



Netfinity 5500 M20

Express Setup and Installation



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Note

Before using this *Netfinity Server Library* and the product it supports, be sure to read the “Legal and safety Information” section of this *Server Library*.

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Express setup and installation

This setup and installation section contains information that guides you through:

- Setting up and cabling your server.
- Starting and configuring your server.
- Installing your network operating system (NOS).

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Overview

After reviewing the “Legal and safety Information” section of this *Server Library*, these are the steps you perform when you follow the “Express setup and installation” procedures.

Hardware Installation

- 1** Install the NetBAY3 (tower models only).
- 2** Install hot-swap hard disk drives.
- 3** Install an additional microprocessor (optional).
- 4** Cable your server.
- 5** Verify your server is operating properly.
- 6** Install additional options.

Software Installation

- 1** Configure your hardware, install the NOS, and install device drivers.
- 2** Enhance server performance with additional programs.

Safety statement



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」。



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.

4



≥18 kg (37 lbs)



≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

CAUTION:

Use safe practices when lifting.

Hardware installation

This hardware installation procedure provides the information or references to the information you need to set up and cable your server, start your server, and verify that your server hardware is functioning properly.

Before you begin:

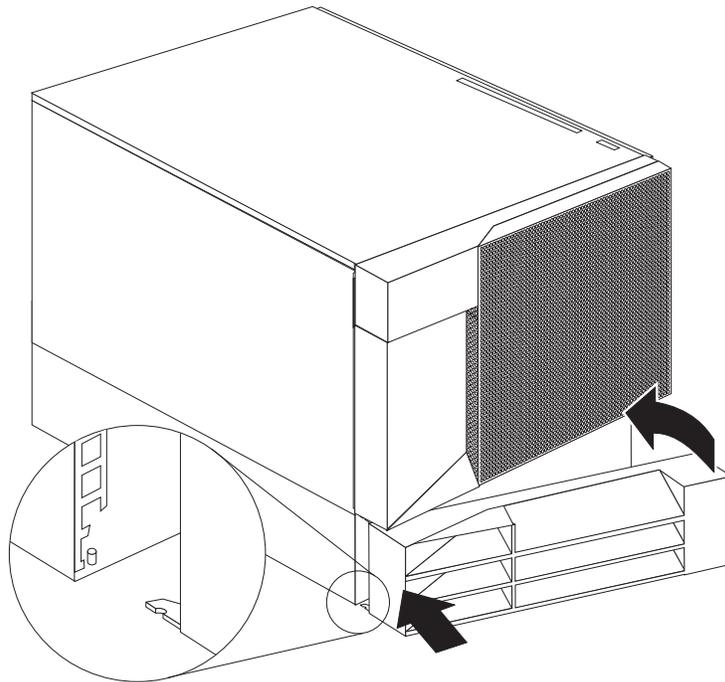
- Review the “Legal and safety Information” section of this *Server Library*.
- If you have not unpacked your server, unpack it and use the “Inventory list” in the “Start Here” section of this *Server Library* to make sure you received all items shipped with the server.
- If your Netfinity 5500 M20 server is a rack model and its planned location in the rack is easily accessible, you might want to install your server in the rack before you begin installing options. For installation instructions, refer to “Rack installation” in the “Hardware Information” section of this *Server Library*.
- To maintain proper system cooling, do not operate the Netfinity 5500 M20 server for more than two minutes without either a drive or a filler panel installed in each bay.
- Your Netfinity 5500 M20 server comes with an integrated ServeRAID II controller. Before you configure your server, you must determine how you want to set up your disk arrays. The RAID levels (0, 1, or 5) of the disk arrays you configure determine the number of hard disk drives you need to install. RAID level-0 requires one drive (minimum), RAID level-1 requires two drives (minimum), and RAID level-5 requires three drives (minimum). For more information, refer to the “ServeRAID Information” section of this *Server Library*.

1. Installing the NetBAY3 (tower models only)

The NetBAY3 is attached to the bottom of Netfinity 5500 M20 server tower models. The bezel for the NetBAY3 is shipped, unattached, inside the NetBAY3.

For more information, refer to “NetBAY3” in the “Hardware Information” section of this *Server Library*.

- 1** Locate the bezel inside the NetBAY3.
- 2** Remove and unpack the bezel.
- 3** Hook the tabs on the left side of the bezel around the posts on the server.
- 4** Push the right side of the bezel toward the server until the bezel locks into place.
- 5** Continue with “2. Installing hot-swap hard disk drives” on page 7.



2. Installing hot-swap hard disk drives

Use the following procedure to install hot-swap hard disk drives in your Netfinity 5500 M20 server.

- 1 Touch the static-protective bag containing the drive to any unpainted metal surface on the server; then, remove the drive from the bag.

Note: The UltraSCSI controller and the backplane of the hot-swap bays provide termination for the internal SCSI bus (cable) in your server. There are no termination requirements for any SCSI devices you install in the hot-swap bays or attach to this cable (bus).

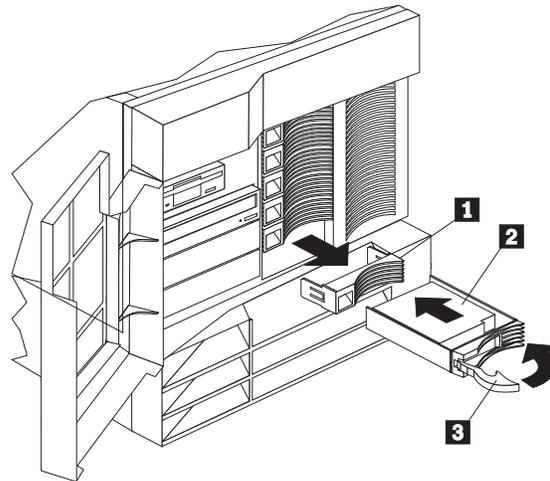
- 2 Remove the filler panel **1** from one of the hot-swap bays. See the following illustration.

- 3 Insert the drive **2** into the bay.

Ensure that the tray handle **3** on the drive is in the open position (perpendicular to the drive).

- 4 Slide the drive assembly into the bay until it connects to the backplane; then, move the handle to the locked (closed) position.

- 5 Continue with “3. Installing an additional microprocessor.”



3. Installing an additional microprocessor

If you have an additional microprocessor to install, do so now by referring to “Microprocessor installation” in the “Hardware Information” section of this *Server Library* and the information provided with the microprocessor; then, return here and continue with “4. Cabling your server” on page 8.

If you do not have an additional microprocessor to install, continue with “4. Cabling your server” on page 8.

4. Cabling your server

Use the following procedure to attach the cables to your Netfinity 5500 M20 server.

- 1 Select a location that will allow for air circulation. Be sure to maintain minimum clearances around the server:

Front 306 mm (12 in.)

Rear 306 mm (12 in.)

Left and Right Sides 51 mm (2 in.)

- 2 Connect the device cables to the server. For the location of cable connectors, see the illustration on the following page.

Important

- If you are attaching a modem or fax machine to the server and you are in the United Kingdom, plug in the power cords first; then, connect the telephone line to the wall outlet and the server.
- To connect the server 10BASE-T or 100BASE-TX port to a hub, use a UTP cable with RJ-45 connectors at both ends. An EIA/TIA-568 category 5 cable must be used for 100BASE-TX connectors to meet various standards, including electromagnetic compatibility.

- 3 Remove the shipping-screw **18**, connect the power cord **11** to the server, and (if applicable) install the power-cord strain-relief clamp **17**. See the illustration on the following page.

7



CAUTION:

When the power-cord strain-relief bracket option is installed on the power cord, the server must be plugged into a power source that is easily accessible.

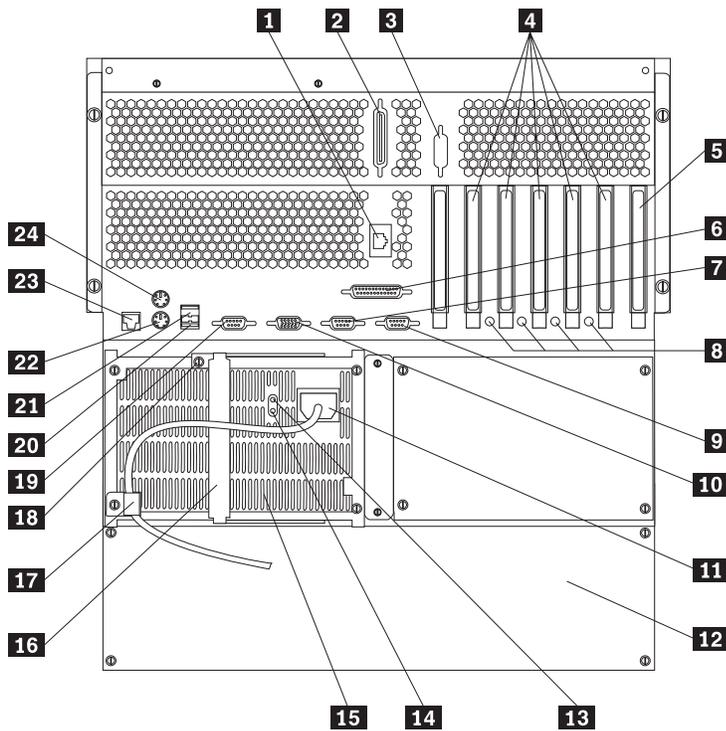
- 4 Connect all power cords to electrical outlets.

Important

After you plug the server power cord into an outlet and before you press the power switch, the power-on light will blink to indicate that power is present.

- 5 Continue with “5. Verifying your server is operating properly” on page 10.

Server cable connectors



1 RS485 management connector

2 SCSI connector

3 External connector knockout

4 PCI expansion slots 1 through 6
(numbered right-to-left)

Note: Because of the processor housing,
PCI slot 6 is not available and PCI slot
5 supports only a short adapter.

5 ISA expansion slot

6 Parallel port

7 Serial port A

8 Attention lights for hot-plug PCI slots

9 Serial port B

10 Video monitor

11 Power supply 1 power cord and connector

12 NetBAY3 (tower models only)

13 Power supply 1 ac power light

14 Power supply 1 dc power light

15 Power supply 1

16 Power supply 1 locking lever

17 Power supply 1 power cord clamp

18 Power supply shipping-screw

19 Management C connector

20 Universal serial bus (USB) 2

21 Universal serial bus (USB) 1

22 Keyboard

23 Ethernet

24 Mouse

5. Verifying your server is operating properly

Use the following procedure to verify that your Netfinity 5500 M20 server is operating properly.

- 1 Turn on all external devices, such as your monitor, printer, and modem; then, turn on your server. For the location of controls and lights, see the illustration on the following page.

Important

After you plug the server power cord into an outlet, wait 20 seconds before pressing the power control button. This allows the system-management processor to initialize.

- 2 Press the power control button on the front of the server. The system power light comes on and the power-on self-test (POST) begins.
- 3 Observe your monitor.

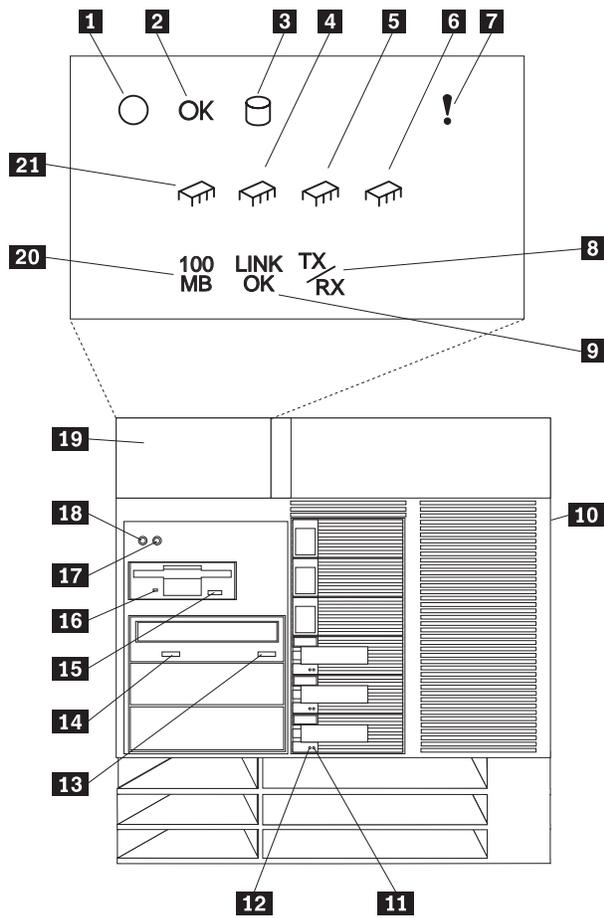
When the system successfully completes its POST, the server beeps once, the system POST complete light comes on, and a prompt appears on your monitor requesting that you insert startable (bootable) media.

Important

- The following POST message might appear because the operating system has not been installed.
1962 Drive does not contain a valid boot record.
- If you have added or removed options, POST message 162 appears if configuration information has changed. Start the Configuration/Setup Utility program and select "Save Settings."
- If any other error message appears, you hear more than one beep, or your monitor screen is blank, refer to "Problem solving" in the "Hardware Information" section of this *Server Library* for instructions; then, return here and continue with "6. Installing additional options" on page 12.

- 4 Continue with "6. Installing additional options" on page 12.

Controls and lights



- | | | | |
|------------------------------------|-------------------------------------|-----------|-------------------------------|
| 1 | System power light | 13 | CD-ROM eject/load button |
| 2 | System POST complete light | 14 | CD-ROM in-use light |
| 3 | SCSI hard disk drive activity light | 15 | Diskette drive eject button |
| 4 , 5 , and 6 | Processor activity lights | 16 | Diskette drive in-use light |
| 7 | System error light | 17 | Reset button |
| 8 | Ethernet activity light | 18 | Power control button |
| 9 | Ethernet link status light | 19 | User Display |
| 10 | Door lock (on side cover) | 20 | Ethernet speed 100 Mbps light |
| 11 | Hard disk drive status light | 21 | Processor activity light |
| 12 | Hard disk drive activity light | | |

6. Installing additional options

If you have additional options to install, do so now. For installation instructions, refer to the information in this *Server Library* and the information provided with the option.

- 1 Before installing additional options, turn off your server and unplug the server power cord from the outlet.

Important

- Adding or removing some options can change the configuration information in the server. When you start (boot) the server after adding or removing options, POST message 164 appears if configuration information has changed. Start the Configuration/Setup Utility program and select “Save Settings.”
- If you plan to install multiple network adapters, install only one at this time. After you have installed the NOS and it is starting without errors, install the additional network adapters one at a time.

You can install all other adapters at once, but installing the adapters one at a time makes locating a defective adapter much easier.

- 2 Use the tables provided in the “Hardware Information” section of this *Server Library* to:
 - Update the device-record tables with the new option information.
 - If you installed an additional microprocessor, update the microprocessor information.
 - Record the server serial number and key serial number.
- 3 After you have installed all your options, return here and continue with “Software installation” on page 13.

Software installation

This software installation procedure provides the information you need to configure hardware, install device drivers, and install the network operating system (NOS).

1. Configuring hardware and installing the NOS

For detailed information about ServerGuide hardware configuration, NOS installation, device driver installation, or partition sizes, see the “ServerGuide and Netfinity Manager Information” section of this *Server Library*.

Before you begin:

If the ServerGuide CD does not start, restart the server and press **F1**. When F1 appears on the screen, select **Configuration/Setup Utility** and check for the following:

- Invalid drive startup sequence (startable CDs require a CD-ROM in the startup sequence)
- Duplicate SCSI ID settings
- Duplicate IRQ assignments

To get started, do the following:

- 1** To configure hardware, insert the *HardwareGuide* CD (CD1); then, restart the server.

Important

Information about the ServeRAID configuration program is included in this Netfinity Server Library or with the ServeRAID option.

- 2** To install your NOS, insert the *SoftwareGuide* CD (CD2); then, restart the server. Refer to the *SoftwareGuide* CD label for NOS versions supported. Your copy of the NOS CD is required.

Important

If you decide not to use ServerGuide to install the NOS, continue with “Installing your NOS without ServerGuide” on page 14.

- 3** Click on **README** to review hints and tips for your NOS installation.
- 4** From the Main Menu, click on **Operating System Installation**. Follow the online instructions to complete the installation.

After the NOS is installed, be sure to see “2. Enhancing server performance with additional programs” on page 14.

Installing your NOS without ServerGuide

If you have already configured the server hardware, and you decide not to use ServerGuide to install your NOS, you must have system-specific NOS installation instructions and device drivers.

You can download the latest level of NOS installation instructions and device drivers from the World Wide Web at: <http://www.pc.ibm.com/support>

- 1** Click on **IBM Servers Support**.
- 2** From the **select family** field, click on **Netfinity 5500 M20**.
- 3** From the list in the Netfinity 5500 M20 window, click on the model.
 - To download device drivers, click on **Downloadable Files**.
 - To download NOS installation instructions, click on **Software information**.

2. Enhancing server performance with additional programs

As a convenience, ServerGuide includes current NOS updates provided by NOS software developers. There is no need to download updates from a Web site. To install updates, refer to the README file on the root directory of the ServerGuide *Operating System FixPak* CD.

Application programs

The ServerGuide CDs include a variety of powerful application programs for which no activation keys are required. Some of these programs are:

- IBM Update Connector
Connects you to the IBM HelpCenter server to check for updates to your server BIOS, microcode (firmware), device drivers, and application programs.
- IBM Netfinity Manager
State-of-the-art systems management software
- IBM ServeRAID programs
Administration and monitoring capability.

For more information about the application programs included with ServerGuide, see the "ServerGuide and Netfinity Manager Information" section of this *Server Library*.



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