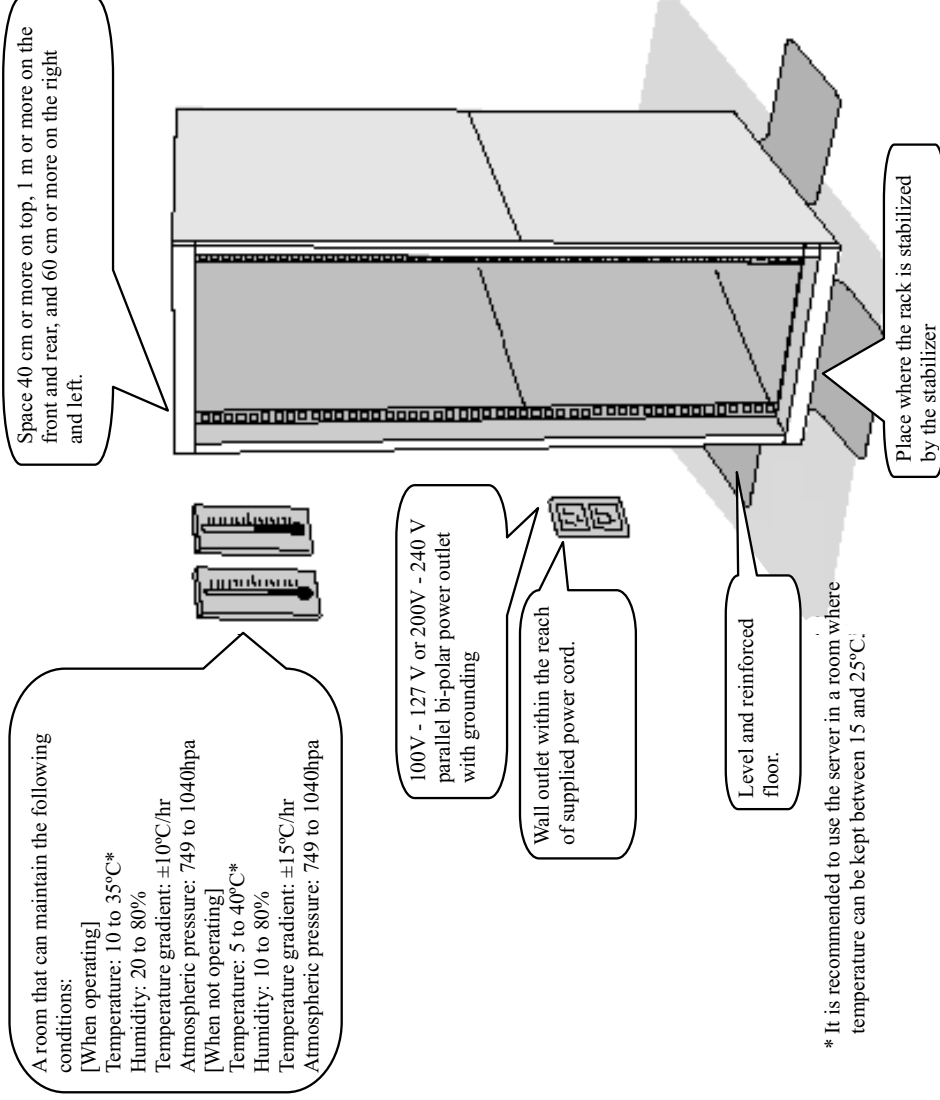
You can mount NEC Express5800/ft series on a rack that conforms to the EIA standards.

IMPORTANT:

NEC Express5800/ft series is a precision instrument. You should ask maintenance personnel to install it.

Installing a rack

To install a rack, see the instruction that comes with the rack, or contact your sales agent or maintenance personnel.



* It is recommended to use the server in a room where temperature can be kept between 15 and 25°C.

⚠ WARNING



Observe the following precautions to use the server safely. There is a risk of a death or serious injury. For details, see “Notes for Safe Handling” in Chapter 1.

- Do not install the server in non-designated places.
- Do not connect the ground wire to a gas pipe.

⚠ CAUTION



Observe the following precautions to use the server safely. There is a risk of a burn, personal injury, or damage to physical assets. For details, see “Notes for Safe Handling” in Chapter 1.

- Do not carry or install a rack alone.
- Do not install a rack in such a manner that its weight is imposed on a single place.
- Do not assemble or disassemble parts alone.
- Do not pull a device out of the rack if the rack is unstable.
- Do not leave more than one device pulled out from the rack.
- Do not install excessive wiring.

Do not install NEC Express5800/ft series in such places as listed below. If you locate racks or install the server in such places, the server may malfunction.

- Place where you cannot pull out the components fully.
- Place that cannot sustain the total weight of the rack and its components.
- Place where you cannot use stabilizers or where you cannot perform installation without quake-resistant engineering.
- Place whose floor is uneven or inclined.
- Place where temperatures change widely (near a heater, an air conditioner, or a refrigerator).
- Place that is subject to intense vibration.
- Place where corrosive gas (sodium chloride, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, or ozone) is generated, or a place that is close to chemicals or exposed to chemicals.
- Place whose floor is covered with non-antistatic carpet.
- Place that may be subject to falling objects.
- Place that is close to some equipment that generates intense magnetic field (e.g., TV set, radio, broadcasting/communications antenna, power transmission wire, and electromagnetic crane). (If unavoidable, contact your sales agent to request proper shield construction.)
- Place where the power cords of the server must be connected to outlets that share the outlet of another device with large power consumption.


3-4 Installing Server


- Place that is close to some equipment that causes power noises (e.g., sparks caused by power-on/off using a relay). If you must install the server close to such equipment, request your sales agent for separate power cabling or noise filter installation.

Installing the Device to the Rack (N8140-74/92/93/94/98/99)

Install this device to the rack.

Installing the device to our company's racks (N8140-74/92/93/94/98/99) or to other company's racks is explained in this section.

 WARNING
<p>Observe the following precautions to use the server safely. There is a risk of a death or serious injury. For details, see "Notes for Safe Handling" in Chapter 1.</p> <ul style="list-style-type: none">■ Do not use the product with the unspecified rack.■ Do not use the product at non-designated places.

 CAUTION
<p>Observe the following precautions to use the server safely. There is a risk of a burn, personal injury, or damage to physical assets. For details, see "Notes for Safe Handling" in Chapter 1.</p> <ul style="list-style-type: none">■ Do not install or remove a rack alone.■ Do not install the server with the cover removed.■ Do not squeeze your fingers in the product.

IMPORTANT:

Temperature increase inside the rack and airflow

If you install several components or the ventilation isn't good inside the rack, the internal temperature may increase due to heat emitted from the components. When the operating temperatures of NEC Express5800/ft series (10 to 35°C) are exceeded, there is a risk of malfunction. You must take adequate precautions and measures for airflow inside the rack as well as in the room so that the internal temperature can be kept within this range during operation.

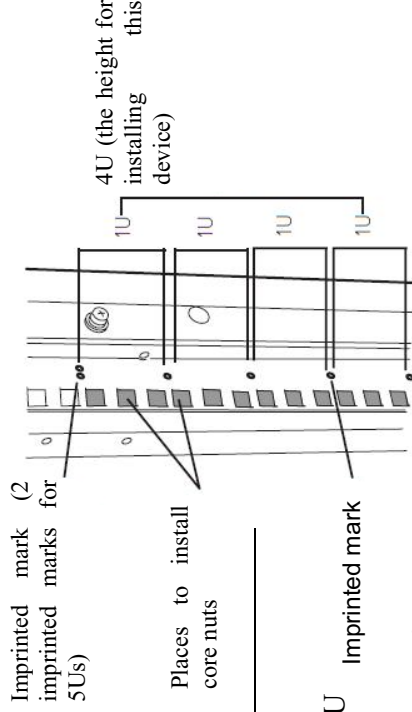
- Required tool

To install the device to the rack, a Phillips-head screw drive is required.

3-6 Installing Server

●Checking the place to install

Decide the place (height) to install. To keep balance, install it as low as you can on the rack. To install the rack, the height for 4U is required.



IMPORTANT:

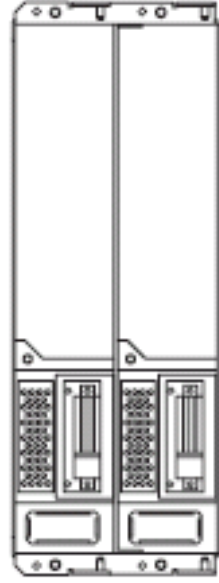
To install this device to the rack, the space for 1U is required for installing the USB

compatible floppy disk drive, in addition to the space for 4U.

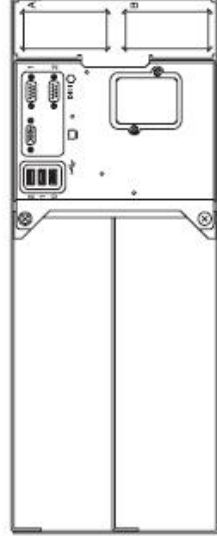
Next to the square hole of the rack, an imprinted mark is placed for 1U (This is the unit to show the height of the rack). This device is as high as 4U (about 176 mm), so install it between the imprinted marks that indicate the height of 4U.

●Installing this device

Follow the steps below to set the 4U chassis to the rack.



Front side of 4U chassis



Back side of 4U chassis

IMPORTANT:

4U chassis weighs about 10 Kg. To mount, remove or replace it, be sure to hold it with two or more people.

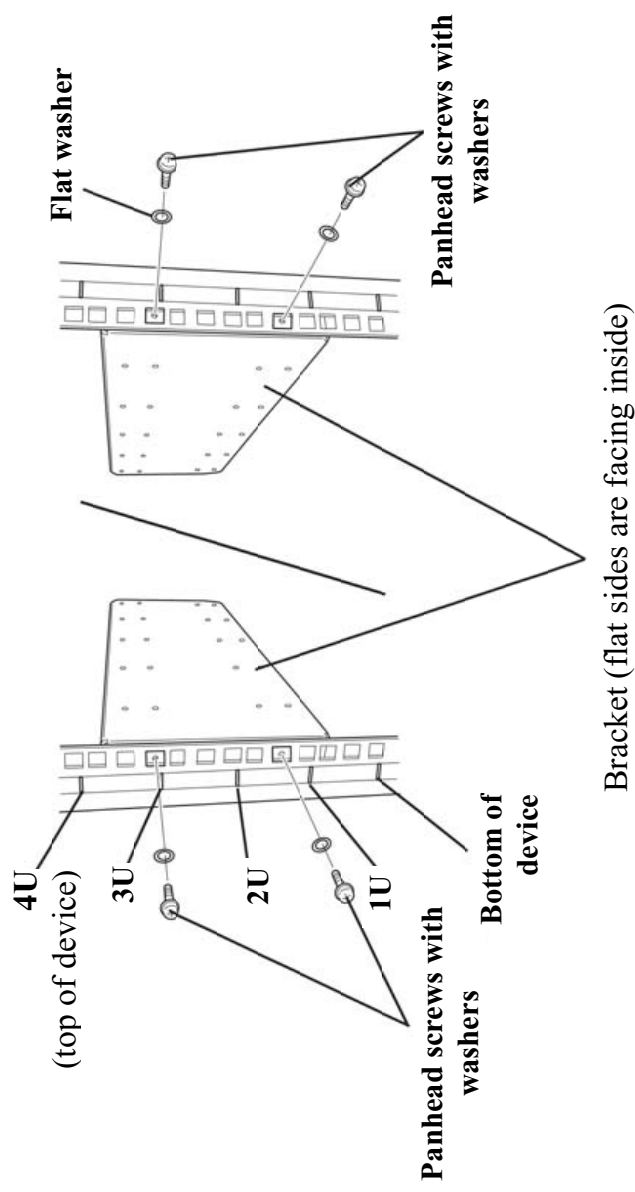
The following are the required accessories. Check if you have them all.

Tool Name	Qty
- Bracket	2
- Panhead screw	4
- Washer for panhead screw	4
- Plate screw (short)	8
- Plate screw (long)	4
- Washer for plate screw	12

TIPS:

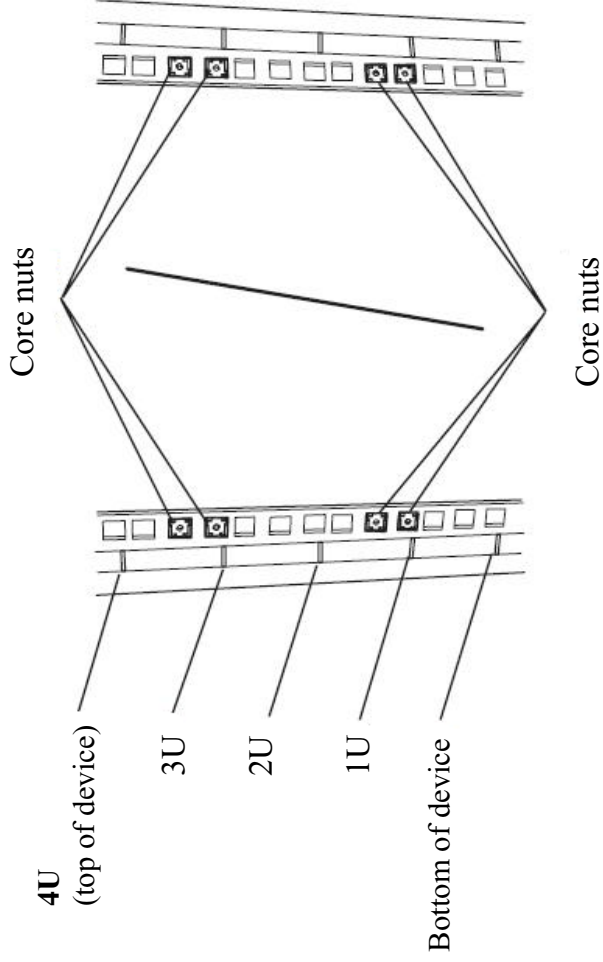
Core nuts (8 pieces) are not included. Use the core nuts that are attached to the rack.

1. If the rack has front and rear doors, read the instruction that comes with the rack, and open them.
2. Install the brackets from the rear side of the rack. Install the brackets with its flat side facing inside. Place them with the round screws with washers that come with the device symmetrically (total: 4). Fasten the screws tentatively not tightly.



3-8 Installing Server

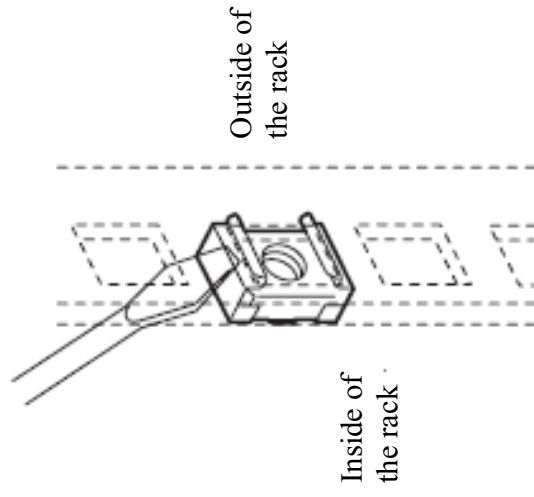
3. Fix the core nuts to the front side of the rack.
Attach them symmetrically (total: 8 core nuts).



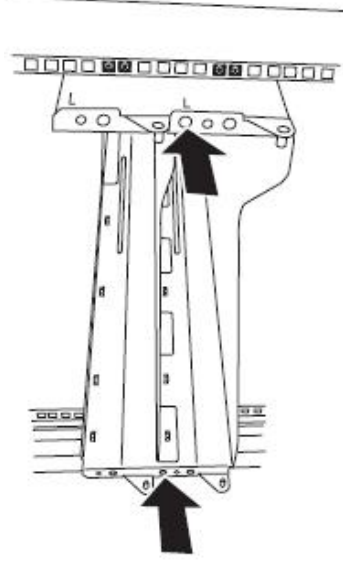
Fix a core nut from inside of the rack.
Hook either of the clips of the core nut to a square hole of the rack, and hook the other clip to a hole by a flat-blade screwdriver.

CHECK:

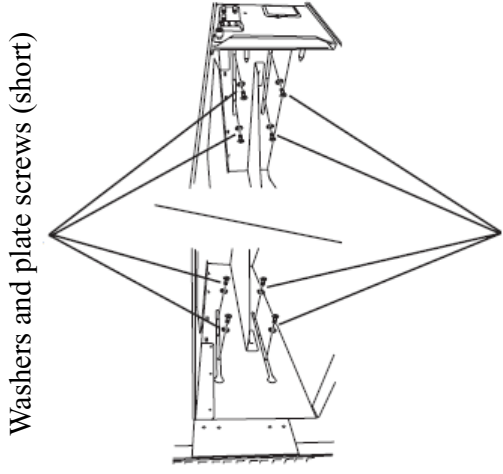
Check whether the core nuts fixed in both sides of the rack are the same in height.



4. Insert the 4U chassis from the front side of the rack.

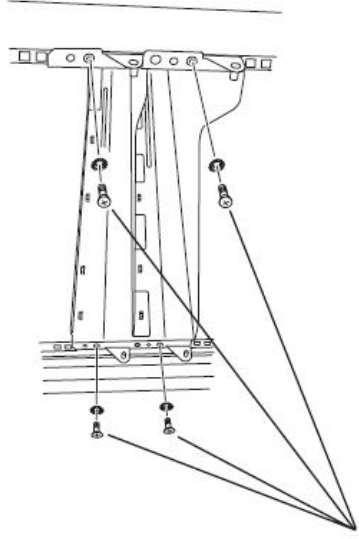


5. Tentatively fasten the washers and plate screws (short) to the 4 places on the front and back sides (total: 8) from the rear.



Washers and plate screws (short)

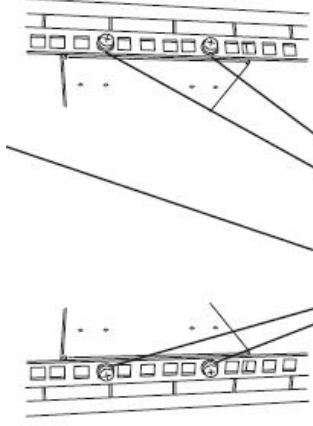
6. Fasten tightly the washers and round screws (long) to the 2 places on the left and right sides (total: 4) from the front.



Washers and plate screws (long)

3-10 Installing Server

7. Fasten tightly the 4 round screws on the back side and the 8 plate screws on the side panels (which you fastened tentatively).



Panhead screws on the side panels

Plate screws on the side panels

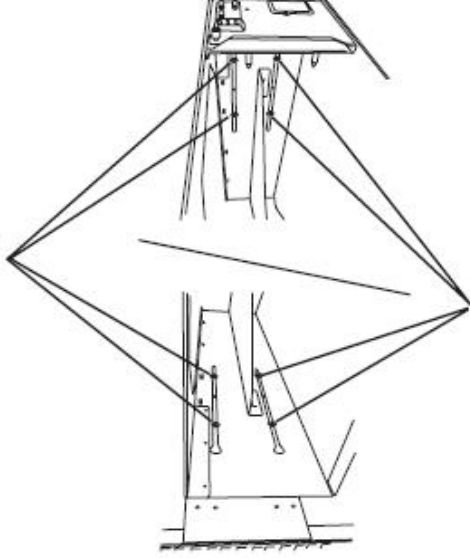
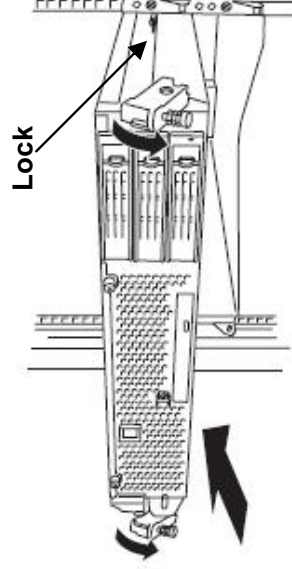


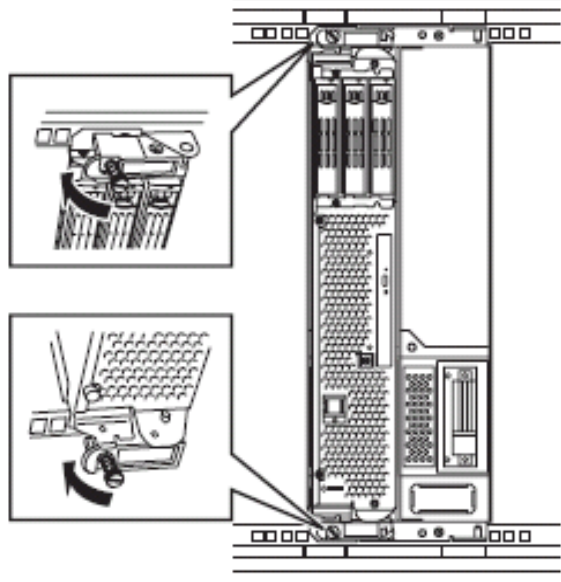
Plate screws on the side panels

8. Mount the CPU/IO module 0.

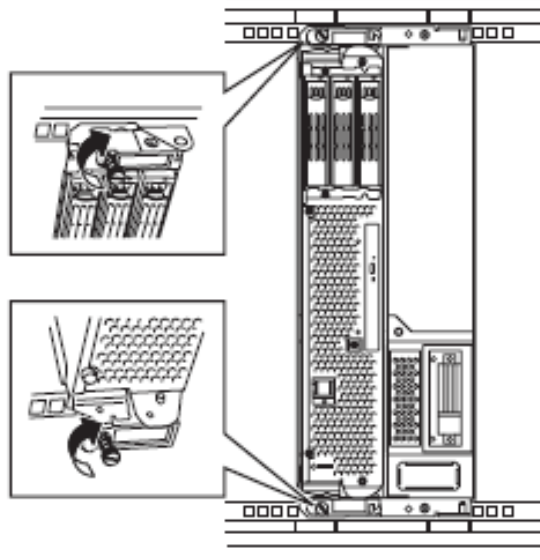
Mount the module while lowering the locks so the module stacks on the way.



9. Bring back the locks on the left and right sides.





10. Fasten the levers on the left and right sides with screws.



11. Mount the CPU/IO module 1 in the same way.

Unmounting the Device from the Rack (N8140-74/92/93/94/98/99)

Follow the steps below and unmount the device from the rack.

	
<p>Observe the following precautions to use the server safely. There is a risk of a burn, personal injury, or damage to physical assets. For details, see “Notes for Safe Handling” in Chapter 1.</p> <ul style="list-style-type: none">■ Do not carry or install a rack alone.■ Do not squeeze your fingers in the product■ Do not impose a weight on the device when it is pulled out from the rack.■ Do not pull a device out of the rack if the rack is unstable.■ Do not leave more than one device pulled out from the rack.■ Do not pull the device from the rack while it is operating.	

1. Check that the device is powered off, and remove all the power cords and interface cables that are connected to the device.
2. Remove the front bezel.
3. Loosen the screws on the left and right sides of the front panel of the CPU/IO module and release the lock by pulling the ejector toward you.
4. Pull out the CPU/IO module gently from the rack.

IMPORTANT:

- When you pull out the device, do not load anything on its top. It is dangerous, since the device becomes unstable and it may fall.
- Do not hold the handle on the front side or the convex part on the back side. To move the device, hold the bottom.
- Since the device is locked and can not be pulled out, pull it out after releasing the lock by lowering the lock on the side of the CPU/IO module.

5. Hold tightly when you unmount 4U chassis from the rack,.

To remove the mechanical parts of the rack, see the installation procedure.

INSTALLING the Tower Conversion Kit (N8843-002)

This section describes how to install the rack-mount model of NEC Express5800/ft series without using the dedicated rack.

IMPORTANT:

NEC Express5800/ft series is a precision instrument. You should ask maintenance personnel to install it.

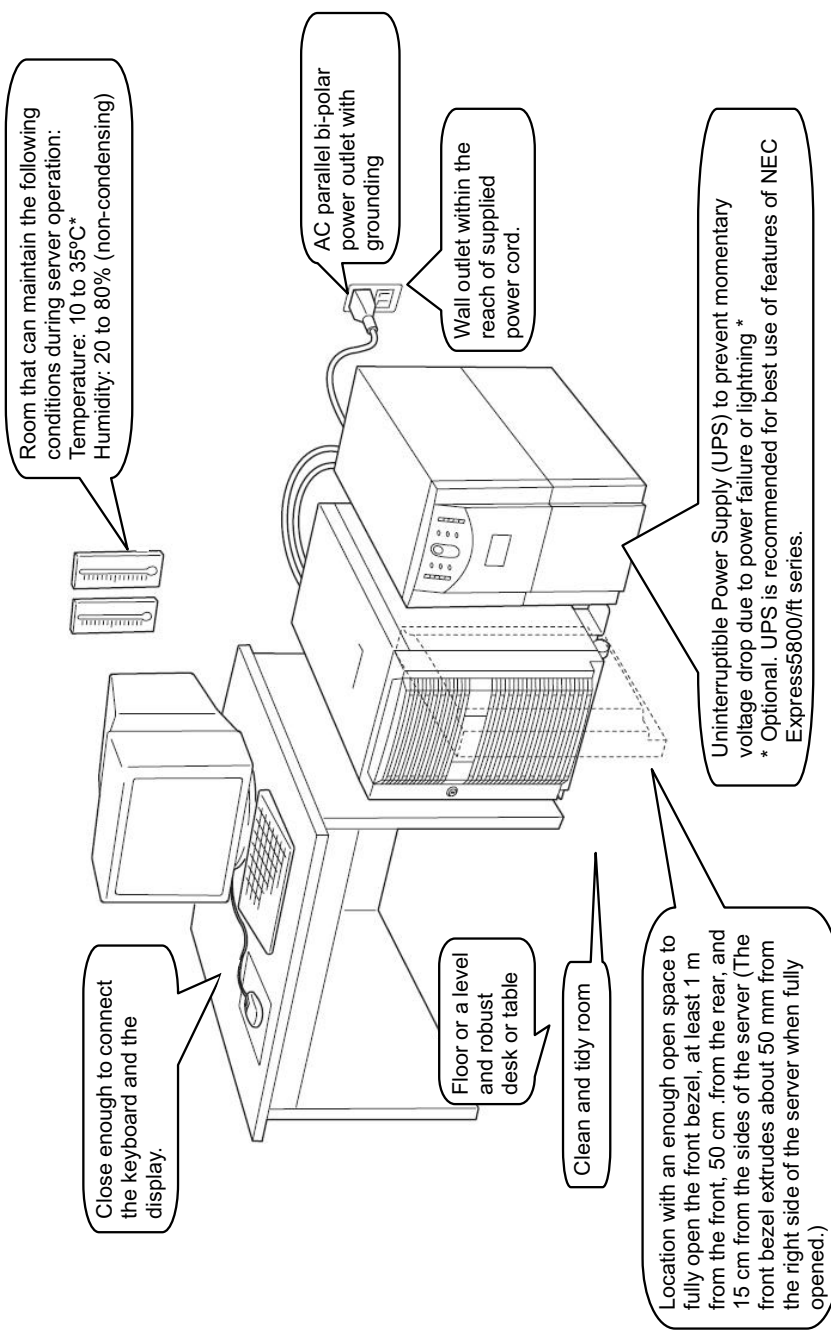
Select a suitable site for tower model.

CAUTION



Observe the following precautions to use the equipment safely. There are risks of a burn, injury, or damage to physical assets. For details, see “Notes for Safe Handling” in Chapter 1.

- Remove all modules before moving the equipment.
- Do not install the equipment in non-designated places.



* It is recommendable to use the server in a room where temperature can be kept between 15 and 25°C.

3-14 Installing Server

Do not install NEC Express5800/ft series in such places as listed below. Otherwise, the server may malfunction.

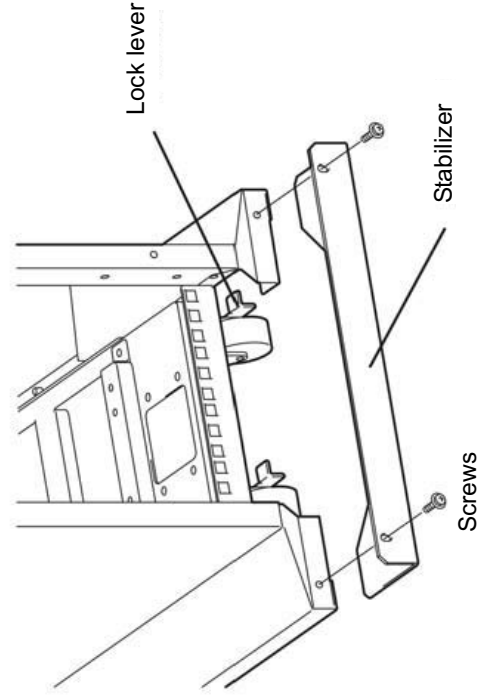
- Place where temperatures change widely (near a heater, air conditioner, or refrigerator).
- Place that is subject to intense vibration.
- Place where corrosive gas (sodium chloride, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, or ozone) is generated, or a place that is close to chemicals or exposed to chemicals.
- Place whose floor is covered with non-antistatic carpet.
- Place that may be subject to falling objects.
- Place where you may step or trip on the power cords or interface cables.
- Place that is close to some equipment that generates intense magnetic field (e.g., TV set, radio, broadcasting/communications antenna, power transmission wire, and electromagnetic crane). (If unavoidable, contact your sales agent to request proper shield construction.)
- Place where the power cord of the server must be connected to an AC outlet that shares the outlet of another device with large power consumption.
- Place that is close to some equipment that causes power noises (e.g., sparks caused by power-on/off using a relay). If you must install the server close to such equipment, request your sales agent for separate power cabling or noise filter installation.

It takes at least three people to carry the server; hold it firmly by its bottom and place it slowly on the selected site.

IMPORTANT:

Do not hold the front bezel to lift it, or it may detach, fall down, and break the server.

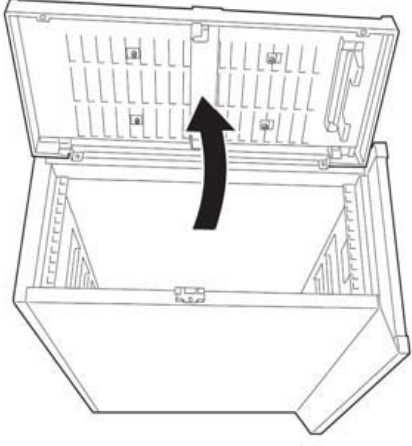
After placing the main cabinet, lock its two front casters out of four and screw the attached four stabilizers on the cabinet adjusting their height.



Steps to Install the Rack-mount Model to the Tower Conversion Kit

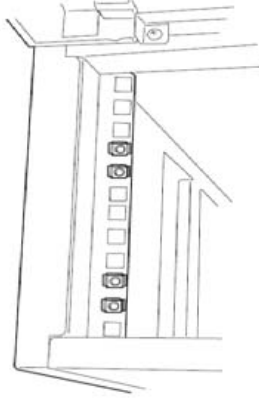
Follow the procedure below to install the devices to the tower conversion kit.

1. Open the front door of the tower conversion kit.
If the door is locked, use the server-accessory key to unlock.

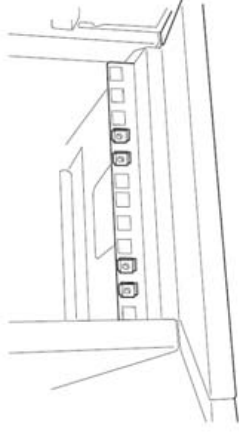


2. Confirm the spots to fix 8 core nuts on the front of the chassis.
See the figure on the right for where to fix the core nuts (4 on the front top and 4 on the front bottom.)

8 core nuts have been installed on the front of the chassis.

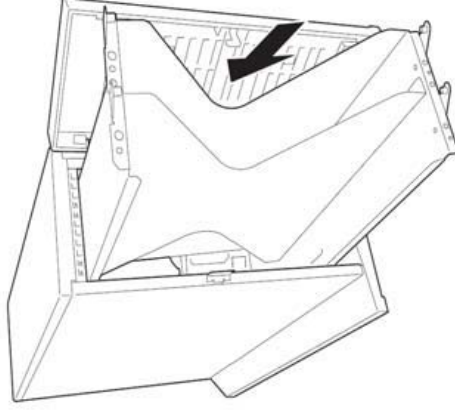


Tower conversion kit (on the front top)

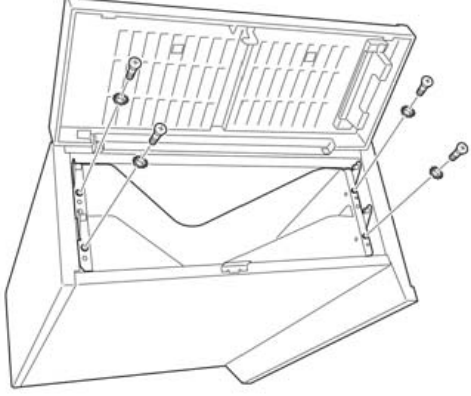


Tower conversion kit (on the front bottom)

3. Insert the bracket from the front of the conversion kit. Tuck the bracket firmly to the back.

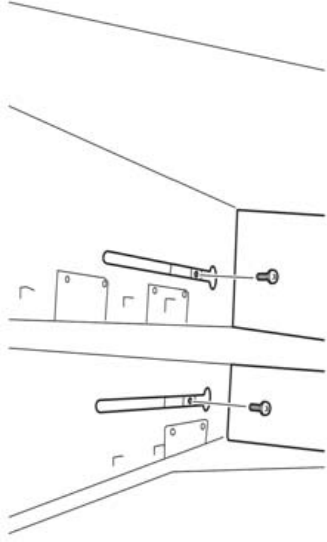


4. Fix the bracket with four washers and countersunk screws (long ones), two at the top and two at the bottom.

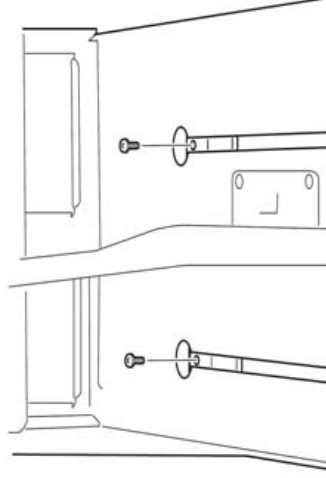


5. Fix the bracket with 4 washers and countersunk screws. See the figure on the right for where to fix the screws (2 screws for the backside on the top, and 2 for the bottom of the tower conversion kit).

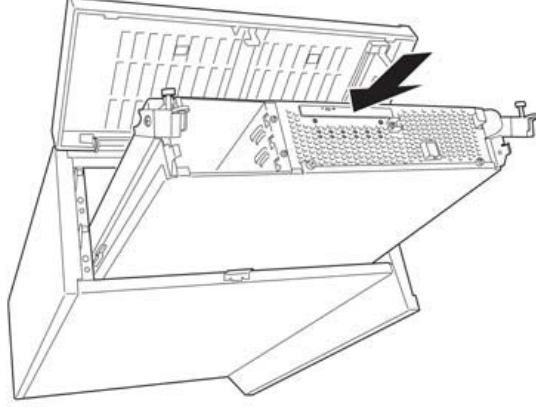
Top (toward the backside)



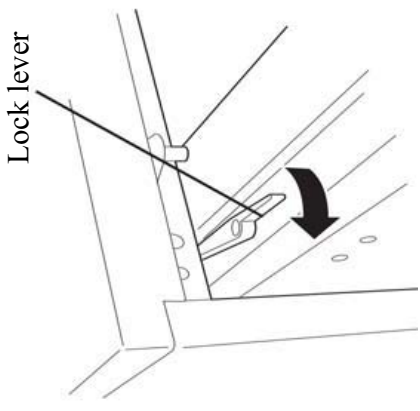
Bottom (toward the backside)



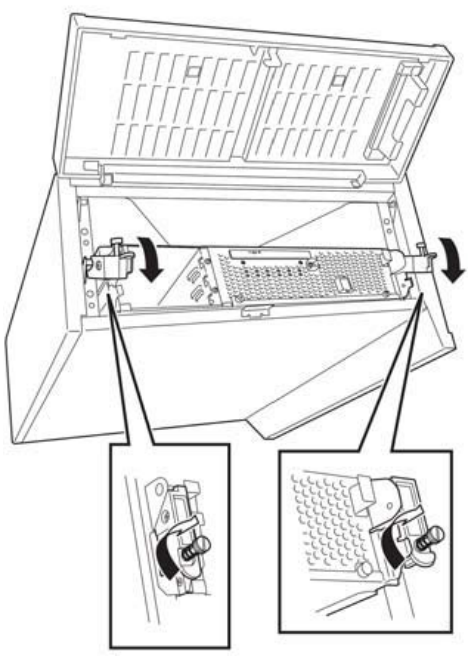
6. Insert the device slowly and securely into the bracket.



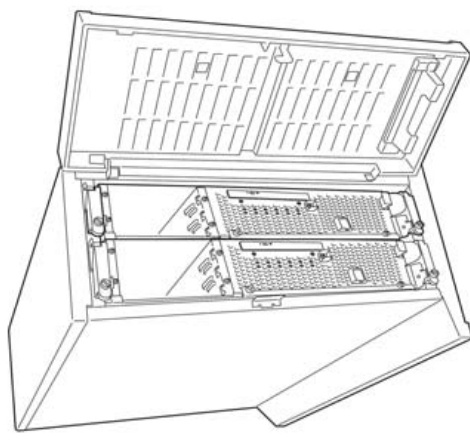
If it becomes rocked and cannot insert any further, push and keep the rock lever to the left as push the device further inside.



7. Close the lever on the top and the bottom of the device. Fix the device to the bracket with clinchers.



8. Take steps 6 to 8 to fix the other device to the bracket.



Connect peripheral devices to NEC Express5800/ft series

The server provides connectors for a wide variety of peripheral devices on its front and rear. The figure on the next page illustrates available peripheral devices for the server in the standard configuration, and locations of the connectors for the devices. After connecting the peripheral devices, connect the provided power cords with the server, and then plug the power cords into the power outlet.



WARNING

Observe the following precautions to use the server safely. There is a risk of a death or serious injury. For details, see “Notes for Safe Handling” in Chapter 1.

- Do not hold the power plug with a wet hand.
- Do not connect the ground wire to a gas pipe.



CAUTION

Observe the following precautions instructions for the safe use of the equipment. There is a risk of a burn, personal injury, or damage to physical assets. For details, see “Notes for Safe Handling” in Chapter 1.

- Do not plug the power cord in a nonconforming outlet.
- Do not plug too many cords in a single outlet.
- Do not plug the cord insecurely.
- Do not use nonconforming power cords.

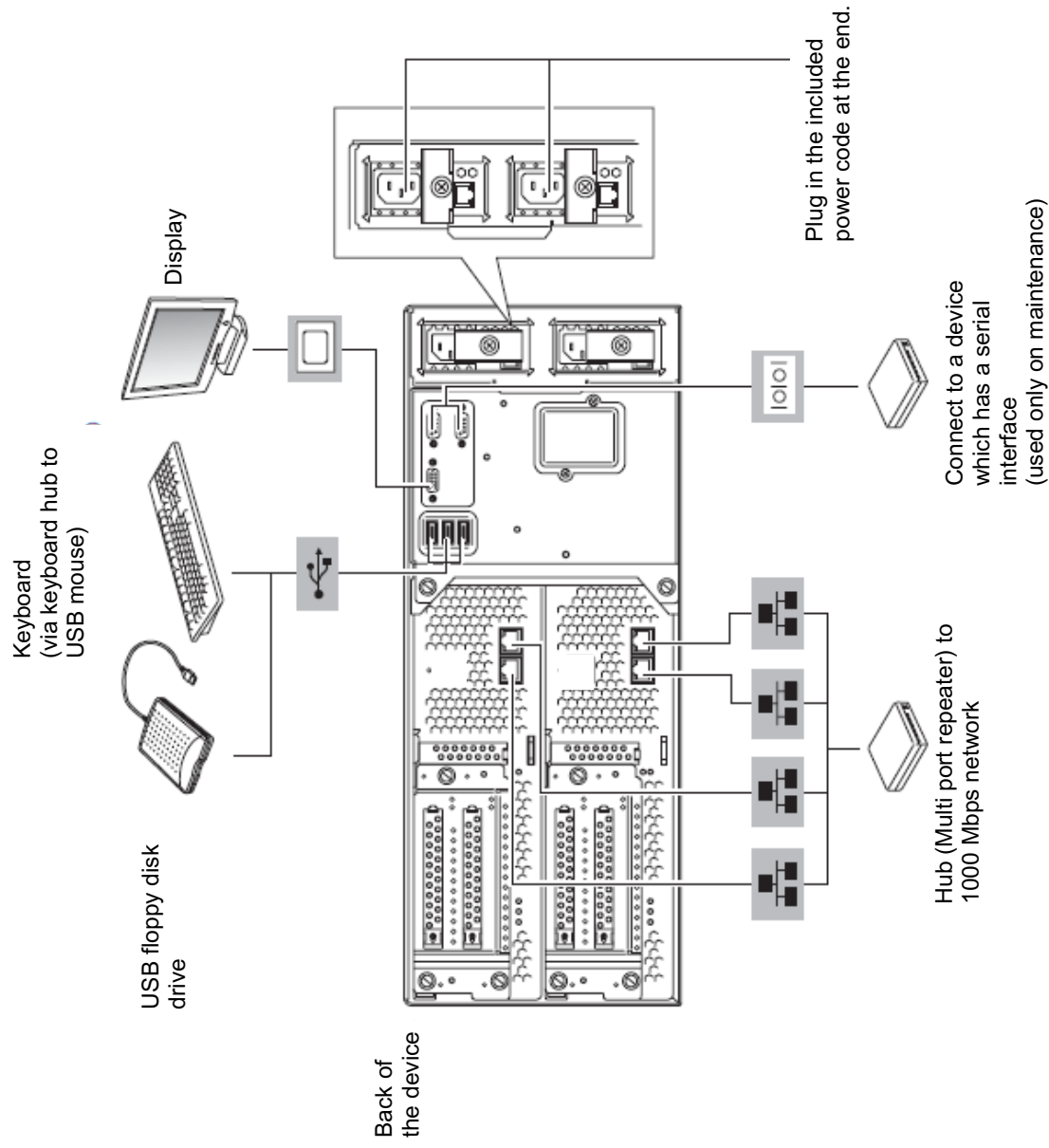
IMPORTANT:

- Power off the server before connecting peripheral devices, with the exception of peripherals with USB interface. Connecting a powered peripheral device to the powered server will cause malfunctions and failures.
 - To connect a third-party peripheral device or interface cable to the server, check with your sales agent to see if they are compatible with NEC Express5800/ft series. Some third-party devices may not be used with the server.
 - The total cable length of SCSI device connections is up to 6 m, including the internal SCSI cables.
 - The serial port connectors are reserved for maintenance.
 - Place the USB floppy disk drive on the server. Space of 1U is needed to put it on the server.
-

IMPORTANT:

Connection of optional devices

- In the case of standard configuration, you need to complete setup of the operating system before mounting optional PCI cards or hard disks that you purchased separately.
- If N8803-035 is mounted, be sure to connect cables to the FC array unit before going on to the next step.

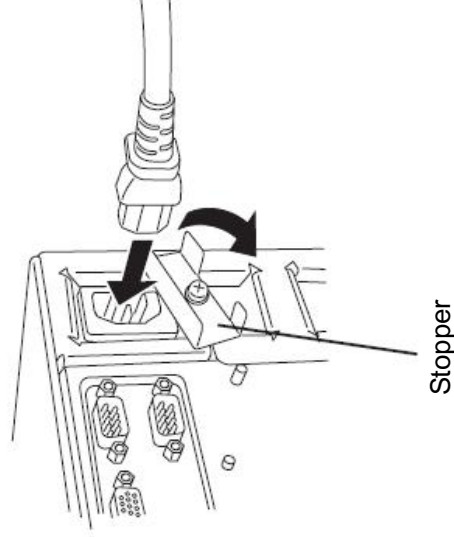


3-20 Installing Server

Rotate the stopper clockwise, and insert the power cords to the AC inlets of the power unit.

Connect the plug at the other end of the power cord to a wall outlet with parallel double-pole grounds provided or to an uninterruptible power supply (UPS).

To use the functions of the server, you should connect the server to the UPS.



IMPORTANT:

- Be sure to use both of the power cords to make the server fault-tolerant.
- After connecting the power cords, wait at least 30 seconds before pressing the power switch.
- By pressing the power switch, the power switch's fans starts to rotate.

To connect the power cords from the server to an uninterruptible power supply (UPS), use service outlets on the rear of the UPS.

The UPS service outlets are categorized into two groups: SWITCH OUT and UN-SWITCH OUT. (They may be called "OUTPUT1" and "OUTPUT2".)

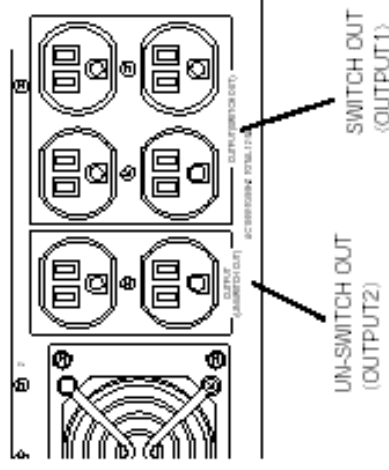
To restrict the power supply from ESMPRO/AutomaticRunningController, connect the power cable to SWITCH OUT.

For constant power supply, connect the power cords to a UN-SWITCH OUT outlet. (Connect the modem that is in service for 24 hours to this outlet.)

When the power cords from the server are connected to a UPS, change the BIOS setup of the server to link with power supply from the UPS.

Select [AC-LINK] from [Server] on the BIOS setup utility and change parameters. See the separate volume of User's Guide for details.

<Example>



Chapter 4

ESX Server Setup

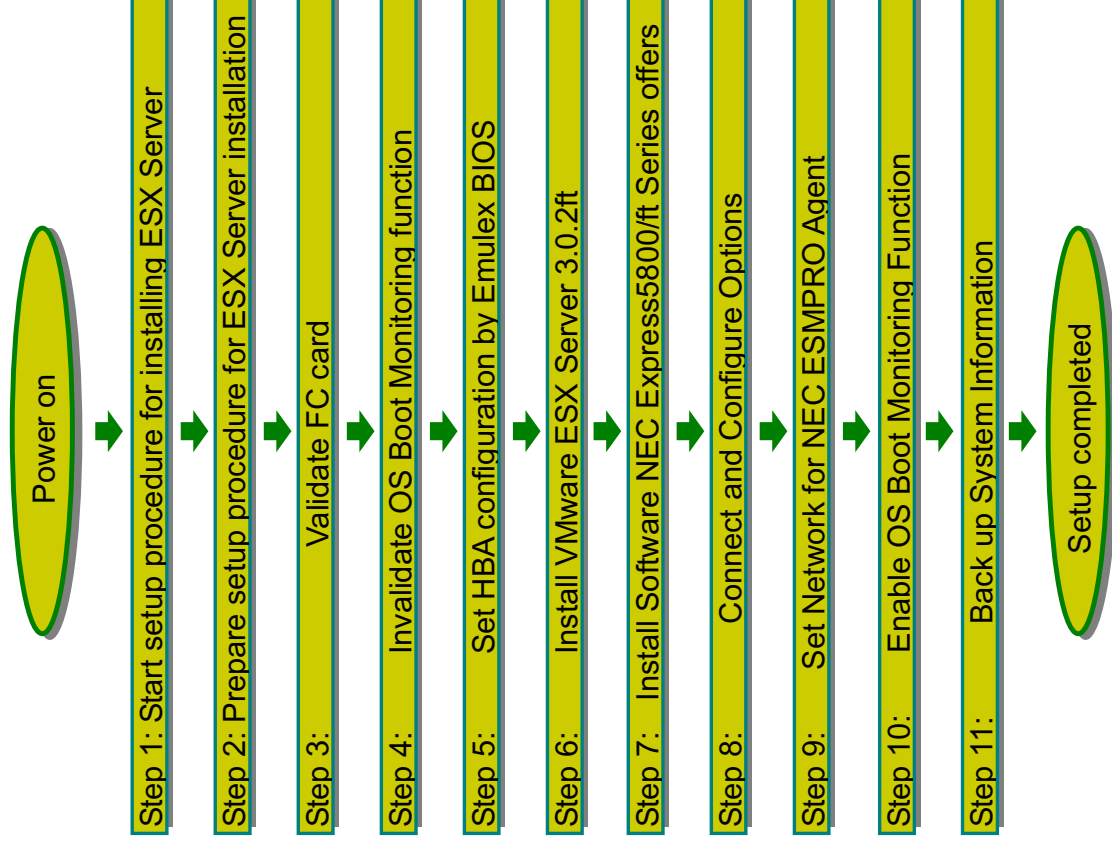
This chapter describes procedures for configuring OS Boot Monitoring function, setting up for ESX Server installation, FC card setting, and so on.

Before starting Setup

Read this section before starting setup.

SETUP FLOW

The flow-chart below illustrates the flow of the setup procedures for the server.



Setup procedure to install ESX Server

Follow the procedure below to install ESX Server.

IMPORTANT:

- NEC Express5800/ft series is a precision equipment. It is recommended to ask engineer from maintenance service provider with good knowledge for setup.
-

Operate the step 1 to 11.

Step 1: Start setup procedure for installing ESX Server

The followings are required for the ESX Server installation.

- Software Products for VMware Infrastructure for ftServer Systems Release 3.0.2ft installation CD
- ft control software for VMware Infrastructure installation CD
- NEC ESMPRO Agent for VMware Infrastructure 3 CD
- User's Guide (Setup) (this manual)
- User's Guide

Step 2: Prepare setup procedure for ESX Server installation

Before installing ESX Server, be sure to do the following. If you do not prepare, setup cannot be performed properly.

Prepare NEC Express5800/ft series

With the power of NEC Express5800/ft series off, follow the steps below:

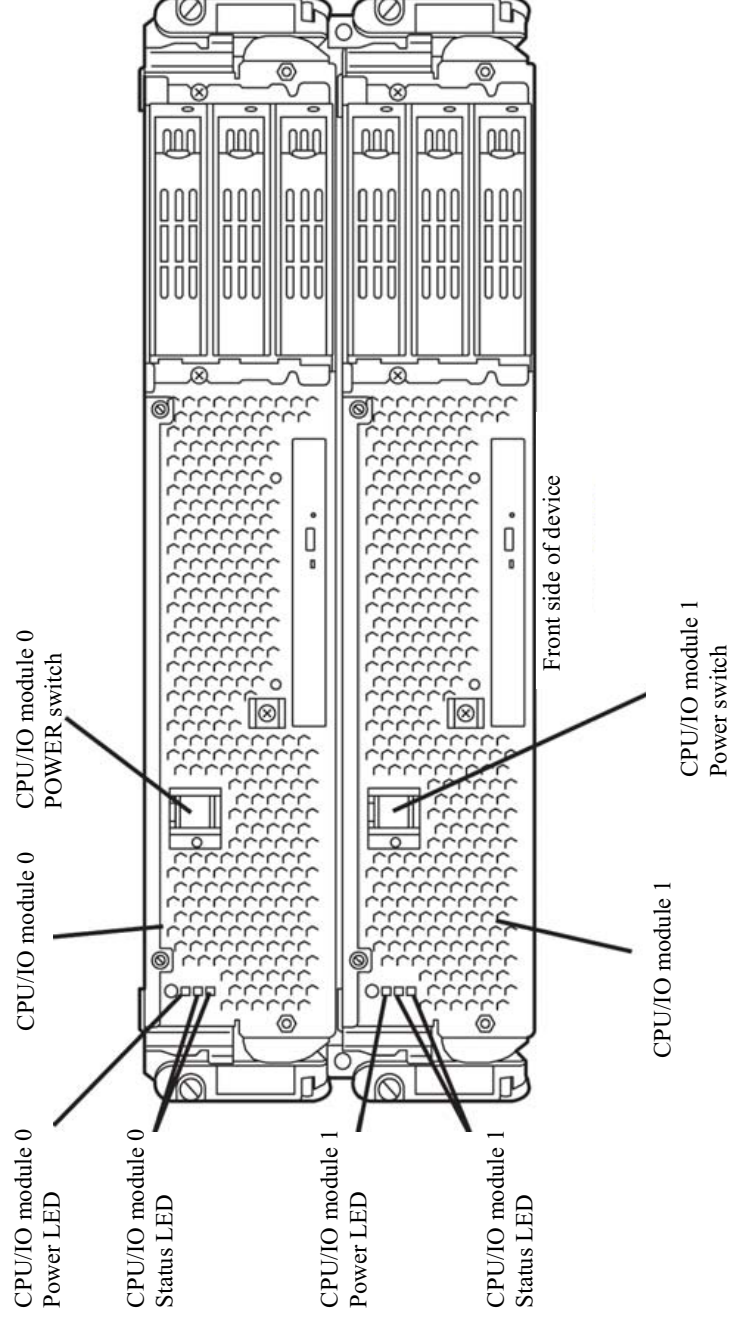
1. Prepare NEC Express5800/ft series.

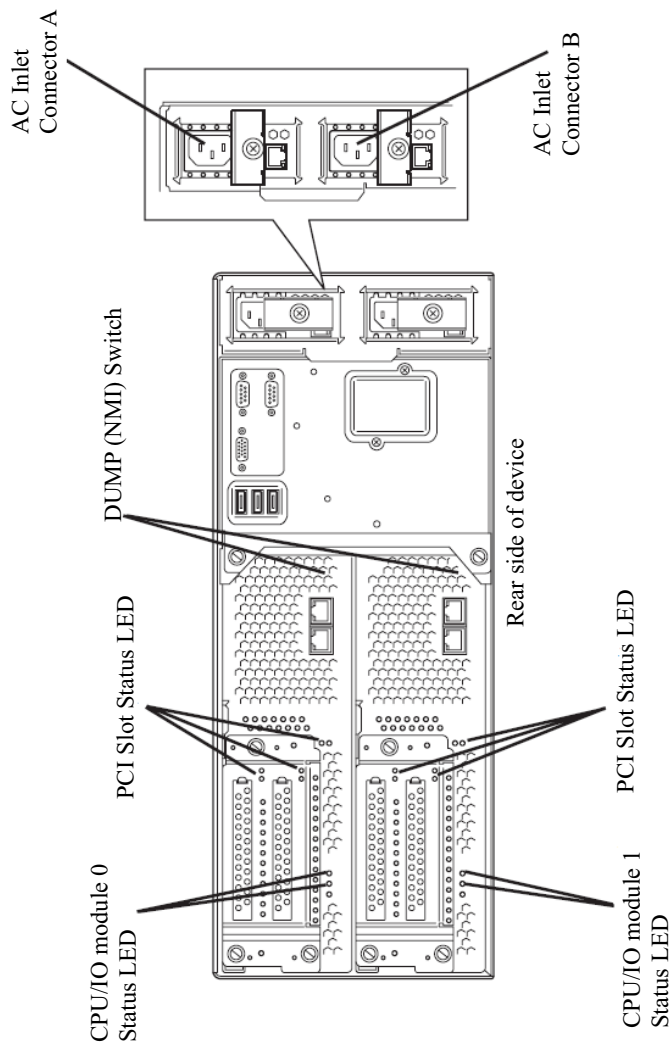
Follow the instructions below to prepare.

- Connect each CPU/IO module and external storage with FC cables.
- Remove all the optional PCI boards except FC card and peripheral equipments except external storage.
- Remove all the LAN cables.

2. Set the CPU/IO module 0 primary.

The location of the parts required for operations and check are shown below:





<When the AC power is on (The power cords are plugged to the wall outlet)>

- (1) Confirm the POWER LED of the CPU/IO module.
 - If the POWER LED is lit, shut down the OS and unplug the AC power cord after the POWER LED turns off.
 - If the POWER LED is turned off, unplug the AC power cord.
- (2) Execute the operation to be taken when AC power supply is turned off.

<When the AC power is off (The power cord is not plugged into the outlet)>

Connect the power cords to NEC Express5800/ft series in the following order:

- (1) Connect the power cord to the AC inlet A connector.
- (2) Connect the power cord to the AC inlet B connector.
- (3) Make sure that the CPU/IO module status LED is turned off.

Preparation is now completed.

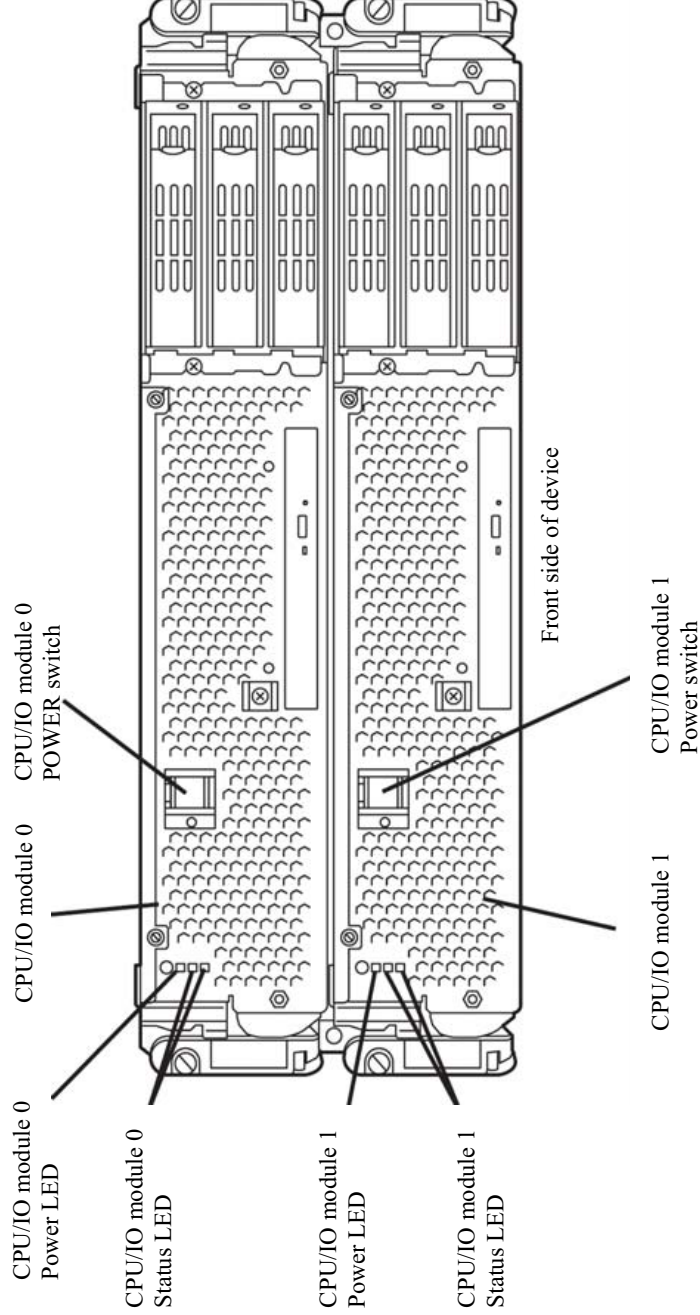
Step 3: Validate FC card

1. Turn on the display and the peripheral equipment connected to the NEC Express5800/ft series.

CHECK:

If the power cords are connected to a power controller like a UPS, make sure that it is powered on.

2. Detach the front bezel.
3. Press the POWER switch that is located on the front side of the server. (The in-built LED lit on this side.)



IMPORTANT:

Do not turn off the power before the "NEC" logo appears.

After a while, the "NEC" logo will appear on the screen.

While the "NEC" logo is displayed on the screen, NEC Express5800/ft series is performing the power-on self test (POST) to check itself. For details, see the separate volume of User's Guide.

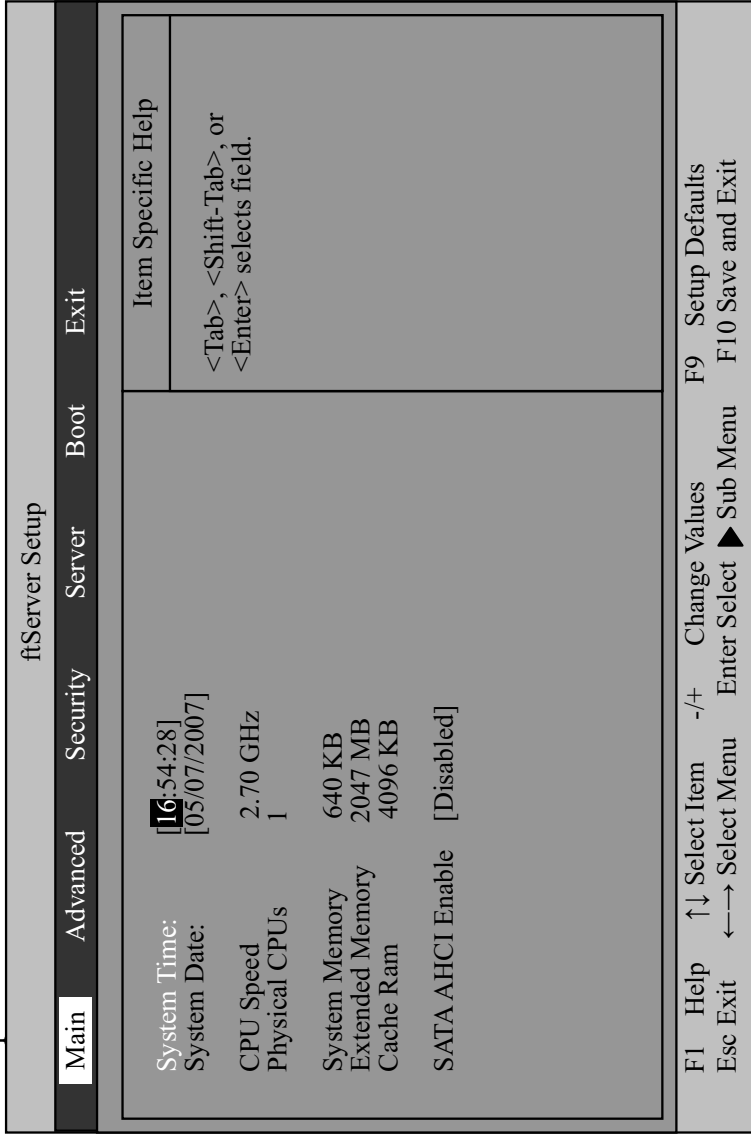
CHECK:

If the server finds errors during POST, it will interrupt POST and display the error message. See the separate volume of User's Guide.

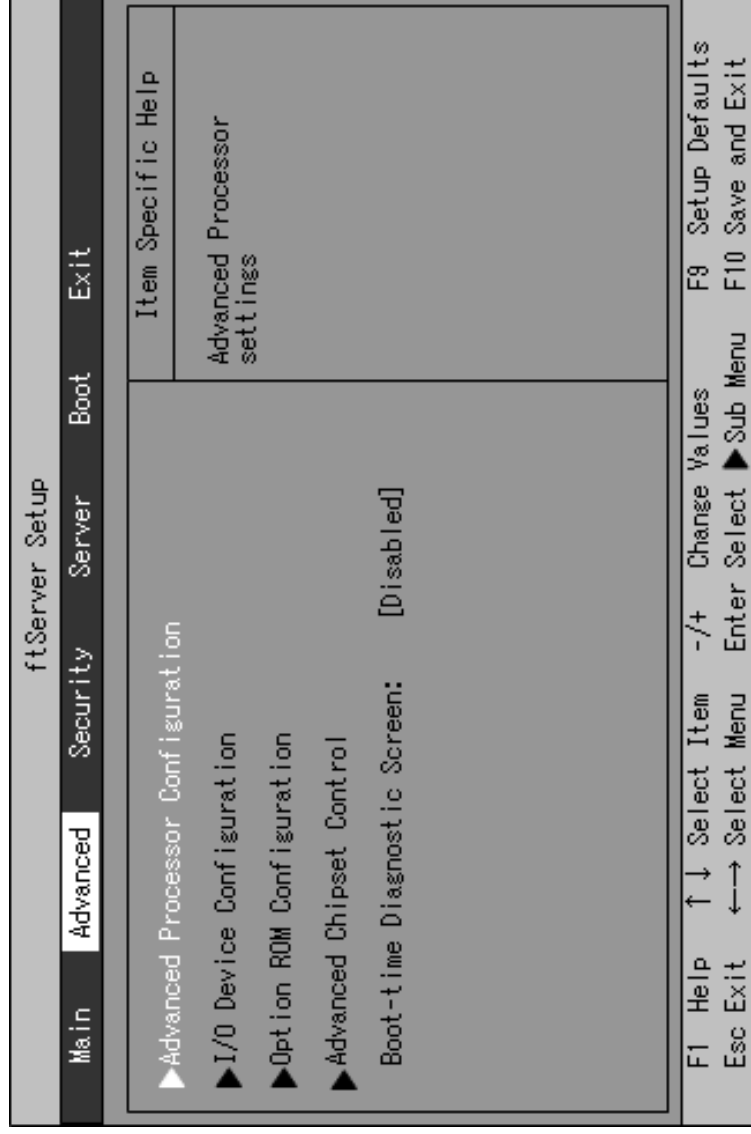
4. When the message “Press <F2> to enter SETUP” or “Press <F2> to enter SETUP or Press <F12> to boot from Network” is displayed on the display screen, press **F2**.

The BIOS Setup Utility “SETUP” starts and the Main menu is displayed on the screen.

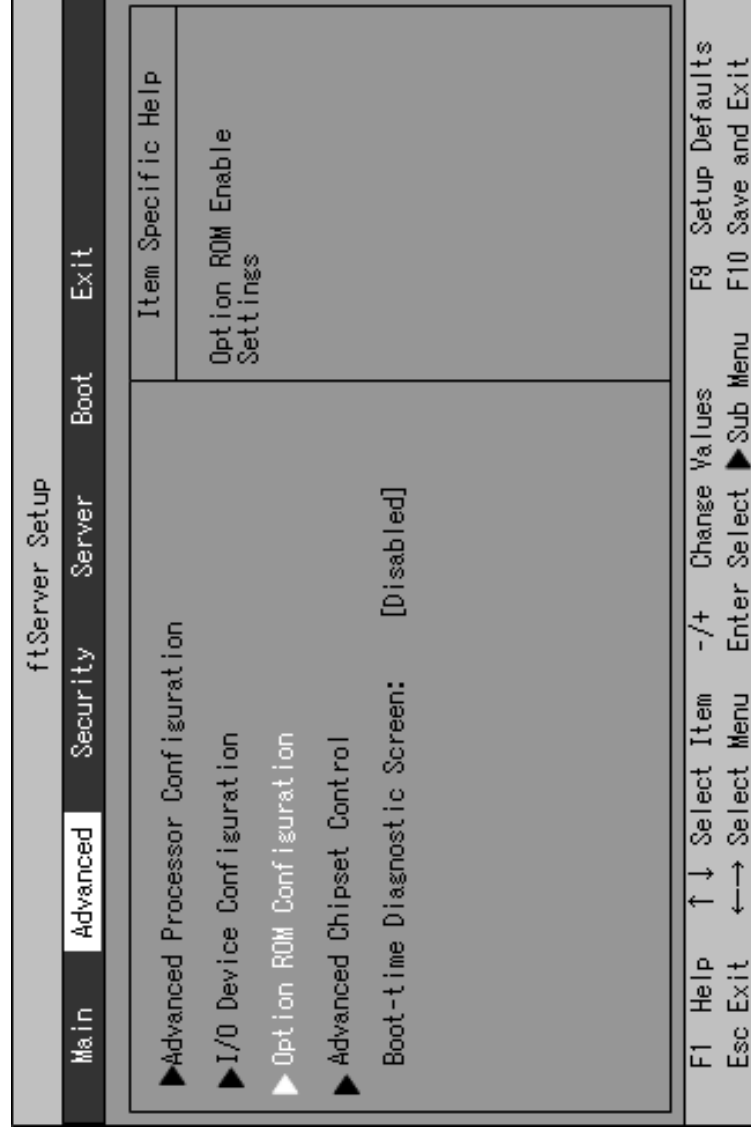
<Example>



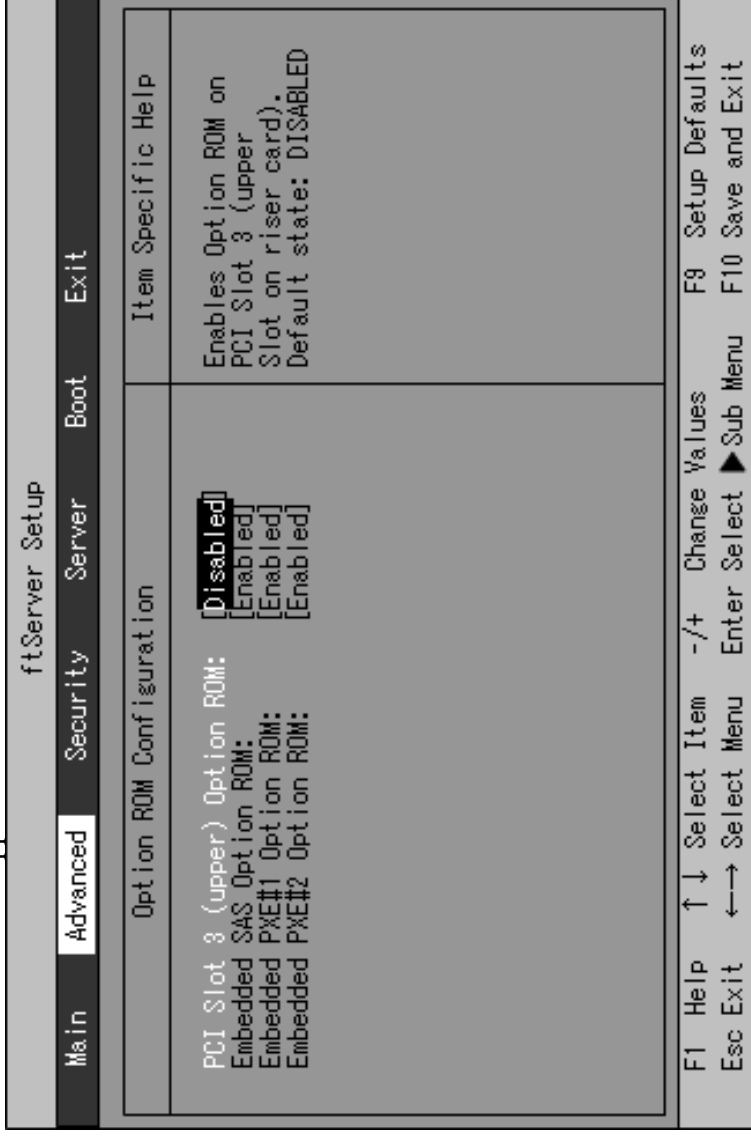
5. Move the cursor onto [Advanced] and select [Advanced].
The Advanced menu appears.



6. Move the cursor onto [Option ROM Configuration] and press **Enter**.
The Option ROM Configuration submenu appears.

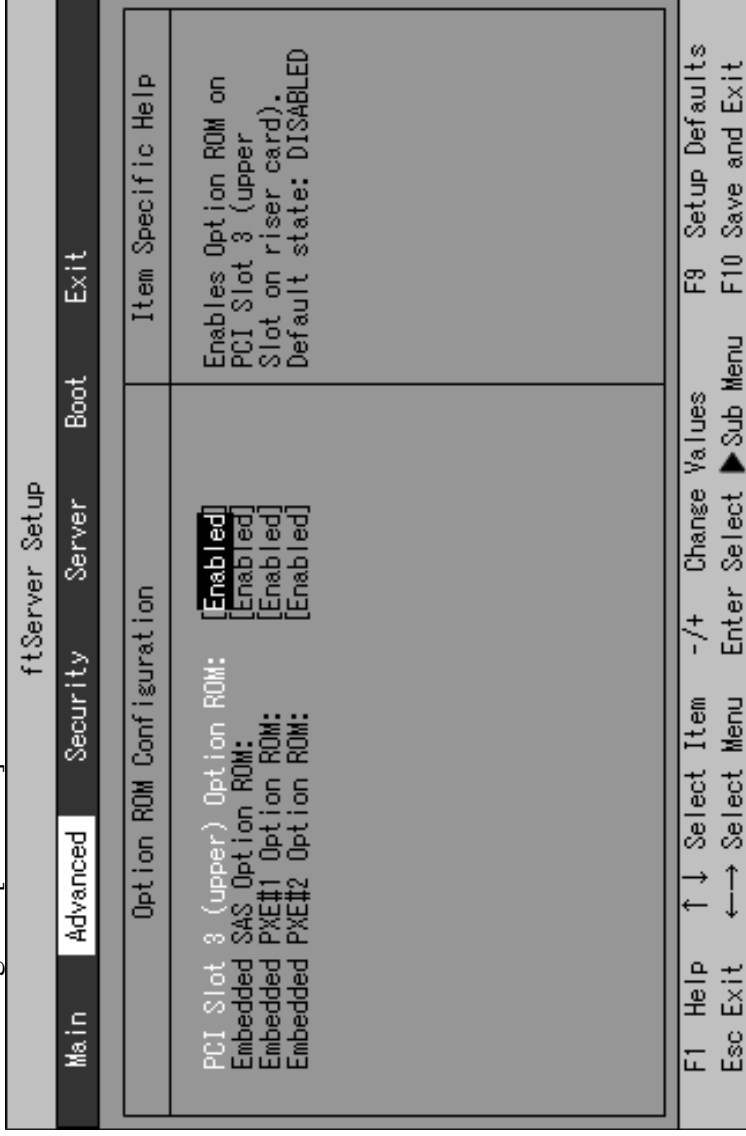


7. Move the cursor onto [PCI Slot3 (upper) Option ROM] and press **Enter**.
Parameters appear.

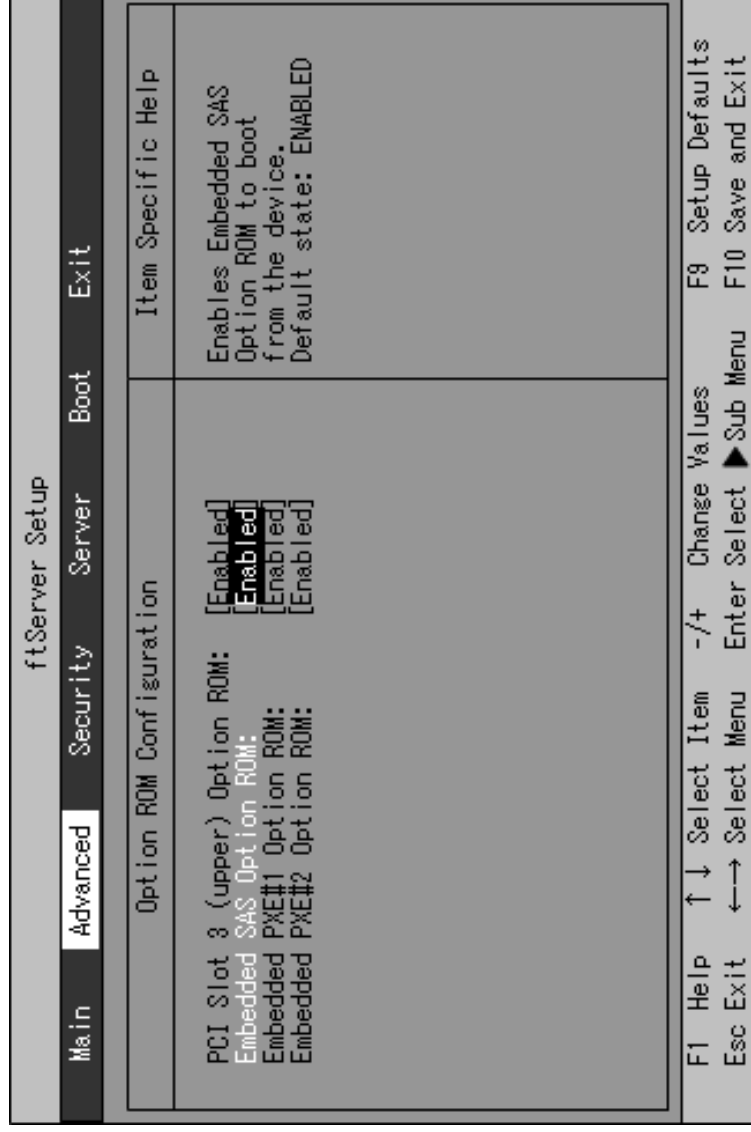


8. Among the parameters, choose [Enabled] and press **Enter**.

The current display of the configuration for PCI Slot3 (upper) Option ROM will be changed to [Enabled.]

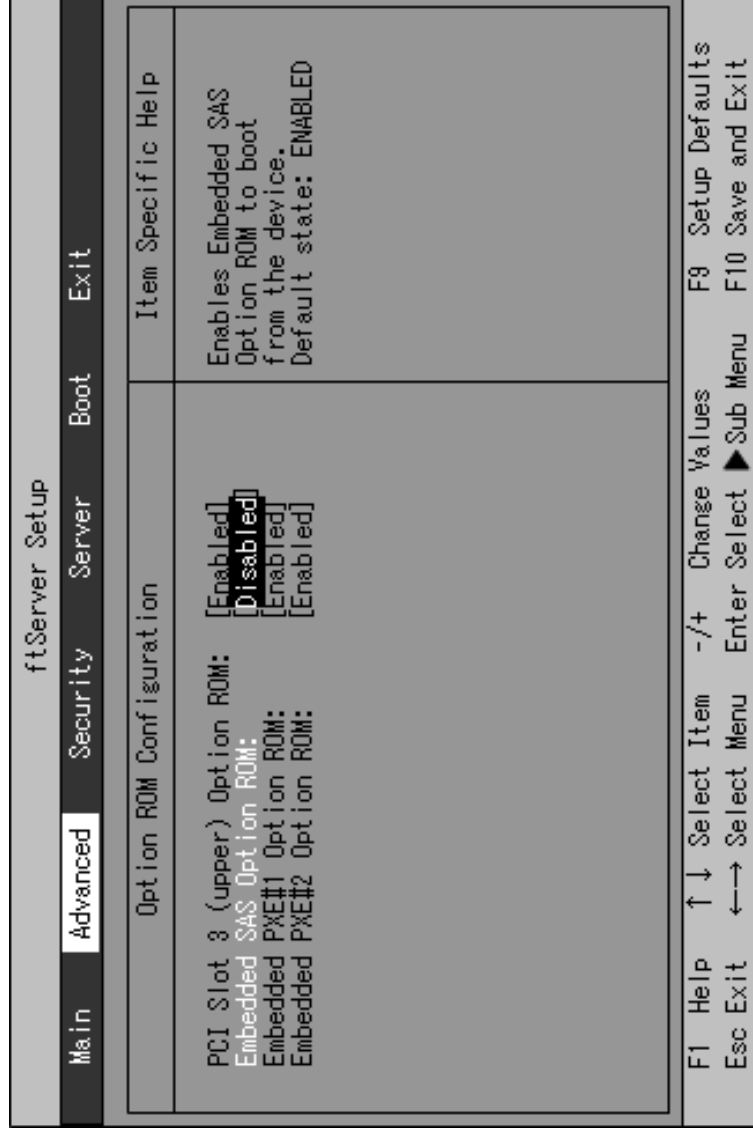


9. Move the cursor onto [Embedded SAS Option ROM] and press **Enter**. Parameters appear.



10. Select [Disabled] from the parameter and press **Enter**.

The display of current configuration for [Embedded SAS Option ROM] becomes [Disabled].



This is the end of steps for validating FC card. .

The following procedure shows how to invalidate the monitoring function. Process “Step 4: Invalidate OS Boot Monitoring function” and continue the settings.

Step 4: Invalidate OS Boot Monitoring Function

Perform the following operation further to the setting to validate FC card in “Step 3 Validate FC card”.

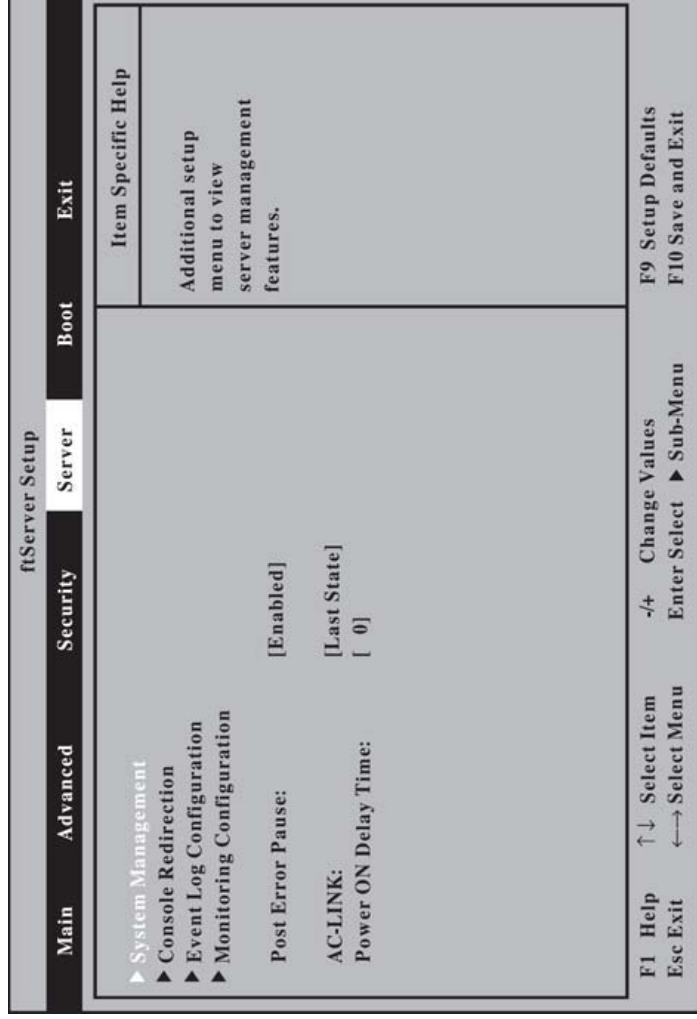
Configure this to confirm the power is on and to process appropriately the setup later. The NEC Express5800/ft series has a monitoring function at start up. Invalidate the monitoring function when installing. If you do not invalidate the function, you will not be able to complete the installation correctly. Follow the procedure described here to setup correctly..

Important:

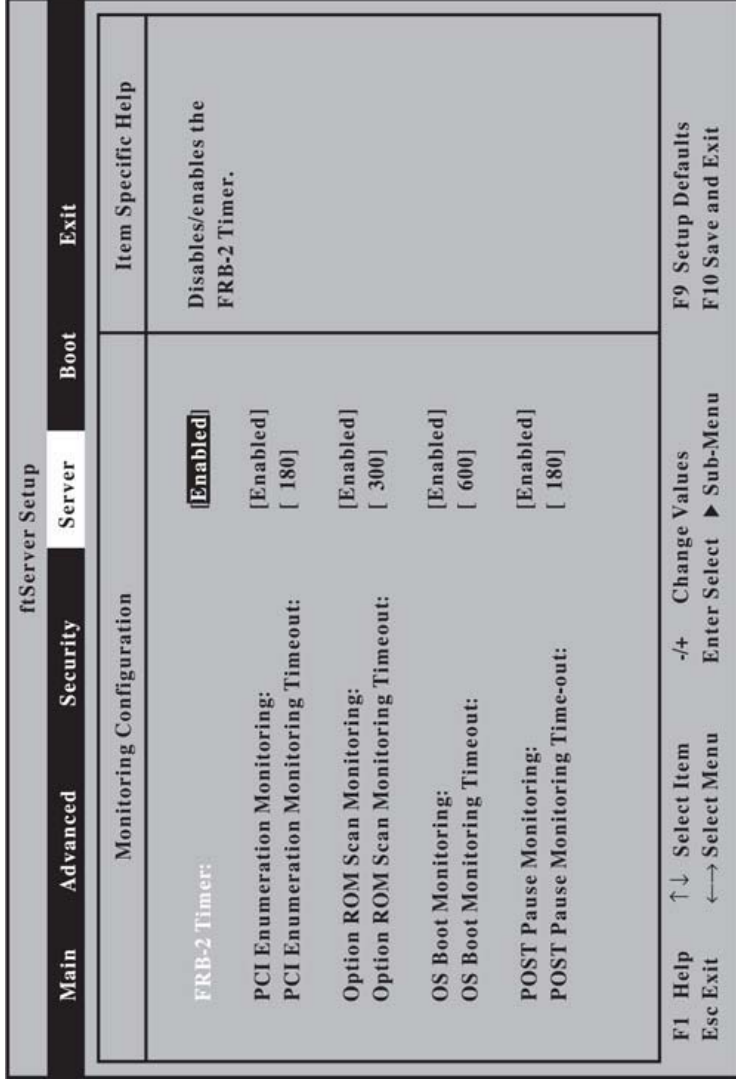
If you do not process the setting described here, you cannot complete the setup correctly because the server forcibly reboot while displaying the OS setup screen. The server may repeat the setup inappropriately after forcibly rebooted. If the setup fails, you will not be able to use the server till you perform reinstallation from the beginning.

1. Press **Esc** key to back to Advanced menu, and then move the cursor onto [Server] and select [Server].

The Server menu appears..

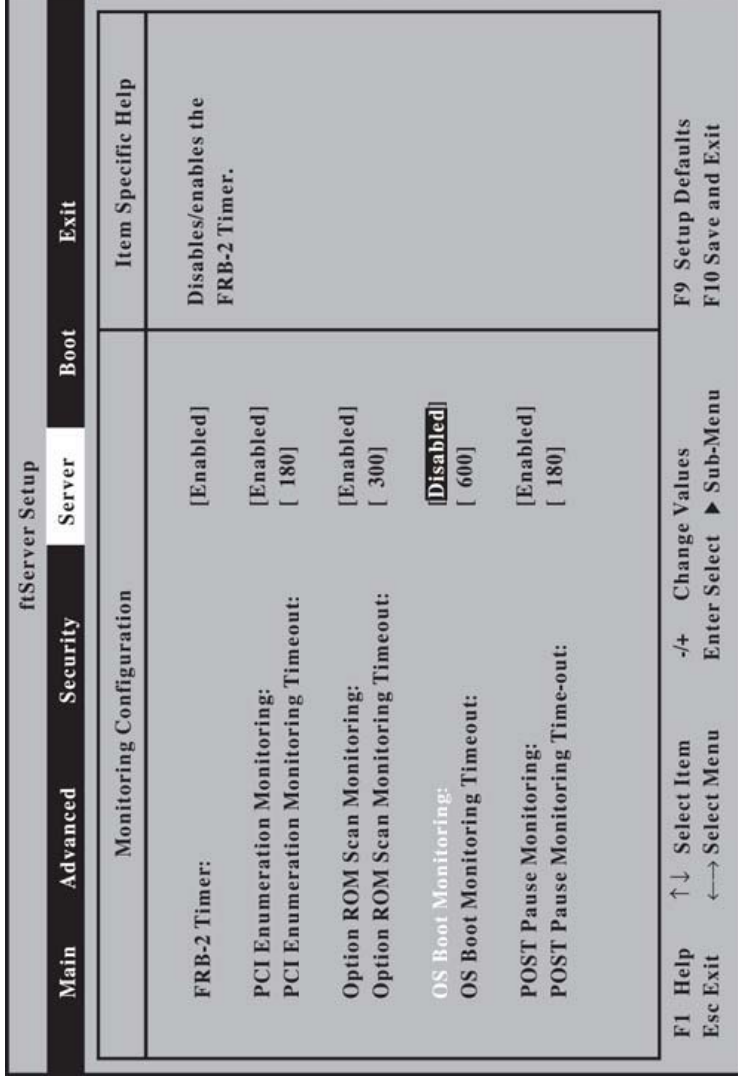


2. Move the cursor onto [Monitoring Configuration] and press **Enter**.
The Monitoring Configuration submenu appears.

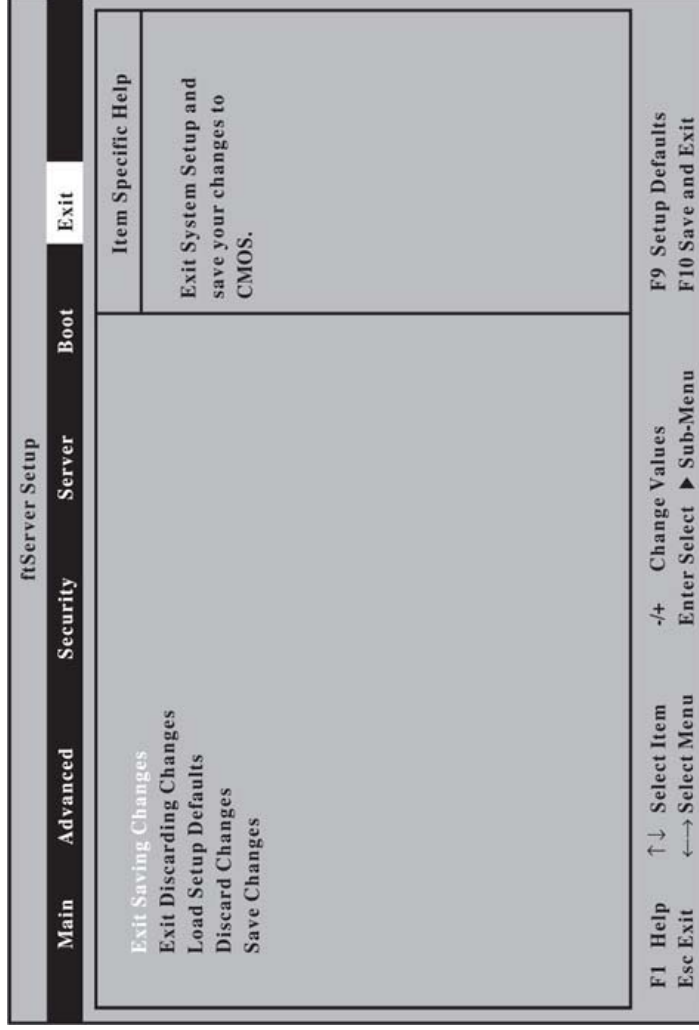


3. Move the cursor onto [OS Boot Monitoring] and press **Enter**.
Parameter appears.

4. Select [Disabled] from the parameter and press **Enter**.
The display of current setting for OS Boot Monitoring becomes [Disabled].

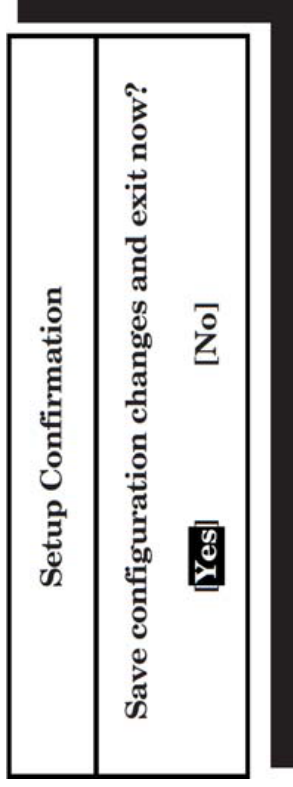


5. Press **Esc** key, then go back to Server menu, and move the cursor onto [Exit].
The Exit menu appears.



6. Move the cursor key onto [Exit Saving Changes] and Press **Enter**.

The Setup confirmation window appears.



7. Select [Yes] and press **Enter**.
Save the setting and quit the SETUP, and then reboot.

TIPS:

- When installing ESX Server, once power off the server for preparation of installation. Then go on setup to the next page “Step 5 Set HBA configuration by Emulex BIOS”

Step 5: Set HBA configuration by Emulex BIOS

IMPORTANT:

Before configuring the settings for HBA by Emulex BIOS, it is required to complete the storage settings such as creating a logical disk.

1. Start from the CPU/IO module 0 and perform the following.
 - 1.1 Start the configuration window of Emulex BIOS.
In the Emulex prompt window which appears during POST, press **ALT + E**.

```
!!! Emulex LightPulse x86 BIOS !!!, Version 2.00a1
Copyright (c) 1997-2007 Emulex. All rights reserved.

Press <Alt E> or <Ctrl E> to enter Emulex BIOS configuration
Utility. Press <sc> to skip Emulex BIOS
```

- 1.2 Select the FC card to be configured.

```
Emulex LightPulse BIOS Utility. JB2.00a1
Copyright (c) 1997-2007 Emulex. All rights reserved.

Emulex Adapters in the System:

1. LP1150aF4: PCI Bus, Device, Function (06,00,00)
```

```
Enter a Selection: 1
Enter <x> to Exit
```

- 1.3 Select [Configure Adapter's Parameters].

```
Adapter 01: PCI Bus, Device, Function (06,00,00)
LP1150-F4: I/O Base: 1000 Firmware Version: JS2.70A5
Port Name: 10000000 C9645C75 Node Name: 20000000 C9645C75
Topology: Auto Topology: Loop First (Default)
The BIOS for this adapter is Enabled

1. Configure Boot Devices
2. Configure This Adapter's Parameters
```

```
Enter a Selection: 2
Enter <x> to Exit <d> to Default Values <Esc> to Previous Menu
```

1.4 Select [Enable or Disable BIOS].

```
Adapter 01:      PCI Bus, Device, Function (06,00,00)
LP1150-F4:      I/O Base: 1000  Firmware Version: JS2.70A5
Port Name: 10000000 C9645C75  Node Name: 20000000 C9645C75
Topology: Auto Topology: Loop First (Default)
The BIOS for this adapter is Enabled

1. Enable or Disable BIOS
2. Change Default ALPA of this Adapter
3. Change PLOGI Retry Timer (+Advanced Option+)
4. Topology Selection (+Advanced Option+)
5. Enable or Disable Spinup Delay (+Advanced Option+)
6. Auto Scan Setting (+Advanced Option+)
7. Enable or Disable EDD 3.0 (+Advanced Option+)
8. Enable or Disable Start Unit Command (+Advanced Option+)
9. Enable or Disable Environment Variable (+Advanced Option+)
10. Enable or Disable Auto Boot Sector (+Advanced Option+)
11. Link Speed Selection (+Advanced Option+)

Enter a Selection: 1
Enter <x> to Exit      <Esc> to Previous Menu
```

1.5 Select **1** so that [Enabled] is configured.

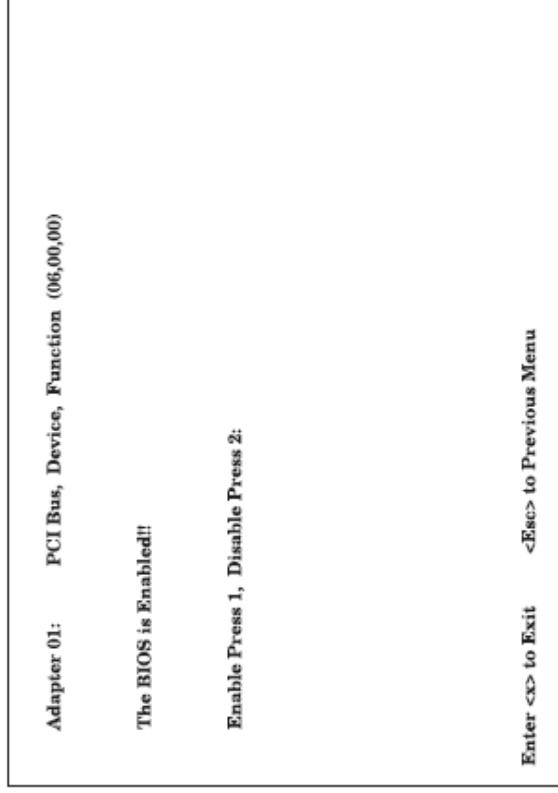
```
Adapter 01:      PCI Bus, Device, Function (06,00,00)

The BIOS is Disabled!!

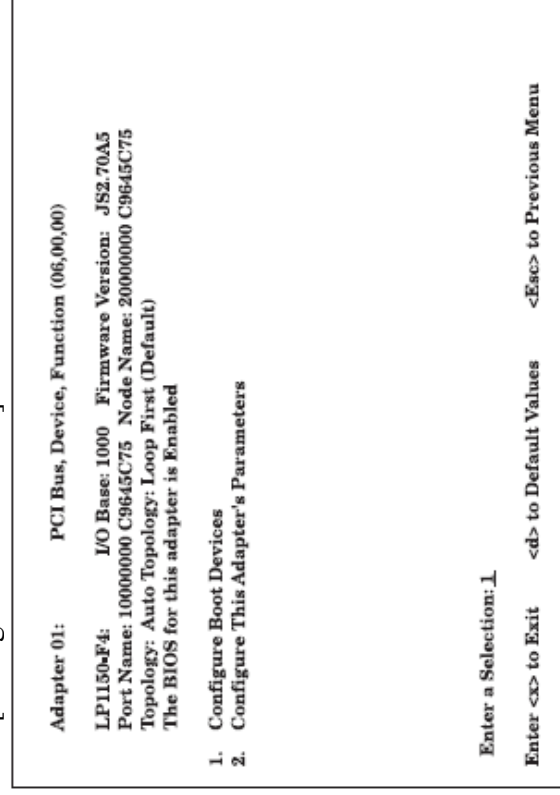
Enable Press 1, Disable Press 2:1

Enter <x> to Exit      <Esc> to Previous Menu
```

1.6 Select **Esc** twice to return to the screen where FC card has been selected.



1.7 Select [Configure Boot Devices].



1.8 Select the location for Boot Entry (select **1**).

```
Adapter 01: S_ID: 000001 PCI Bus, Device, Function (06,00,00)

List of Saved Boot Devices:

1. Unused DID:000000 WWPN:00000000 00000000 LUN:00 Primary Boot
2. Unused DID:000000 WWPN:00000000 00000000 LUN:00
3. Unused DID:000000 WWPN:00000000 00000000 LUN:00
4. Unused DID:000000 WWPN:00000000 00000000 LUN:00
5. Unused DID:000000 WWPN:00000000 00000000 LUN:00
6. Unused DID:000000 WWPN:00000000 00000000 LUN:00
7. Unused DID:000000 WWPN:00000000 00000000 LUN:00
8. Unused DID:000000 WWPN:00000000 00000000 LUN:00

Select a Boot Entry: 1

Enter <x> to Exit <Esc> to Previous Menu
```

1.9 Select the boot device (select **01**).

```
Adapter 01: S_ID: 000001 PCI Bus, Device, Function (06,00,00)

00. Clear selected boot entry!!
01. ALPA:CD(0F) WWPN:20010000 138402EB LUN:00 NEC iStorage 1000 1400

Select The Two Digit Number of The Desired Boot Device:01

Enter <x> to Exit <Esc> to Previous Menu <PageDn> to Next Page
```

1.10 Enter LUN (Hex) (select **00**).

```
Adapter 01: S_ID: 000001 PCI Bus, Device, Function (06,00,00)
00. Clear selected boot entry!!
01. ALPA:CD(0F) WWP:N:20010000 138402EB LUN:00 NEC iStorage 1000 1400
```

```
ALPA:CD(0F) WWP:N:20010000 138402EB
Enter two digits of starting LUN (Hex):00
<Esc> to Previous Menu
```

```
Select The Two Digit Number of The Desired Boot Device:01
Enter <x> to Exit <Esc> to Previous Menu <PageDn> to Next Page
```

1.11 Select Boot LUN (select **01**).

```
Adapter 01: S_ID: 000001 PCI Bus, Device, Function (06,00,00)
ALPA:CD SelectID:0F WWP:N:20010000 138402EB
```

01.	LUN:00	NEC	iStorage 1000	1400
02.	LUN:01	NEC	iStorage 1000	1400

```
Enter a Selection: 01
B#W: Boot number via WWP.N. B#D: Boot number via DID
Enter <x> to Exit <Esc> to Previous Menu
```


1.12 Select “WWPN”.

```
Adapter 01: S_ID: 0000001 PCI Bus, Device, Function (06,00,00)
ALPA:CD SelectID:0F WWPN:20010000 138402EB
01. LUN:00 NEC iStorage 1000 1400
02. LUN:01 NEC iStorage 1000 1400

DID:0000CD WWPN:20010000 138402EB LUN:00
1. Boot this device via WWPN
2. Boot this device via DID
<Esc> to Previous Menu
Enter a Selection: 1

Enter a Selection: 01
BFW: Boot number via WWPN. B#D: Boot number via DID
Enter <x> to Exit <Esc> to Previous Menu
```

1.13 Select x and then Y, then reboot the OS.

```
Adapter 01: S_ID: 0000001 PCI Bus, Device, Function (06,00,00)

List of Saved Boot Devices:
1. Used DID:000000 WWPN:20010000 138402EB LUN:00 Primary Boot
2. Unused DID:000000 WWPN:00000000 00000000 LUN:00
3. Unused DID:000000 WWPN:00000000 00000000 LUN:00
4. Unused DID:000000 WWPN:00000000 00000000 LUN:00
5. Unused DID:000000 WWPN:00000000 00000000 LUN:00
6. Unused DID:000000 WWPN:00000000 00000000 LUN:00
7. Unused DID:000000 WWPN:00000000 00000000 LUN:00
8. Unused DID:000000 WWPN:00000000 00000000 LUN:00

Select a Boot Entry:

Enter <x> to Exit <Esc> to Previous Menu
```

2. Start from the CPU/IO module 1. Perform steps 1.1 to 1.13 similarly.

CHECK:

- The images shown in 1.9-1.11 are examples. The information displayed varies depending on the product name of external storage and settings (e.g. settings on logical disk or access control).

Step 6: Install VMware ESX Server 3.0.2ft

1. Insert the install CD of ft control software for VMware Infrastructure to start the machine.

The ftSys logo is displayed.

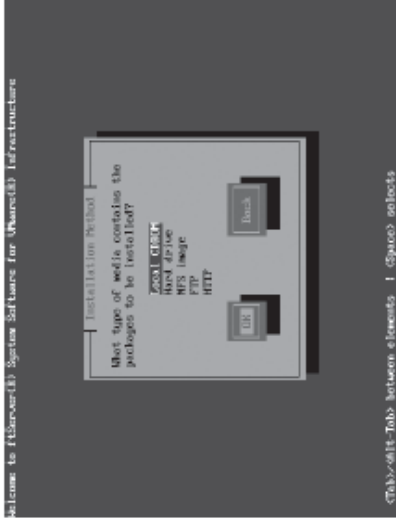


IMPORTANT:

Set CPU/IO module 0 as the primary, and insert the installation CD into the drive of primary side.

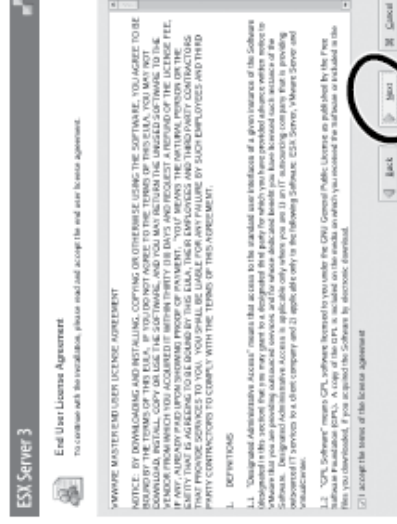
2. Press **Enter** at [boot: _].
3. Replace the CD with the install CD of Software Products for VMware Infrastructure for ftServer Systems Release 3.0.2ft. Select [Local CDROM] for Installation Method, select [OK] and press **Enter**.

It changes to the graphical mode.



4. The start screen of the install wizard appears.

5. After confirming the agreement in the [End User License Agreement] window, tick the checkbox of [I accept the terms of the license agreement] and click [Next].



6. If the [Warning] shown in the right appears, click [Yes].
Initialization of the partition table is performed.



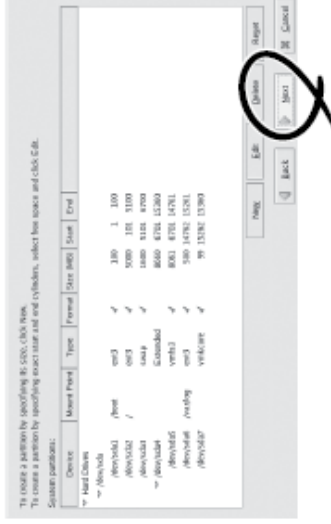
7. In the partitioning options selection window, select [Recommend,] select the drive where ESX Server is to be installed (sda in this guide) and click [Next].



8. In the window confirming partition removal, click [Yes].

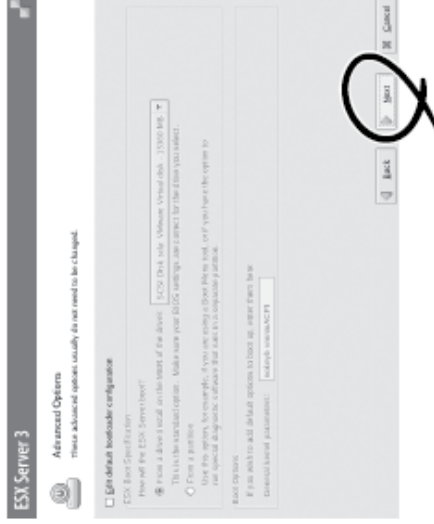


9. Change the partition configuration and size in the Partition Disks window.

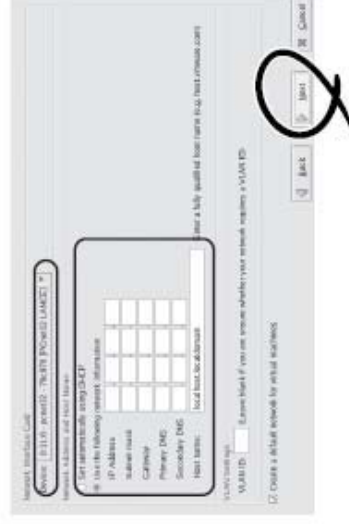


Select the recommended settings in principle. If you change the partition size, do not configure the smaller size than the recommended value. Save about 2GB disk space for the partition that includes /var/crash because the dump file is stored under /var/crash when collecting the dump. You do not have to change the swap partition and vmcore partition. When the partition configuration is completed, click [Next].

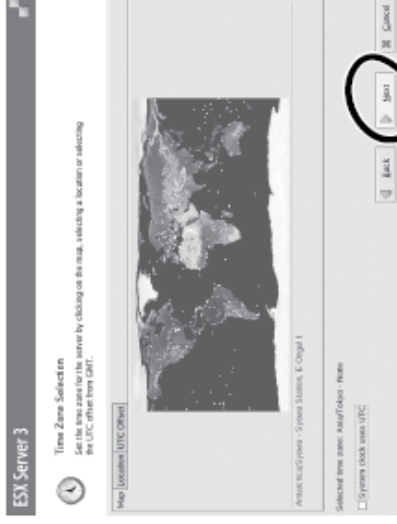
10. Click [Next] in the ESX Server starting settings.



11. Configure the IP address and host name in Network Configuration (optional), and click [Next].



12. Select a region in Time Zone Selection.



Untick the checkbox of [System clock UTC] to select a country.

Do not untick if using UTC.

Click [Next].

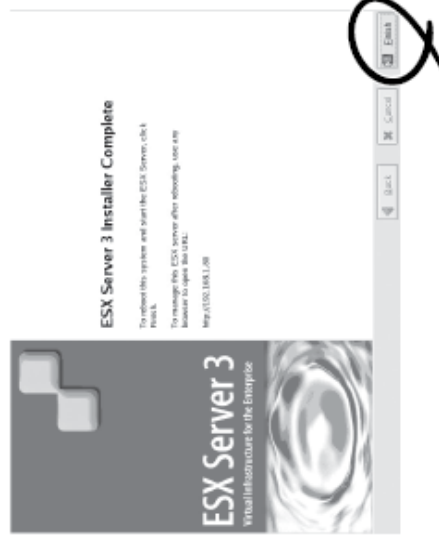
13. In Set Root Password, enter the password for Root account and click [Next].



14. Installation starts.



15. Click [Finish] in the [Installer Complete] window.



The machine is restarted.

Step 7: Install Software NEC Express5800/ft Series offers

Install the software provided by NEC Express5800/ft series by the following procedures.

ft Server Control Software

1. Select [VMware ESX Server] in the bootloader (Grub) window and press **Enter**. When starting ESX Server completes, [VMware ESX Server version 3.0.2ft] is displayed.
2. Press **ALT + F1** to switch the console windows.
3. Login as a root user.

```
Account: root
Password: **** (configured upon installation)
```

4. Set the install CD of ft control software for VMware Infrastructure.
5. Mount the CD.

```
# mount/mnt/cdrom
```
6. Execute the install script.

```
# cd/mnt/cdrom
# ./install.sh
```

All input should remain to be default.
“ftadmin” can be used in SSH connection etc.

After installation completes, eject the install CD of ft control software for VMware Infrastructure and reboot the OS.

7. Login to the service console as a root user.
8. Set the ft control software for VMware Infrastructure installation CD.
9. Mount the CD media

```
# mount /mnt/cdrom
```
10. Install the alert linkage functions with ESMPRO Agent.

Install either Japanese version or English version.

When you install Japanese version

```
# cd /mnt/cdrom/NEC/LANG/JP/REPORT_TABLE/
# rpm -ivh vmfjpn-alert-tbl-1.0.0-NEC01.i386.rpm
```

When you install English version

```
# cd /mnt/cdrom/NEC/LANG/EN/REPORT_TABLE/
# rpm -ivh vmfus-alert-tbl-1.0.0-NEC01.i386.rpm
```

11. Eject the ft control software for VMware Infrastructure installation CD.

NEC ESMPRO Agent

IMPORTANT:

Be sure to read the "5-4 Preparation before Setup" before system installation or setup.

1. Login to the service console as a root user.
2. Set the CD-ROM in the optical disk drive to mount.
3. Move to the directory where the server management driver is stored and run the rpm command to install.

```
# cd /(mount point)/simm_drv/vmware_3.0.2/320Fd/  
# rpm -ivh *.rpm
```

4. Move to the directory where the package of the NEC ESMPRO Agent is stored and run the rpm command to install.

```
# cd /(mount point)/esmpro_sa/4361-01/  
# rpm -ivh Esmpro-common-*  
# rpm -ivh Esmpro-type1-*  
# rpm -ivh Esmpro-ft-*  
# rpm -ivh Esmpro-Express-*
```

5. Move the current directory to /opt/nec/esmpro_sa/log to run the following commands.

```
# cd /opt/nec/esmpro_sa/log/  
# sh /(mount point)/esmpro_sa/vmset.sh -l NONE  
# sh /(mount point)/esmpro_sa/esmcron.sh
```

6. Eject the CD-ROM from the DVD-ROM drive to reboot the OS.

```
# sync  
# reboot
```

Functions of the installed NEC ESMPRO Agent become enabled after the reboot.

TIPS:

To report to NEC ESMPRO Manager from NEC ESMPRO Agent, you need to configure the settings on reporting method in "Report Setting Function" after the reboot. Refer to the *User's Guide* (/doc/esmsa_users.pdf) stored in the CD-ROM for how to configure the reporting method.

Step 8: Connect and Configure Options

If there is any optional PCI board or peripheral equipment to connect to NEC Express5800/ft series, turn off the power to NEC Express5800/ft series, and connect it according to the “PCI board” in *User’s Guide* and the device’s instruction.

Immediately after the installation completes, network configuration for a port is duplicated. When you change the network configuration or configure the duplication setting by adding a LAN card, it is necessary to configure the settings from VI client. For detailed procedures, refer to the *User’s Guide* packaged with this guide and the *Server Configuration Guide* of VMware Infrastructure.

To have enough time to initialize Fibre Channel disk and Fibre Channel switch and so on, adjust [Server] - [Power On Delay Time] by setting System BIOS configuration Utility.

Step 9: Set Network for NEC ESMPRO Agent

NEC ESMPRO Agent is required for continuous operation of the NEC Express5800/ft series. To run NEC ESMPRO Agent, you need to configure the SNMP settings.

For details and methods of the settings, refer to “Installing Management Utility.”

Step 10: Enable OS Boot Monitoring Function

When necessary for system operation, enable the [OS Boot Monitoring] setting which has been disabled in “Step 3: Validate FC card” (page 4-6). Set appropriate time referring to “Step 3: Validate FC card” (Default is 10 minutes. Specify by second).

ftServer Setup					
Main	Advanced	Security	Server	Boot	Exit
Monitoring Configuration		Item Specific Help			
FRB-2 Timer	[Enabled]	Disables/enables the FRB-2 Timer.			
PCI Enumeration Monitoring:	[Enabled]				
PCI Enumeration Monitoring Timeout:	[180]				
Option ROM Scan Monitoring:	[Enabled]				
Option ROM Scan Monitoring Timeout:	[300]				
OS Boot Monitoring:	[Enabled]				
OS Boot Monitoring Timeout:	[600]				
POST Pause Monitoring:	[Enabled]				
POST Pause Monitoring Time-out	[180]				
F1 Help	↑↓ Select Item	-/+ Change Values	F9 Setup Defaults		
Esc Exit	←→ Select Menu	Enter Select	▶ Sub-Menu	F10 Save and Exit	

Step 11: Back up System Information

We recommend you to back up the system information using the Off-line Maintenance Utility after setting up the system.

Without backup for system information, the information and settings that are specific to your server cannot be restored after the server is repaired. Follow the steps below to make a backup copy of the system information:

1. Prepare a 3.5-inch floppy disk.
2. Insert the NEC EXPRESSBUILDER DVD into the optical disk drive and reboot the system.
NEC EXPRESSBUILDER is activated and [Boot selection] menu is displayed.
3. Select [Tool menu]
4. Select [English].
5. Select [Maintenance Utility].
6. Select [save System Information Management].
7. Insert a floppy disk into the floppy disk drive.
8. Select [Save].

The setup is now completed.

Setup Procedures upon Installing Guest OS

For the setup procedures upon installing guest OS, see *Guest Operating System Installation Guide* of VMware Infrastructure. For the network configuration, refer to the *User's Guide* packaged with this guide and the *Server Configuration Guide* of VMware Infrastructure.

NOTE:

It is not recommended that guest OS uses the optical disk drive on the ESX host during operation. When an optical disk drive is used during the system operation, the product may not work properly. If an optical disk drive is used, remove the mounted / allocating optical disk drive and reboot the system.

Check the configuration of the virtual machine from VI client.

If [Host Device] in [Device Type] is selected in CD device settings, untick the following checkboxes in [Device Status]:

connected
connected at power on

When an optical disk drive is used during the system operation, the product may not work properly. If an optical disk drive is used, remove the mounted / allocating optical disk drive and reboot the system.

Chapter 5

Procedures after Completion of Installation

This chapter describes the procedures after installation such as how to install management utilities and how to setup PCs on the network. You may need to confirm these procedures while the system is running.

INSTALLING MANAGEMENT UTILITIES

The provided "NEC EXPRESSBUILDER" CD-ROM contains "NEC ESMPRO Agent" for monitoring NEC Express5800/ft series and "NEC ESMPRO Manager" for managing the NEC Express5800/ft series. Install and setup these management utilities in the NEC Express5800/ft series or the computer (management PC) that manages the NEC Express5800/ft series.

NEC ESMPRO Agent

NEC ESMPRO Agent is a utility to monitor the operating status, the configuration information, the failure occurrence status of hardware and software on the NEC Express5800/ft series. When it detects some problems, it sends messages to the computer in which the NEC ESMPRO Manager is installed.

NEC ESMPRO Agent is required to be installed by users. For the installation procedures, see the Installation Guide included in the CD-ROM of “NEC ESMPRO Agent for VMware Infrastructure 3”. In order for NEC ESMPRO Agent to operate, it is necessary to configure the settings according to your environment. See the User’s Guide included in the CD-ROM of “NEC ESMPRO Agent for VMware Infrastructure 3”.

IMPORTANT:

Make sure that NEC ESMPRO Agent is installed because it is indispensable for continuous operation of NEC Express5800/ft series.

Operation Environment

NEC ESMPRO Agent can be operated in the hardware and software environments shown below.

Hardware

Installation system NEC Express5800/ft series

Software

NEC ESMPRO Agent for VMware Infrastructure 3

Preparation before Setup

IMPORTANT:

Be sure to read the following before system installation or setup.

1. Check necessary packages

The following packages are needed to use NEC ESMPRO Agent.

All the packages are installed upon OS installation. If there is any package which is not installed, please install it.

```
chkconfig
compat-libstdc++-7.3
gawk
glibc
initscripts
libstdc++
net-snmp
net-snmp-utils
newt
portmap
sed
slang
tar
```

2. SNMP service settings

To monitor from NEC ESMPRO Manager, it is necessary to change SNMP environment setting file (/etc/snmp/snmpd.conf) to set a community right to more than “READ WRITE”.

Refer to the following to modify the environment setting file by vi command etc.

```
rwcommunity public default
```

3. Environment settings of snmpd

Run the following command to set snmpd to start automatically.

```
# /sbin/chkconfig --level 345 snmpd on
```


4. Start setting of portmap

Run the following command to set portmap to start automatically.

```
# /sbin/chkconfig --level 345 portmap on
```

5. Setting firewall

When monitoring the device where NEC ESMPRO Agent is installed from the NEC ESMPRO Manager, use the following port.

If you set the firewall on your environment, set the access permission to the following ports.

```
snmp 161/udp  
snmp-trap 162/udp
```

Installation procedure

1. Log in to the system as a root user.
2. Set the CD-ROM to the DVD-ROM drive to mount.
3. Move to the directory where the server management driver is stored, and install by the rpm command.

```
# cd /$(mount point)/smm_drv/vmware_3.0.2/320Fd/  
# rpm -ivh *.rpm
```
4. Move to the directory where the package of the NEC ESMPRO Agent is stored, and install by the rpm command.

```
# cd /$(mount point)/esmpro_sa/4361-01/  
# rpm -ivh Esmpro-common-*  
# rpm -ivh Esmpro-type1-*  
# rpm -ivh Esmpro-ft-*  
# rpm -ivh Esmpro-Express-*
```
5. Move the current directory to /opt/nec/esmpro_sa/log to run the following commands.

```
# cd /opt/nec/esmpro_sa/log/  
# sh /$(mount point)/esmpro_sa/vmset.sh -l NONE  
# sh /$(mount point)/esmpro_sa/esmcron.sh
```
6. Restart the OS after ejecting the CD-ROM from the optical disk drive.

```
# sync  
# reboot
```

The functions of the installed NEC ESMPRO Agent become enabled after the reboot.

TIPS:

To report to NEC ESMPRO Manager from NEC ESMPRO Agent, you need to configure the settings on reporting method in “Report Setting Function” after the reboot. Refer to the *User’s Guide* (/doc/esmsa_users.pdf) stored in the CD-ROM for how to configure the reporting method.

Uninstallation procedure

1. Log in to the service console as a root user.
2. Run the following command to uninstall the package.

Note that procedures vary depending on the server you use.

```
# rpm -e Esmpro-Express  
# rpm -e Esmpro-ft  
# rpm -e Esmpro-type1  
# rpm -e Esmpro-common
```

IMPORTANT:

Make sure to uninstall the package in this order.

3. Uninstall the server management driver by the rpm commands.

```
# rpm -e libnecmbios  
# rpm -e nechwid
```

4. Run the following command to delete of file.

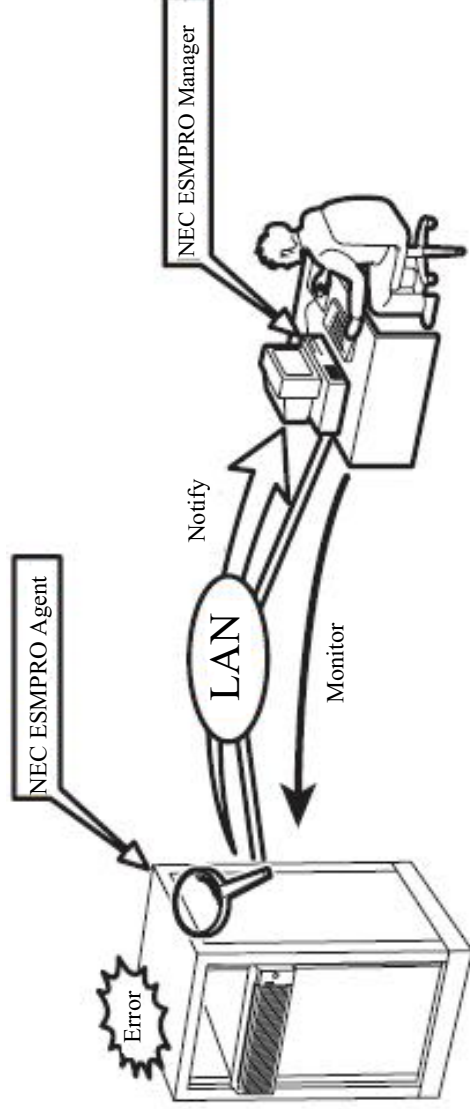
```
# rm /etc/cron.daily/esmrestart
```

5. Reboot the OS.

```
# sync  
# reboot
```

NEC ESMPRO Manager

Linked with NEC ESMPRO Agent installed in the server, NEC ESMPRO Manager monitors the server status and receives alerts from the server.



When a failing module in the server is to be replaced, NEC ESMPRO Manager enables logical module disconnection from the server and logical installation after module replacement. For the installation of NEC ESMPRO Manager and notes on the operation, see the separate volume of the *User's Guide*.

Set up for PCs on Network

If you have computers which communicate with Express5800/ft servers through TCP/IP protocol and operate on Windows Server 2003/Windows XP/Windows 2000/Windows NT 4.0/Windows 95/Windows 98/Windows ME, the following configuration is required on all the computers.

1. Copy the following file in the “ft control software for VMware Infrastructure installation CD” and copy it to an arbitrary directory.
\\NECLANG\EN\PROG\FTREG.EXE
2. Run Command prompt and type the directory where you copied the above file, then enter the following command.

FTREG.EXE

This configuration aims to avoid possibility of timeout if the connection fails and there is no communication between Express5800/ft server (including guest OS that operates on Express5800/ft servers) and computers that connect with LAN protocol, just after starting up Express5800/ft server or when reinstalling CPU modules (duplex process).

On Express5800/ft server (including guest OS that operates on Express5800/ft server), just after starting up the server or when reinstalling CPU modules, duration of the connection failure largely changes depending on the mounted memory size and system operating status.

The max duration of communication failure is as follows on each memory size.

<u>Memory size</u>	<u>Duration of communication failure</u>
2GB	About 8 Sec
4GB	About 12 Sec
8GB	About 22 Sec
12GB	About 32 Sec
24GB	About 64 Sec

This setting program is to configure the following registry of Windows.

Windows XP/Windows NT/Windows 2000/Windows Server 2003

Registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters

Value: TcpMaxConnectRetransmissions

Type: REG_DWORD

Configuration value: 5

Value: TcpMaxDataRetransmissions

Type: REG_DWORD

Configuration value: 8

Value: TcpMaxConnectResponseRetransmissions

Type: REG_DWORD

Configuration value: 5

Windows 95/Windows 98/Windows Me

Registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\VxD\MSTCP

Value: MaxConnectRetries

Type: String

Configuration value: 5

Value: MaxDataRetries

Type: String

Configuration value: 8

Disable Auto Reinstallation of CPU Module

You can disable the auto reinstallation of CPU module with the following configuration. You can shift the timing of no communication that occurs during the installation process of CPU module by disabling the auto reinstallation of CPU module and manually enabling the installation of the module.

[Tips]

Auto reinstallation of CPU module is enabled by default.

Even if auto reinstallation of CPU is disabled, the installation process occurs only when the system is starting up by a reboot.

[Caution]

This configuration just shifts the timing of the connectio timeout and does neither control nor avoid the timeout. Furthermore, this configuration does not prevent no communication timeout from occurring.

You need to configure this as a root user.

Disable auto reinstallation of CPU module

1. Confirm auto reinstallation of CPU module is enabled
/opt/ft/bin/ftsmaint bringupPolicy list

CPU bringup policy is enabled.

2. Disable auto reinstallation of CPU module
/opt/ft/bin/ftsmaint bringupPolicy defer

Successfully deferred cpuBringupPolicy.

3. Confirm auto reinstallation of CPU module is disabled.
/opt/ft/bin/ftsmaint bringupPolicy list

CPU bringup policy is deferred.

Manually install CPU module

1. Confirm which CPU/IO module is the primary.
CPU/IO module 0 is the primary – Path of CPU module to be installed is 1.
CPU/IO module 1 is the primary – Path of CPU module to be installed is 0.
2. Install CPU module (Run the following command depending on the status of CPU/IO module)
- CPU/IO module 0 is the primary
/opt/ft/bin/ftsmaint bringup 1

Completed bringUp on the device at path 1.

- CPU/IO module 1 is the primary
/opt/ft/bin/ftsmaint bringup 0

Completed bringUp on the device at path 0.

Confirm LEDs illuminate in green.

Status lamp 2 of CPU/IO module 0: Green

Status lamp 2 of CPU/IO module 1: Green

Enable auto reinstallation of CPU module

1. Confirm auto reinstallation of CPU module is disabled.
/opt/ft/bin/ftsmaint bringupPolicy list

CPU bringup policy is deferred.

2. Enable auto reinstallation of CPU module
/opt/ft/bin/ftsmaint bringupPolicy enable
Successfully deferred cpuBringupPolicy.

3. Confirm auto reinstallation of CPU module is enabled.
/opt/ft/bin/ftsmaint bringupPolicy list

CPU bringup policy is enabled.

You can also limit the auto reinstallation of CPU timing by combination with cron daemon.

1. Add configuration to `/etc/crontab`

Example: Disable auto reinstallation of CPU module from 6:00 to 18:15 everyday.

Add the following rows to `/etc/crontab`

```
# Defer CPU bringup at 6:00 every day
```

```
# Enable CPU bringup at 18:15 every day
```

```
0 6 * * * root /opt/ft/bin/ftsmaint bringupPolicy defer
```

```
15 18 * * * root /opt/ft/bin/ftsmaint bringupPolicy enable
```

2. Reflect the configuration file of cron daemon.

```
# crontab -u root /etc/crontab
```

Confirmation of the Kernel Version

The following describes how to check the version of ESX Server and the version of the kernel in the service console.

Check the version following the steps below.

ESX Server

1. Run the following command on the service console.
esxupdate -l query

Service Console

1. Run the following command on the service console.
uname -a

The version of the kernel in operation is displayed.

This completes version confirmation.

Confirmation of the ft Server Control Software Version

The following describes how to check the version of ft Server Control Software. Perform the procedure when you need to check the ft Server Control Software version of the current system such as before adding units or attachment to NEC Express5800/ft series.

Confirm the version following the steps below:

1. Execute the command below.

```
# rpm -q lsb-ft-eula_display
```

The version of the ft Server Control Software in operation is displayed.

This completes the version confirmation.

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Chapter 6

Troubleshooting

This chapter describes what to do when files needed to operate the OS are damaged and any trouble occurs on the product.

SYSTEM REPAIR

For repairing the service console, try fsck.

IMPORTANT:

- If the sd device cannot be recognized by the service console, the system cannot be repaired.
- To execute this configuration, login as a user with root privilege.

```
# fsck -C -pvf /dev/sd*  
*:device ID
```

Try the guest OS repairing method according to each OS.

TROUBLESHOOTING

This section describes what you should do when a trouble occurs in the product.

Problems with NEC EXPRESSBUILDER

When the NEC Express5800/ft series cannot be booted from the NEC EXPRESSBUILDER DVD, check the following:

- Did you set the NEC EXPRESSBUILDER DVD during POST and restart the server?
 - If you do not set the NEC EXPRESSBUILDER DVD during POST and restart the server, an error message will appear or the OS will boot.
- Is BIOS setup correct?
 - The boot device order may be specified with the BIOS setup utility of the server. Use the BIOS setup utility to change the boot device order so that the optical disk drive boots first.
 - <Menu to be checked: [Boot]>

When an error occurs while the NEC EXPRESSBUILDER is in progress, the following message appears. After this message appears, check the error and take the appropriate corrective action according to the error codes listed in the table below.

Message	Cause and Remedy
This machine is not supported.	This NEC EXPRESSBUILDER version is not designed for this server. Execute the NEC EXPRESSBUILDER on the compliant server.
NVRAM access error	An access to the nonvolatile memory (NVRAM) is not acceptable.
Hard disk access error	The hard disk is not connected or it is failed. Check whether the hard disk is correctly connected.
The system-specific information does not exist on the baseboard. Please restore the backup data or write the data by using [System Information Management] of the Off-line Maintenance Utility. Only the authorized personnel are allowed to do this operation.	This message is displayed when NEC EXPRESSBUILDER cannot find device specific information due to the replacement of a motherboard, etc. Contact your maintenance service company.

An error message will also be displayed when an error was detected during system diagnosis. Take a note or print the error message displayed, and contact your sales agent.

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Appendix A

About Services

Information on NEC Express5800/ft series is provided the web at NEC Express5800 Web ASIA
PACIFIC

<http://www.nec.co.jp/express/>

N8800-128F, EXP320J
NEC Express5800/320Fd-LR
N8800-129F, EXP320K
NEC Express5800/320Fd-MR
User's Guide (Setup)



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