NovaScale 4040

Quick Start Guide

NOVASCALE

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Quick Start Guide

Hardware

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Regulatory Specifications and Disclaimers

Declaration of the Manufacturer or Importer

We hereby certify that this product is in compliance with European Union EMC Directive 89/336/EEC, using standards EN55022 (Class A) and EN55024 and Low Voltage Directive 73/23/EEC, using standard EN60950. The product has been marked with the CE Mark to illustrate its compliance.

Safety Compliance Statement

- UL 60950 (USA)
- IEC 60950 (International)
- CSA 60950 (Canada)

European Community (EC) Council Directives

This product is in conformity with the protection requirements of the following EC Council Directives:

Electromagnetic Compatibility

- 89/336/EEC

Low Voltage

- 73/23/EEC

EC Conformity

- 93/68/EEC

Telecommunications Terminal Equipment

- 199/5/EC

Neither the provider nor the manufacturer can accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product.

Compliance with these directives requires:

- an EC declaration of conformity from the manufacturer

- an EC label on the product

- technical documentation

Federal Communications Commission (FCC) Statement

☞ **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.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Neither the provider nor the manufacturer are responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment. The customer is responsible for ensuring compliance of the modified product.

FCC Declaration of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canadian Compliance Statement (Industry Canada)

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

Cet appareil numérique de la classe A est conforme à la norme NMB–003 du Canada.

This product is in conformity with the protection requirements of the following standards:

Electromagnetic Compatibility
- ICES–003
- NMB–003

Laser Compliance Notice

This product that uses laser technology complies with Class 1 laser requirements.

A CLASS 1 LASER PRODUCT label is located on the laser device.

Class 1 Laser Product **Luokan 1 Laserlaite** **Klasse 1 Laser Apparat** **Laser Klasse 1**

Definition of Safety Notices

⚠ **DANGER**
A *Danger* notice indicates the presence of a hazard that has the potential of causing death or serious personal injury.

⚠ **CAUTION:**
A *Caution* notice indicates the presence of a hazard that has the potential of causing moderate or minor personal injury.

⚠ **Warning:**
A *Warning* notice indicates an action that could cause damage to a program, device, system, or data.

Electrical Safety

The following safety instructions shall be observed when connecting or disconnecting devices to the system.

⚠ **DANGER**
The Customer is responsible for ensuring that the AC electricity supply is compliant with national and local recommendations, regulations, standards and codes of practice.
An incorrectly wired and grounded electrical outlet may place hazardous voltage on metal parts of the system or the devices that attach to the system and result in an electrical shock.
It is mandatory to remove power cables from electrical outlets before relocating the system.

⚠ **CAUTION:**
This unit has more than one power supply cable. Follow procedures for removal of power from the system when directed.

Laser Safety Information

The optical drive in this system unit is a classified as a Class 1 level Laser product. The optical drive has a label that identifies its classification.

The optical drive in this system unit is certified in the U.S. to conform to the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J for Class 1 laser products. Elsewhere, the drive is certified to conform to the requirements of the International Electrotechnical Commission (IEC) 60825–1: 2001 and CENELEC EN 60825–1: 1994 for Class 1 laser products.

⚠️ **CAUTION:**
Invisible laser radiation when open. Do not stare into beam or view directly with optical instruments.

Class 1 Laser products are not considered to be hazardous. The optical drive contains internally a Class 3B gallium–arsenide laser that is nominally 30 milliwatts at 830 nanometers. The design incorporates a combination of enclosures, electronics, and redundant interlocks such that there is no exposure to laser radiation above a Class 1 level during normal operation, user maintenance, or servicing conditions.

Data Integrity and Verification

⚠️ **Warning:**
Bull NovaScale Servers are designed to reduce the risk of undetected data corruption or loss. However, if unplanned outages or system failures occur, users are strongly advised to check the accuracy of the operations performed and the data saved or transmitted by the system at the time of outage or failure.

Presentation

The server is delivered rack–mounted, pre–cabled and pre–configured in one 19"/19U or 19"/36U cabinet, according to the version chosen.

Figure 1.   19" / 19U and 19" / 36U cabinets

Configuration Examples
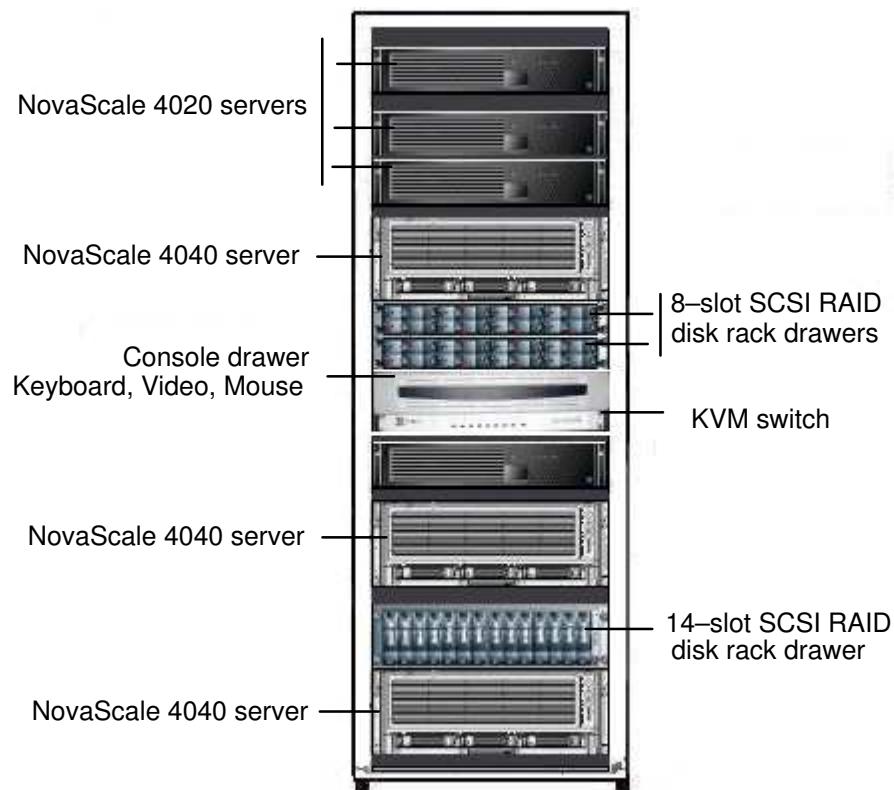
Figure 2.   36U cabinet configuration (example)

- NovaScale 4020 servers
- NovaScale 4040 server
- Console drawer Keyboard, Video, Mouse
- NovaScale 4040 server
- NovaScale 4040 server
- 8–slot SCSI RAID disk rack drawers
- KVM switch
- 14–slot SCSI RAID disk rack drawer
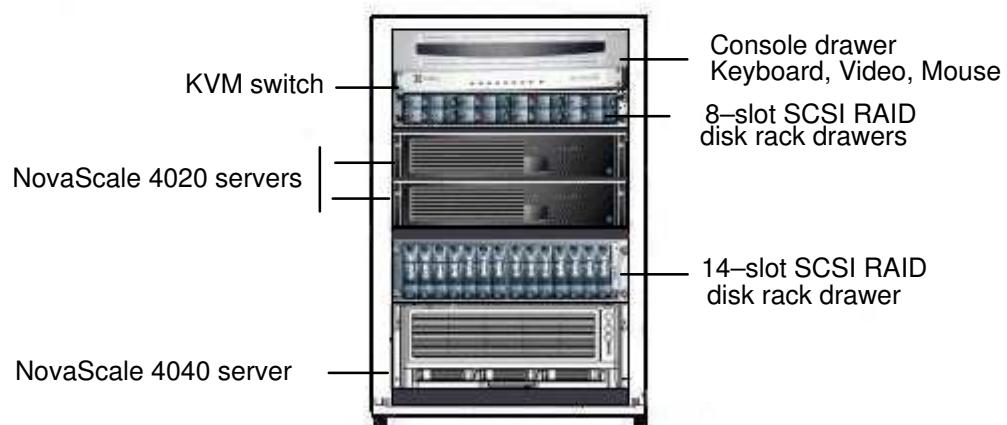
Figure 3.   19U cabinet configuration (example)

- KVM switch
- NovaScale 4020 servers
- NovaScale 4040 server
- Console drawer Keyboard, Video, Mouse
- 8–slot SCSI RAID disk rack drawers
- 14–slot SCSI RAID disk rack drawer

Important Safety Instructions

Before proceeding to install the server, read all caution and safety statements at the end of this document.

CAUTION:
Electrostatic discharge (ESD) can damage disk drives, add–in cards, and other parts. This server can withstand normal levels of environmental ESD. Wear an anti–static wrist strap attached to chassis ground of the server (i.e. any unpainted metal surface) when handling components.

CAUTION:
Grounded outlet:
Ensure that the power service connection is through a properly grounded outlet.

Warning:
The following instructions are to be complied with for all rack–mounted servers:

Main AC power disconnects:
You are responsible for installing an AC power disconnect for the entire cabinet. This main disconnect must be readily accessible, and it must be labeled as controlling power to the entire cabinet and not just to the server(s).

Grounding the cabinet:
To avoid the potential for an electrical shock hazard, you must provide three–wire safety–grounding for the cabinet and its contents.

Overcurrent protection:
Each server is designed for an AC line voltage source with up to 20 amperes of overcurrent protection. If the power system for the cabinet is installed on a branch circuit with more than 20 amperes of protection, you must provide supplemental protection for the server.

Checking Power Cords

⚠ **Warning:**
The Power button on the server control panel does not completely remove AC power. To completely remove AC power from the server, you must unplug all AC power cords from the server or from the wall outlet.

⚠ **Warning:**
Do not attempt to modify or use an AC power cord that is not the exact type required.

Rack–mounted servers:

1. **Server power units must be connected to the PDU(s) (Power Distribution Unit(s)) located inside the cabinet. Connect server power cords to the outlets at the front of the PDU(s). Do NOT use the outlets at the rear of the PDU(s).**

2. **Connect the PDU(s) to the site power supply with the power cord(s) provided with the PDU(s).**

Desktop servers:

1. **U.S. / Canada:**
   Cords must be UL Listed/CSA Certified, 16/3, 75C type, VW–1, SJT/SVT, with NEMA 5–15P or NEMA 6–15P attachment plug and IEC 320 C13 input power connector rated 15 amps.

   Outside U.S. / Canada:
   Cords must be flexible harmonized (<HAR>) rated 250V, 1.0 mm minimum conductor size with IEC 320 C13 input power connector and rated for no less than 10 amps.

2. **AC attachment connector:**
   The AC wall attachment plug should be a three conductor grounding type in compliance with the national and regional standards in force :

   – **Nominal voltage: 125 V / 250 V**

   – **Nominal amperage: 15 A**

   The AC wall attachment plug must bear an accepted safety agency certification mark for the specific country or country.

3. **Input power connector, server end:**
   The connectors that plug into the AC receptacles on the server must be an IEC 320, sheet C13 type female connectors :

   – **Nominal voltage: 125 V / 250 V**

   – **Nominal amperage: 15 A**

☞ **Note:**
Surge Suppressor Recommendations:
In geographic regions that are susceptible to electrical storms, we highly recommend that you plug the server into a surge suppressor.

EMI Information:
For information about complying with electromagnetic interference regulations, see "Electromagnetic Compatibility" in the *NovaScale User's Guide.*

Delivery

Site preparation must be completed by the pre–arranged delivery date. Any delay due to non–completion of the site by the pre–arranged date will be considered as the Customer's responsibility. See the *NovaScale Series Site Preparation Guide.*

The server is delivered 24 hours in advance of the scheduled installation date. On arrival, the server must be placed, in its packing, in the Computer Room so that it reaches room temperature before powering up (optimum operating temperature = 22° C ± 3° C, hygrometry = 50% ± 5%).

⚠ **CAUTION:**
It is mandatory for the server to be transported vertically. The server cabinet is extremely heavy and requires the use of an elevator. The Data Processing Site manager must allocate enough personnel to ensure safe handling.

Connections and Controls

Figures 4 and 5 show the NovaScale 4040 Server and peripheral bay module.
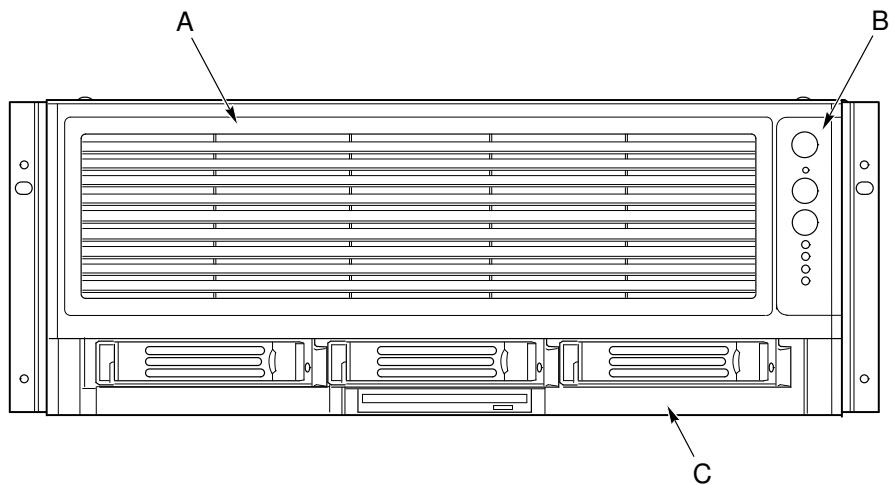
OM12885

A   Bezel
B   Front Panel
C   Peripheral Bay Module

Figure 4.   NovaScale 4040 Server Front View
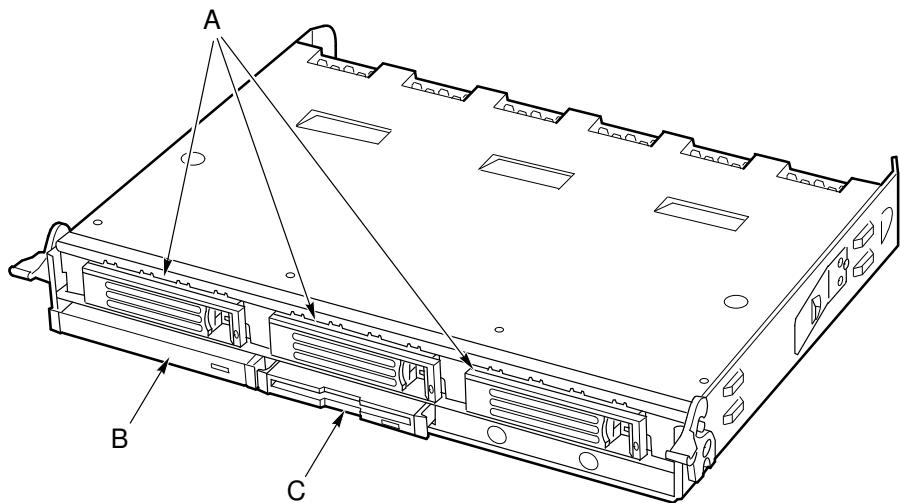
OM12905

A   Hot swap SCSI hard disk drives
B   DVD/CD–ROM drive
C   LS–240 floppy diskette drive

Figure 5.   NovaScale 4040 Server Peripheral Bay Module

Figure 6 shows server drawer control panel status lights for fans, hard drives and power supplies.
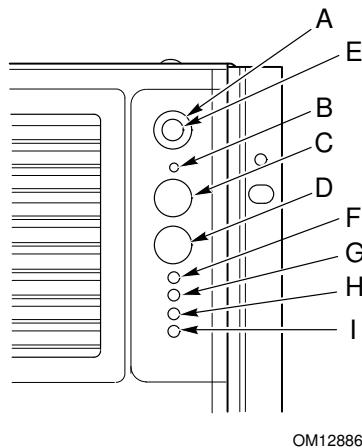

OM12886

Figure 6.   NovaScale 4040 Server Control Panel Status Lights

Item	Feature	Description
Switches		
A	System ID Switch	Toggle switch for blue System ID LEDs (the front panel system ID LED is located inside the system ID switch). See E below for description of LED operation.
B	Assert SDINT (System Diag-nostic Interrupt) Switch	Asserts SDINT. This switch is accessible through a small opening and requires a narrow tool to activate.
C	Reset switch	Resets the system.
D	Power switch	Toggles system power.
LED Indicators		
E	System ID (Blinking or Solid Blue). The system ID LEDs are located inside the system ID switch on the front panel, and on the back panel.	Identifies the system. The system ID is activated either by the system ID switch or through server management software. Pressing the system ID switch once turns on the LEDs solid blue Press the system ID switch again, the solid blue LEDs turn off Remove activation – LEDs turn on blinking for 4 min-utes (max). LEDs cannot be turned off by pressing the switch.
F	Main Power (Solid Green, Blinking Green indicates the system is in sleep mode.)	A continuously lit LED indicates the presence of DC power in the system. The LED goes out when the pow-er is turned off or the power source is disrupted. Off indicates power off.
G	Power Fault (Solid Amber)	Indicates any system power faults. Off indicates power is OK.
H	Cooling Fault (Solid Amber)	Indicates any system cooling faults. Off indicates sys-tem cooling is OK.
I	General Fault (Solid amber)	Indicates a system failure. Off indicates system is OK.

Table 1.   NovaScale 4040 Server Control Panel Status Lights

Figure 7 shows the features found on the server drawer rear panel including the I/O module, the power supply modules, and user–accessible connectors.

OM12888
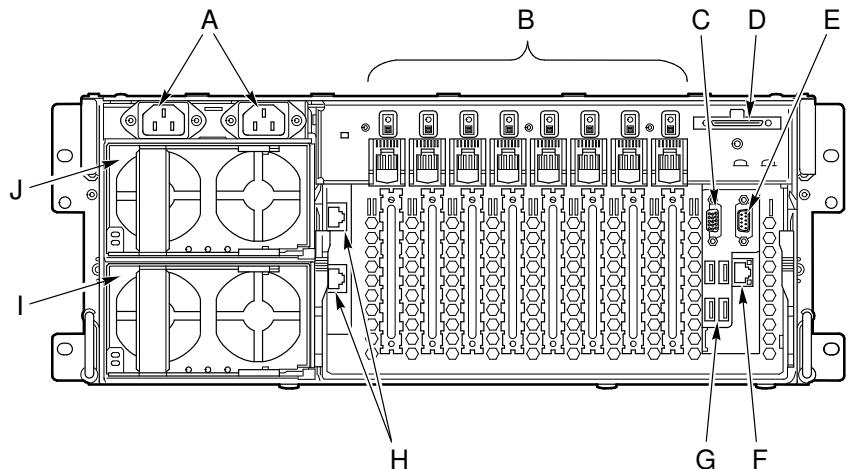
A	AC input power connectors
B	PCI Slots (All slots support hot plug PCI add–in cards)[1]
	Slots 1 through 4 100–MHz, 64–bit PCI–X slot, half length
	Slot 5 100–MHz, 64–bit PCI–X slot, full length
	Slots 6 through 8 133–MHz, 64–bit PCI–X slot, full length
C	Video port, standard VGA compatible, 15–pin connector
D	External SCSI connector[2]
E	Serial port, 9–pin RS–232 connector[3]
F	Ethernet port, RJ45 connector
G	Four USB ports, 4–pin connectors
H	ICMB connectors in/out (optional)
	ICMB port 1, SEMCONN 6–pin connector
	ICMB port 2, SEMCONN 6–pin connector
I	Power supply 2
J	Power supply 1
Notes:	1. PCI slots support 3.3–V signal adapter cards only.
	2. External SCSI bus supports both LVDS and SE signals via the external SCSI connector.
	3. Emergency Management Port (EMP) access is provided via the shared serial port.

Figure 7.   NovaScale 4040 Server Rear Panel

Connecting the Monitor, Keyboard, and Mouse

⚠ **CAUTION:**
Unplug server before connecting external devices, make sure the server is not plugged in or equipment could be damaged.

Before powering on the server, you must connect these devices to the back of the NovaScale 4040 Server.

1. Video monitor to the video port (C in Figure 7.)

2. Keyboard to a USB port (G in Figure 7.)

3. Mouse to a USB port (G in Figure 7.)

Powering On the Server for the First Time

The first time you power on the server, you need to enter the BIOS Setup Utility and set the correct date and time values. The server then executes its Power–On Self Test (POST) sequence and passes control to the Boot Manager. From the Boot Manager, you can mount the DVD/CD–RW device to block zero and then load the operating system.

For further information about the Boot Manager, the EFI Shell, and the BIOS Setup Utility, refer to the *NovaScale 4040 User's Guide*.

Warning:
The EFI shell can only manage QWERTY keyboards. If you have an AZERTY keyboard, please refer to the AZERTY/QWERTY keyboard lookup table on page 20.

Follow these steps to power on the NovaScale 4040 Server for the first time:

1. Ensure that all external devices are connected (monitor, keyboard, mouse, disk racks, printers, etc).

2. Connect the server power supply cable(s) to the power supply outlet.

3. Power on the video monitor.

4. Press the Power button on the server drawer control panels (F in Figure 6. Server Draw Control Panel). The server fans start up and POST begins.

5. When POST displays the message:

    "Hit <F2> if you want to run SETUP,"

    enter <F2>. The system will enter the BIOS Setup Utility.

    If you see a prompt asking for a system password, press the <ENTER> key for direct access to the BIOS Setup Utility.

6. From the BIOS Setup Utility **Main** menu, use the arrow keys to move the cursor down to system date and time selections. Position the cursor over the date and time values and enter appropriate values. Use the <tab> key to move within the date and time fields.

7. Use the arrow key to access the **Exit** menu and select **Save changes and exit the BIOS Setup Utility**. After you exit the utility, the boot procedure resumes. You can monitor the remainder of the boot progress on the video display.

Note:
POST checks the processors, memory, keyboard, and most installed peripheral devices. During the memory test, POST displays the amount of memory it is able to access and test. The length of time needed to test memory depends on the amount of memory installed. POST is stored in flash memory.

8. The AMI* BIOS banner displays the loaded versions of the BIOS, PAL, SAL, and EFI.

9. The LSI* banner appears and indicates the recognized drives. Note that a Platform Configuration EFI based configuration utility is required to enter the LSI SCSI utility. The LSI* SCSI utility enables you to manage and configure the server's SCSI devices.

10. POST concludes and passes control to the Boot Manager.

11. From the Boot Manager, you can use the arrow keys to highlight and select the option that invokes the EFI Shell or the **Boot Maintenance Menu**. Booting to the EFI Shell causes the following prompt to appear:

    ```
    Shell>
    ```

12. Mount the DVD/CD–RW device as block zero. See "*Mounting the DVD/CD–RW Device*" below.

13. Boot the operating system that you want to run on the server.

Mounting the DVD/CD–RW Device

You must mount the DVD–CD–RW drive before you can use it to read media:

1. Ensure that you are in the EFI Shell. You should see the following prompt:

```
Shell>
```

2. For the **mount** command in the next step to work, the drive must be loaded with media.

3. At the shell prompt, enter the following command:

```
mount -r
```

The media in the DVD/CD–RW drive is mapped to one of the file systems, i.e., FS0:, FS1:, FS2. Change to the appropriate file system and enter the following command:

```
ls
```

The NovaScale 4040 Resource CD

The *NovaScale 4040 Resource CD* has the following contents: Utilities (SDRViewer™, SELViewer™, FRUSDR Loader™, System Maintenance Utility (SMU), EFI Platform Diagnostics), the *NovaScale 4040 Quick Start Guide* (this guide), the *NovaScale 4040 User's Guide* and Adobe™ Acrobat Reader.

The Resource CD comes with a menu driven program that can be used for the following:

1. Create a removable media containing utilities, service partition and diagnostics.

2. Install EFI* Service Partition. The EFI service partition supports remote access to the NovaScale 4040 Server, via modem or LAN, for the purpose of executing configuration/setup utilities and diagnostics.

3. Run EFI–based utilities.

How to invoke the Resource CD menu.

1. Insert the Resource CD into the DVD/CD–RW drive before booting to EFI Shell.

2. Boot the system into EFI Shell; the EFI CD Menu program will launch automatically. If the EFI CD Menu program does not launch in the EFI Shell, mount and map to the CD drive, type '**startup**' and press <Enter> to launch the EFI CD Menu.

3. Arrow key over to the Utilities and select the utility you want to run.

The NovasScale 4040 User's Guide

The *NovaScale 4040 User's Guide* comes as a single .PDF file shipped on the resource CD. You can use Adobe™ Acrobat Reader to view the guide.

AZERTY/QWERTY Keyboard Lookup Table

2	1	2	3	4	5	6	7	8	9	0	°	+
	&	é ~	" #	' {	([	− |	è '	_ \	ç ^	à @	)]	= }

A	Z	E	R	T	Y	U	I	O	P	¨ ^	£ $ ¤

Q	S	D	F	G	H	J	K	L	M	% ù	µ *

> <	W	X	C	V	B	N	? ,	. ;	/ :	§ !

Figure 8.   AZERTY keyboard

~ '	! 1	@ 2	# 3	$ 4	% 5	^ 6	& 7	* 8	(9	) 0	_ −	+ =

Q	W	E	R	T	Y	U	I	O	P	{ [	}]	| \

A	S	D	F	G	H	J	K	L	: ;	" ,

	Z	X	C	V	B	N	M	< ,	> .	? /

Figure 9.   QWERTY keyboard

NovaScale 4040 Server Cabinet Specifications

NovaScale 4040 servers are delivered rack–mounted in a 19U or 36 U cabinet.

36U Cabinet Dimensions / Weight	
Unpacked	**Packed**
Height: 174.0 cm (68.5 in)	Height: 200.5 cm (80.7 in)
Width: 65.0 cm (25.6 in)	Width: 80.0 cm (31.5 in)
Depth: 113.6 cm (44.7 in)	Depth: 120.0 cm (47.2 in)
Weight (empty): 225 kg (496 lb)	Weight (empty): 255 kg (562 lb)
Weight (full): 680 kg (1280 lb)	Weight (full): 610 kg (1345 lb)

19U Cabinet Dimensions / Weight	
Unpacked	**Packed**
Height: 100.0 cm (39.4 in)	Height: 118.0 cm (46.49 in)
Width: 65.0 cm (25.6 in)	Width: 80.0 cm (31.5 in)
Depth: 113.6 cm (44.7 in)	Depth: 120.0 cm (47.2 in)
Weight (empty): 200 kg (440 lb)	Weight (empty): 230 kg (507 lb)
Weight (full): 390 kg (860 lb)	Weight (full): 420 kg (927 lb)

Service Clearance	
Front	150 cm
Rear	100 cm
Side (left and right)	100 cm

Power Cables	
AC (20A)	1 per PDU
Cable type	3 x 4mm^2 / AWG # 12 (US)
Connector type	C22 Appliance Coupler

It is mandatory for power lines and terminal boxes to be located within the immediate vicinity of the system and to be easily accessible. Each power line must be connected to a separate, independent electrical panel and bipolar circuit breaker. The PDU requires an extra cable length of 1.5 meters for connection inside the cabinet.

Electrical Specifications	
(power supplies are auto–sensing and auto–ranging)	
Current draw	24 A max. at 240 VAC input per PDU
Power consumption	8800 VA (max. 36U cabinet) 5500 VA (max. 19U cabinet) 5700 VA (max. per PDU)
Thermal dissipation	1500 VA / 5100 BTU (per NovaScale 4040 CPU drawer) 650 VA / 2300 BTU (per NovaScale 4020 CPU drawer)
Europe	
Nominal voltage	230 VAC (Phase / Neutral)
Voltage range	207 – 244 VAC
Frequency	50 Hz $\pm$ 1%
United States of America	
Nominal voltage	208 VAC (Phase / Neutral)
Voltage range	182 – 229 VAC
Frequency	60 Hz $\pm$ 0.3%
Japan	
Nominal voltage	200 VAC (Phase / Neutral)
Voltage range	188 – 212 VAC
Frequency	60 Hz $\pm$ 0.2%
Brazil	
Nominal voltage	220 VAC (Phase / Neutral)
Voltage range	212 – 231 VAC
Frequency	60 Hz $\pm$ 2%
Breaker Protection	
Mains power PDU Maximum inrush current	20A Curve C 210A / per quarter period

Table 2.   NovaScale 4040 Server cabinet specifications

NovaScale 4040 Server CPU Drawer Specifications

Dimensions / Weight
Height	17.53 cm (6.9 in, 4U)
Width	44.45 cm (17.5 in)
Depth	71.12 cm (28.0 in)
Weight	48.08 kg (106 lbs)

Electrical
Power	1500 VA
Voltage range (V ac)	200 V ac to 240 nominal, autoranging +6%, −10%
Frequency	50 to 60 Hz $\pm$ 5%
current	6.4 amps
Thermal output (typical)	6100 Btu/hr

Temperature Requirements	**Operating**	**Non–Operating**
Dry Bulb Temperature	10 to 35°C	−40 to 70°C
	(50 to 95°F)	(−40 to 158°F)
Gradient	Not stated	Not stated

Humidity Requirements	**Operating**	**Non–Operating**
(noncondensing)	Not stated	90% at 25 to 35°C
Gradient	Not stated	Not stated
Max. Wet Bulb Temperature	Not stated	Not stated
Moisture Content	Not stated	Not stated

Noise Emissions (1)	**System Running**	**System Idle**
Sound Power (Dome method)	7.0 BA	Not stated
Sound Pressure (Bystander, Floor–standing)	60 dBA	N/A

(1) Acoustic tests at room temperature of 28°C (82°F) without failure condition.

Table 3. NovaScale 4040 Server CPU drawer specifications

Warnings

WARNING: English (USA)
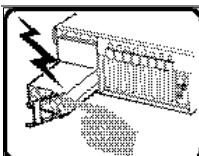
The power supply in this product contains no user–serviceable parts. There may be more than one supply in this product. Refer servicing only to qualified personnel.
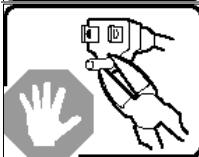
Do not attempt to modify or use the supplied AC power cord if it is not the exact type required. A product might be equipped with more than one AC power cord.
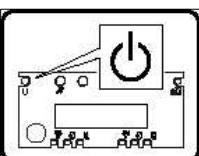
The power button on the system does not turn off all system AC power. To remove all AC power from the system, you must unplug each AC power cord from the wall outlet or power supply.

To avoid injury from electrical and mechanical hazards, chassis covers should only be removed by qualified service personnel.

SAFETY STEPS: Whenever you remove the chassis covers to access the inside of the system, follow these steps:

4. Turn off all peripheral devices connected to the system.

5. Turn off the system by pressing the power button.

6. Unplug all AC power cords from the system or from wall outlets.

7. Label and disconnect all telecommunication cables and all other cables connected to I/O connectors or ports on the back of the system.

8. Provide some electrostatic discharge (ESD) protection by wearing an anti–static wrist strap attached to chassis ground of the system—any unpainted metal surface—when handling components.

9. Do not operate the system with the chassis covers removed.
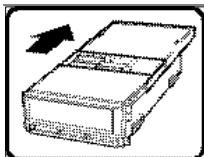
After you have completed the six SAFETY steps above, remove the covers as follows:

1. To open the top *back* cover, push the sliding latches on the top of the cover and pull the cover toward the back of the chassis.

2. To remove the top back cover, continue to slide the cover toward the back of the chassis until it reaches the end–stops. Press the latch on the left rail slide and pull the cover until it clears the chassis.

3. To remove the top *front* cover, loosen the two captive screws on either side of the cover, slide the cover toward the front of the chassis until it stops, then lift the cover off.

4. Always replace the covers before operating the system.
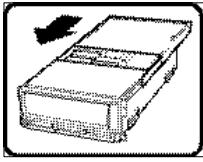
For proper cooling and airflow, unless hot swapping PCI cards or fans, always reinstall the chassis covers before turning on the system. Operating the system without the covers in place can damage system parts. To install the covers:

1. Check first to make sure you have not left loose tools or parts inside the system.

2. Check that cables, add–in boards, and other components are properly installed.

3. To replace the top back cover, slide the two bearing cages on the back top cover all the way to the end of the slides.

4. Place the top cover on the cover slides and push the cover into place.

5. To replace the top front cover, attach the back edge of the front top cover to the chassis, lower the front edge of the cover onto the chassis, then push the cover into place.

6. Tighten the two captive screws on either side of the cover.

7. Connect all external cables and the AC power cord(s) to the system.
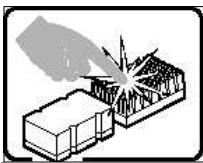
A microprocessor and heat sink might be hot if the system has been running. Also, there might be sharp pins and edges on some board and chassis parts. Contact should be made with care. Consider wearing protective gloves.

Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

The system is designed to operate in a typical office environment. Choose a site that is:

• Clean and free of airborne particles (other than normal room dust).

• Well–ventilated and away from sources of heat including direct sunlight.

• Away from sources of vibration or physical shock.

• Isolated from strong electromagnetic fields produced by electrical devices.

• Protected when in regions that are susceptible to electrical storms. We recommend you plug your system into a surge suppresser and disconnect telecommunication lines to your modem during an electrical storm.

• Provided with a properly grounded wall outlet.

• Provided with sufficient space to access the power supply cords, because they serve as the product's main power disconnect.
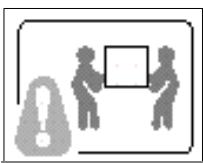
Servers can be too heavy for a single person to lift or move safely. Depending on the server, use two people or a mechanical assist to lift or move the server.

AVERTISSEMENTS : Français
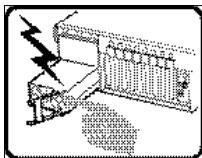
Le bloc d'alimentation de ce produit ne contient aucune pièce pouvant être réparée par l'utilisateur. Ce produit peut contenir plusieurs blocs d'alimentation. Veuillez contacter un technicien qualifié en cas de problème.
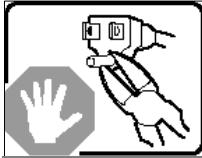
Ne pas essayer d'utiliser ni de modifier le câble d'alimentation CA fourni, s'il ne correspond pas exactement au type requis. Un produit peut être équipé de plus d'un câble d'alimentation CA.
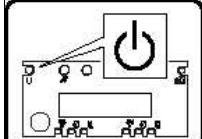
Le bouton d'alimentation du système n'éteint pas toutes les alimentations CA du système. Pour mettre complètement le système hors tension, vous devez débrancher chaque cordon d'alimentation CA de sa prise.

Pour éviter toute lésion à la suite de risques électriques et mécaniques, les panneaux du châssis ne doivent être démontés que par un personnel qualifié.

CONSIGNES DE SÉCURITÉ : Lorsque vous retirez les panneaux du châssis pour accéder à l'intérieur du système, suivez les étapes ci–dessous :

1. Mettez hors tension tous les périphériques connectés au système.

2. Mettez hors tension le système en appuyant sur le bouton d'alimentation.

3. Débranchez tous les cordons d'alimentation CA du système ou des prises murales.

4. Identifiez et déconnectez tous les câbles de télécommunications et tous les autres câbles reliés aux connecteurs E/S ou aux ports derrière le système.

5. Pour prévenir les décharges électrostatiques lorsque vous touchez aux composants, portez un bracelet antistatique et reliez–le à la masse du système (toute surface métallique non peinte du boîtier).

6. Ne faites pas fonctionner le système si les panneaux du châssis sont enlevés.
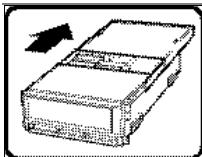
Une fois que vous avez effectué les six étapes de SÉCURITÉ, retirez les panneaux comme indiqué ci–dessous :

1. Pour ouvrir le panneau arrière supérieur, poussez sur les loquets coulissants placés sur le dessus du panneau et tirez ce dernier vers l'arrière du châssis.

2. Pour retirer le panneau arrière supérieur, continuez à le faire glisser vers l'arrière du châssis, jusqu'à ce qu'il atteigne les butées. Appuyez sur le loquet du rail gauche et retirez le panneau du châssis.

3. Pour retirer le panneau avant supérieur, desserrez les deux vis imperdables de chaque côté du panneau, faites glisser ce dernier vers l'avant du châssis au maximum, puis soulevez–le.

4. Remettez toujours le panneau en place avant de lancer le système.
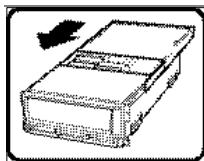
Pour un refroidissement et une circulation d'air efficaces, remettez toujours en place le panneau avant d'utiliser le système, sauf si vous disposez de cartes PCI ou de ventilateurs échangeables à chaud. Le fonctionnement du système sans les panneaux risque d'endommager ses composants. Pour installer les panneaux :

1. Assurez–vous en premier lieu de ne pas avoir oublié d'outils ou de composants à l'intérieur du système.

2. Vérifiez que les câbles, les cartes additionnelles et autres composants sont correctement installés.

3. Pour remettre en place le panneau supérieur arrière, faites glisser les cages à roulement du panneau jusqu'au bout des glissières.

4. Placez le panneau supérieur sur les glissières puis faites–le glisser jusqu'à la position fermée.

5. Pour remettre en place le panneau avant supérieur, accrochez la partie arrière du panneau sur le châssis, faites basculer ce dernier vers l'avant vers le châssis, puis poussez pour le bloquer en position fermée.

6. Serrez les deux vis imperdables de chaque côté du panneau.

7. Connectez tous les câbles externes et le ou les cordons d'alimentation au système.
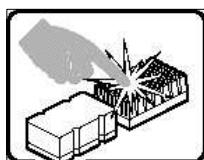
Le microprocesseur et le dissipateur de chaleur peuvent être chauds si le système a été sous tension. Faites également attention aux broches aiguës des cartes et aux bords tranchants du capot. Les contacts doivent être établis avec soin. L'usage de gants de protection est conseillé.

Danger d'explosion si la batterie n'est pas remontée correctement. Remplacer uniquement par une pile du même type ou de type équivalent recommandé par le fabricant. Débarrassez–vous des piles usagées conformément aux instructions du fabricant.
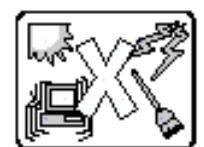
Le système a été conçu pour fonctionner dans un cadre de travail normal. L'emplacement choisi doit être :

• Propre et dépourvu de poussières en suspension (sauf la poussière normale).

• Bien aéré et loin des sources de chaleur, y compris du soleil direct.

• À l'abri des chocs et des sources de vibration.

• Isolé des forts champs électromagnétiques générés par des appareils électriques.

• Protégé s'il se trouve dans des régions sujettes aux orages magnétiques. Nous vous recommandons de connecter votre système à un suppresseur de surtension et de déconnecter les lignes de télécommunications de votre modem pendant un orage magnétique.

• Muni d'une prise murale correctement mise à la terre.

• Suffisamment spacieux pour vous permettre d'accéder aux câbles d'alimentation (ceux–ci étant le seul moyen de mettre le système hors tension).
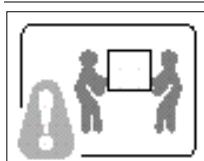
Il se peut que les serveurs soient trop lourds pour qu'une seule personne puisse les soulever et les déplacer en toute sécurité. En fonction du serveur, utilisez deux personnes ou utilisez un équipement mécanique auxiliaire pour soulever ou déplacer le serveur.

WARNUNG: Deutsch
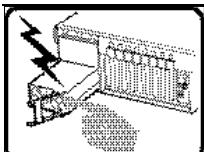
Das Netzteil dieses Computers enthält keine wartungsbedürftigen Teile. Dieses Produkt kann über mehrere Netzteile verfügen. Überlassen Sie Wartungsarbeiten nur qualifizierten Fachleuten.
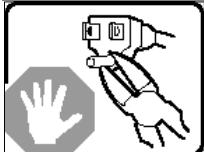
Versuchen Sie nicht, das mitgelieferte Netzkabel zu verändern oder einzusetzen, wenn es nicht exakt dem benötigten Kabeltyp entspricht. Das Produkt kann über mehrere Netzkabel verfügen.
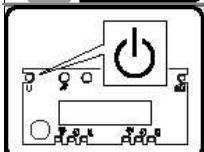
Durch Ausschalten des Netzschalters wird die Wechselstromversorgung des Systems
nicht unterbrochen. Um das System vom Netz zu trennen, müssen Sie das Netzkabel
aus der Steckdose oder vom Netzteil abziehen.

Vermeiden Sie Verletzungen aufgrund elektrischer oder mechanischer Gefahren; lassen Sie daher den Gehäusedeckel nur von technisch qualifiziertem Personal abnehmen.

SICHERHEITSHINWEISE: Beachten Sie beim Abnehmen der Gehäuseabdeckung und Arbeiten im Inneren des Systems folgende Schritte:

1. Schalten Sie alle am System angeschlossenen Peripheriegeräte ab.

2. Drücken Sie den Netzschalter, um das System abzuschalten.

3. Ziehen Sie alle Wechselstromkabel vom System und den Steckdosen ab.

4. Kennzeichnen Sie alle Telekommunikationsleitungen und sonstigen Kabel an den E/A–Steckern bzw. Anschlüssen an der Rückseite des Systems, und trennen Sie diese vom Netz.

5. Um sich gegen elektrostatische Entladung zu schützen, sollten Sie eine Antistatik–Manschette tragen, die Sie beim Arbeiten mit Komponenten zur Erdung an einem beliebigen unlackierten Metallteil befestigen.

6. Nehmen Sie das System nicht ohne Abdeckung in Betrieb.
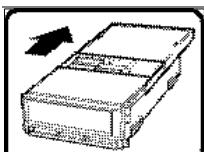
Nachdem Sie die sechs bereits beschriebenen Schritte zur SICHERHEIT befolgt haben, können Sie die Abdeckung, wie im folgenden erläutert, abnehmen.

1. Zum Öffnen der oberen, rückwärtigen Abdeckung, drücken Sie die Verriegelung oben an der Abdeckung und schieben die Abdeckung an das Ende des Gehäuses.

2. Um die obere, rückwärtige Abdeckung abzunehmen, schieben Sie die Abdeckung bis zum Anschlag an das Ende des Gehäuses. Drücken Sie die Verriegelung der linken Schienenkomponente, und ziehen Sie die Abdeckung vollständig vom Gehäuse ab.

3. Lösen Sie zum Abnehmen der oberen, vorderseitigen Abdeckung die beiden unverlierbaren Schrauben an beiden Seiten der Abdeckung. Schieben Sie dann die Abdeckung bis zum Anschlag Richtung Vorderseite des Gehäuses, und nehmen Sie sie ab.

4. Bringen Sie die Abdeckung vor Inbetriebnahme des Systems wieder an.
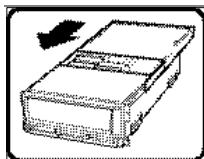
Bringen Sie die Gehäuseabdeckung vor Inbetriebnahme wieder an, um ordnungsgemäße Kühlung und Lüftung zu gewährleisten. Dies gilt nicht für das Hot–Swapping von PCI-Karten oder Ventilatoren. Die Inbetriebnahme des Systems ohne angebrachte Abdeckung kann zur Beschädigung von Systemkomponenten führen. So bringen Sie die Abdeckung wieder an:

1. Vergewissern Sie sich zunächst, daß Sie keine Werkzeuge oder Teile im Gehäuse vergessen haben.

2. Prüfen Sie, ob Kabel, Erweiterungskarten sowie weitere Komponenten ordnungsgemäß angebracht sind.

3. Schieben Sie zur Anbringung der hinteren, rückwärtigen Abdeckung die beiden Haltekomponenten bis zum Anschlag an das Ende der Schiene.

4. Legen Sie die obere Abdeckung in die Schienen ein, und schieben Sie die Abdeckung in Position.

5. Bringen Sie dann die rückwärtige Kante der oberen, vorderseitigen Abdeckung am Gehäuse an, senken Sie die vordere Kante der Abdeckung auf das Gehäuse, und schieben Sie die Abdeckung in Position.

6. Ziehen Sie die zwei unverlierbaren Schrauben an beiden Seiten der Abdeckung fest.

7. Schließen Sie wieder alle externen Kabel und Netzstecker an das System an.
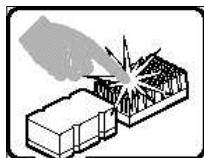
Mikroprozessor und Kühlkörper können heiß sein, wenn das System längere Zeit eingeschaltet war. Einige Platinen– und Gehäuseteile können scharfe Spitzen und Kanten aufweisen. Gehen Sie auf jeden Fall mit Vorsicht heran. Das Tragen von Schutzhandschuhen wird empfohlen.

Wird die Batterie unsachgemäß ausgewechselt, besteht Explosionsgefahr. Ersetzen Sie die Batterie nur durch denselben oder einen gleichwertigen Batterietyp, der vom Gerätehersteller empfohlen wird. Entsorgen Sie verbrauchte Batterien gemäß den Herstellerempfehlungen.

Das System ist für den Betrieb innerhalb normaler Büroumgebungen geeignet. Der Standort sollte folgende Anforderungen erfüllen:

• Saubere, möglichst staubfreie Umgebung.

• Gut belüftet und weit entfernt von Wärmequellen wie direkte Sonneneinstrahlung.

• Vibrations– und erschütterungsfreie Umgebung.

• Abgeschirmt von starken elektromagnetischen Feldern, die durch elektrische Geräte erzeugt werden.

• Entsprechender Schutz bei Betrieb in gewittergefährdeten Gebieten. Es empfiehlt sich, den Computer über einen Überspannungsschutz anzuschließen und die Verbindung zwischen dem Modem und dem Telefonanschluß im Falle eines Gewitters zu trennen.

• Ausgestattet mit einer ordnungsgemäß geerdeten Wandsteckdose.

• Sorgen Sie für ausreichend Platz, damit das Servernetzkabel problemlos erreicht werden kann, da das Gerät nur über dieses Kabel vom Netz getrennt wird.
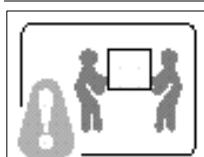
Um einen Server sicher anzuheben und zu bewegen ist eine Person nicht ausreichend. Bewegen Sie den Server, je nach Größe, entweder zu zweit oder mittels einer mechanischen Hilfe.

AVVERTENZA: Italiano
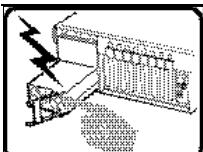
L'alimentatore contenuto nel computer non contiene parti riparabili dall'utente. Questo prodotto può essere fornito con più alimentatori. Per l'assistenza fare riferimento solo a personale qualificato.
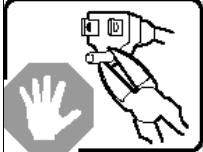
Non tentare di modificare o utilizzare cavi di alimentazione in c.a. che non siano del tipo prescritto. Un prodotto potrebbe contenere più di un cavo di alimentazione in c.a.
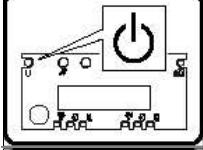
L'interruttore di accensione del sistema non scollega tutta l'alimentazione in c.a. del sistema. Per scollegare tutta l'alimentazione in c.a., è necessario disinserire ogni cavo di alimentazione in c.a. dalla presa a muro o dall'alimentatore.

Per evitare incidenti elettrici e meccanici, i coperchi del telaio devono essere rimossi da personale qualificato.

MISURE DI SICUREZZA: Nel caso sia necessario rimuovere i coperchi del telaio per accedere alle parti interne del sistema, procedere nel seguente modo:

1. Spegnere tutte le periferiche collegate al sistema.

2. Spegnere il sistema premendo il pulsante di accensione.

3. Scollegare tutti i cavi di alimentazione in c.a. dal sistema o dalle prese a muro.

4. Apporre un'etichetta e scollegare tutti i cavi di telecomunicazione e i cavi collegati ai connettori di I/O o alle porte sulla parte posteriore del sistema.

5. Assicurare un minimo di protezione da scariche elettrostatiche (ESD) indossando un bracciale antistatico collegato a un componente metallico non verniciato del telaio quando si maneggiano i componenti.

6. Non attivare il sistema nel caso in cui i coperchi del telaio siano stati rimossi.
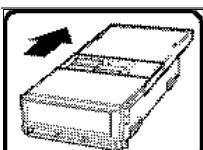
Dopo aver effettuato le sei operazioni di SICUREZZA descritte in precedenza, rimuovere i coperchi nel modo seguente:

1. Per aprire il coperchio superiore sul retro del sistema, premere le linguette di chiusura sulla parte superiore del coperchio e tirare il coperchio verso la parte posteriore del telaio.

2. Per rimuovere il coperchio superiore sul retro del sistema, continuare a far scorrere il coperchio verso la parte posteriore del telaio fino a raggiungerne le estremità. Premere la linguetta di chiusura sulla guida di scorrimento di sinistra e tirare il coperchio fino a liberare il telaio.

3. Per rimuovere il coperchio frontale superiore, svitare le due viti su entrambi i lati del coperchio, far scorrere il coperchio verso la parte frontale del telaio fino all'arresto, quindi togliere il coperchio.

4. Riposizionare sempre i coperchi prima dell'utilizzo del sistema.
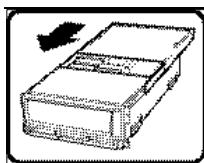
Per evitare che il sistema si surriscaldi e per garantire una ventilazione adeguata, in assenza di schede PCI e ventole sostituibili a computer acceso, reinstallare sempre i coperchi del telaio prima di attivare il sistema. Se si attiva il sistema senza aver riposizionato i coperchi correttamente, alcune parti del sistema potrebbero risultare danneggiate. Per installare i coperchi:

1. Verificare innanzitutto di non aver lasciato utensili o altre parti all'interno del sistema.

2. Verificare che i cavi, le schede aggiuntive e gli altri componenti siano stati installati correttamente.

3. Per riposizionare il coperchio superiore del retro del sistema, affiancare le due gabbie cuscinetto sul coperchio superiore del retro fino a raggiungere l'estremità delle guide di scorrimento.

4. Posizionare il coperchio superiore sulle guide di scorrimento del coperchio e premere il coperchio fino a raggiungere la posizione corretta.

5. Per riposizionare il coperchio frontale superiore, collegare al telaio l'estremità posteriore del coperchio frontale superiore, inserire l'estremità frontale del coperchio sul telaio, quindi spingere il coperchio fino a raggiungere la posizione corretta.

6. Stringere le due viti su entrambi i lati del coperchio.

7. Collegare tutti i cavi esterni e il cavo o i cavi di alimentazione in c.a. al sistema.
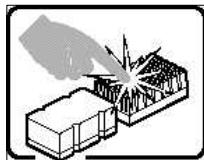
Se il sistema è stato in funzione, il microprocessore e il dissipatore di calore potrebbero essere caldi. Inoltre su alcune parti della scheda e del telaio potrebbero esserci piedini appuntiti e bordi taglienti. Prestare quindi molta attenzione nel toccarli. Indossare guanti protettivi.

Se sostituita in modo errato, la batteria potrebbe esplodere. Sostituire le batterie scariche solo con batterie originali o del tipo consigliato dal produttore dell'apparecchiatura. Per lo smaltimento delle batterie usate attenersi alle istruzioni del produttore.

Il sistema è concepito per l'utilizzo in ambienti adibiti a ufficio. Scegliere una postazione con le caratteristiche riportate di seguito.

• Pulita, priva di particelle diverse dalla polvere normalmente presente nell'ambiente di lavoro.

• Aerata e lontana da fonti di calore, compresa la luce solare diretta.

• Lontana da fonti di vibrazione o urti.

• Isolata da forti campi elettromagnetici prodotti da apparecchi elettrici.

• Protetta nelle regioni soggette a temporali. Durante un temporale, si consiglia di collegare il sistema a un limitatore di corrente e di scollegare le linee di telecomunicazione dal modem.

• La posizione prescelta deve essere dotata di una presa a muro con adeguata messa a terra.

• Deve inoltre esserci sufficiente spazio per accedere ai cavi di alimentazione nel caso sia necessario scollegare l'alimentazione principale.
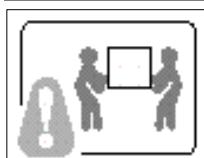
I server possono risultare troppo pesanti per essere sollevati o spostati da una sola persona. Alcuni server devono dunque essere sollevati o spostati da due persone o da un assistente tecnico.

ADVERTENCIA: Español
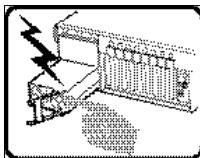
La fuente de alimentación de este producto no contiene piezas que puedan ser reparadas por el usuario. Puede que haya más de una fuente de alimentación en este producto. Para las reparaciones, consulte sólo con el personal cualificado.
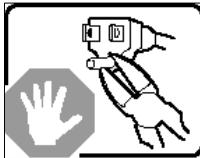
No intente modifica ni utilizar el cable de alimentación de CA suministrado si no es del tipo exacto requerido. Un producto puede estar equipado con más de un cable de alimentación de CA.
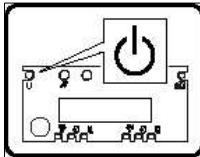
El botón de alimentación del sistema no desactiva toda la alimentación de CA del sistema. Para eliminar toda la alimentación de CA del sistema, deberá desenchufar todos los cables de alimentación de CA del enchufe de pared o de la fuente de alimentación.

Para evitar lesiones causadas por descargas eléctricas y mecánicas, únicamente puede retirar las cubiertas de las carcasas el personal técnico cualificado.

PASOS DE SEGURIDAD: Siempre que retire las cubiertas de las carcasas para acceder al interior del sistema, siga las instrucciones que se especifican a continuación:

1. Desactive todos los dispositivos periféricos conectados al sistema.

2. Pulse el botón de alimentación para desactivar el sistema.

3. Desenchufe todos los cables de alimentación de CA del sistema o de los enchufes de pared.

4. Etiquete y desconecte todas las líneas de telecomunicaciones y todos los cables conectados a los puertos o conectores de E/S de la parte posterior del sistema.

5. Para contar con cierto grado de protección contra descargas electrostáticas (ESD), utilice un brazalete antiestático conectado a la toma de tierra del sistema (cualquier superficie de metal que no esté pintada) al manipular sus componentes.

6. No utilice el sistema sin las cubiertas de la carcasa.
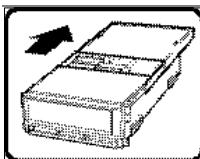
Después de haber realizado los seis pasos de seguridad anteriores, puede retirar las cubiertas del sistema de este modo:

1. Para abrir la cubierta posterior superior empuje los pestillos deslizantes de la parte superior de la cubierta y tire de ella hacia la parte posterior de la carcasa.

2. Para extraer la cubierta posterior superior, siga deslizando la cubierta hacia la parte posterior de la carcasa hasta que alcance los topes finales. Presione el pestillo del raíl de deslizamiento izquierdo y tire de la cubierta hasta que se separe de la carcasa.

3. Para retirar la cubierta frontal superior, afloje los dos tornillos de sujeción de cada lado de la cubierta, deslice la cubierta hacia la parte frontal de la carcasa hasta que se detenga y levante la cubierta para extraerla.

4. Recuerde siempre volver a colocar las cubiertas antes de utilizar el sistema.
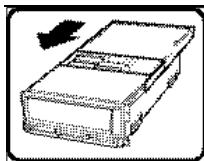
Para conseguir una refrigeración y corriente de aire adecuada, a excepción de las tarjetas PCI o de los ventiladores de intercambio activo, no olvide volver a instalar las cubiertas de la carcasa antes de encender el sistema. Si utiliza el sistema sin las cubiertas, podría dañar sus componentes. Para instalar las cubiertas:

1. Compruebe primero que no ha dejado herramientas o piezas sueltas dentro del sistema.

2. Compruebe que los cables, tarjetas adicionales y otros componentes están instalados correctamente.

3. Para volver a colocar la cubierta posterior superior, ponga los dos cajetines de cojinetes de la cubierta posterior superior al lado del recorrido de los raíles hasta su extremo.

4. Coloque la cubierta superior en los raíles de la cubierta y empújela para colocarla en su lugar.

5. Para volver a colocar la cubierta frontal superior, acople el borde posterior de la cubierta a la carcasa, baje el borde frontal de la cubierta sobre la carcasa y empújela para colocarla en su lugar.

6. Apriete los tornillos de sujeción de cada lado de la cubierta.

7. Conecte todos los cables externos y los cables de alimentación de CA al sistema.
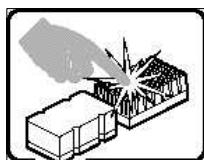
Puede que el microprocesador y el disipador de calor se recalienten si se ha estado ejecutando el sistema. Asimismo, puede que algunas tarjetas o piezas de la carcasa tengan patillas o bordes afilados. Los contactos deberán realizarse cuidadosamente. Puede que sea conveniente llevar guantes de protección.

Existe peligro de explosión si la batería se sustituye incorrectamente. Sustitúyala sólo por el mismo tipo o uno equivalente recomendado por el fabricante del equipo. Deseche las baterías usadas según las instrucciones del fabricante.

El sistema está diseñado para que funcione en un entorno de oficina típico. Elija un emplazamiento:

• Limpio y libre de partículas de transportadas por aire (aparte del polvo normal de la habitación).

• Bien ventilado y alejado de las fuentes de calor, incluida la luz del sol directa.

• Alejado de las fuentes de vibración o de los golpes físicos.

• Aislado de campos electromagnéticos fuertes producidos por dispositivos eléctricos.

• Protegido, si se encuentra en regiones susceptibles de tormentas eléctricas. Se recomienda que enchufe el sistema a un supresor de sobretensiones y desconecte las líneas de telecomunicaciones al módem durante una tormenta eléctrica.

• Que tenga un enchufe de pared correctamente conectado a tierra.

• Con suficiente espacio para acceder a los cables de la fuente de alimentación, ya que éstos sirven como desconectador de alimentación principal del sistema.
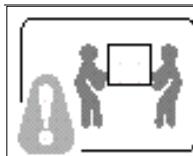
Los servidores pueden ser demasiado pesados para que una sola persona los levante o los mueva de forma segura.

Dependiendo del servido, utilice dos personas o una ayuda mecánica para levantar o mover el servidor.

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