

IBM Netfinity® 5000

**Rack-to-Tower Conversion Kit
Installation Instructions**



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Installation Instructions**

Important

Before using this information and the product it supports, be sure to read the general information under Appendix B, "Product Warranties and Notices" on page 22.

First Edition (October 1998)

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Safety Information



Before installing this product, read the Safety Information.

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 **Safety Information** (安全信息)。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας (safety information).

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si pečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前，請先閱讀「安全資訊」。

1



DANGER

To avoid a shock hazard, do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.

To avoid shock hazard:

- **The power cord must be connected to a properly wired and earthed receptacle.**
- **Any equipment to which this product will be attached must also be connected to properly wired receptacles.**

When possible, use one hand to connect or disconnect signal cables to prevent a possible shock from touching two surfaces with different electrical potentials.

Electrical current from power, telephone, and communications cables is hazardous. To avoid shock hazard, connect and disconnect cables as described following when installing, moving, or opening covers of this product or attached devices.

To Connect

1. Turn Everything OFF.
2. First, attach all cables to devices.
3. Attach signal cables to receptacles.
4. Attach power cord(s) to outlet.
5. Turn device ON.

To Disconnect

1. Turn Everything OFF.
2. First, remove power cord(s) from outlet.
3. Remove signal cables from receptacles.
4. Remove all cables from devices.

NOTE: In the UK, by law, the telephone cable must be connected after the power cord.

NOTE: In the UK, the power cord must be disconnected after the telephone cable.

Rack-to-Tower Conversion Kit

With the IBM Netfinity 5000 Rack-to-Tower Conversion Kit you can convert your server from a rack model to a tower model. This book provides instructions for removing your server from a rack enclosure and installing the conversion kit on your server. For additional information about the IBM Netfinity 5000 server, consult the “Hardware Information” section of the IBM Netfinity 5000 *Server Library*.

Inventory List

The conversion kit contains the following items:

- Four server feet, with center pins
- One side-cover-release latch components packet
- One operator-LED-panel bracket
- One ribbon cable (for operator LED panel)
- Operator-LED-panel cable accessories
 - Two cable clips (for LED panel cable)
 - One cable grommet (for LED panel cable)
- One base cover plate, with screw
- One tower-model front bezel with lockable server door, key, and power-on switch protector
- One left-side cover
- One right-side cover (also referred to as L-shaped cover)
- One or more packages of screws, some of which are optional replacement screws
- One packet containing four wire electromagnetic compatibility (EMC) clips
- *IBM Netfinity 5000 Rack-To-Tower Conversion Kit Installation Instructions* (this book)

What You Need

You need the following items to install the conversion kit:

- Flat-blade screwdriver
- Phillips screwdriver
- The documentation that comes with your rack

This book contains the warranty for your option. Store it in a safe place for future reference.

Removing the Server from the Rack Enclosure

Before You Begin

- Read through these instructions to familiarize yourself with the installation procedure.
- Read the “Legal and Safety Information” section of the IBM Netfinity 5000 *Server Library*.

Note: The illustrations in this publication might be slightly different from your hardware.

If your server is already removed from the rack enclosure, go to “Installing the Conversion Kit on the Server” on page 5.

5



≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

CAUTION:

Use safe lifting practices when lifting your machine.

Note: Two people might be required to perform this procedure.

1. Open the rack front and rear doors.

2. Prepare the server for removal.

- a. Shut down the server operating system.
- b. Remove all media (diskettes, CDs, optical discs, or tapes) from the drives.
- c. Turn off the server and any attached devices.
- d. If you have a fax or modem attached to the server, disconnect the telephone line from the from the wall outlet and the server.

Note: If you are in the United Kingdom and have a modem or fax machine attached to your server, you must disconnect the telephone line from the server *before* unplugging any power cords (also known as power cables).

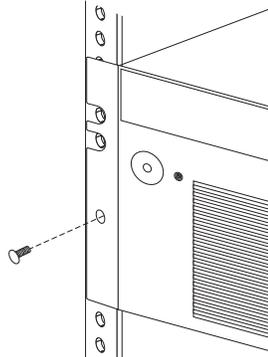
6



CAUTION:

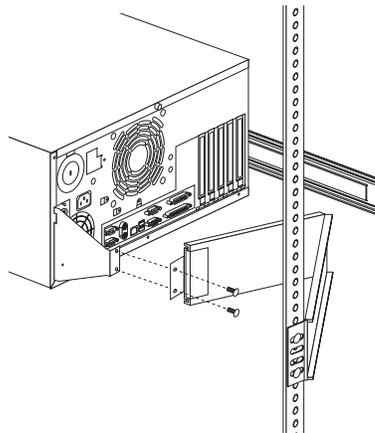
The Power Control button on the front of the server does not turn off the electrical current supplied to the server. The server also might have more than one power cord. To remove all electrical current from the server, ensure that all power cords are disconnected from the power source.

- e. Disconnect all the power cords (cables) from electrical outlets.
- f. Remove the screws from each front bracket.



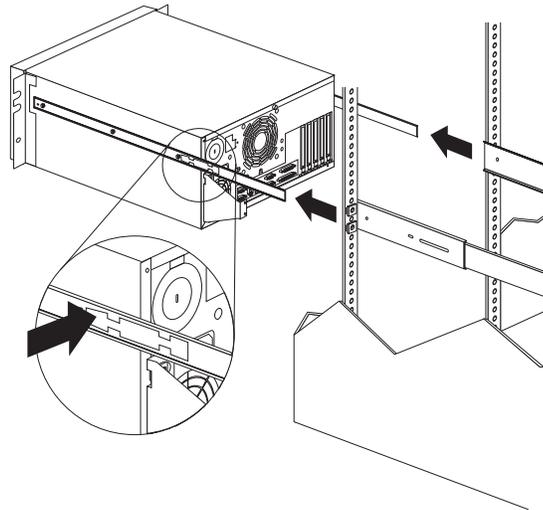
3. Remove the server from the rack enclosure.

- a. Slide the server approximately halfway out of the rack.
- b. Disconnect all cables and power cords from the rear of the server.
- c. Remove the two screws that secure the cable-management arm to the cable-arm bracket on the server.



- d. If you do not plan to install another rack model, remove the cable-management arm from the rack and store it in a safe place.
- e. Slide the server out of the rack until the slide-bracket assemblies lock.

f. Press the safety release latch on each slide rail.



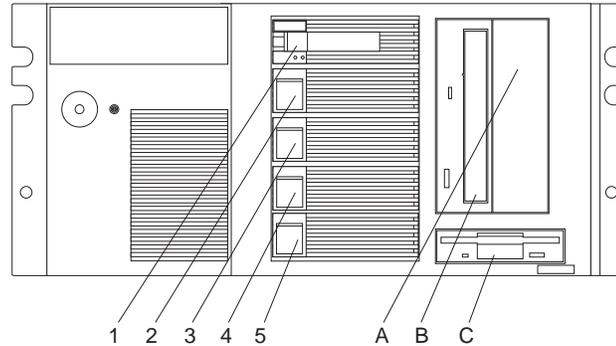
g. Lift the server slightly and carefully slide it out of the slide-bracket assemblies.

h. Place the server on a flat, nonconductive surface.

4. Continue with “Installing the Conversion Kit on the Server” on page 5.

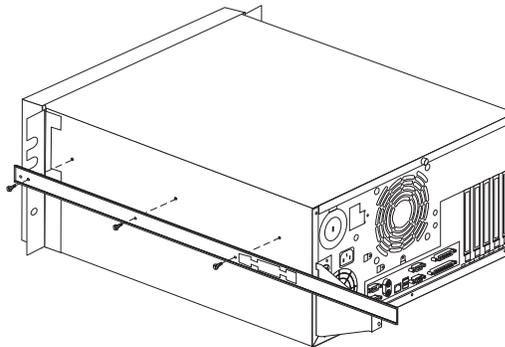
Installing the Conversion Kit on the Server

1. Using a pen or pencil, write the bay numbers of the hard disk drives on the drives (1 to 5, from top to bottom), as indicated in the following illustration. For example, if you have only three drives, installed in bays 2, 3, and 4, they would be numbered 2, 3, and 4 respectively.



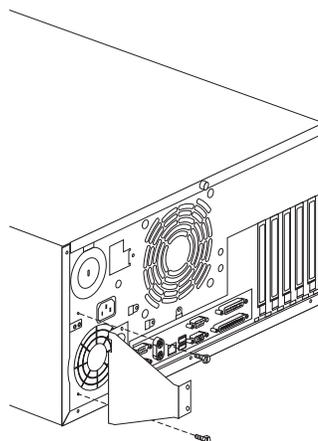
2. Remove the slide rails.

- a. Remove the three screws on each side that hold the slide rails.
- b. Remove the slide rails from the server.



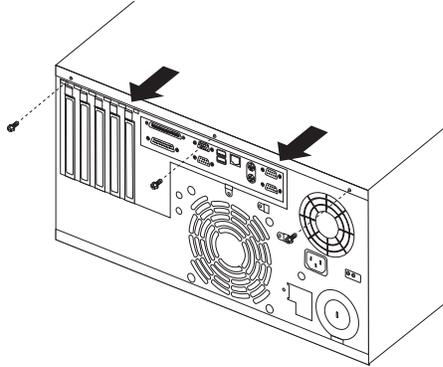
3. Remove the cable-arm bracket from the server.

- a. Remove the two screws that hold the cable-arm bracket; then, remove the bracket.
- b. Replace the two screws you removed in step 3a; these screws secure the primary power supply.



4. Remove the bottom cover.

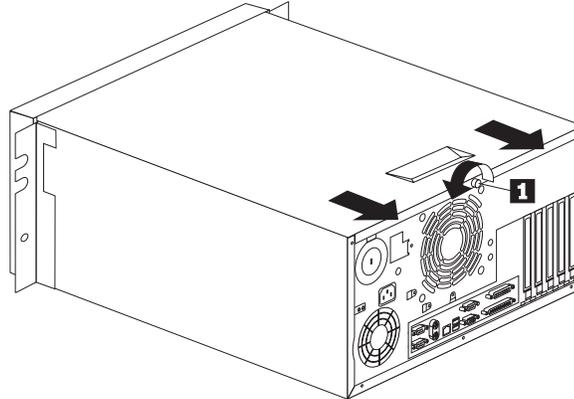
- a. Position the server as illustrated below.
- b. Remove the three cover screws.



- c. Slide the cover toward the back of the server about 25 mm (1 inch); then, lift the cover off.
- d. Return the server to its previous position (top side up).

5. Remove the top cover.

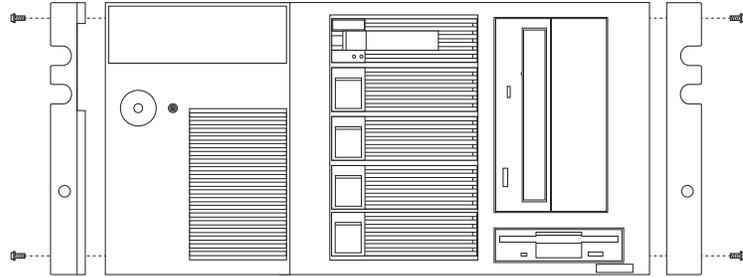
- a. Turn counterclockwise the captive screw **1** on the back edge of the cover and slide the cover toward the rear of the server.
- b. Lift the cover off the server.



- c. Keep the cover nearby, or obtain the new left-side cover from the conversion kit; you might need to refer to the service label on the inside of the cover.

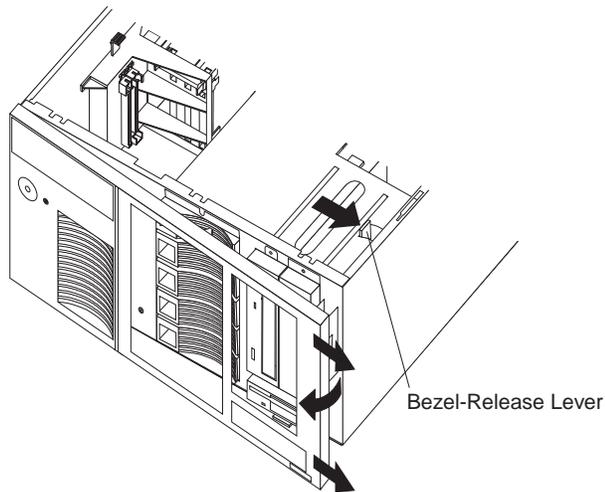
6. Remove the chassis brackets.

- a. Remove the screws that attach the chassis brackets to each side of the server.
- b. Remove the two chassis brackets from the server.



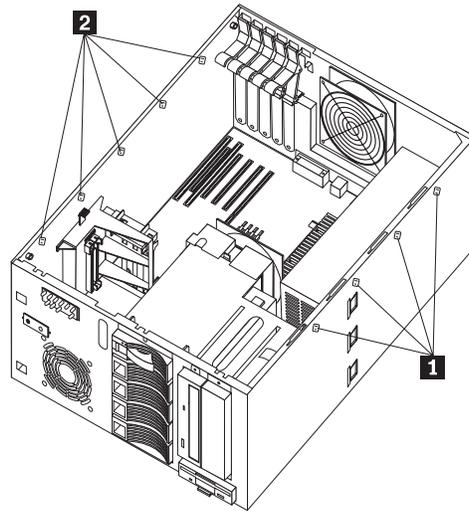
7. Remove the front bezel. You will replace it later with the new bezel from the conversion kit.

- a. Locate the blue bezel-release lever on the top of the server, in the right front corner.
- b. Move the lever toward the right, following the curve of the lever opening.



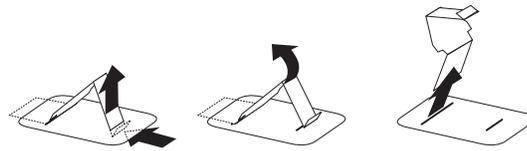
- c. Pull the right end of the bezel away from the server front and move the bezel to the right until the bezel tabs are out of the tab openings on the server front.
- d. Store the bezel in a safe place.

8. Remove the electromagnetic compatibility (EMC) clips.

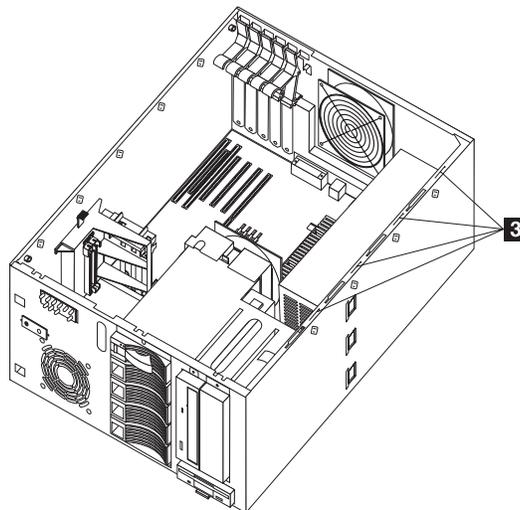


Use a screwdriver to pry the EMC clips from the retaining slots **1**, **2** near the top of the sides, or follow these steps:

- From inside the server, push the hooked end of the clip toward the blade end slightly, so that you can push the hooked end through its slot opening and out of the server.
- Lift the clip out of the wide opening of the slot.

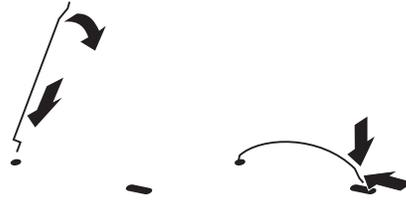


9. Install the four wire EMC clips from the conversion kit.



- Locate the positions **3** for the wire clips; each position consists of a hole and a small slot.

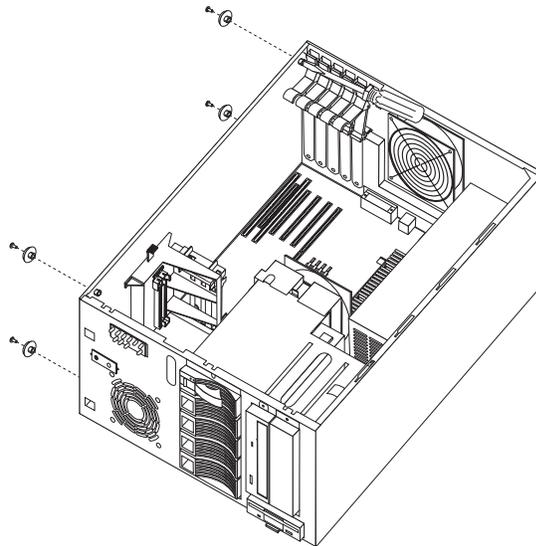
- b. Place the angled end of the wire clip into the hole; then, gently bend the clip and slip the other end of the wire clip into the small slot.



10. **Install the four feet.**

Note: Each foot is in two parts: the circular foot itself and a pin to hold it in place.

- a. Locate the server side closest to the expansion slots; it will become the bottom of the server.



- b. Push each foot into its opening on the side of the server.
c. From the outside of the server, push a pin through the center of each foot toward the inside of the server.

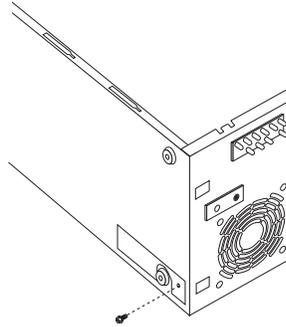
11. **Install the base cover plate.**



CAUTION:

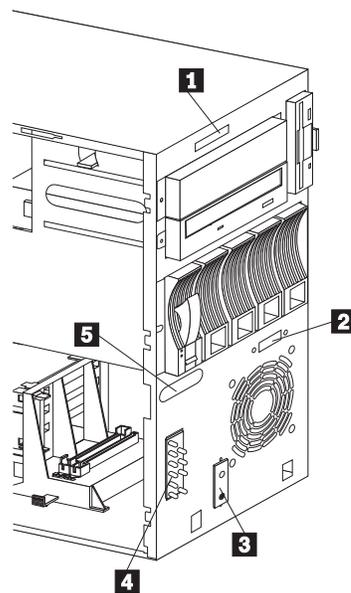
The base cover plate *must* be installed before the server is positioned on its feet in order to meet IEC950 safety requirements.

- a. Position the plate as shown, near the right front foot.
- b. Install the screw packaged with the plate.



- c. Position the server on its feet.

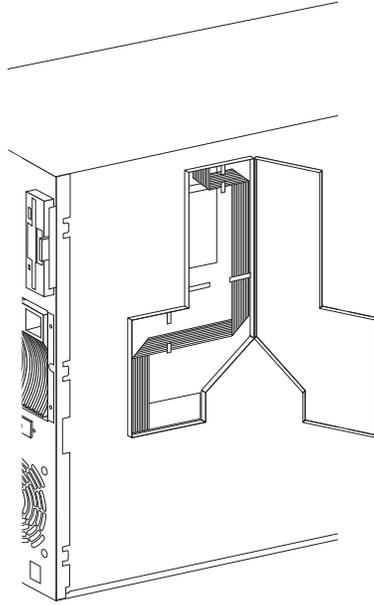
12. Move the operator LED panel **4** to its new location **1**.



- a. Replace the existing LED panel cable with the ribbon cable from the conversion kit.
 - 1) Disconnect the cable from the back of the operator LED panel **4** and from the connector on the system board.
 - 2) Connect the system board end of the new cable to the LED panel connector (J29) on the system board (see the service label inside the cover).

Note: If you have difficulty connecting a cable, turn the cable connector over and try again; cable connectors are keyed to connect only one way.
- b. Route the cable through the external cable duct to the new location **1** opening.

Note: Other cables are already routed through the duct.



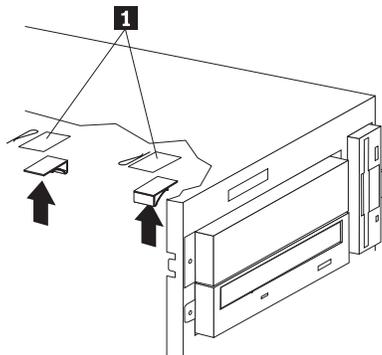
c. Install the LED panel cable clips. These clips keep the LED panel cable away from any device that might be in the top bay. It will be easier if you first remove any device that is currently in the top bay (bay A).

1) Locate the following clip markings on the inside top of the server, near the front.

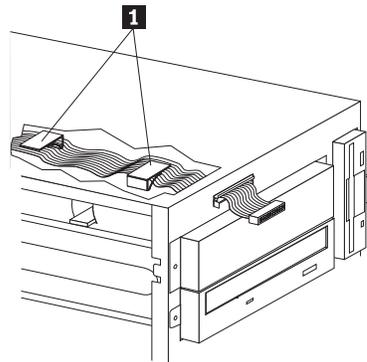


The open end of the wavy marks indicates the direction the open end of the clip must face. (One clip must face the open side of the server; the other clip must face the system board.)

2) Remove the adhesive backing from the clips and press them into place inside the square marks **1**, facing the direction indicated.

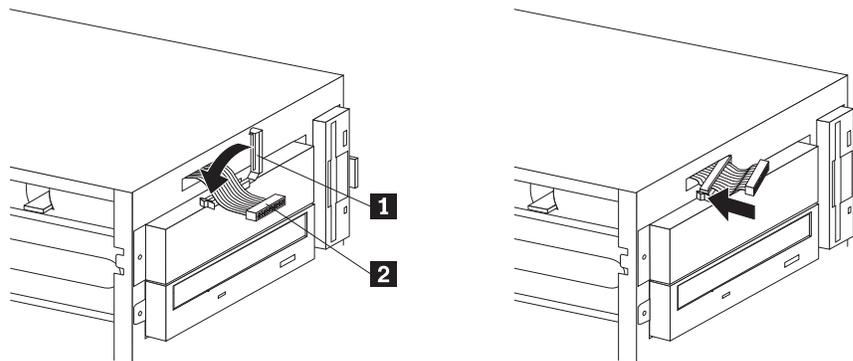


- d. Thread the new cable through the cable clips **1**, over the bezel release mechanism, and out the opening in the server front. One side of the cable connector is keyed, one side is smooth. Make sure the keyed side of the connector faces up when the cable emerges through the opening.



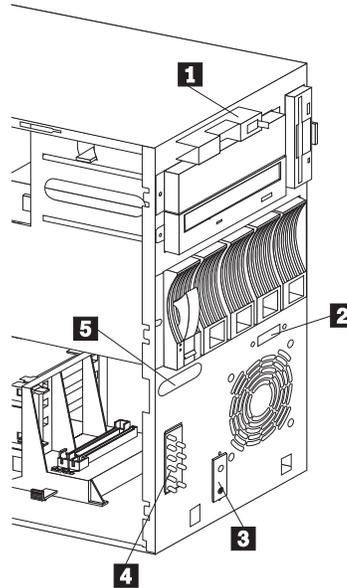
- e. Install the LED cable grommet.

- 1) With the flange edges of the LED cable grommet **1** facing away from the server, clip the grommet onto the LED cable about 40 mm (1.5 inches) from the cable end **2**.
- 2) Press the right end of the grommet against the inside of the opening as shown and push the other end of the grommet into the opening until the grommet clicks into place.



f. Install the LED panel bracket from the conversion kit.

- 1) Push the bracket **1** tabs into the slots in the upper left corner of the server front.
- 2) Slide the bracket away from the diskette drive until the screw hole on the base of the bracket lines up with the screw hole on the server.
- 3) Secure the bracket with a M3.5 by 7-mm screw from the conversion kit.



g. Remove the screws from the operator LED panel **4** and move the panel to the LED panel bracket **1**.

h. Connect the new cable to the back of the operator LED panel. Make sure the Power-On light (PWR) is at the upper left of the operator LED panel.

i. Place the operator LED panel on the LED panel bracket you just installed **1**. Ensure that the PWR LED is at the upper left. Secure the operator LED panel to the bracket with the screws you removed in step 12g, or use two M3 by 5-mm screws from the conversion kit.

13. Move the power-on switch panel **3 to its new location **2**.**

a. Disconnect the cable for the power-on switch panel from the system board (press on the release tab on the cable plug to release it from the connector). Note the location of the cable connector before you remove it.

b. Remove the screws from the power-on switch panel **3**; carefully remove the panel and cable from the server.

c. Thread the power-on switch panel cable through the hole at its new location **2**, and align the panel with its new location. The power-on switch button (PWR) must be on the left; the reset button (RESET) must be on the right.

d. Install the screws for the power-on switch panel; use two M3 by 5-mm screws from the conversion kit if you prefer.

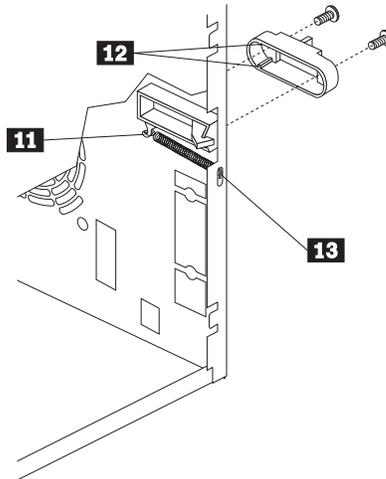
e. Reconnect the power-on switch panel cable to the On/Off & Reset connector (J34) on the system board (see the service label inside the cover).

Note: If you have difficulty connecting a cable, turn the cable connector over and try again; cable connectors are keyed to connect only one way.

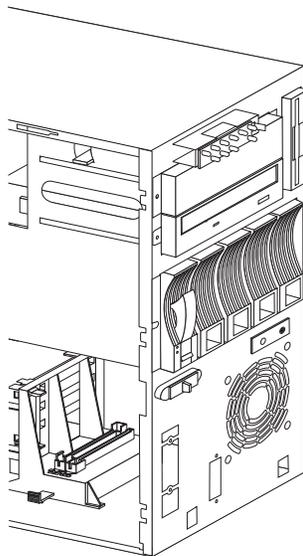
14. Install the side-cover-release latch.

Note: The latch is in two main pieces: a “button” (black piece) and a pawl (white piece).

- a. From the inside of the server, push the posts of the pawl through the latch holes **5** in the server front. Make sure the hook **11** is facing down.
- b. From the outside of the server, place the button over the posts of the pawl. Be sure to match the button end that has three ridges on the inside **12** to the pawl end that has the longer post (shorter base on the post).



- c. Install the two screws that hold the latch pieces together. Be sure that the latch slides back and forth easily.
 - d. Attach the spring to the hook **13** on the edge of the server and to the latch hook **11**.
- After you have completed the preceding steps, your server looks like this illustration.



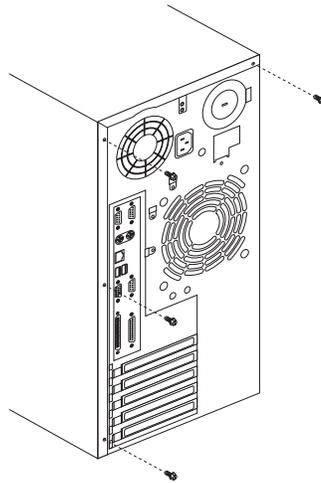
15. Install the L-shaped cover.

Note: This is both the right-side cover and top cover.

- a. Align the cover with the right side of the server, about 25 mm (1 inch) from the front of the server.
- b. Place the bottom edge of the cover on the bottom rail of the right-side frame. Make sure the top of the cover is snug against the top of the server.
- c. Hold the cover against the server and slide the cover toward the front of the server until the cover stops.

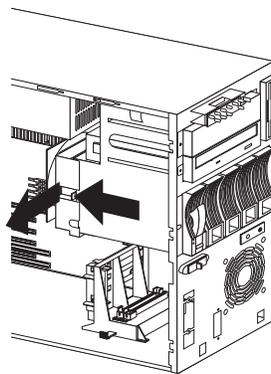
Note: Be sure the front edge of the cover is flat against the server.

- d. From the rear of the server, secure the cover to the server with four M3.5 by 7-mm screws from the conversion kit.



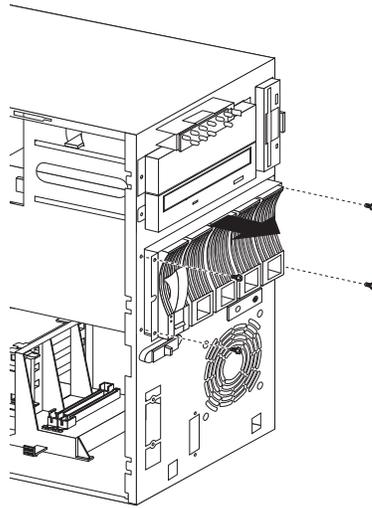
16. Prepare the hard disk drives for tower use.

- a. Remove the fan from the hard disk drive backplane. You will reinstall the fan later.
 - 1) Push the fan release lever away from the hard disk drive enclosure until the fan is free to move.
 - 2) Pull the fan away from the server about 50 mm (2 inches).

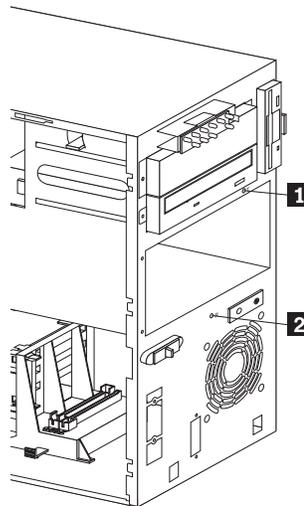


- 3) Disconnect the fan cable from the system board (press on the release tab on the fan cable plug to release it from the connector).
 - 4) Remove the fan from the server. Set the fan aside.
- b. Disconnect the cables from the hard disk drive backplane.

- c. Remove the screws from the front of the hard disk drive enclosure; then, pull the hard disk drive enclosure from the front of the server.

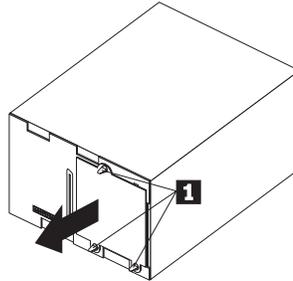


- d. Move the orientation screw from the rack position **2** to the tower position **1**.

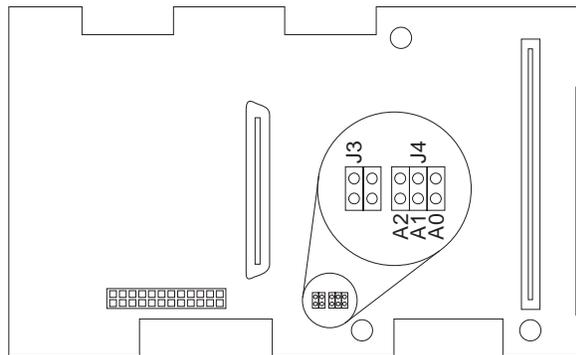


e. Swap the SCSI IDs on the hot-swap bays. Swapping SCSI IDs is accomplished by changing the A0 jumper on the hard disk drive backplane. To do this, you must first remove the daughterboard from the hard disk drive backplane.

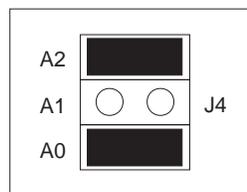
- 1) Release the tip of each of the three posts **1** holding the daughterboard.
- 2) Pull the daughterboard away from the hard disk drive backplane. Set the daughterboard aside on a nonconductive surface.



3) Locate jumper block J4 on the hard disk drive backplane. Place a jumper on A0.

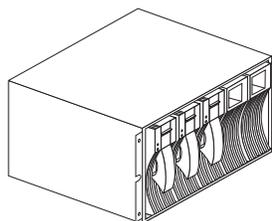


Note: Make sure the jumper on A2 remains in place.



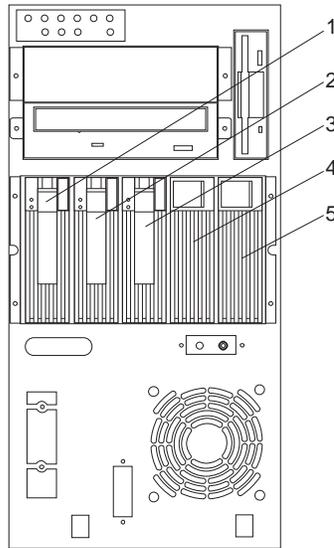
- 4) Position the daughterboard on the connector and posts on the hard disk drive backplane. Press gently but firmly until the daughterboard is securely seated and the posts hold the board in place.

f. Orient the hard disk drive enclosure for tower use.



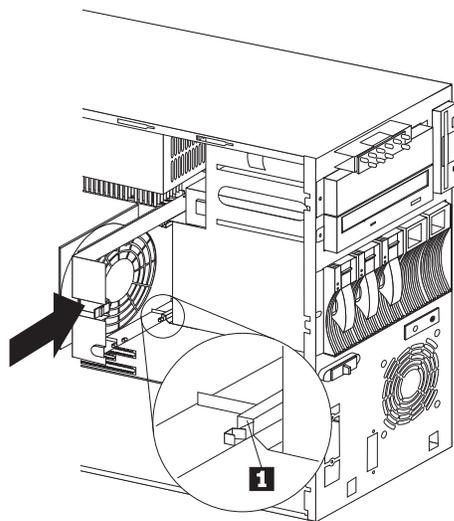
g. Push the hard disk drive enclosure straight in to the opening in the server front.

- h. Secure the hard disk drive enclosure in place using the screws you removed in step 16c on page 16.
- i. Reconnect to the hard disk drive backplane the cables that you disconnected in step 16b on page 15.
- j. Swap the hard disk drives in the bays to correspond with the tower model bay numbering. (The hot-swap bays in a tower model are numbered 1 through 5 from left to right; move the drive that you labeled 1 (for rack-model bay 1) to what is now bay 1 in the tower, move the drive that you labeled 2 to what is now bay 2 in the tower, and so forth.)



- k. Reinstall the hard disk drive fan.

1) Align the fan bracket with the fan bracket guides **1**.



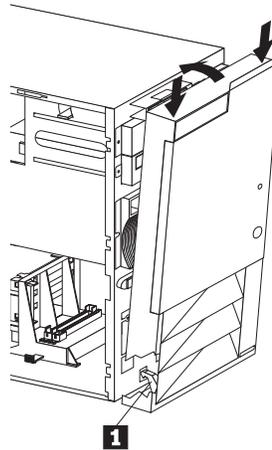
- 2) Push the fan bracket toward the system board about 50 mm (2 inches).
- 3) Reconnect the fan cable to the Fan 1 connector (J13) on the system board (see the service label inside the cover).

4) Push the fan bracket in until it clicks into place.

Note: Make sure no cables will be trapped or crimped by the fan bracket.

17. Install the front bezel that comes with this kit.

a. Align the tabs on the back of the bezel **1** with the tab openings on the front of the server.



b. Press the bezel into place until it clicks.

18. Install the left-side cover.

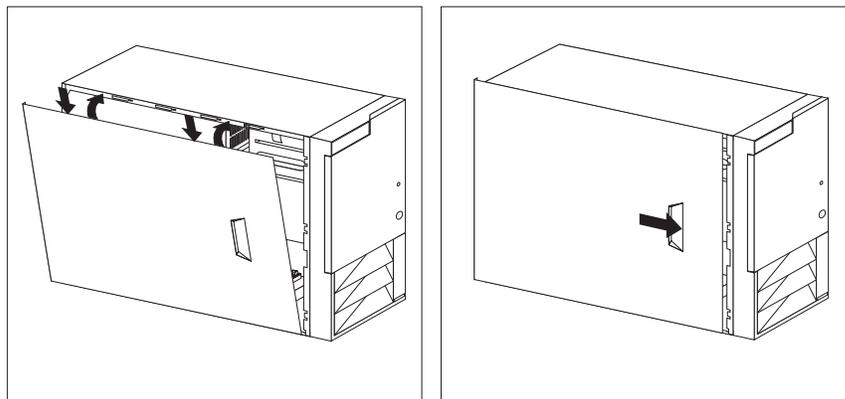
a. Check that all cables, adapters, and other components are installed and seated correctly and that you have not left loose tools or parts inside the server.

b. Align the left-side cover with the left side of the server, about 25 mm (1 inch) from the front of the server; place the bottom of the left-side cover on the bottom rail of the left-side frame.

c. Insert the tabs at the top of the cover into the slots at the top of the server side.

d. Hold the cover against the server and slide the cover toward the front of the server until the cover clicks into place.

Note: Be sure the front edge of the cover is flat against the server.



Attention:

Be sure to maintain a clearance of at least 127 mm (5 inches) on the front and rear of the server to allow for air circulation.

19. **Connect all server and device cables and connectors.**

Notes:

- a. If you are in the United Kingdom and are going to attach a modem or fax machine to your server, you must plug in all power cords *before* connecting the telephone line.
- b. Wait 15 seconds after connecting the power cords to the server and the wall outlet before proceeding to the next step.

20. **Use the server configuration program to reconfigure the server.**

Because of the necessary changes to the hard disk drives, you must change the server configuration so that the Netfinity Manager program will show a graphic of a tower model for this server instead of showing a rack model.

- a. Open the server door by pushing on the small depression in the door.
- b. Press the Power-On switch to turn on the server, and watch the screen.
- c. When the messages Press F1 for Configuration/Setup and Press F2 for Diagnostics appear, Press F1.
- d. Select **System Information**; then select **Product Data**.
- e. Change the machine type and model from a rack model to a tower model.
 - 1) Find the machine type and model in the Rack column in the following table.
 - 2) Change it to the machine type and model shown in the Tower column.

Tower	Rack
8659-12Y	8659-1SY
8659-22Y	8659-2SY
8659-31Y	8659-3RY

- f. Press **Esc** to return to the main configuration utility menu.
- g. Select **Save Settings**; then select **Exit Setup**.

The Rack-to-Tower Conversion Kit installation is complete. If you choose to lock the server door, the key is inside the door.

Appendix A. Help and Service Information

During the warranty period, you can get toll-free technical support 24 hours a day, 7 days a week¹ to answer questions about your conversion kit (toll-free technical support is available in the United States, Puerto Rico, and Canada only). If you need warranty service, return or exchange is available. In addition, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

Before calling, please prepare for your call by following these steps.

Step 1: Troubleshooting

1. Remove and reattach all cables.
2. Inspect the conversion kit components for any damage.
3. Retrace all steps in the conversion kit instructions.

Step 2: Preparing for the Service Call

To assist the technical support representative, have the following information available:

1. Option name and description
2. Proof of purchase
3. Server model, serial number, and manual
4. Exact wording of the error message (if any)
5. Description of the problem
6. Hardware and software configuration information for your system

If possible, be at your computer. Your technical support representative might want to walk you through the problem during the call.

Step 3: Placing the Service Call to IBM

Use one of the following numbers:

- In the United States and Puerto Rico, call 1-800-772-2227.
- In Canada, call 1-800-565-3344.
- In all other countries, contact your IBM reseller, IBM marketing representative, or your place of purchase.

¹ Response time will vary depending on the number and nature of calls received.

Appendix B. Product Warranties and Notices

Warranty Statements

The warranty statements consist of two parts: Part 1 and Part 2. Part 1 varies by country. Part 2 is the same for both statements. Be sure to read both the Part 1 that applies to your country and Part 2.

- **United States, Puerto Rico, and Canada (Z125-4753-05 11/97)**
(Part 1 - General Terms on page 22)
- **Worldwide except Canada, Puerto Rico, Turkey, and United States (Z125-5697-01 11/97)**
(Part 1 - General Terms on page 24)
- **Worldwide Country-Unique Terms**
(Part 2 - Country-Unique Terms on page 25)

IBM Statement of Limited Warranty for United States, Puerto Rico, and Canada (Part 1 - General Terms)

This Statement of Limited Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. The terms of Part 2 may replace or modify those of Part 1. The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you purchase for your use, and not for resale, from IBM or your reseller. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. The term "Machine" does not include any software programs, whether pre-loaded with the Machine, installed subsequently or otherwise. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. Nothing in this Statement of Warranty affects any statutory rights of consumers that cannot be waived or limited by contract. If you have any questions, contact IBM or your reseller.

Machine - IBM Netfinity 5000 Rack-to-Tower Conversion Kit

Warranty Period* - Three Years

**Contact your place of purchase for warranty service information. Some IBM Machines are eligible for On-site warranty service depending on the country where service is performed.*

The IBM Warranty for Machines

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications. The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your sales receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period IBM or your reseller, if approved by IBM to provide warranty service, will provide repair and exchange service for the Machine, without charge, under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

If a Machine does not function as warranted during the warranty period, and IBM or your reseller are unable to either 1) make it do so or 2) replace it with one that is at least functionally equivalent, you may return it to your place of purchase and your money will be refunded. The replacement may not be new, but will be in good working order.

Extent of Warranty

The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible. The warranty is voided by removal or alteration of Machine or parts identification labels.

THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO

YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

Items Not Covered by Warranty

IBM does not warrant uninterrupted or error-free operation of a Machine.

Unless specified otherwise, IBM provides non-IBM machines **WITHOUT WARRANTIES OF ANY KIND.**

Any technical or other support provided for a Machine under warranty, such as assistance via telephone with "how-to" questions and those regarding Machine set-up and installation, will be provided **WITHOUT WARRANTIES OF ANY KIND.**

Warranty Service

To obtain warranty service for the Machine, contact your reseller or IBM. In the United States, call IBM at 1-800-772-2227. In Canada, call IBM at 1-800-565-3344. You may be required to present proof of purchase.

IBM or your reseller provides certain types of repair and exchange service, either at your location or at a service center, to keep Machines in, or restore them to, conformance with their Specifications. IBM or your reseller will inform you of the available types of service for a Machine based on its country of installation. IBM may repair the failing Machine or exchange it at its discretion.

When warranty service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item.

Any feature, conversion, or upgrade IBM or your reseller services must be installed on a Machine which is 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many features, conversions, or upgrades involve the removal of parts and their return to IBM. A part that replaces a removed part will assume the warranty service status of the removed part.

Before IBM or your reseller exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service.

You also agree to

1. ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
2. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
3. where applicable, before service is provided
 - a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provides,
 - b. secure all programs, data, and funds contained in a Machine,
 - c. provide IBM or your reseller with sufficient, free, and safe access to your facilities to permit them to fulfill their obligations, and
 - d. inform IBM or your reseller of changes in a Machine's location.

IBM is responsible for loss of, or damage to, your Machine while it is 1) in IBM's possession or 2) in transit in those cases where IBM is responsible for the transportation charges.

Neither IBM nor your reseller is responsible for any of your confidential, proprietary or personal information contained in a Machine which you return to IBM or your reseller for any reason. You should remove all such information from the Machine prior to its return.

Production Status

Each IBM Machine is manufactured from new parts, or new and used parts. In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's appropriate warranty terms apply.

Limitation of Liability

Circumstances may arise where, because of a default on IBM's part or other liability, you are entitled to recover damages from IBM. In each such instance, regardless of the basis on which you are entitled to claim damages from IBM (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), IBM is liable for no more than

1. damages for bodily injury (including death) and damage to real property and tangible personal property; and
2. the amount of any other actual direct damages, up to the greater of U.S. \$100,000 (or equivalent in local currency) or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

This limit also applies to IBM's suppliers and your reseller. It is the maximum for which IBM, its suppliers, and your reseller are collectively responsible.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR

FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS), EVEN IF IBM, ITS SUPPLIERS OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

IBM Statement of Warranty Worldwide except Canada, Puerto Rico, Turkey, United States (Part 1 - General Terms)

This Statement of Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. The terms of Part 2 may replace or modify those of Part 1. The warranties provided by IBM in this Statement of Warranty apply only to Machines you purchase for your use, and not for resale, from IBM or your reseller. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. The term "Machine" does not include any software programs, whether pre-loaded with the Machine, installed subsequently or otherwise. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. Nothing in this Statement of Warranty affects any statutory rights of consumers that cannot be waived or limited by contract. If you have any questions, contact IBM or your reseller.

Machine - IBM Netfinity 5000 Rack-to-Tower Conversion Kit

Warranty Period* - Three Years

**Contact your place of purchase for warranty service information. Some IBM Machines are eligible for On-site warranty service depending on the country where service is performed.*

The IBM Warranty for Machines

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications. The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your sales receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period IBM or your reseller, if approved by IBM to provide warranty service, will provide repair and exchange service for the Machine, without charge, under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

If a Machine does not function as warranted during the warranty period, and IBM or your reseller are unable to either 1) make it do so or 2) replace it with one that is at least functionally equivalent, you may return it to your place of purchase and your money will be refunded. The replacement may not be new, but will be in good working order.

Extent of Warranty

The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible. The warranty is voided by removal or alteration of Machine or parts identification labels.

THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

Items Not Covered by Warranty

IBM does not warrant uninterrupted or error-free operation of a Machine.

Unless specified otherwise, IBM provides non-IBM machines **WITHOUT WARRANTIES OF ANY KIND.**

Any technical or other support provided for a Machine under warranty, such as assistance via telephone with "how-to" questions and those regarding Machine set-up and installation, will be provided **WITHOUT WARRANTIES OF ANY KIND.**

Warranty Service

To obtain warranty service for the Machine, contact your reseller or IBM. You may be required to present proof of purchase.

IBM or your reseller provides certain types of repair and exchange service, either at your location or at a service centre, to keep Machines in, or restore them to, conformance with their Specifications. IBM or your reseller will inform you of the available types of service for a Machine based on its country of installation. IBM may repair the failing Machine or exchange it at its discretion.

When warranty service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item.

Any feature, conversion, or upgrade IBM or your reseller services must be installed on a Machine which is 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many features, conversions, or upgrades involve the removal of parts and their return to IBM. A part that replaces a removed part will assume the warranty service status of the removed part.

Before IBM or your reseller exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service.

You also agree to

1. ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
2. obtain authorisation from the owner to have IBM or your reseller service a Machine that you do not own; and
3. where applicable, before service is provided
 - a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provides,
 - b. secure all programs, data, and funds contained in a Machine,
 - c. provide IBM or your reseller with sufficient, free, and safe access to your facilities to permit them to fulfil their obligations, and
 - d. inform IBM or your reseller of changes in a Machine's location.

IBM is responsible for loss of, or damage to, your Machine while it is 1) in IBM's possession or 2) in transit in those cases where IBM is responsible for the transportation charges.

Neither IBM nor your reseller is responsible for any of your confidential, proprietary or personal information contained in a Machine which you return to IBM or your reseller for any reason. You should remove all such information from the Machine prior to its return.

Production Status

Each IBM Machine is manufactured from new parts, or new and used parts. In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's appropriate warranty terms apply.

Limitation of Liability

Circumstances may arise where, because of a default on IBM's part or other liability, you are entitled to recover damages from IBM. In each such instance, regardless of the basis on which you are entitled to claim damages from IBM (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), IBM is liable for no more than

1. damages for bodily injury (including death) and damage to real property and tangible personal property; and
2. the amount of any other actual direct damages, up to the greater of U.S. \$100,000 (or equivalent in local currency) or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

This limit also applies to IBM's suppliers and your reseller. It is the maximum for which IBM, its suppliers, and your reseller are collectively responsible.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS), EVEN IF IBM, ITS SUPPLIERS OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Part 2 - Worldwide Country-Unique Terms

ASIA PACIFIC

AUSTRALIA: The IBM Warranty for Machines: The following paragraph is added to this Section:

The warranties specified in this Section are in addition to any rights you may have under the Trade Practices Act 1974 or other legislation and are only limited to the extent permitted by the applicable legislation.

Extent of Warranty: The following replaces the first and second sentences of this Section:

The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, operation in other than the Specified Operating Environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible.

Limitation of Liability: The following is added to this Section:

Where IBM is in breach of a condition or warranty implied by the Trade Practices Act 1974, IBM's liability is limited to the repair or replacement of the goods or the supply of equivalent goods. Where that condition or warranty relates to right to sell, quiet possession or clear title, or the goods are of a kind ordinarily acquired for personal, domestic or household use or consumption, then none of the limitations in this paragraph apply.

PEOPLE'S REPUBLIC OF CHINA: Governing Law: The following is added to this Statement:

The laws of the State of New York govern this Statement.

INDIA: Limitation of Liability: The following replaces items 1 and 2 of this Section:

1. liability for bodily injury (including death) or damage to real property and tangible personal property will be limited to that caused by IBM's negligence;
2. as to any other actual damage arising in any situation involving nonperformance by IBM pursuant to, or in any way related to the subject of this Statement of Warranty, IBM's liability will be limited to the charge paid by you for the individual Machine that is the subject of the claim.

NEW ZEALAND: The IBM Warranty for Machines: The following paragraph is added to this Section:

The warranties specified in this Section are in addition to any rights you may have under the Consumer Guarantees Act 1993 or other legislation which cannot be excluded or limited. The Consumer Guarantees Act 1993 will not apply in respect of any goods which IBM provides, if you require the goods for the purposes of a business as defined in that Act.

Limitation of Liability: The following is added to this Section:

Where Machines are not acquired for the purposes of a business as defined in the Consumer Guarantees Act 1993, the limitations in this Section are subject to the limitations in that Act.

EUROPE, MIDDLE EAST, AFRICA (EMEA)

The following terms apply to all EMEA countries.

The terms of this Statement of Warranty apply to Machines purchased from an IBM reseller. If you purchased this Machine from IBM, the terms and conditions of the applicable IBM agreement prevail over this warranty statement.

Warranty Service

If you purchased an IBM Machine in Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland or United Kingdom, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM.

If you purchased an IBM Personal Computer Machine in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Kirghizia, Federal Republic of Yugoslavia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, or Ukraine, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM.

The applicable laws, Country-unique terms and competent court for this Statement are those of the country in which the warranty service is being provided. However, the laws of Austria govern this Statement if the warranty service is provided in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Federal Republic of Yugoslavia, Georgia, Hungary, Kazakhstan, Kirghizia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, and Ukraine.

The following terms apply to the country specified:

EGYPT: Limitation of Liability: The following replaces item 2 in this Section:

2. as to any other actual direct damages, IBM's liability will be limited to the total amount you paid for the Machine that is the subject of the claim.

Applicability of suppliers and resellers (unchanged).

FRANCE: Limitation of Liability: The following replaces the second sentence of the first paragraph of this Section:

In such instances, regardless of the basis on which you are entitled to claim damages from IBM, IBM is liable for no more than: (items 1 and 2 unchanged).

GERMANY: The IBM Warranty for Machines: The following replaces the first sentence of the first paragraph of this Section:

The warranty for an IBM Machine covers the functionality of the Machine for its normal use and the Machine's conformity to its Specifications.

The following paragraphs are added to this Section:
The minimum warranty period for Machines is six months.

In case IBM or your reseller are unable to repair an IBM Machine, you can alternatively ask for a partial refund as far as justified by the reduced value of the unrepaired Machine or ask for a cancellation of the respective agreement for such Machine and get your money refunded.

Extent of Warranty: The second paragraph does not apply.

Warranty Service: The following is added to this Section:
During the warranty period, transportation for delivery of the failing Machine to IBM will be at IBM's expense.

Production Status: The following paragraph replaces this Section:
Each Machine is newly manufactured. It may incorporate in addition to new parts, re-used parts as well.

Limitation of Liability: The following is added to this Section:
The limitations and exclusions specified in the Statement of Warranty will not apply to damages caused by IBM with fraud or gross negligence and for express warranty.

In item 2, replace "U.S. \$100,000" with "1.000.000 DEM."

The following sentence is added to the end of the first paragraph of item 2:
IBM's liability under this item is limited to the violation of essential contractual terms in cases of ordinary negligence.

IRELAND: Extent of Warranty: The following is added to this Section:
Except as expressly provided in these terms and conditions, all statutory conditions, including all warranties implied, but without prejudice to the generality of the foregoing all warranties implied by the Sale of Goods Act 1893 or the Sale of Goods and Supply of Services Act 1980 are hereby excluded.

Limitation of Liability: The following replaces items one and two of the first paragraph of this Section:
1. death or personal injury or physical damage to your real property solely caused by IBM's negligence; and 2. the amount of any other actual direct damages, up to the greater of Irish Pounds 75,000 or 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim.

Applicability of suppliers and resellers (unchanged).

The following paragraph is added at the end of this Section:
IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default shall be limited to damages.

ITALY: Limitation of Liability: The following replaces the second sentence in the first paragraph:
In each such instance unless otherwise provided by mandatory law, IBM is liable for no more than: (item 1 unchanged) 2) as to any other actual damage arising in all situations involving non-performance by IBM pursuant to, or in any way related to the subject matter of this Statement of Warranty, IBM's liability, will be limited to the total amount you paid for the Machine that is the subject of the claim.

Applicability of suppliers and resellers (unchanged).

The following replaces the second paragraph of this Section:
Unless otherwise provided by mandatory law, IBM and your reseller are not liable for any of the following: (items 1 and 2 unchanged) 3) indirect damages, even if IBM or your reseller is informed of their possibility.

SOUTH AFRICA, NAMIBIA, BOTSWANA, LESOTHO AND SWAZILAND: Limitation of Liability: The following is added to this Section:
IBM's entire liability to you for actual damages arising in all situations involving nonperformance by IBM in respect of the subject matter of this Statement of Warranty will be limited to the charge paid by you for the individual Machine that is the subject of your claim from IBM.

TURKIYE: Production Status: The following replaces this Section:
IBM fulfils customer orders for IBM Machines as newly manufactured in accordance with IBM's production standards.

UNITED KINGDOM: Limitation of Liability: The following replaces items 1 and 2 of the first paragraph of this Section:
1. death or personal injury or physical damage to your real property solely caused by IBM's negligence;
2. the amount of any other actual direct damages or loss, up to the greater of Pounds Sterling 150,000 or 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim.

The following item is added to this paragraph:
3. breach of IBM's obligations implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982.

Applicability of suppliers and resellers (unchanged).

The following is added to the end of this Section:

IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default will be limited to damages.

NORTH AMERICA

CANADA: Warranty Service: The following is added to this Section:

To obtain warranty service from IBM, call **1-800-465-6666**.

UNITED STATES OF AMERICA: Warranty Service: The following is added to this Section:

To obtain warranty service from IBM, call **1-800-IBM-SERV**.

Notices

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Subject to IBM's valid intellectual property or other legally protectable rights, any functionally equivalent product, program, or service may be used instead of the IBM product, program, or service. The evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, are the responsibility of the user.

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