IBM Netfinity 8Ux24D Rack-to-Tower Kit

Installation Instructions



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First Edition (March 2000)

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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).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

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 pečítaje 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」。

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8Ux24D Rack-to-Tower Kit Introduction

The IBM® Netfinity® 8Ux24D Rack-to-Tower Kit converts an 8U server that is 61.0 cm (24 in.) deep from a rack model to a tower model. Additional NetBAY3 enclosures (up to three total) are available separately to stack on top of the one that comes with this kit. Each enclosure is 61.0 cm (24 in.) deep and can store a 3U device.

The following parts come with the 8Ux24D Rack-to-Tower Kit:

- · One server left-side cover
- · One server right-side cover
- · Two server side-cover brackets
- · Two server glide feet
- · One NetBAY3 enclosure
- · One NetBAY3 enclosure front bezel
- · Two enclosure swivel casters
- · Two enclosure fixed casters
- · One caster stabilizer
- · For Netfinity 5500 series servers:
 - One server front door
 - One information-panel cover and window assembly
- For non 5500 series servers:
 - One server front door
 - One information-panel cover and window assembly
- Miscellaneous hardware kit (includes screws and nuts to attach side covers and casters)
- · IBM Safety Information booklet
- This documentation

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

Tool requirements

You will need the following tools to install the 8Ux24D Rack-to-Tower Kit:

- · A small flat-blade screwdriver
- · A medium phillips screwdriver
- An 8-mm open-end or box wrench
- A 10-mm nut driver or a 10-mm open-end or box wrench

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Installation overview

Use the following general steps to prepare your server and install the 8Ux24D Rack-to-Tower Kit:

- 1 If your server is already installed in a rack cabinet, remove it according to "Removing the server from a rack" on page 3.
- 2 Prepare the server for the conversion kit and install the server on the NetBAY3 enclosure or on the glide feet according to "Installing the server on the NetBAY3 enclosure or on the glide feet" on page 6.
- 3 If applicable, install a device inside of the NetBAY3 enclosure according to "Installing devices in the NetBAY3 enclosure" on page 16.
- 4 Attach all cables and neatly route them before turning On your server.

Removing the server from a rack

Use the following basic steps to remove your server from a rack cabinet:

1. Refer to your server and rack documentation for detailed information.

Note: Removing rack doors and side panels makes it easier to remove the server.

2. Shut down the server operating system and remove all media from the drives, such as diskettes, CDs, optical disks, or tapes.







DANGER

Electrical current from power, telephone, and communication cables is hazardous.

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.
- Connect all power cords to a properly wired and grounded electrical outlet.
- Connect to properly wired outlets any equipment that will be attached to this product.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.

To Connect:

- 1. Turn everything OFF.
- 2. First, attach all cables to devices.
- 3. Attach signal cables to connectors.
- 4. Attach power cords to outlet.
- 5. Turn device ON.

To Disconnect:

- 1. Turn everything OFF.
- 2. First, remove power cords from outlet.
- 3. Remove signal cables from connectors.
- 4. Remove all cables from devices.

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- 3. Turn Off the server and any attached devices.
- 4. Disconnect all power cords from the rack, server, and electrical outlets.
- 5. Disconnect all communication cables from external devices that are connected to your server.
- Note the location of any remaining cables; then, disconnect all other cables from the back of the server.
- 7. If the retaining screws **B** are installed on your server, remove them.

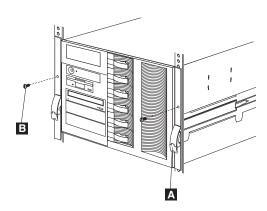


Figure 1. Removing the server retaining screws

Note: Netfinity 5500 series servers might have two retaining screws installed per side, as shown below:

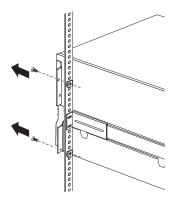


Figure 2. Removing Netfinity 5500 series server retaining screws

8. If applicable, release the left and right release latches **A**; then, slide the server out of the rack until both slide rails lock.

Note: When the server is fully extended on the slide rails, safety latches lock the rails in place. To release the safety latches, press them in toward the server.





≥18 kg (37 lbs)



≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

CAUTION:

Use safe practices when lifting.

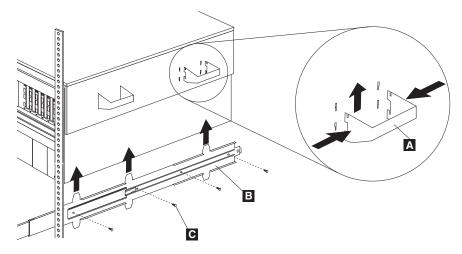


Figure 3. Removing the server from the rack

- 9. Locate the four server lift handles A that came with your server; then, attach two handles to each side of the server making sure that they lock into place:
 - a. Press in on the sides of the lift handle A near the tabs and insert the handle tabs into the slots on the side of the server.
 - **b.** Move the handle up in the slots until the hooked part of each tab is inside the server.
 - **c.** Release the pressure on the sides of the handle.
- 10. Remove the four M4 pan-head screws per side C that attach the server to each slide rail B.
- 11. Carefully lift the server off of the slide rails and out of the rack; then, set the server on a flat surface.

Proceed with "Installing the server on the NetBAY3 enclosure or on the glide feet" on page 6 to prepare the server for the 8Ux24D Rack-to-Tower Kit and install it on the NetBAY3 enclosure or on the glide feet.

Installing the server on the NetBAY3 enclosure or on the glide feet

Use the following steps to install your server on the enclosure or on the glide feet:

- 1. If they are not already installed, install the four lift handles that come with your server. Make sure that the handles lock into place.
 - **a.** Press in on the sides of the lift handle near the tabs and insert the handle tabs into the slots on the side of the server.
 - **b.** Move the handle up in the slots until the hooked part of each tab is inside the server.
 - c. Release the pressure on the sides of the handle.
- 2. Remove the screws and release-latch-bracket assemblies A from both sides of the server.

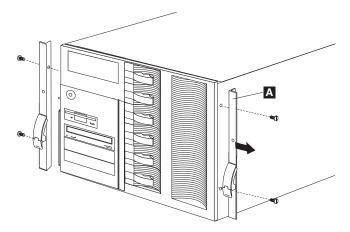


Figure 4. Removing the release-latch-bracket assemblies

Note: Some Netfinity 5500 series servers might have a different kind of release-latch-bracket assembly as shown below:

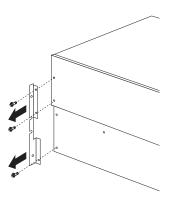


Figure 5. Removing Netfinity 5500 series release-latch-bracket assemblies

3. Install the side-cover brackets on each side of the server with four M3.5 screws per bracket.

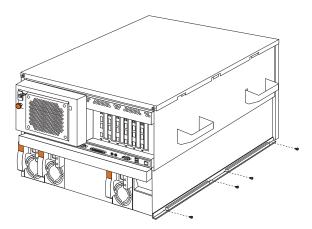


Figure 6. Installing the side-cover brackets

You can choose to either install your server on the NetBAY3 enclosure, or on the glide feet included in the 8Ux24D Rack-to-Tower Kit. You cannot use both on the same server. Refer to step 4 on page 8 for glide feet installation or step 5 on page 9 for NetBAY3 installation.

4. Install the server on the glide feet:











≥18 kg (37 lbs)

≥32 kg (70.5 lbs)

≥55 kg (121.2 lbs)

CAUTION:

Use safe practices when lifting.

a. Space the glide feet (smooth side down) parallel to each other and next to the server, spaced the depth of the server apart.

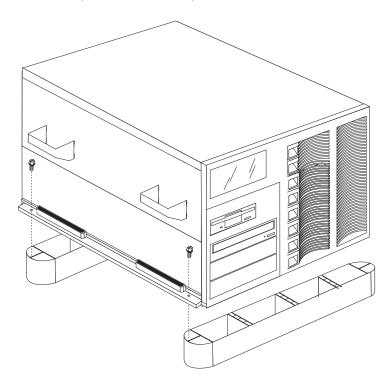


Figure 7. Installing the server on the glide feet

- **b.** Using the lift handles, place the server on top of the glide feet. Make sure that the holes in the side-cover brackets line up with the holes in the glide feet.
- **c.** Secure the server to the glide feet with four M4.2 self-tapping screws (two per side); then, remove the lift handles from the server.
- d. Skip to step 6 on page 11 to continue the installation.

- 5. Install the server on the NetBAY3 enclosure:
 - a. If you are going to install the casters on the enclosure, you must first remove the skid pads:

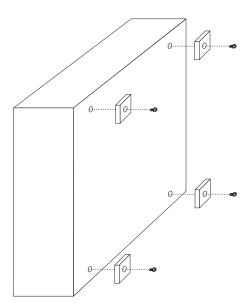


Figure 8. Removing the enclosure skid pads

b. Install the swivel casters on the front of the enclosure with four M6 screws per caster; then, install the fixed casters on the rear of the enclosure.

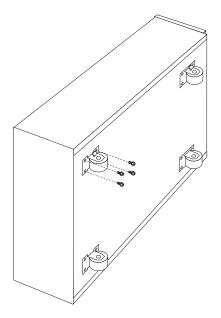


Figure 9. Installing the enclosure casters

Notes:

- 1) To prevent unexpected movement, make sure that the casters are locked when you are not moving the enclosure.
- 2) Install the caster stabilizer (see step 15 on page 15) on the front (swivel) casters for added stability when not moving the enclosure.







≥18 kg (37 lbs)





≥32 kg (70.5 lbs)

≥55 kg (121.2 lbs)

CAUTION:

Use safe practices when lifting.

c. Using the lift handles, place the server on the enclosure. Make sure that the holes in the side-cover brackets line up with the bolts on the enclosure.

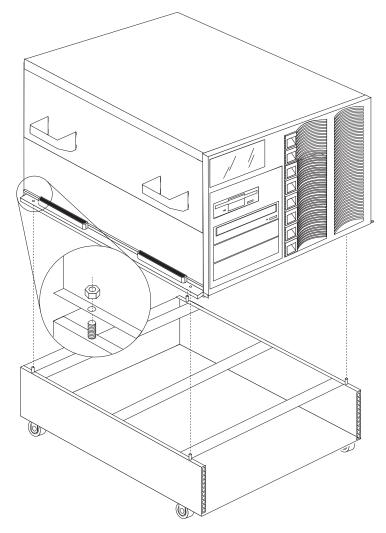


Figure 10. Installing the server on the enclosure

d. Secure the server to the enclosure with four M5 nuts (two per side); then, remove the lift handles.

- 6. Remove the front bezel from the server:
 - **a.** Press in on the left and right sides at the top of the bezel to release the latches.

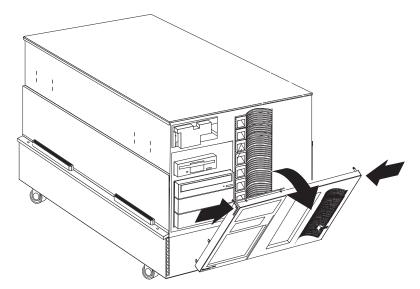


Figure 11. Removing the server front bezel

- **b.** Swing the bezel away from the front of the server until you can pull it away from the server.
- **7.** To remove the information-panel window from the bezel, carefully push outward from the inside of the bezel until the window disengages from the bezel.

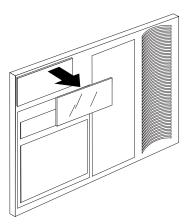


Figure 12. Removing the information-panel window

8. To put the bezel back on the server, align the bottom of the bezel with the bottom front of the server; then, swing the bezel toward the front of the server and push until it snaps into place.

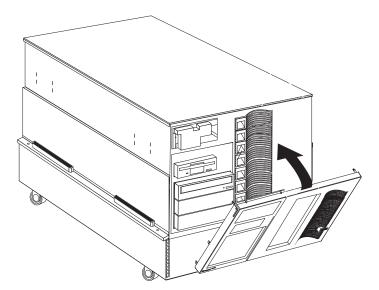


Figure 13. Installing the server front bezel

the server to remove it and set it aside for later reinstallation in step 12 on page 14.

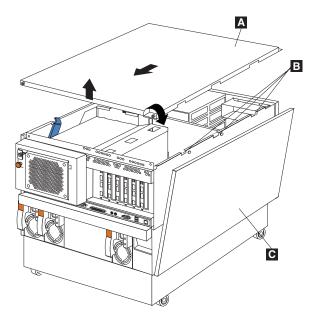


Figure 14. Removing the top cover

Note: You must have the top cover in place for proper cooling and airflow. Operating the server for extended periods of time without the top cover might damage server components.

- 10. Install the left and right side covers:
 - **a.** Remove the keys that are attached to the inside of the right-side cover; then, make sure that the lock is in the unlocked position before installing side covers.
 - b. Align the bottom of each side cover with the slots in the side-cover brackets; then, pivot the top of each side cover into place until the three tabs on the upper inside of the cover fit into the matching slots
 B in the server chassis.

Note: You must install the left-side cover on the left side of the server, and the right-side cover on the right side of the server. The side covers are correctly installed when they are level at the top of the server and do not interfere with top cover installation.

- **11.** Move the information panel to its extended mounting position as shown below:
 - a. Remove the two M3.5 screws A.

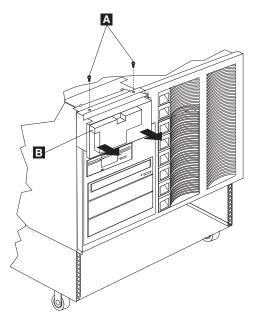


Figure 15. Moving the information panel

b. Move the panel **B** away from the front of the server until the screw holes align with the extended mounting position; then, replace and tighten both screws.

12. Install the server top cover that you removed in step 9 on page 12:

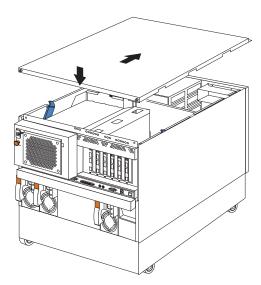


Figure 16. Installing the server top cover

Note: You must have the top cover in place for proper cooling and airflow. Operating the server for extended periods of time without the top cover might damage server components.

- a. Verify that all cables, adapters, and other components are installed and seated correctly inside of the server. Also verify that no loose parts or tools are inside of the server.
- **b.** Lower the cover with the rear edge of the cover about 2.5 cm (1 in.) from the rear of the server.
- **c.** Slide the cover toward the front of the server; then, tighten the two screws on the cover.
- 13. If your server is a Netfinity 5500 series model, install its information-panel cover and window assembly that comes with the 8Ux24D Rack-to-Tower Kit as shown below:
 - a. Position the latch tab on the left side of the cover over the slot on the left side of the server; then, pivot the right side of the cover toward the right side of the server and press until it latches.

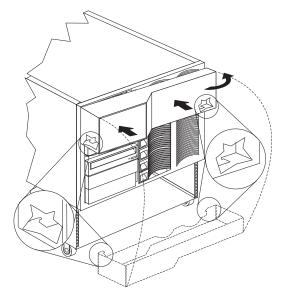


Figure 17. Installing the Netfinity 5500 series information-panel cover and window assembly

b. Skip to step 15 on page 15 to continue the installation.

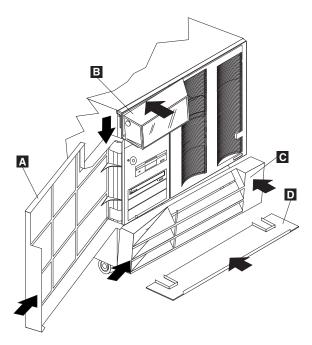


Figure 18. Installing the door, bezel, and caster stabilizer

- **14.** For non 5500 series servers, install the information-panel cover and window assembly **B** by aligning the tabs on the top of the assembly with the slots in the top of the server; then, press in on the top and bottom of the assembly until it snaps into place.
- **15.** To install the appropriate server door (5500 series or non 5500 series), align the left side of the door with the hinge pins on the left-side cover; then, pivot the door toward the server until it latches shut.
- **16.** If you are using the NetBAY3 enclosure, install the enclosure bezel **C**; then, slide the caster stabilizer **D** into place on the enclosure front (swivel) casters for added stability.

Note: If you left the skid pads on the NetBAY3 instead of installing the casters, then you do not need the caster stabilizer.

- 17. If required, use the keys that come with this kit to lock the right-side cover and secure the front door.
- 18. Connect all server and device cables and connectors.

The 8Ux24D Rack-to-Tower Kit installation is complete. If you are using the NetBAY3 enclosure and have a device to install inside of it, proceed with "Installing devices in the NetBAY3 enclosure" on page 16.

Installing devices in the NetBAY3 enclosure

The NetBAY3 enclosure requires a minimum service clearance of 91.5 cm (36 in.) in the front and the rear. The type of server you install determines the service clearance on the sides. Refer to the server documentation for proper side service clearance.

A minimum cooling clearance of 15 cm (6 in.) on all sides is required. The server or device that you install in the enclosure might require a greater cooling clearance. Refer to the server or device documentation for the required cooling clearance.

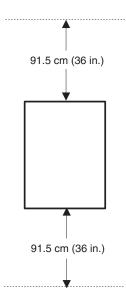


Figure 19. Service and cooling clearances for the enclosure

You can install side-rail devices like the IBM EXP10, cantilevered devices such as a power distribution unit that installs on the front or rear of the enclosure, or devices that sit on the enclosure base plate.

Attention:

- 1. Always lock the casters before installing any devices in enclosures.
- 2. When stacking enclosures, always install the heaviest device in the bottom enclosure, the next heaviest device in the second enclosure, and the lightest device in the top enclosure.
- 3. For the enclosure bezel to close, devices with handles must not extend more than 56 cm (2.2 in.).

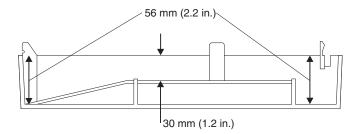


Figure 20. Enclosure internal dimensions

4. All device cables must exit from the rear of the enclosure.

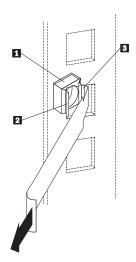
16

Installing and moving cage nuts

Install the cage nuts that come with the 8Ux24D Rack-to-Tower Kit on the mounting flanges toward the inside of the enclosure. Make sure that you install all of the cage nuts at the appropriate levels on the mounting flanges, depending on the device you are installing in the enclosure. You can install or move cage nuts with a flat-blade screwdriver or the cage nut insertion tool that comes with the enclosure.

Using the cage nut insertion tool

To install a cage nut using the cage nut insertion tool:

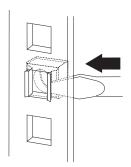


- 1. Determine the hole in which you want to install the cage nut 1.
- 2. Insert one edge of the cage nut into the hole 2.
- Push the insertion tool through the hole and hook the other edge of the cage nut
- 4. Pull the insertion tool and the cage nut back through the hole to finish.

Figure 21. Using the cage nut insertion tool to install cage nuts

Using a flat-blade screwdriver

To install a cage nut using a flat-blade screwdriver:



- 1. Hook one side of the cage nut into the rack-mounting-rail square hole.
- 2. Hold the cage nut in one hand and compress the cage nut clip with a flat-blade screwdriver.
- 3. With the clip compressed, push the cage nut fully into the square hole.
- **4.** Release the screwdriver pressure on the clip to lock the cage nut in the square hole.

Figure 22. Using a flat-blade screwdriver to install cage nuts

Removing the rear panel

When you install a device in the enclosure, remove the rear panel as follows:

1. Remove the four screws that hold the panel in place.

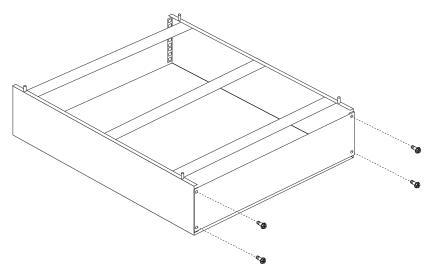


Figure 23. Removing the enclosure rear panel

2. Lift the rear panel off of the enclosure and save for future use.

After you remove the rear panel, you can install one of the following:

- A side-rail device (See "Installing a side-rail device")
- A cantilevered device (See "Installing cantilevered devices" on page 20)
- · A device on the base plate (See "Installing devices on the enclosure base plate" on page 21)

Installing a side-rail device

Installing a device with side rails in the NetBAY3 is similar to installing it in a rack cabinet. The basic steps for installing a device on side rails in the enclosure are as follows:

1. Refer to the device documentation for detailed installation information.

Note: If you need to install or move cage nuts at the front or rear of the enclosure, see "Installing and moving cage nuts" on page 17.

2. Turn the device power off and remove all cables and connectors from the device.

3. Install the side rails into the enclosure.

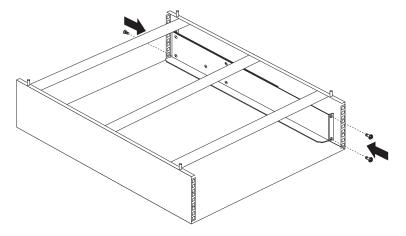


Figure 24. Installing side rails in the enclosure

4









≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

CAUTION: Use safe practices when lifting.

4. Install the device on the side rails.

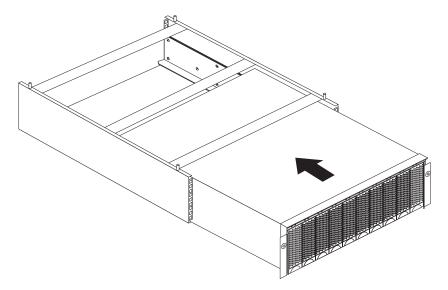


Figure 25. Installing a device on a side rail in the enclosure

Installing cantilevered devices

Installing cantilevered devices in an enclosure is similar to installing these devices in a rack cabinet. You can install cantilevered devices in the front or rear of the enclosure. You must secure the devices to the enclosure vertical mounting rails.

The basic steps for installing a cantilevered device are as follows:

1. Refer to the device documentation for detailed installation information.

Note: If you need to install or move cage nuts at the front or rear of the enclosure, see "Installing and moving cage nuts" on page 17.

- 2. Turn the device power off and remove all cables and connectors from the device.
- 3. Install the device in the enclosure.

The following figure shows a power distribution unit (PDU) installed in the rear of the enclosure:

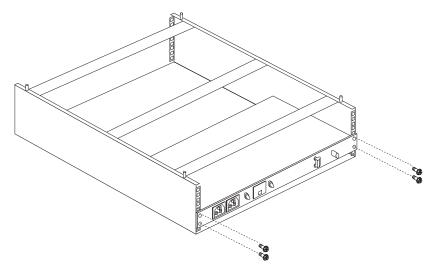


Figure 26. Installing a PDU in the rear of the enclosure

Installing devices on the enclosure base plate

Some devices rest on the enclosure base plate. You must secure these devices to the enclosure vertical mounting rails.

The basic steps for installing a device on the enclosure base plate are as follows:

1. Refer to the device documentation for detailed installation information.

Note: If you need to install or move cage nuts at the front or rear of the enclosure, see "Installing and moving cage nuts" on page 17.

2. Turn the device power off and remove all cables and connectors from the device.











≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

CAUTION:

Use safe practices when lifting.

3. Install the device in the enclosure.

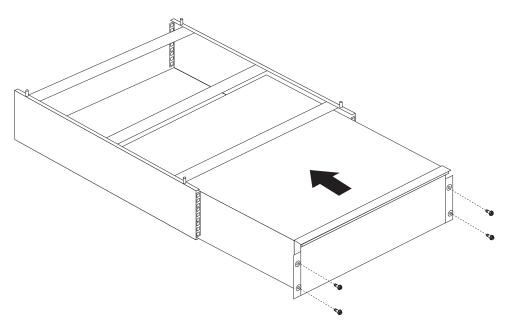


Figure 27. Installing a device on the enclosure base plate

Getting help, service, and information

If you need help, service, technical assistance, or just want more information about IBM products, you will find a wide variety of sources available from IBM to assist you.

With the original purchase of an IBM hardware product, you have access to extensive support coverage. During the IBM hardware product warranty period, you may call the IBM Personal Computer HelpCenter (1-800-772-2227 in the U.S.) for hardware product assistance covered under the terms of the IBM Statement of Limited Warranty.

The following services are available during the warranty period:

- Problem Determination Trained personnel are available to assist you with determining if you have a hardware problem and deciding what action is necessary to fix the problem.
- IBM Hardware Repair If the problem is determined to be caused by IBM hardware under warranty, trained service personnel are available to provide the applicable level of service.
- Engineering Change Management Occasionally, there might be changes that are required after a product has been sold. IBM or your reseller, if authorized by IBM, will make Engineering Changes (ECs) available that apply to your hardware.

Be sure to retain your proof of purchase to obtain warranty service. Refer to the IBM hardware warranty for a full explanation of IBM's warranty terms.

Please have the following information ready when you call:

- · Machine Type and Model
- · Serial numbers of your IBM hardware products
- Description of the problem
- · Exact wording of any error messages
- Hardware and software configuration information

On the World Wide Web, the IBM Personal Computing Web site has up-to-date information about IBM Personal Computer products and support.

Some helpful addresses are:

http://www.ibm.com Main IBM home page
http://www.ibm.com/pc IBM Personal Computing

http://www.ibm.com/pc/support IBM Personal Computing Support

http://www.ibm.com/pc/us/accessories Options by IBM (U.S.)

http://www.ibm.com/pc/us/netfinity IBM Netfinity Servers (U.S.)

http://www.ibm.com/pc/techconnect IBM TechConnect

You can select a country-specific Web site from these pages.

If you select Profile from the support page, you can create a customized support page that is specific to your hardware, complete with Frequently Asked Questions, Parts Information, Technical Hints and Tips, and Downloadable Files. You will have the information you need, all in one place. In addition, you can choose to receive e-mail notifications whenever new information becomes available about your registered products. You also can access online support forums, which are community sites monitored by IBM support staff.

Product warranties and notices

This section contains important product warranty and notice information about your product.

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 23)
- Worldwide except Canada, Puerto Rico, Turkey, and United States (Z125-5697-01 11/97)
 (Part 1 General Terms on page 25)
- Worldwide Country-Unique Terms
 (Part 2 Country-Unique Terms on page 27)

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 8Ux24D Rack-to-Tower 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

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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 8Ux24D Rack-to-Tower 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 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 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 1-800-565-3344.

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

To obtain warranty service from IBM, call 1-800-772-2227.

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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