Power Systems

Installing your IBM PurePower System

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Note

Before using this information and the product it supports, read the information in "Safety notices" on page v and "Notices" on page 17 and read the information in the safety and environmental notices included with the system.

This edition applies to the IBM PureFlex System and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Safety notices

Safety notices may be printed throughout this guide:

- **DANGER** notices call attention to a situation that is potentially lethal or extremely hazardous to people.
- **CAUTION** notices call attention to a situation that is potentially hazardous to people because of some existing condition.
- **Attention** notices call attention to the possibility of damage to a program, device, system, or data.

World Trade safety information

Several countries require the safety information contained in product publications to be presented in their national languages. If this requirement applies to your country, safety information documentation is included in the publications package (such as in printed documentation, on DVD, or as part of the product) shipped with the product. The documentation contains the safety information in your national language with references to the U.S. English source. Before using a U.S. English publication to install, operate, or service this product, you must first become familiar with the related safety information documentation. You should also refer to the safety information documentation any time you do not clearly understand any safety information in the U.S. English publications.

Replacement or additional copies of safety information documentation can be obtained by calling the IBM Hotline at 1-800-300-8751.

German safety information

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne § 2 der Bildschirmarbeitsverordnung geeignet.

Laser safety information

IBM® servers can use I/O cards or features that are fiber-optic based and that utilize lasers or LEDs.

Laser compliance

IBM servers may be installed inside or outside of an IT equipment rack.

DANGER

When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard:

- **If IBM supplied the power cord(s), connect power to this unit only with the IBM provided power cord. Do not use the IBM provided power cord for any other product.**
- **Do not open or service any power supply assembly.**
- **Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.**
- **The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.**
- **Connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.**
- **Connect any equipment that will be attached to this product to properly wired outlets.**
- **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.**
- **Do not attempt to switch on power to the machine until all possible unsafe conditions are corrected.**
- **Assume that an electrical safety hazard is present. Perform all continuity, grounding, and power checks specified during the subsystem installation procedures to ensure that the machine meets safety requirements.**
- **Do not continue with the inspection if any unsafe conditions are present.**
- **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 procedures when installing, moving, or opening covers on this product or attached devices.**

  To Disconnect:

  1. **Turn off everything (unless instructed otherwise).**
  2. **Remove the power cords from the outlets.**
  3. **Remove the signal cables from the connectors.**
  4. **Remove all cables from the devices.**

  To Connect:

  1. **Turn off everything (unless instructed otherwise).**
  2. **Attach all cables to the devices.**
  3. **Attach the signal cables to the connectors.**
  4. **Attach the power cords to the outlets.**
  5. **Turn on the devices.**

  Sharp edges, corners and joints may be present in and around the system. Use care when handling equipment to avoid cuts, scrapes and pinching.

  (D005)

(R001 part 1 of 2):

DANGER: Observe the following precautions when working on or around your IT rack system:

- Heavy equipment–personal injury or equipment damage might result if mishandled.
- Always lower the leveling pads on the rack cabinet.
- Always install stabilizer brackets on the rack cabinet.
- To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.

- Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices.

- Each rack cabinet might have more than one power cord. Be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.
- Connect all devices installed in a rack cabinet to power devices installed in the same rack cabinet. Do not plug a power cord from a device installed in one rack cabinet into a power device installed in a different rack cabinet.
- An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

(R001 part 2 of 2):

CAUTION:

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.
- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.

- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack.

CAUTION:
Removing components from the upper positions in the rack cabinet improves rack stability during relocation. Follow these general guidelines whenever you relocate a populated rack cabinet within a room or building.

- **Reduce the weight of the rack cabinet by removing equipment starting at the top of the rack cabinet. When possible, restore the rack cabinet to the configuration of the rack cabinet as you received it. If this configuration is not known, you must observe the following precautions:**
  - **Remove all devices in the 32U position (compliance ID RACK-001 or 22U (compliance ID RR001) and above.**
  - **Ensure that the heaviest devices are installed in the bottom of the rack cabinet.**
  - **Ensure that there are little-to-no empty U-levels between devices installed in the rack cabinet below the 32U (compliance ID RACK-001 or 22U (compliance ID RR001) level, unless the received configuration specifically allowed it.**
- **If the rack cabinet you are relocating is part of a suite of rack cabinets, detach the rack cabinet from the suite.**
- **If the rack cabinet you are relocating was supplied with removable outriggers they must be reinstalled before the cabinet is relocated.**
- **Inspect the route that you plan to take to eliminate potential hazards.**
- **Verify that the route that you choose can support the weight of the loaded rack cabinet. Refer to the documentation that comes with your rack cabinet for the weight of a loaded rack cabinet.**
- **Verify that all door openings are at least 760 x 230 mm (30 x 80 in.).**
- **Ensure that all devices, shelves, drawers, doors, and cables are secure.**
- **Ensure that the four leveling pads are raised to their highest position.**
- **Ensure that there is no stabilizer bracket installed on the rack cabinet during movement.**
- **Do not use a ramp inclined at more than 10 degrees.**
- **When the rack cabinet is in the new location, complete the following steps:**
  - **Lower the four leveling pads.**
  - **Install stabilizer brackets on the rack cabinet.**
  - **If you removed any devices from the rack cabinet, repopulate the rack cabinet from the lowest position to the highest position.**
- **If a long-distance relocation is required, restore the rack cabinet to the configuration of the rack cabinet as you received it. Pack the rack cabinet in the original packaging material, or equivalent. Also lower the leveling pads to raise the casters off of the pallet and bolt the rack cabinet to the pallet.**

(R002)

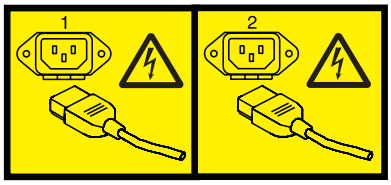
(L001)

DANGER: Hazardous voltage, current, or energy levels are present inside any component that has this label attached. Do not open any cover or barrier that contains this label. (L001)

(L002)

DANGER: Rack-mounted devices are not to be used as shelves or work spaces. (L002)

(L003)



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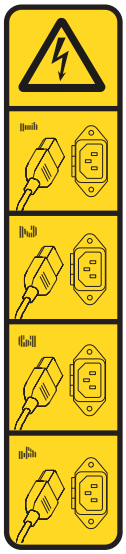

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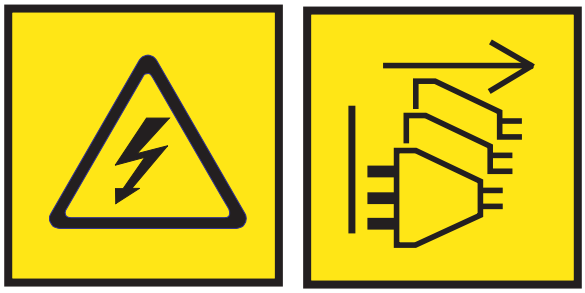

DANGER: Multiple power cords. The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords. (L003)

(L007)

CAUTION: A hot surface nearby. (L007)

(L008)

CAUTION: Hazardous moving parts nearby. (L008)

All lasers are certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for class 1 laser products. Outside the U.S., they are certified to be in compliance with IEC 60825 as a class 1 laser product. Consult the label on each part for laser certification numbers and approval information.

CAUTION:
This product might contain one or more of the following devices: CD-ROM drive, DVD-ROM drive, DVD-RAM drive, or laser module, which are Class 1 laser products. Note the following information:

- **Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.**
- **Use of the controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.**

(C026)

CAUTION:
Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. Although shining light into one end and looking into the other end of a disconnected optical fiber to verify the continuity of optic fibers many not injure the eye, this procedure is potentially dangerous. Therefore, verifying the continuity of optical fibers by shining light into one end and looking at the other end is not recommended. To verify continuity of a fiber optic cable, use an optical light source and power meter. (C027)

CAUTION:
This product contains a Class 1M laser. Do not view directly with optical instruments. (C028)

CAUTION:
Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following information: laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam. (C030)

CAUTION:
The battery contains lithium. To avoid possible explosion, do not burn or charge the battery.

Do Not:
- **___ Throw or immerse into water**
- **___ Heat to more than 100°C (212°F)**
- **___ Repair or disassemble**

Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations. In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (C003)

(C048)
CAUTION regarding IBM provided VENDOR LIFT TOOL:

- **Operation of LIFT TOOL by authorized personnel only.**
- **LIFT TOOL intended for use to assist, lift, install, remove units (load) up into rack elevations. It is not to be used loaded transporting over major ramps nor as a replacement for such designated tools like pallet jacks, walkies, fork trucks and such related relocation practices. When this is not practicable, specially trained persons or services must be used (for instance, riggers or movers).**
- **Read and completely understand the contents of LIFT TOOL operator's manual before using. Failure to read, understand, obey safety rules, and follow instructions may result in property damage and/or personal injury. If there are questions, contact the vendor's service and support. Local paper manual must remain with machine in provided storage sleeve area. Latest revision manual available on vendor's web site.**
- **Test verify stabilizer brake function before each use. Do not over-force moving or rolling the LIFT TOOL with stabilizer brake engaged.**
- **Do not move LIFT TOOL while platform is raised, except for minor positioning.**
- **Do not exceed rated load capacity. See LOAD CAPACITY CHART regarding maximum loads at center versus edge of extended platform.**
- **Only raise load if properly centered on platform. Do not place more than 200 lb (91 kg) on edge of sliding platform shelf also considering the load's center of mass/gravity (CoG).**
- **Do not corner load the platform tilt riser accessory option. Secure platform riser tilt option to main shelf in all four (4x) locations with provided hardware only, prior to use. Load objects are designed to slide on/off smooth platforms without appreciable force, so take care not to push or lean. Keep riser tilt option flat at all times except for final minor adjustment when needed.**
- **Do not stand under overhanging load.**
- **Do not use on uneven surface, incline or decline (major ramps).**
- **Do not stack loads.**
- **Do not operate while under the influence of drugs or alcohol.**
- **Do not support ladder against LIFT TOOL.**
- **Tipping hazard. Do not push or lean against load with raised platform.**
- **Do not use as a personnel lifting platform or step. No riders.**
- **Do not stand on any part of lift. Not a step.**
- **Do not climb on mast.**
- **Do not operate a damaged or malfunctioning LIFT TOOL machine.**
- **Crush and pinch point hazard below platform. Only lower load in areas clear of personnel and obstructions. Keep hands and feet clear during operation.**
- **No Forks. Never lift or move bare LIFT TOOL MACHINE with pallet truck, jack or fork lift.**
- **Mast extends higher than platform. Be aware of ceiling height, cable trays, sprinklers, lights, and other overhead objects.**
- **Do not leave LIFT TOOL machine unattended with an elevated load.**
- **Watch and keep hands, fingers, and clothing clear when equipment is in motion.**
- **Turn Winch with hand power only. If winch handle cannot be cranked easily with one hand, it is probably over-loaded. Do not continue to turn winch past top or bottom of platform travel. Excessive unwinding will detach handle and damage cable. Always hold handle when lowering, unwinding. Always assure self that winch is holding load before releasing winch handle.**
- **A winch accident could cause serious injury. Not for moving humans. Make certain clicking sound is heard as the equipment is being raised. Be sure winch is locked in position before releasing handle. Read instruction page before operating this winch. Never allow winch to unwind freely. Freewheeling will cause uneven cable wrapping around winch drum, damage cable, and may cause serious injury. (C048)**

Power and cabling information for NEBS (Network Equipment-Building System) GR-1089-CORE

The following comments apply to the IBM servers that have been designated as conforming to NEBS (Network Equipment-Building System) GR-1089-CORE:

The equipment is suitable for installation in the following:

- Network telecommunications facilities
- Locations where the NEC (National Electrical Code) applies

The intrabuilding ports of this equipment are suitable for connection to intrabuilding or unexposed wiring or cabling only. The intrabuilding ports of this equipment *must not* be metallically connected to the interfaces that connect to the OSP (outside plant) or its wiring. These interfaces are designed for use as intrabuilding interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of primary protectors is not sufficient protection to connect these interfaces metallically to OSP wiring.

Note: All Ethernet cables must be shielded and grounded at both ends.

The ac-powered system does not require the use of an external surge protection device (SPD).

The dc-powered system employs an isolated DC return (DC-I) design. The DC battery return terminal *shall not* be connected to the chassis or frame ground.

The dc-powered system is intended to be installed in a common bonding network (CBN) as described in GR-1089-CORE.

Installing your IBM PurePower System

Use this information to install your IBM PurePower System™.

Scenario: Installing the PurePower system

After you order an IBM PurePower System, you must receive the preconfigured, factory-racked system, install the system into your site, and perform post-installation tasks.

It is important that you have completed the planning tasks associated with installing the IBM PurePower System. For more information, see Planning for the system (http://www.ibm.com/support/knowledgecenter/POWER8/p8eek/p8eek_kickoff.htm).

A typical installation scenario follows these steps:

1. You determine which configuration to order and then order the system.
2. IBM sends you links to the planning information.
3. IBM builds and ships your system.
4. You accept the shipment.
5. You follow the unpacking instructions that came with the system.
6. You move the rack to the installation site and perform rack installation tasks.
7. You connect the rack power cords to the power distribution unit (PDU).
8. You plug the rack into the main power source.
9. You wait until all LEDs on the front of the rack are green and are blinking slowly and that the physical operator panels on any compute nodes display **01 N PVM**.
10. If you ordered IBM Systems Lab Services for startup services and basic network integration, you would stop here and let IBM Systems Lab Services complete the remaining steps while training your personnel.
11. You access the rack-mounted monitor and keyboard that is preinstalled in the rack.
12. You access the PurePower Integrated Manager by double-clicking the desktop shortcut using the Keyboard/Video/Mouse on the rack to check your hardware inventory.
13. You access the Nagios Core manager to ensure that your components are functioning properly.

Preparing the rack for installation

You must position the rack, lower the rack leveling pads, and check the rack power connections before you install the system.

1. Position the rack where you want it to be installed.
2. Use the open-end wrench that comes with the hardware kit to lower each of the four leveling pads just enough so that they touch the floor. The rack casters support the weight of the rack cabinet. The pads prevent the rack from rolling.
3. Ensure that the power cords are securely attached to each power distribution unit (PDU).

Additional cabling information for an IBM PurePower System with multiple racks

Locate and identify the hardware components and port-to-port cabling sequence in a multiple rack IBM PurePower System.

The following tables help you understand port-to-port cabling sequence between the components in a multiple rack IBM PurePower System.

Note: To locate and identify the hardware components, types of ports, and port numbers in an IBM PurePower System, see Identifying hardware components in an IBM PurePower System.

Table 1. Mellanox SX1710 cabling for an IBM PurePower System with multiple racks

From rack	Switch (U-Loc)	Port number	Cable type	To rack	Switch (U-Loc)	Port number
Rack 1	Mellanox SX1710 1 (U20)	Port 1	Quad small form-factor pluggable (QSFP) direct-attach copper (DAC) cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 1
Rack 1	Mellanox SX1710 1 (U20)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 1
Rack 1	Mellanox SX1710 1 (U20)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 2
Rack 1	Mellanox SX1710 1 (U20)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 2
Rack 1	Mellanox SX1710 2 (U21)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 3
Rack 1	Mellanox SX1710 2 (U21)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 3
Rack 1	Mellanox SX1710 2 (U21)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 4
Rack 1	Mellanox SX1710 2 (U21)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 4
Rack 2	Mellanox SX1710 1 (U20)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 5
Rack 2	Mellanox SX1710 1 (U20)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 5
Rack 2	Mellanox SX1710 1 (U20)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 6
Rack 2	Mellanox SX1710 1 (U20)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 6
Rack 2	Mellanox SX1710 2 (U21)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 7
Rack 2	Mellanox SX1710 2 (U21)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 7

Table 1. Mellanox SX1710 cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	Switch (U-Loc)	Port number
Rack 2	Mellanox SX1710 2 (U21)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 8
Rack 2	Mellanox SX1710 2 (U21)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 8
Rack 3	Mellanox SX1710 1 (U20)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 9
Rack 3	Mellanox SX1710 1 (U20)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 9
Rack 3	Mellanox SX1710 1 (U20)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 10
Rack 3	Mellanox SX1710 1 (U20)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 10
Rack 3	Mellanox SX1710 2 (U21)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 11
Rack 3	Mellanox SX1710 2 (U21)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 11
Rack 3	Mellanox SX1710 2 (U21)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 12
Rack 3	Mellanox SX1710 2 (U21)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 12
Rack 4	Mellanox SX1710 1 (U20)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 13
Rack 4	Mellanox SX1710 1 (U20)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 13
Rack 4	Mellanox SX1710 1 (U20)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 14
Rack 4	Mellanox SX1710 1 (U20)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 14
Rack 4	Mellanox SX1710 2 (U21)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 15
Rack 4	Mellanox SX1710 2 (U21)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 15

Table 1. Mellanox SX1710 cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	Switch (U-Loc)	Port number
Rack 4	Mellanox SX1710 2 (U21)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 16
Rack 4	Mellanox SX1710 2 (U21)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 16
Rack 5	Mellanox SX1710 1 (U20)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 17
Rack 5	Mellanox SX1710 1 (U20)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 17
Rack 5	Mellanox SX1710 1 (U20)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 18
Rack 5	Mellanox SX1710 1 (U20)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 18
Rack 5	Mellanox SX1710 2 (U21)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 19
Rack 5	Mellanox SX1710 2 (U21)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 19
Rack 5	Mellanox SX1710 2 (U21)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 20
Rack 5	Mellanox SX1710 2 (U21)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 20
Rack 6	Mellanox SX1710 1 (U20)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 21
Rack 6	Mellanox SX1710 1 (U20)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 21
Rack 6	Mellanox SX1710 1 (U20)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 22
Rack 6	Mellanox SX1710 1 (U20)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 22
Rack 6	Mellanox SX1710 2 (U21)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 23
Rack 6	Mellanox SX1710 2 (U21)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 23

Table 1. Mellanox SX1710 cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	Switch (U-Loc)	Port number
Rack 6	Mellanox SX1710 2 (U21)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 24
Rack 6	Mellanox SX1710 2 (U21)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 24
Rack 7	Mellanox SX1710 1 (U20)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 25
Rack 7	Mellanox SX1710 1 (U20)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 25
Rack 7	Mellanox SX1710 1 (U20)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 26
Rack 7	Mellanox SX1710 1 (U20)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 26
Rack 7	Mellanox SX1710 2 (U21)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 27
Rack 7	Mellanox SX1710 2 (U21)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 27
Rack 7	Mellanox SX1710 2 (U21)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 28
Rack 7	Mellanox SX1710 2 (U21)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 28
Rack 8	Mellanox SX1710 1 (U20)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 29
Rack 8	Mellanox SX1710 1 (U20)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 29
Rack 8	Mellanox SX1710 1 (U20)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 30
Rack 8	Mellanox SX1710 1 (U20)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 30
Rack 8	Mellanox SX1710 2 (U21)	Port 1	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 31
Rack 8	Mellanox SX1710 2 (U21)	Port 2	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 31

Table 1. Mellanox SX1710 cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	Switch (U-Loc)	Port number
Rack 8	Mellanox SX1710 2 (U21)	Port 3	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 32
Rack 8	Mellanox SX1710 2 (U21)	Port 4	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 32
Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 33	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 33
Aggregation switch rack	Mellanox SX1710 1 (user determined)	Port 35	QSFP DAC cable	Aggregation switch rack	Mellanox SX1710 2 (user determined)	Port 35

Table 2. IBM System Storage® SAN48B-5 cabling for an IBM PurePower System with multiple racks

From rack	Switch (U-Loc)	Port number	Cable type	To rack	To: (U-Loc)	Port number
Rack 1	IBM SAN48B-5 1 (U16)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 0
Rack 1	IBM SAN48B-5 1 (U16)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 1
Rack 1	IBM SAN48B-5 1 (U16)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 2
Rack 1	IBM SAN48B-5 1 (U16)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 3
Rack 1	IBM SAN48B-5 2 (U17)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 0
Rack 1	IBM SAN48B-5 2 (U17)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 1
Rack 1	IBM SAN48B-5 2 (U17)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 2
Rack 1	IBM SAN48B-5 2 (U17)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 3
Rack 2	IBM SAN48B-5 1 (U16)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 4
Rack 2	IBM SAN48B-5 1 (U16)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 5
Rack 2	IBM SAN48B-5 1 (U16)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 6

Table 2. IBM System Storage® SAN48B-5 cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	To: (U-Loc)	Port number
Rack 2	IBM SAN48B-5 1 (U16)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 7
Rack 2	IBM SAN48B-5 2 (U17)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 4
Rack 2	IBM SAN48B-5 2 (U17)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 5
Rack 2	IBM SAN48B-5 2 (U17)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 6
Rack 2	IBM SAN48B-5 2 (U17)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 7
Rack 3	IBM SAN48B-5 1 (U16)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 8
Rack 3	IBM SAN48B-5 1 (U16)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 9
Rack 3	IBM SAN48B-5 1 (U16)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 10
Rack 3	IBM SAN48B-5 1 (U16)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 11
Rack 3	IBM SAN48B-5 2 (U17)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 8
Rack 3	IBM SAN48B-5 2 (U17)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 9
Rack 3	IBM SAN48B-5 2 (U17)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 10
Rack 3	IBM SAN48B-5 2 (U17)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 11
Rack 4	IBM SAN48B-5 1 (U16)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 12
Rack 4	IBM SAN48B-5 1 (U16)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 13
Rack 4	IBM SAN48B-5 1 (U16)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 14

Table 2. IBM System Storage® SAN48B-5 cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	To: (U-Loc)	Port number
Rack 4	IBM SAN48B-5 1 (U16)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 15
Rack 4	IBM SAN48B-5 2 (U17)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 12
Rack 4	IBM SAN48B-5 2 (U17)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 13
Rack 4	IBM SAN48B-5 2 (U17)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 14
Rack 4	IBM SAN48B-5 2 (U17)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 15
Rack 5	IBM SAN48B-5 1 (U16)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 16
Rack 5	IBM SAN48B-5 1 (U16)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 17
Rack 5	IBM SAN48B-5 1 (U16)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 18
Rack 5	IBM SAN48B-5 1 (U16)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 19
Rack 5	IBM SAN48B-5 2 (U17)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 16
Rack 5	IBM SAN48B-5 2 (U17)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 17
Rack 5	IBM SAN48B-5 2 (U17)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 18
Rack 5	IBM SAN48B-5 2 (U17)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 19
Rack 6	IBM SAN48B-5 1 (U16)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 20
Rack 6	IBM SAN48B-5 1 (U16)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 21
Rack 6	IBM SAN48B-5 1 (U16)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 22

Table 2. IBM System Storage® SAN48B-5 cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	To: (U-Loc)	Port number
Rack 6	IBM SAN48B-5 1 (U16)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 23
Rack 6	IBM SAN48B-5 2 (U17)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 20
Rack 6	IBM SAN48B-5 2 (U17)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 21
Rack 6	IBM SAN48B-5 2 (U17)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 22
Rack 6	IBM SAN48B-5 2 (U17)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 23
Rack 7	IBM SAN48B-5 1 (U16)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 24
Rack 7	IBM SAN48B-5 1 (U16)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 25
Rack 7	IBM SAN48B-5 1 (U16)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 26
Rack 7	IBM SAN48B-5 1 (U16)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 27
Rack 7	IBM SAN48B-5 2 (U17)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 24
Rack 7	IBM SAN48B-5 2 (U17)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 25
Rack 7	IBM SAN48B-5 2 (U17)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 26
Rack 7	IBM SAN48B-5 2 (U17)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 27
Rack 8	IBM SAN48B-5 1 (U16)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 28
Rack 8	IBM SAN48B-5 1 (U16)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 29
Rack 8	IBM SAN48B-5 1 (U16)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 30

Table 2. IBM System Storage® SAN48B-5 cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	To: (U-Loc)	Port number
Rack 8	IBM SAN48B-5 1 (U16)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 1 (user determined)	Port 31
Rack 8	IBM SAN48B-5 2 (U17)	Port 0	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 28
Rack 8	IBM SAN48B-5 2 (U17)	Port 1	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 29
Rack 8	IBM SAN48B-5 2 (U17)	Port 2	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 30
Rack 8	IBM SAN48B-5 2 (U17)	Port 3	OM3 MMF cable	Aggregation switch rack	IBM SAN48B-5 2 (user determined)	Port 31

Table 3. Lenovo RackSwitch G8052 (7120-48E) cabling for an IBM PurePower System with multiple racks

From rack	Switch (U-Loc)	Port number	Cable type	To rack	Switch (U-Loc)	Port number
Rack 1	Lenovo G8052 switch 1 (U18)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 1
Rack 1	Lenovo G8052 switch 1 (U18)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 1
Rack 1	Lenovo G8052 switch 2 (U19)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 2
Rack 1	Lenovo G8052 switch 2 (U19)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 2
Rack 2	Lenovo G8052 switch 1 (U18)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 3
Rack 2	Lenovo G8052 switch 1 (U18)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 3
Rack 2	Lenovo G8052 switch 2 (U19)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 4
Rack 2	Lenovo G8052 switch 2 (U19)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 4
Rack 3	Lenovo G8052 switch 1 (U18)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 5
Rack 3	Lenovo G8052 switch 1 (U18)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 5

Table 3. Lenovo RackSwitch G8052 (7120-48E) cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	Switch (U-Loc)	Port number
Rack 3	Lenovo G8052 switch 2 (U19)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 6
Rack 3	Lenovo G8052 switch 2 (U19)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 6
Rack 4	Lenovo G8052 switch 1 (U18)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 7
Rack 4	Lenovo G8052 switch 1 (U18)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 7
Rack 4	Lenovo G8052 switch 2 (U19)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 8
Rack 4	Lenovo G8052 switch 2 (U19)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 8
Rack 5	Lenovo G8052 switch 1 (U18)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 9
Rack 5	Lenovo G8052 switch 1 (U18)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 9
Rack 5	Lenovo G8052 switch 2 (U19)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 10
Rack 5	Lenovo G8052 switch 2 (U19)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 10
Rack 6	Lenovo G8052 switch 1 (U18)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 11
Rack 6	Lenovo G8052 switch 1 (U18)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 11
Rack 6	Lenovo G8052 switch 2 (U19)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 12
Rack 6	Lenovo G8052 switch 2 (U19)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 12
Rack 7	Lenovo G8052 switch 1 (U18)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 13
Rack 7	Lenovo G8052 switch 1 (U18)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 13

Table 3. Lenovo RackSwitch G8052 (7120-48E) cabling for an IBM PurePower System with multiple racks (continued)

From rack	Switch (U-Loc)	Port number	Cable type	To rack	Switch (U-Loc)	Port number
Rack 7	Lenovo G8052 switch 2 (U19)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 14
Rack 7	Lenovo G8052 switch 2 (U19)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 14
Rack 8	Lenovo G8052 switch 1 (U18)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 15
Rack 8	Lenovo G8052 switch 1 (U18)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 15
Rack 8	Lenovo G8052 switch 2 (U19)	Port 45	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 16
Rack 8	Lenovo G8052 switch 2 (U19)	Port 36	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 16
Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 46	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 46
Aggregation switch rack	Lenovo G8052 switch 1 (user determined)	Port 47	Cat5e or higher rated cable	Aggregation switch rack	Lenovo G8052 switch 2 (user determined)	Port 47

Connecting power cords and verifying that the system attention LEDs are green

Before powering on the system, you must connect the power cords to the power source and verify that each component's attention light is green and flashing.

Do the following to connect power cords:

1. Plug the PDU power cords into the alternating current (AC) power source.
2. Wait at least 10 minutes for the system to complete its power application process.
3. Ensure that the system attention LEDs are green and flashing for each component.

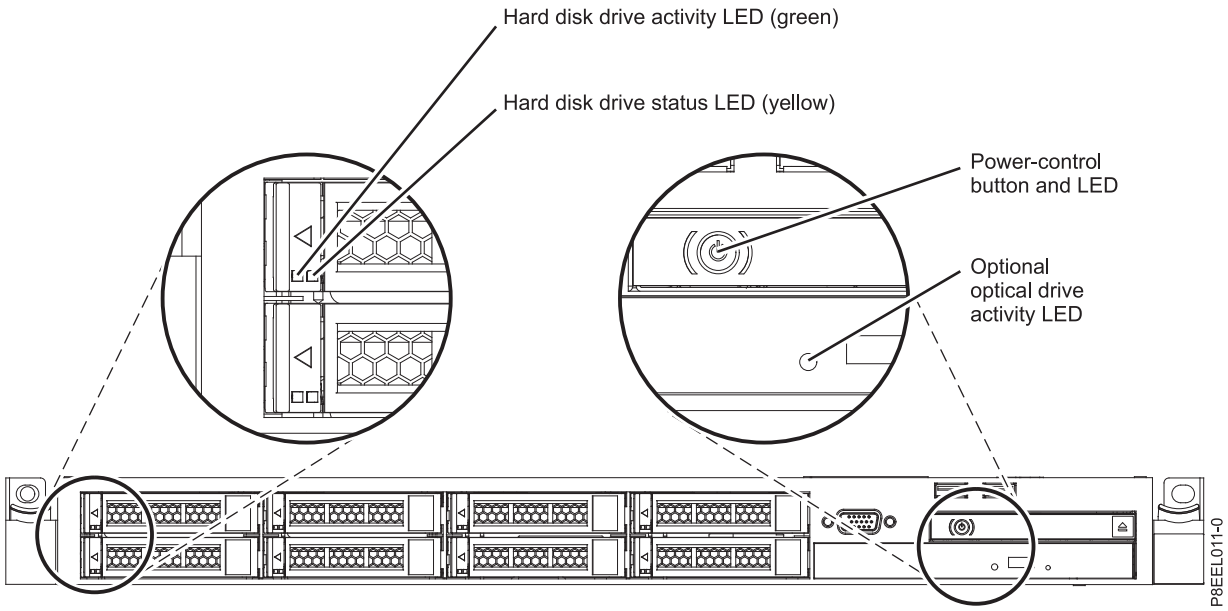

Figure 1. System attention LED locations

4. Ensure that the Operator panel displays the following information:

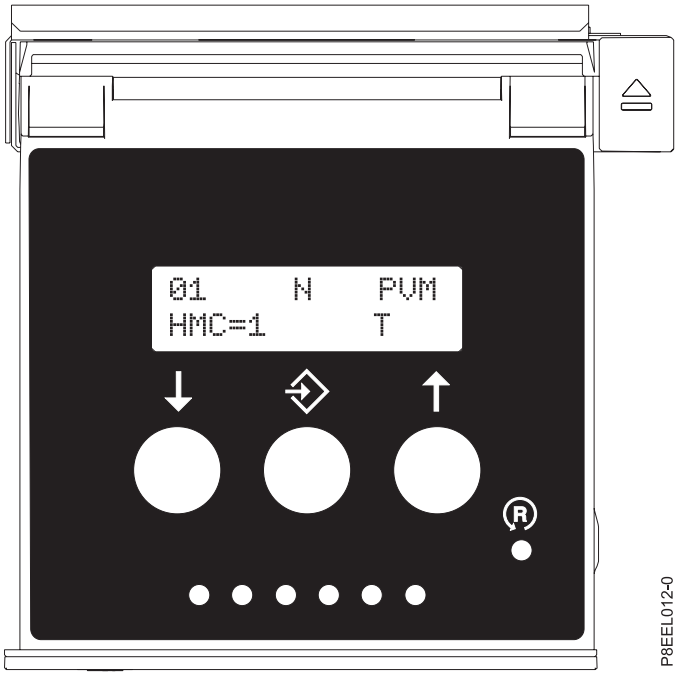

Figure 2. Operator panel display

For more information about how to identify the components in your system, see Identifying hardware components in an IBM PurePower System. If one of your components isn't responding correctly, see Troubleshooting the hardware components.

Using the rack-mounted keyboard and monitor to access the PurePower Integrated Manager user interface

After you have cabled the power cords and verified that the system LEDs are green and blinking, use the PurePower Integrated Manager user interface to ensure that your components are present and configured.

Note: If you ordered IBM Systems Lab Services startup services, do not perform these steps. IBM Systems Lab Services performs these steps as part of the startup services while training your personnel.

To use the PurePower Integrated Manager UI to ensure that your components are present and configured, do the following:

1. Power on the management nodes by pressing the buttons on the right side of the node chassis.
2. Wait 5 minutes for the management nodes to power on.
3. Slide out the console display and keyboard. Lift the display to access the keyboard.
4. The display powers on.
5. Press the **PRTSC** key to enable the KVM switch. The management nodes are displayed.
6. Press **Enter**.
7. Log in to the KVM console. The default user ID is `admin` and the password is `PASSW0RD` for the KVM hypervisor operating system (192.168.93.44).

   To change the default ID and password, select **Applications** > **System Tools** > **Settings** > **Users** and change the required fields.

   Note:

   To change the password for the PurePower Integrated Manager operating system (puremgrvm), complete the following steps:

   a. From the Red Hat Enterprise Linux (RHEL) KVM operating system desktop, select **Applications** > **Utilities** > **Terminal**.
   b. From the terminal session, run the following command: `ssh admin@192.168.93.46 PASSW0RD`
   c. From the puremgrvm operating system, run the following command: `passwd`

      Note: You will be prompted for the new password and confirmation.
   d. Exit the terminal session and return to console login screen. You can now log on by using the new password.
8. Double-click the PurePower Integrated Manager icon to start the PurePower Integrated Manager user interface.
9. Log in to the PurePower Integrated Manager user interface.

   Note: The default ID and password is `admin/PASSW0RD`.
10. The PurePower Integrated Manager Home window opens.
11. In the left-hand navigation area, click the **Hardware Inventory** icon. The Hardware Inventory screen displays information about hardware resources.
12. Check the Nagios interface to ensure that the components of the system are functioning properly. To access Nagios, complete the following steps:
    a. Click **Home**.
    b. From the PurePower Integrated Manager Home screen, click **puremgra**. The Nagios Core manager window opens.
    c. Log in to Nagios Core manager.

       Note: The default ID and password is `nagiosadmin/PASSW0RD`.

Continue with “Completing the installation.”

Completing the installation

Learn more about the tasks you must perform to complete the system installation.

If you ordered IBM Systems Lab Services startup services, IBM Systems Lab Based Services performs these tasks as part of the startup services while training your personnel.

You might want to do the following after the IBM Service Team representative leaves your site:

- Learn more about PurePower Integrated Manager.
- Add components

For more information about the configuration and management tasks that you can perform, see Configuring and managing your system (http://www.ibm.com/support/knowledgecenter/POWER8/p8ef9/p8ef9_config_manage_kickoff.htm).

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The following Class A statements apply to the IBM servers that contain the POWER8® processor and its features unless designated as electromagnetic compatibility (EMC) Class B in the feature information.

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with

the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

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

Industry Canada Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

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

European Community Compliance Statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

European Community contact:
IBM Deutschland GmbH
Technical Regulations, Department M372
IBM-Allee 1, 71139 Ehningen, Germany
Tele: +49 (0) 800 225 5423 or +49 (0) 180 331 3233
email: halloibm@de.ibm.com

Warning: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

VCCI Statement - Japan

この装置は、クラスA 情報技術装置です。この装置を家庭環境で使用すると電波妨害
を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求され
ることがあります。 VCCI－A

The following is a summary of the VCCI Japanese statement in the box above:

This is a Class A product based on the standard of the VCCI Council. If this equipment is used in a domestic environment, radio interference may occur, in which case, the user may be required to take corrective actions.

Japan Electronics and Information Technology Industries Association Statement

This statement explains the Japan JIS C 61000-3-2 product wattage compliance.

（一社）電子情報技術産業協会　高調波電流抑制対策実施
要領に基づく定格入力電力値：Knowledge Centerの各製品の
仕様ページ参照

This statement explains the Japan Electronics and Information Technology Industries Association (JEITA) statement for products less than or equal to 20 A per phase.

高調波電流規格　JIS C 61000-3-2 適合品

This statement explains the JEITA statement for products greater than 20 A, single phase.

高調波電流規格　JIS C 61000-3-2 準用品

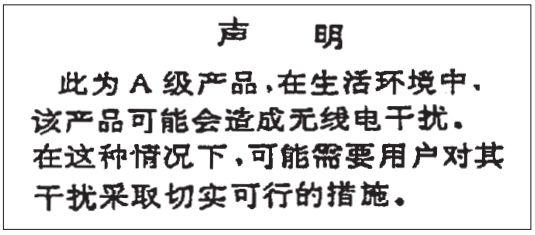
本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。
• 回路分類　：6（単相、ＰＦＣ回路付）
• 換算係数　：0

This statement explains the JEITA statement for products greater than 20 A per phase, three-phase.

高調波電流規格　JIS C 61000-3-2 準用品

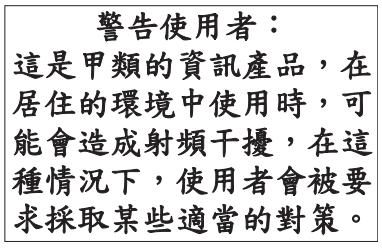
本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。
• 回路分類　：5（3相、ＰＦＣ回路付）
• 換算係数　：0

Electromagnetic Interference (EMI) Statement - People's Republic of China



Declaration: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may need to perform practical action.

Electromagnetic Interference (EMI) Statement - Taiwan



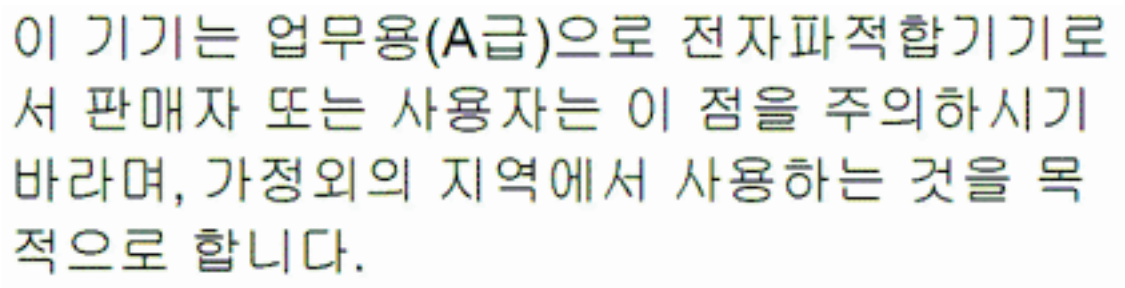
The following is a summary of the EMI Taiwan statement above.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user will be required to take adequate measures.

IBM Taiwan Contact Information:

台灣IBM 產品服務聯絡方式：
台灣國際商業機器股份有限公司
台北市松仁路7號3樓
電話：0800-016-888

Electromagnetic Interference (EMI) Statement - Korea



Germany Compliance Statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse A ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung von IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung von IBM gesteckt/eingebaut werden.

EN 55022 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden:
"Warnung: Dieses ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funk-Störungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen zu ergreifen und dafür aufzukommen."

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem “Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)“. Dies ist die Umsetzung der EU-Richtlinie 2004/108/EG in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC EG Richtlinie 2004/108/EG) für Geräte der Klasse A

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:
International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
Tel: 914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:
IBM Deutschland GmbH
Technical Regulations, Abteilung M372
IBM-Allee 1, 71139 Ehningen, Germany
Tel: +49 (0) 800 225 5423 or +49 (0) 180 331 3233
email: halloibm@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse A.

Electromagnetic Interference (EMI) Statement - Russia

ВНИМАНИЕ! Настоящее изделие относится к классу А.
В жилых помещениях оно может создавать
радиопомехи, для снижения которых необходимы
дополнительные меры

Class B Notices

The following Class B statements apply to features designated as electromagnetic compatibility (EMC) Class B in the feature installation information.

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM-authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM-authorized dealers. IBM is not responsible for any radio or television interference caused by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

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

Industry Canada Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

European Community Compliance Statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication equipment.

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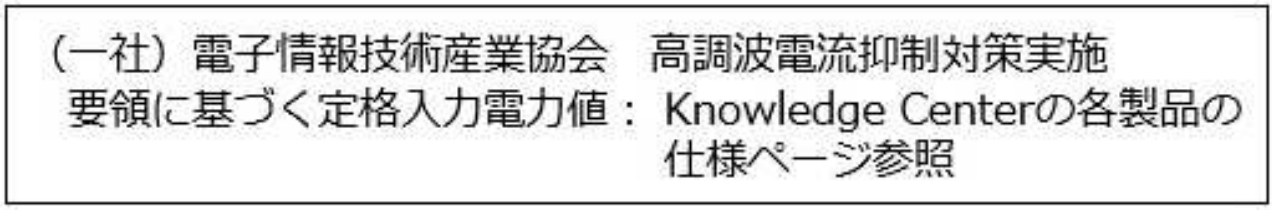
Technical Regulations, Department M372
IBM-Allee 1, 71139 Ehningen, Germany
Tele: +49 (0) 800 225 5423 or +49 (0) 180 331 3233
email: halloibm@de.ibm.com

VCCI Statement - Japan

この装置は, クラスB情報技術装置です。この装置は, 家庭環境で使用することを目的としていますが, この装置がラジオやテレビジョン受信機に近接して使用されると, 受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。 VCCI－B

Japan Electronics and Information Technology Industries Association Statement

This statement explains the Japan JIS C 61000-3-2 product wattage compliance.



This statement explains the Japan Electronics and Information Technology Industries Association (JEITA) statement for products less than or equal to 20 A per phase.

This statement explains the JEITA statement for products greater than 20 A, single phase.

高調波電流規格 JIS C 61000-3-2 準用品

本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。
- 回路分類 ：6（単相、ＰＦＣ回路付）
- 換算係数 ：0

This statement explains the JEITA statement for products greater than 20 A per phase, three-phase.

高調波電流規格 JIS C 61000-3-2 準用品

本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。
- 回路分類 ：5（3相、ＰＦＣ回路付）
- 換算係数 ：0

IBM Taiwan Contact Information

台灣IBM 產品服務聯絡方式：
台灣國際商業機器股份有限公司
台北市松仁路7號3樓
電話：0800-016-888

Electromagnetic Interference (EMI) Statement - Korea

이 기기는 가정용(B급)으로 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

Germany Compliance Statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse B EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse B ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung von IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung von IBM gesteckt/eingebaut werden.

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 2004/108/EG in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC EG Richtlinie 2004/108/EG) für Geräte der Klasse B

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:
International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
Tel: 914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:
IBM Deutschland GmbH
Technical Regulations, Abteilung M372
IBM-Allee 1, 71139 Ehningen, Germany
Tel: +49 (0) 800 225 5423 or +49 (0) 180 331 3233
email: halloibm@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse B.

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