

Power Systems

Managing the HMC 5250 console

IBM

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IBM

Note

Before using this information and the product it supports, read the information in "Notices" on page 5, "Safety notices" on page v, the *IBM Systems Safety Notices* manual, G229-9054, and the *IBM Environmental Notices and User Guide*, Z125-5823.

This edition applies to IBM Power Systems servers that contain the POWER[®]7 processor and to all associated models.

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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.

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:

- 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.
- 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.

(D005)

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.

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.

(R001)

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 and above.
 - Ensure that the heaviest devices are installed in the bottom of the rack cabinet.
 - Ensure that there are no empty U-levels between devices installed in the rack cabinet below the 32U level.
- If the rack cabinet you are relocating is part of a suite of rack cabinets, detach the rack cabinet from the suite.
- 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)



(L002)



(L003)



or



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. (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)

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.

Managing the HMC 5250 console

Learn about how the Hardware Management Console (HMC) provides support to host the 5250 console for an IBM i logical partition.

Note: The remote HMC client is not able to start a 5250 emulator.

What's new in Managing the HMC 5250 console

Read about new or significantly changed information in Managing the HMC 5250 console since the previous update of this topic collection.

February 2010

- Added information for IBM Power Systems™ servers that contain the POWER7® processor.

Preparing the IBM i logical partition to connect to a 5250 console session

Learn how to set up your IBM i logical partition so that it can communicate with the 5250 console on a Hardware Management Console (HMC).

To connect to a 5250 console using the HMC, you must ensure that the IBM i logical partition profile properties are set up properly. To set up the properties on an IBM i logical partition so that you can connect to a 5250 console, do the following:

1. In the navigation area, expand **Systems Management**.
2. Expand **Servers** and select the server that contains the IBM i logical partition that you want to work with.
3. In the contents pane, select the logical partition you want to work with.
4. Select **Tasks > Configuration > Manage Profiles**.
5. Select the profile you want to work with, and select **Actions > Edit**.
6. Click **Tagged I/O**.
7. Verify that **Hardware Management Console** appears under the **Console** menu, and click **OK**.
8. Click **Close**.

The logical partition is now ready for a 5250 console session through the HMC. Tagging the I/O adapter (IOA) in the partition profile automatically sets the console type during the next activation after the partition profile is updated. An initial program load (IPL) does not recognize the changed partition profile.

Connecting to a 5250 console

Learn how to connect to the 5250 console on the Hardware Management Console (HMC) so that it can communicate with the IBM i logical partition.

To connect to the 5250 console so that it can communicate with the IBM i logical partition, you must connect to the 5250 proxy on an HMC that is managing the managed system.

Opening a local 5250 console session from an HMC

You can open a 5250 console locally from an active logical partition or while activating an IBM i logical partition from a Hardware Management Console (HMC).

Opening a session from an active IBM i logical partition

If your IBM i logical partition is active, you can open a 5250 console from it.

To connect to a 5250 console locally from an active logical partition, complete the following steps:

1. In the navigation area, expand **Systems Management**.
2. Select **Servers**, and select the server with the IBM i logical partition that you want to work with.
3. In the contents area, right-click on the logical partition and choose from the following options:
 - **Open dedicated 5250 console:** If you select this option, other users are not able to share the session with you.
 - **Open shared 5250 console:** If you select this option, others can share this session with you. For example, you could start a backup that might take several hours, and then either you or someone else can manage it from another workstation in your office or from home.
4. If you selected **Open shared 5250 console**, you must enter a session key that can be used by another user with another 5250 emulator. If you are the first user, the session key is entered twice to verify accuracy. You must include a numeric digit in the key. You might want to describe the task that you are performing, for example, backup1key. With this option, you can do the following operations:
 - Share a console session
 - See the same logical partition console windows
 - Navigate each of the logical partition console windows

Opening a session while activating an IBM i logical partition

If your IBM i logical partition is not active, you can activate it and open a 5250 console at the same time.

To open a 5250 console, perform the following steps:

1. In the navigation area, expand **Systems Management**.
2. Select **Servers**, and select the server with the IBM i logical partition that you want to work with.
3. In the contents area, select the logical partition that you want to activate and for which you want to open a 5250 console session.
4. Select **Operations > tasks > Activate**.
5. Select **Open a terminal window or console session**.
6. Click **OK**. The logical partition is activated and the 5250 session opens. If requested, enter a session key.

Opening a remote 5250 console session from an HMC

Learn how to connect to a 5250 console remotely, in addition to configuring remote security and the Hardware Management Console (HMC) firewall.

The remote support for HMC 5250 uses Secure Sockets Layer (SSL) encryption. With SSL encryption required for all remote access to the HMC, a certificate is required to provide the keys for this encryption. The HMC provides a self-signed certificate that allows this encryption to occur.

To connect to a 5250 console remotely, you must use one of the following emulators:

- IBM iSeries[®] Access PC5250 emulator, Version 5, Release 3 with PTF SI13587 or later

Note: To view your service pack level, select **Start > Programs > IBM System i[®] Access for Windows > Service > Check Service Level**.

- IBM Personal Communications 5250 emulator, Version 5.7 or later

- System i Access for Linux emulator, Version 5.2.0-1.4 or later

To connect remotely, complete the following steps:

1. Configure HMC support for your PC that is running in the Windows or Linux environment.

To configure your PC that is running in the Windows environment, do the following:

- a. Open the 5250 emulator application on your PC.
- b. Create a new session.
- c. In the Configure PC5250 window, type the HMC host name or IP address in the **System Name** field and indicate the port number. Type 2300 into the port number field if you are not using SSL, or 2301 if you are using SSL.
- d. Select **Properties**.
- e. If you are using the IBM iSeries Access PC5250 emulator, do the following:
 - 1) Select **Use default User ID, prompt as needed** from the menu.
 - 2) Type Q#HMC into the **User ID** field.

Note: The user ID, Q#HMC, is not used for security authentication. You will be prompted for additional security values by the HMC Telnet Proxy.

- 3) If you are not using SSL, select **Not secured** as the security setting, or select your current SSL level.

To configure your PC that is running in the Linux environment, complete the following steps:

- a. Create a new session by using the setup5250 configuration program.
- b. In the 5250 Emulator Connection window, type the HMC TCP system name or IP address in the **AS/400 Host Name** field.
- c. Select **Advanced 5250 Connection** The Advanced 5250 Emulator Connection window is displayed.
- d. Type 2300 into the **Telnet Port number** field.
- e. Type Q#HMC into the **Emulator User ID** and **Emulator Password** fields.

Note: The user ID, Q#HMC, is not used for security authentication. You will be prompted for additional security values by the HMC Telnet Proxy. The **Emulator Password** field is ignored. As a result, any character string can be used.

2. Open the 5250 emulator and select the language you want to see on the interface.
3. Log in using your HMC user ID and password.
4. Select the managed system that contains the logical partition to which you want to connect.
5. Select the logical partition to which you want to connect.
 - If you select **Shared**, you must enter a session key that can be used by another user with another 5250 emulator. If you are the first user, the session key is entered twice to verify accuracy.
 - If you select **Dedicated**, other users are not able to share the session with you.
 - If you select **Details**, you can view which users are connected to this partition.

Related information:

 [Changing HMC firewall settings](#)

 [Starting system management services](#)

Operating a 5250 console

After you have successfully connected to a 5250 console, there are many options available to operate a 5250 console.

To learn more about operating a 5250 console, perform the following steps:

1. Go to the IBM i Information Center website at <http://www.ibm.com/systems/i/infocenter> and select from the following options:
 - If you select **i 7.1**, expand **IBM i 7.1 Information Center**.
 - If you select **i 6.1**, expand **IBM i 6.1 Information Center**.
 - If you select **V5R4**, expand **i5/OS Information Center, Version 5 Release 4 > System management**.
2. Expand **Basic system operations > Overview of basic system operations > Using system interfaces**.

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Homologation statement

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Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Windows is a trademark of Microsoft Corporation in the United States, other countries, or both.

Electronic emission notices

When attaching a monitor to the equipment, you must use the designated monitor cable and any interference suppression devices supplied with the monitor.

Class A Notices

The following Class A statements apply to the IBM servers that contain the POWER7 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:
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Tele: +49 7032 15 2941
email: lugi@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.

**Japanese Electronics and Information Technology Industries Association (JEITA)
Confirmed Harmonics Guideline (products less than or equal to 20 A per phase)**

高調波ガイドライン適合品

**Japanese Electronics and Information Technology Industries Association (JEITA)
Confirmed Harmonics Guideline with Modifications (products greater than 20 A per phase)**

高調波ガイドライン準用品

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

声 明

此为 A 级产品,在生活环境中,
该产品可能会造成无线电干扰。
在这种情况下,可能需要用户对其
干扰采取切实可行的措施。

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

警告使用者：

這是甲類的資訊產品，在
居住的環境中使用時，可
能會造成射頻干擾，在這
種情況下，使用者會被要
求採取某些適當的對策。

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

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Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

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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.

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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
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