

Installation Procedures

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Introduction

These installation procedures provide information for unpacking and installing the Express5800/1160Xd/1320Xd Server. Read these procedures in their entirety before performing the installation to become familiar with the components and the sequence of steps you will perform.

Symbols and Conventions

This guide uses the following text conventions and graphics symbols.

Warnings, cautions, and notes have the following meanings:

 **WARNING**

Warnings alert you to situations that could result in serious personal injury or loss of life.

 **CAUTION**

Cautions indicate situations that can damage the system hardware or software.

Note: Notes give important information about the material being described.

Safety Notices

WARNING

To avoid a risk of injuries, installation should be performed by trained technical personnel.

It takes at least two people to unpack your server and two people to maneuver the server, after unpacking.

Your server is equipped with a front stabilizer. Engage the front stabilizer during installation. For stability and to distribute the weight, also attach side stabilizers. Otherwise, the rack may topple over and cause injuries.

If you extend two or more devices from the rack at the same time, the rack may topple over on you. Extend only one device from the rack at a time.

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

- **Elevated Operating Ambient Temperature** – If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient environment. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum rated ambient temperature of 95°F (35°C).
- **Reduced Air Flow** – Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- **To prevent fires and damage to rack equipment and supply wiring**, make sure that the rated load of the power branch circuit is not exceeded. Equipment nameplate ratings should be used when addressing this concern. For more information on installation and wiring of power-related facilities, contact your electrician or local power company.
- **To prevent electrical shock**, connect all rack and rack support equipment to the same electrical circuit of the building wiring. If you are unsure, check the building wiring to avoid remote earth conditions.
- **For safe operation**, only connect the equipment to a building supply that is in accordance with current wiring regulations in your country. In the USA, those wiring standards are regulated by Underwriter Laboratories (UL); in the U.K. by the Institution of Electrical Engineers, (IEE) and in Canada by the Canadian Standards Association (CSA).

Safety Notices for Users Outside of the U.S.A. and Canada

- **PELV (Protected Extra-Low Voltage) Integrity:** To ensure the extra-low voltage integrity of the equipment, connect only equipment with mains-protected electrically-compatible circuits to the external ports.
- **Remote Earths:** To prevent electrical shock, connect all local (individual office) computers and computer support equipment to the same electrical circuit of the building wiring. If you are unsure, check the building wiring to avoid remote earth conditions.
- **Earth Bonding:** For safe operation, only connect the equipment to a building supply that is in accordance with current wiring regulations in your country. In the USA, those wiring standards are regulated by Underwriter Laboratories (UL); in the U.K. by the Institution of Electrical Engineers, (IEE) and in Canada by the Canadian Standards Association (CSA).

If you Need Help

Contact NEC Technical Support at **1-866-269-1239**.

Selecting a Site

The server operates reliably in a computer room environment. Choose a site that is:

- Near grounded, three-pronged power outlets.

 **Note:** For the United States and Canada, this means NEMA 5-15R outlets for 100-120 VAC or NEMA L6-30R outlets for 200-240 VAC. For other international sites, this means three-pronged power outlets applicable for the electrical code of the region.

WARNING

Be sure the power service connection is through a properly grounded outlet.

WARNING

All AC connections to the server must be plugged into the same common ground power outlets.

-
- Clean, dust-free, and well ventilated. Front and rear and top ventilating openings kept free of obstructions. Away from sources of heat, vibration or physical shock.
 - Isolated from strong electromagnetic fields and electrical noise produced by electrical devices (such as air conditioners, large fans, large electric motors, radio and TV transmitters, and high-frequency security devices)
 - Spacious enough to provide at least 2 feet (0.6 meters) behind the server, 3 feet (1.0 meters) in front of the server and 19.0 inches (0.5 meters) on each side of the server for proper cooling, airflow, cable clearance and maintenance.
 - Easily accessible for server maintenance and installation of server upgrades.

Unpacking the Server



CAUTION

If the packaged server has come from an environment which is significantly warmer or colder than the environment in which it is to be installed, leave the server in its shipping container for at least 24 hours at room temperature before removing any packaging. This will prevent damaging condensation from occurring.



WARNING

The server weighs approximately 926.0 pounds (420.0Kg). If the server contains optional equipment, it will weigh more. To avoid personal injury, make sure you have another person help you unpack the server and two other persons help you move the server.

When you receive the server, check to see if the shipping boxes are damaged, note the damage, and if possible, photograph it for reference. After removing the contents of the containers, keep the cartons and the packing materials. If the contents appear damaged when you unpack the boxes, file a damage claim with the carrier immediately.

The server cabinet is covered with a vinyl shroud for anti-dew-condensation protection. The packaged cabinet is loaded onto the pallet, outer shipping covers are attached, and the covers are fastened with plastic straps. The server is loaded into the shipping container with the front of the server facing the rear of the container. A ramp for loading and unloading the cabinet is also included in the shipping container.

Figure 1 shows the Model 1160Xd/1320Xd shipping container. The smaller container (not shown) includes the following contents:

- Server Stabilizer Kit
- Accessory Box.



Figure 1. Shipping Container

Unpacking Procedure

 **Note:** It is recommended that you save the shipping container, should the server require transport to another location at a later date.

WARNINGS

Plastic straps securing the packaging may cause injury if the belts snap loose when cut. Use caution when performing the first step of this procedure, protecting the hands and face.

Handling the wooden unloading ramp and the pallet can cause splinters. The use of gloves is recommended.

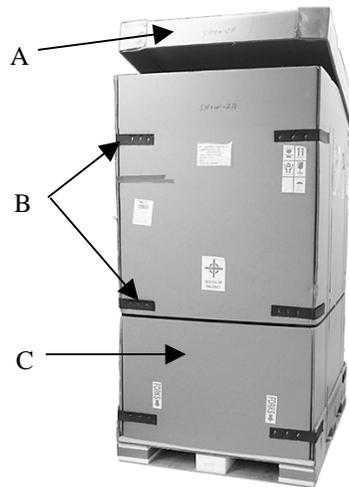
1. Move the server as close as possible to the computer room where the server is to be installed.
2. Plastic straps secure the shipping box around the server. Carefully cut and remove the plastic straps securing the sides and top of the shipping container. See Figure 2A. It is recommended that you wear gloves and protective eye wear when cutting the plastic straps.



A Plastic Straps

Figure 2. Shipping Container Plastic Straps

3. Lifting upwards, remove the top shipping cover. See Figure 3A.
4. Release the Velcro tapes that secure the front, rear, and side covers of the shipping box. See Figure 3B.
5. Remove the shipping container surrounding the server and set it aside. See Figure 3C.



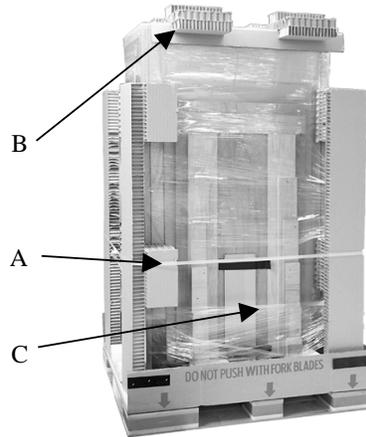
A Shipping Cover
B Velcro Straps
C Shipping Container

Figure 3. Removing the Cardboard Covers

! WARNING

Plastic straps securing the packaging may cause injury if the straps snap loose when cut. Use caution when performing the first step of this procedure, protecting the hands and face.

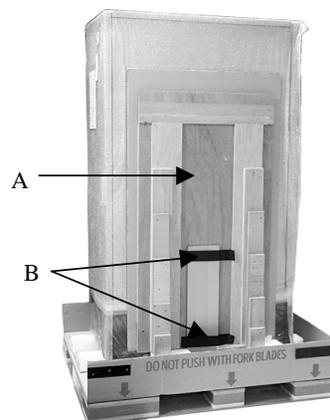
6. Cut the strap or tape securing the corrugated cardboard end pieces protecting the corners of the server. Remove the four corner protectors and set them aside. Note the positions of the corner protectors that are marked FR (front right), FL (front left), RR (rear right) and RL (rear left). See Figure 4A.
7. Remove the corrugated cardboard protecting the top of the cabinet. See Figure 4B.



- A Strap
- B Top Corrugated Cardboard
- C Plastic Stretch Film

Figure 4. Removing the Corner and Top Protectors

8. Cut and remove the plastic stretch film that is wrapped around the server. See Figure 4C.
9. Remove the unloading ramp and set it aside. See Figure 5A.
10. A metal ramp plate is attached to the unloading ramp. Release the Velcro strips and remove the ramp plate from the unloading ramp. See Figure 5B.



- A Unloading Ramp
- B Velcro Strips and Ramp Plate

Figure 5. Removing the Unloading Ramp

11. Four Styrofoam stoppers prevent the server from moving during shipment. Wing nuts secure Styrofoam stoppers, located on both sides of the server as well as the front and rear of the server, to the shipping pallet. Remove the four wing nuts and remove the stoppers and set them aside. See Figure 6A.
12. A plastic sheathing, secured with tape, protects the bottom sides of the server. Remove the tape and then cut and remove the bottom sheathing. Be careful not to damage the upper vinyl shroud. Be sure the bottom sheathing is free and clear of the server wheels and levelers. See Figure 6B.

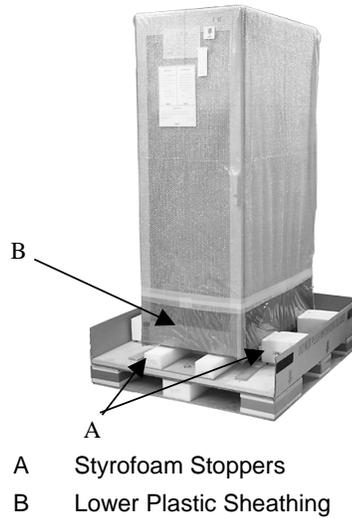


Figure 6. Removing the Cardboard Covers

13. Place the unloading ramp in front of the rear of the server and secure the ramp to the pallet using the ramp plate removed in Step 10. See Figure 7.

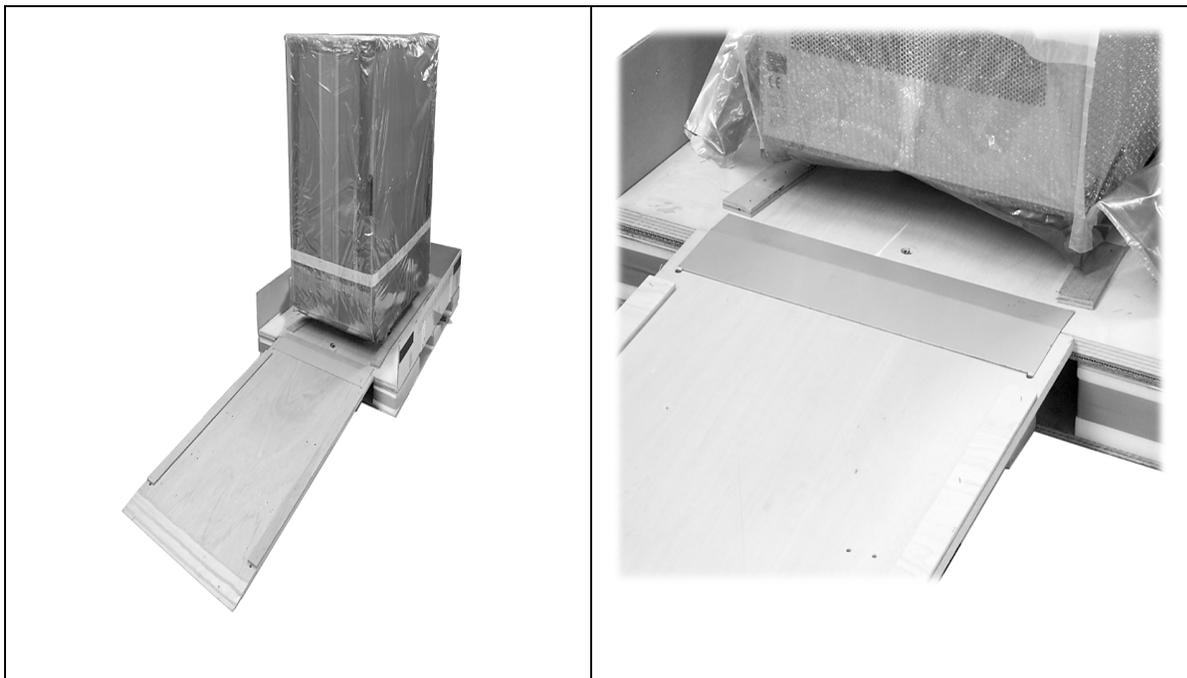


Figure 7. Installing the Unloading Ramp

WARNING

The server weighs approximately 926.0 pounds (420.0Kg). If the server contains optional equipment, it will weigh more. To avoid personal injury, make sure you have another person help you unpack the server and two other persons help you move the server.

CAUTION

Exerting excessive pressure on the server cabinet doors may damage them. When performing the next step, be sure to grasp the corner frame of the server when pushing the server towards the unloading ramp.

14. Position a person at the front of the server (rear of pallet) and one person standing on the ramp at the rear of the server. Grasp the corners of the server. Do not put pressure on the center of the front or rear cabinet doors. See Figure 8.



Figure 8. Rolling the Server Down the Ramp

15. With another person pushing on the front corners of the server, the person standing on the ramp should stabilize the movement of the server and guide the server down the center of the unloading ramp. Guide strips are positioned along the sides of the ramp to prevent the server from falling off the sides of the ramp. See Figure 8. Remove the server from the shipping pallet.
16. Once the server is removed from the pallet, remove any bubble-pack and the shroud that covers and protects the server.
17. With the assistance of another person, move the server to the selected location in the computer room.

-
- 18.** Once the server is located in its designated position, using an adjustable wrench, lower the leveling pads to secure the server in place. See Figure 9A.

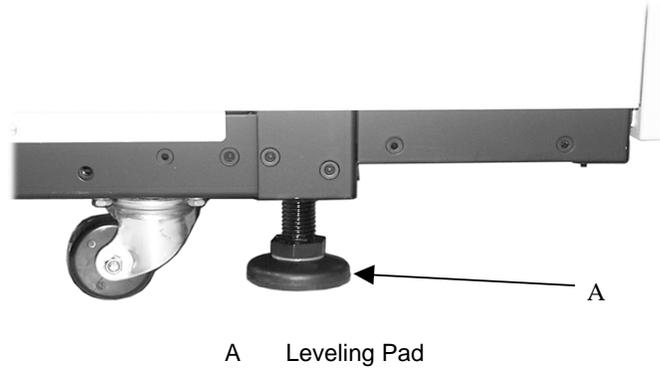


Figure 9. Lowering the Leveling Pads

- 20.** At the front of the system. Remove the single screw securing the front stabilizer and pull the stabilizer out from the cabinet as shown in Figure 10.



Figure 10. Releasing the Front Stabilizer

Installing the Side Stabilizer Kit

 **Note:** The Side Stabilizer Kit is included in the Accessory box.

1. Position a stabilizer bracket on each side of the cabinet.
2. Secure each stabilizer bracket to the cabinet with three M4 screws provided. See Figure 11.

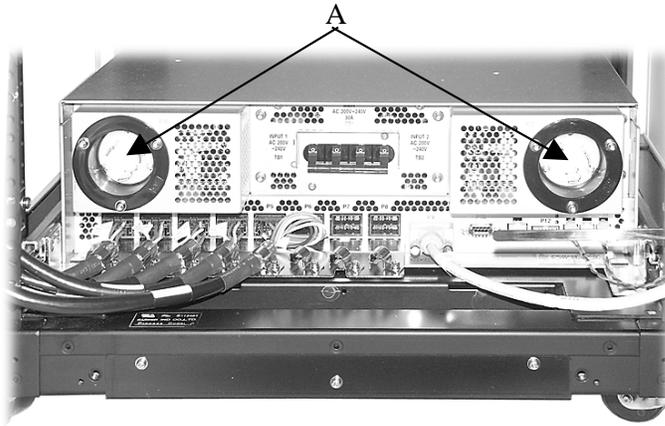


A Side Stabilizers

Figure 11. Installing the Side Stabilizers

Attaching the Power Cables

1. Open the rear door of the server and remove any shipping tape.
2. Route the AC cables (customer supplied) under the server and connect them to the AC receptacles. See Figure 12A.

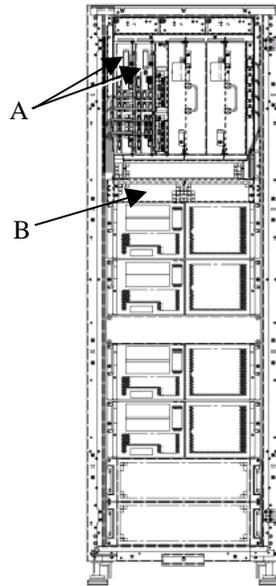


A AC Receptacles

Figure 12. Attaching the Power Cables

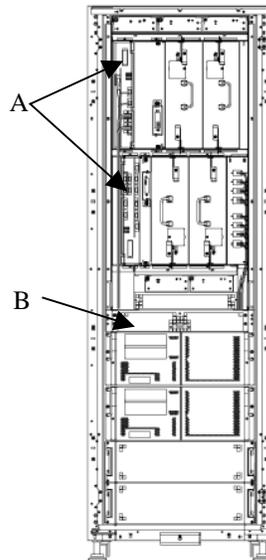
Attaching the LAN Cables

1. Open the front door of the server. Locate the service processor boards (see Figures 13A and 14A).
2. Connect the LAN cables to the ETHER connector on the service processor boards (see Figure 15).
3. Remove the screws securing the open channel cover and remove the cover (see Figures 13B and 14B).
4. Carefully route the LAN cables along the left side of the cabinet and through the open channel to the rear of the server. Use the cable ties at the rear of the server to secure the cables. Route the cables to the left side of the server and down under the cabinet frame.
5. Replace the open channel cover on the front of the server and secure it with the screws.



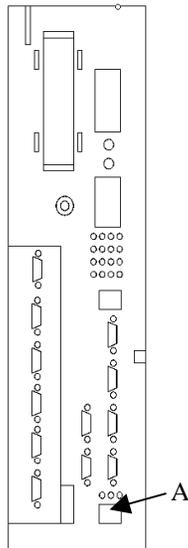
- A Service Processor Boards
- B Open Channel

Figure 13. Connecting and Routing the LAN Cables (1160Xd)



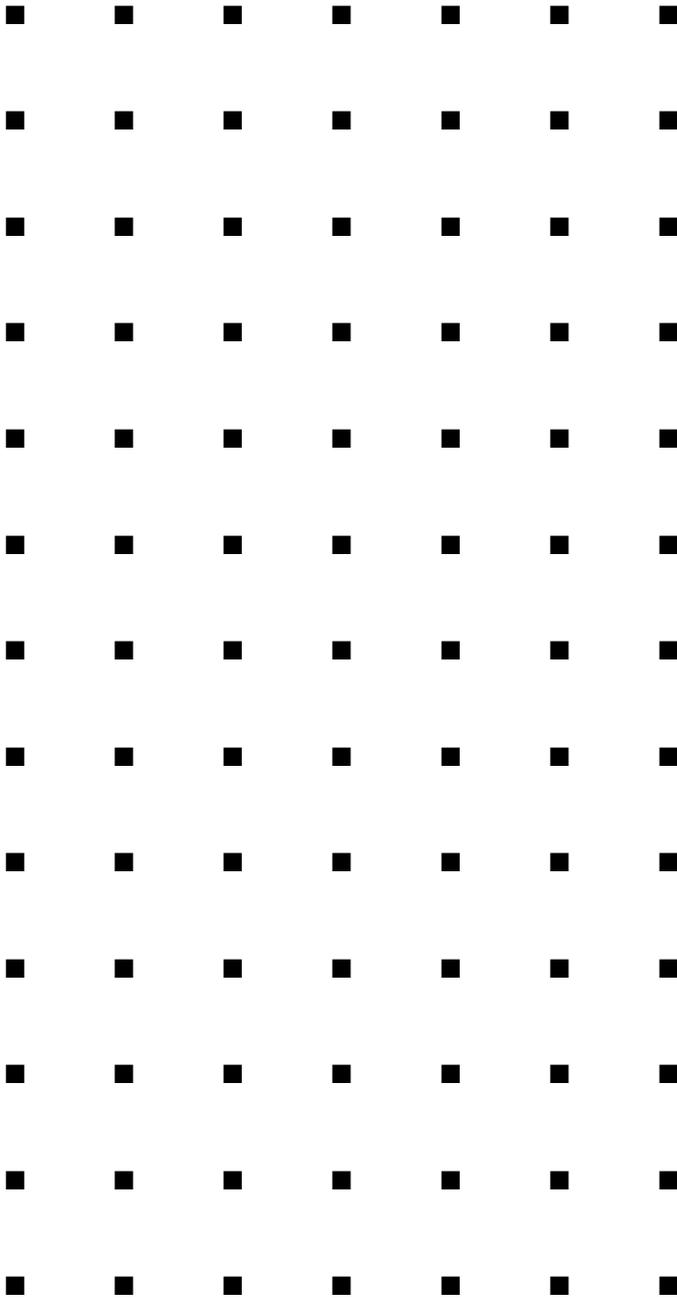
- A Service Processor Boards
- B Open Channel

Figure 14. Connecting and Routing the LAN Cables (1320Xd)



A ETHER Connector

Figure 15. Locating the Service Processor Board ETHER Connector



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