



System i and System p
Changing consoles, interfaces, and terminals





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Note

Before using this information and the product it supports, read the information in “Notices” on page 33 and the *IBM Systems Safety Information* manual, G229-9054.

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Safety and environmental 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, a safety information booklet is included in the publications package shipped with the product. The booklet 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 in the booklet. You should also refer to the booklet any time you do not clearly understand any safety information in the U.S. English publications.

Laser safety information

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

Laser compliance

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)

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

The following comments apply to the IBM System i models and IBM System p 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.

Product recycling and disposal

This unit must be recycled or discarded according to applicable local and national regulations. IBM encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. IBM offers a variety of product return programs and services in several countries to assist equipment owners in recycling their IT products. Information on IBM product recycling offerings can be found on IBM's Internet site at <http://www.ibm.com/ibm/environment/products/prp.shtml>.

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EU Only

Note: This mark applies only to countries within the European Union (EU) and Norway.

Appliances are labeled in accordance with European Directive 2002/96/EC concerning waste electrical and electronic equipment (WEEE). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.

In accordance with the European WEEE Directive, electrical and electronic equipment (EEE) is to be collected separately and to be reused, recycled, or recovered at end of life. Users of EEE with the WEEE marking per Annex IV of the WEEE Directive, as shown above, must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to customers for the return, recycling, and recovery of WEEE. Customer participation is important to minimize any potential effects of EEE on the environment and human health due to the potential presence of hazardous substances in EEE. For proper collection and treatment, contact your local IBM representative.

Battery return program

This product may contain sealed lead acid, nickel cadmium, nickel metal hydride, lithium, or lithium ion battery. Consult your user manual or service manual for specific battery information. The battery must be recycled or disposed of properly. Recycling facilities may not be available in your area. For information on disposal of batteries outside the United States, go to <http://www.ibm.com/ibm/environment/products/batteryrecycle.shtml> or contact your local waste disposal facility.

In the United States, IBM has established a return process for reuse, recycling, or proper disposal of used IBM sealed lead acid, nickel cadmium, nickel metal hydride, and other battery packs from IBM Equipment. For information on proper disposal of these batteries, contact IBM at 1-800-426-4333. Please have the IBM part number listed on the battery available prior to your call.

For Taiwan: Please recycle batteries.



For the European Union:



Note: This mark applies only to countries within the European Union (EU).

Batteries or packaging for batteries are labeled in accordance with European Directive 2006/66/EC concerning batteries and accumulators and waste batteries and accumulators. The Directive determines the framework for the return and recycling of used batteries and accumulators as applicable throughout the European Union. This label is applied to various batteries to indicate that the battery is not to be thrown away, but rather reclaimed upon end of life per this Directive.

In accordance with the European Directive 2006/66/EC, batteries and accumulators are labeled to indicate that they are to be collected separately and recycled at end of life. The label on the battery may also include a chemical symbol for the metal concerned in the battery (Pb for lead, Hg for mercury and Cd for cadmium). Users of batteries and accumulators must not dispose of batteries and accumulators as unsorted municipal waste, but use the collection framework available to customers for the return, recycling, and treatment of batteries and accumulators. Customer participation is important to minimize any potential effects of batteries and accumulators on the environment and human health due to the potential presence of hazardous substances. For proper collection and treatment, contact your local IBM representative.

For California: Perchlorate Material - special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate.

The foregoing notice is provided in accordance with California Code of Regulations Title 22, Division 4.5 Chapter 33. Best Management Practices for Perchlorate Materials. This product/part may include a lithium manganese dioxide battery which contains a perchlorate substance.

IBM Cryptographic Coprocessor Card Return Program

The following information applies only for systems originally sold prior to July 1, 2006:

This machine may contain an optional feature, the cryptographic coprocessor card, which includes a polyurethane material that contains mercury. Please follow local ordinances or regulations for disposal of this card. IBM has established a return program for certain IBM Cryptographic Coprocessor Cards. More information can be found at <http://www.ibm.com/ibm/environment/products/prp.shtml>.

About this publication

This topic provides users with procedures for changing the current console to the Hardware Management Console (HMC), HMC 5250, Thin Console, twinaxial console, and Operations Console.

For information about the accessibility features of this product, for users who have a physical disability, see “Accessibility features,” on page 31.


Changing consoles, interfaces, and terminals

Learn how to change a console, interface, or terminal if you must use an additional or alternate console, interface, or terminal for certain systems management functions.

Changing consoles, interface, or terminal requires careful attention to the procedures to avoid unwanted results. The procedure you need to follow depends on your current and future console, interface, or terminal configuration.

PDF file for Changing consoles, interfaces, and terminals

You can view and print a PDF file of this information.


To view or download the PDF version of this document, select Changing consoles, interfaces, and terminals  (about 550 KB).

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2. Click the option that saves the PDF locally.
3. Navigate to the directory in which you want to save the PDF.
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Concepts for changing your current configuration of consoles, interfaces, or terminals

Learn more about why and under what circumstances changing consoles, interfaces, or terminals can give you greater control over the management of your systems.

If your business demands different management capabilities than your current console, interface, or terminal delivers, you can change it. You might choose to change your console, interface, or terminal for one of the following reasons:

- **Upgrading to a POWER5 server:**

If you are upgrading from a POWER4™ server to a POWER5™ server, you must either upgrade your existing Hardware Management Console (HMC) or purchase a new HMC. If you are upgrading your system, other upgrades might also require additional consoles, interfaces, and terminals.

- **Adding management features:**

In many cases, you can have multiple consoles, interfaces, and terminals connected to your systems. This is typically done to increase the management control over systems. For example, some System p users have a graphics terminal that is used by an application program. This graphics terminal might also be used as an interface for certain management functions. In these and similar cases, changing consoles, interfaces, and terminals is a matter of changing the active communications device without connecting or disconnecting hardware.

- **Changing administrative personnel:**

In some cases, you might have to add or change administrators for a system, and the skills of the new administrator might favor a different console choice. For example, you might have to add an administrator with financial experience for your new System i accounting package. However, the best available administrator has experience only with IBM iSeries® Access for Windows® and iSeries Navigator. You can connect a PC client to the server and install iSeries Access for Windows onto the client. Because iSeries Access for Windows contains iSeries Navigator and Operations Console, the administrator has all the tools that are needed.

- **Servicing the system:**

You might have to connect a console or terminal to your system for special service functions or for access by service providers.

Your console, interface, and terminal options are constrained by your server family. If you have an IBM System p server, your options include the HMC, the Advanced System Management Interface (ASMI), the system management services menus, a graphics terminal, an ASCII terminal, and the control panel. If you have an IBM System i model, your options include the HMC with the ASMI, Operations Console, the twinaxial console, the Thin Console, and the control panel. For more information about your console options, see *Types of consoles, interfaces, and terminals*.

Related concepts

Types of consoles, interfaces, and terminals

Choosing the procedure to follow to change a console, interface, or terminal

Answer questions to help you choose the correct procedure to follow for changing the current console, interface, or terminal.

1. Is the server or logical partition that you are changing consoles for running i5/OS®?
 - **Yes.** Continue to question 2.
 - **No.** Complete “Changing the console from devices that use the ASMI and SMS to the HMC.”
2. Is the server managed by a Hardware Management Console (HMC)?

Note: If your current console is the Thin Console, select **No**.

- **Yes.** Continue to question 3.
 - **No.** Complete “Changing the console without an HMC” on page 3.
3. Will you power off the logical partition or the managed system to make the hardware changes?

Note: If either of the following statements are true, select **Yes**.

- You already have the correct hardware installed in the system and need to change only the console or Operations Console tag. You also plan to activate the logical partition at a later time.
- You are changing to or from a twinaxial console. This type of console change requires an initial program load (IPL) to use a different console.
- **Yes.** Complete “Changing the console with the managed system powered off” on page 9.
- **No.** Complete “Changing the console with the managed system powered on” on page 14.

Changing the console from devices that use the ASMI and SMS to the HMC

Learn how to change the current configuration from an ASCII terminal or a PC used to access the Advanced System Management Interface (ASMI), or a graphics terminal used to access the system management services (SMS) menus to the Hardware Management Console (HMC).

If you are changing a nonpartitioned system to a partitioned system, you must change the current configuration to the HMC. The current configuration can include an ASCII terminal or a PC used to access the ASMI, and a graphics terminal used to access the SMS menus.

This procedure assumes that you are not disconnecting the graphics terminal. If you want, you can disconnect the graphics terminal after completing the steps to change the console.

To change the console from devices that use the ASMI and the SMS to the HMC, complete these steps:

1. Power off the ASCII terminal or the PC that you are using to access ASMI, and then disconnect it from the server.
2. Set up the HMC, ensuring that the following configurations are set:
 - The HMC is installed as a DHCP server.
 - The Ethernet cable from the HMC is plugged into the service processor. The HMC automatically finds the IP address of the service processor in step 3.
3. Access the ASMI using the HMC.
4. Using the HMC, start the SMS menus.
 - a. Access the SMS menus while the AIX® or Linux® partition is booting.
 - b. From the main menu, select option 4 (Select console) and follow the instructions on the display.

Related concepts

Installing the HMC

Related tasks

Accessing the ASMI using the HMC

Starting the system management services

Changing the console without an HMC

Learn how to change the current console to a new console when there is no Hardware Management Console (HMC) present.

Because of the many variables associated with the possible replacement or movement of adapters to support a change in console type, there is no single process flow that can be used. Review and comply with the following list, and then select a procedure to perform a console change when no HMC is present.

- Verify that the QAUTOCFG system value is set to 0n. Use the WRKSYSVAL QAUTOCFG (Work with System Value) command to do this.
- Satisfy the hardware requirements by verifying that your new console adapter is correctly located or will be correctly located before the completion of this procedure. You can do this using the following information:
 - Operations Console - See Operations Console hardware requirements.
 - Thin Console - An adapter is not required. For more information about hardware requirements, refer to the documentation that was provided with your console device or see <http://www.neoware.com/>
 - Twinaxial console - The twinaxial adapter, FC 2746, must be located in a specific position depending on the server model. See Cabling your server for more information.
- If you have an IBM System i5® or eServer™ i5 520, 525, or 515 model, your system can have asynchronous adapters located in multiple slots simultaneously, including locating the 2793 asynchronous adapter in slot C4. Slot C4 allows an IOA that does not require an IOP. This is possible only for systems that are not managed by an HMC and have an input/output adapter (IOA) that does not require an input/output processor (IOP). To allow for this greater flexibility on the 520, you must install PTF MF39303 (V5R3M5) or PTF MF39304 (V5R4M0). These PTFs should already be installed on the 525 and 515.

With these PTFs, you are able to select an individual asynchronous adapter for use with the console and remote service by using either a native macro or the console service functions (65+21). The console and remote service functions must all remain on a single asynchronous adapter. If you have a system that was shipped with Licensed Internal Code (LIC) prior to V5R4M5, you cannot select slot C4 for use with the console when using the 2793, but you can select slot C4 for use with remote service.

Example: If you have an asynchronous adapter located in both C2 and C3 for use by Operations Console (Direct), you can choose to use either slot for console and remote service, without having to remove the asynchronous adapter from the other slot.

- Deallocate the LAN adapter if you are not using a local console on a network (LAN) configuration, even as a backup, or if you are not using the service tools server. After the LAN adapter is deallocated, you can move it or use it for another purpose. You must also be using a workstation other than a local console on a network (LAN) because the steps to deallocate the adapter will cause the console to disconnect.

To deallocate the LAN adapter currently associated with a local console on a network (LAN), use either the dedicated service tools (DST) or the system service tools (SST). However, you must unlock the SST option before you can use it. For additional information about SST, see Unlocking service tools device IDs in SST.

1. Access service tools using DST or SST.
 - If you are using DST, select **Work with DST environment**, and then **System devices**.
 - If you are using SST, select **Work with service tools user IDs and devices**, and then **Configure service tools LAN adapter**.
2. Press F6 to clear the old values, and then F7 to store the new values.
3. Press F3 or F12 to exit.

To change a console when no HMC is present, select one of the following tasks:

- “Changing the console without an HMC and when the correct hardware is installed”
- “Changing the console without an HMC and when hardware changes are needed” on page 5

Related concepts


Cabling your server

Using the console service functions (65+21)

Related tasks

Using the OPSCONSOLE macro

Unlocking service tools device IDs in SST

 Access service tools using DST

 Access service tools using SST

Related reference

Operations Console hardware requirements

Related information

 <http://www.neoware.com/>

Changing the console without an HMC and when the correct hardware is installed

Learn how to change the console that manages the i5/OS operating system without a Hardware Management Console (HMC) and when the correct hardware is installed.

Before you perform this procedure, ensure that the target console resource has been installed.

To change the console, complete the following steps:

1. Change the console type in i5/OS.

- a. Access service tools using DST or SST.
 - If you are using DST, select **Work with DST environment**, and then **System devices**.
 - If you are using SST, select **Work with service tools user IDs and devices**.
- b. Select **Select console**. The value of the current console is displayed. A value of 0 means that the console value is not set. The console value must be one of the following values:

Console value	Console
1	Twinaxial console
2	Operations Console (Direct)
3	Operations Console (LAN)
4	HMC or Thin Console The HMC and Thin Console cannot be connected to the server at the same time.

If you are unable to select a new console value, see IBM i5/OS problem analysis to begin troubleshooting the problem.

2. To have the new console type recognized, complete *one* of the following tasks:
 - Perform an initial program load (IPL) of the system.
Attention: Changing to or from a twinaxial console requires you to perform an IPL on the system.
 - Use the OPSCONSOLE RESTART macro. For more information about the macro, see Using the OPSCONSOLE macro.
 - Use the console service functions (65+21) by performing a sequence of functions: 65, 21, and 21. For more information, see Using the console service functions (65+21). It might take up to three minutes for the new console to start.

If you experience problems, see Troubleshooting the new console when the system is not managed by an HMC.

Related concepts

Using the console service functions (65+21)

Troubleshooting the new console when the system is not managed by an HMC

Related tasks

 Access service tools using DST

 Access service tools using SST

IBM i5/OS problem analysis

Using the OPSCONSOLE macro

Changing the console without an HMC and when hardware changes are needed

Learn how to change the console that manages the i5/OS operating system without a Hardware Management Console (HMC) and when hardware changes are needed.

Select the procedure that best fits your situation:

- “Changing the console hardware with the power on” on page 6
- “Changing the console hardware with the power off, and using another workstation” on page 7
- “Changing the console hardware with the power off, and no other workstation is available” on page 8

Related concepts

Using the console service functions (65+21)

Shutting down i5/OS logical partitions

Setting up Operations Console

Troubleshooting the new console when the system is not managed by an HMC

Related tasks

 Access service tools using SST

IBM i5/OS problem analysis

Using the OPSCONSOLE macro

Setting up a twinaxial console

Cabling the Thin Console for System i5

Putting the physical control panel in manual operating mode

Related information

PCI adapter

Changing the console hardware with the power on:

Learn how to change a console without an HMC while the managed system is powered on. This procedure requires that you have another workstation available that can use SST.

When changing consoles, you might have to either replace the current adapter or make another hardware change to support a different console. This change might not require you to perform an IPL if you follow the procedures to install, remove, or replace a PCI adapter (concurrent maintenance) with the system power on. For more information, see PCI adapters.

Important: If you do not have another workstation available that can use SST, follow the instructions in “Changing the console hardware with the power off, and no other workstation is available” on page 8.

To change your console, complete the following steps:

1. Using another workstation, vary off or deactivate the resource associated with the current console.
 - If the current console is Operations Console, disconnect the connection:
 - a. Select the configuration name (under **iSeries Connection**). This is the name that Operations Console uses to refer to a specific server.
 - b. From the **Connections** menu, click **Disconnect**. The connection status displays Disconnecting.
 - c. Wait for the status to display Disconnected.
 - If the current console is the twinaxial console, use the Vary Configuration (VRYCFG) command to vary off all devices and the controller. You can power off the device.

Important: This procedure must be performed using a PC or terminal not associated with the current console. If the adapter is active at the time you attempt to exchange it, the procedure to physically exchange the adapter will fail and you might have to power off the partition to make the changes for the console.

- If the current console is a Thin Console, you can power off and disconnect the device.
2. After you verify that the adapter is not active, use a combination of powering off a slot, replacing or moving adapters, and powering on the slot again as necessary, using concurrent maintenance, until you have the correct location for the hardware of the new console.
 3. Change the console type in i5/OS.
 - a. Access service tools using SST.
 - b. Select **Work with service tools user IDs and devices**.

- c. Select **Select console**. The value of the current console is present in the input field. A value of 0 means that the console value is not set. The console value must be one of the following values:

Console value	Console
1	Twinaxial console
2	Operations Console (Direct)
3	Operations Console (LAN)
4	HMC or Thin Console The HMC and Thin Console cannot be connected to the server at the same time.

If you are unable to select a new console value, see IBM i5/OS problem analysis to begin troubleshooting the problem.

4. To have the new console type recognized, complete one of the following tasks:
- Perform an initial program load (IPL) of the system.
Attention: Changing to or from a twinaxial console requires you to perform an IPL on the system.
 - Use the OPSCONSOLE RESTART macro. For more information about the macro, see Using the OPSCONSOLE macro.
 - Use the console service functions (65+21) by performing a sequence of functions: 65, 21, and 21. For more information, see Using the console service functions (65+21). It might take up to three minutes for the new console to start.

If you experience problems, see Troubleshooting the new console when the system is not managed by an HMC.

Changing the console hardware with the power off, and using another workstation:

Learn how to change a console without an HMC while the managed system is powered off. This procedure requires that you to have another workstation available that can use SST.

Important: If you do not have another workstation available that can use SST, follow the instructions in “Changing the console hardware with the power off, and no other workstation is available” on page 8.

To change the console, complete the following steps:

1. Using the current console or another workstation, power off the i5/OS logical partition. See Shutting down i5/OS logical partitions.
2. Depending on the current console, do *one* of the following tasks:
 - If the current console is Operations Console, disconnect the connection:
 - a. Select the configuration name (under **iSeries Connection**). This is the name that Operations Console uses to refer to a specific server.
 - b. From the **Connections** menu, click **Disconnect**. The connection status displays Disconnecting.
 - c. Wait for the status to display Disconnected.
 - If the current console is a twinaxial console or Thin Console, you can power off the device now.
3. Remove any hardware or cables associated with the previous console, and add or move any hardware or cables needed for the new console. For more information about setting up the new console, see Setting up a twinaxial console, Setting up Operations Console, or Cabling the Thin Console for System i5.
4. Select the option that best fits your situation. More than one option might apply.
 - If the new console is *not* Operations Console, power on the console device and start a connection at this time.

- If you currently have a configured connection for Operations Console that you will not be using as a backup console, delete the configured connection:
 - a. Select the configuration name (under iSeries Connection).
 - b. Click **Delete** on the Connection menu.
 - c. Click **Yes** to confirm the deletion.
 - If you are changing the current console to Operations Console, create an Operations Console connection by following the instructions in Setting up Operations Console.
5. Using the physical control panel, press the power button to power on the system.

Note: The system is expected to perform an unattended initial program load (B Normal IPL), which leaves the system without a console. You must use another workstation to complete the console change.

6. When the IPL is complete, use another workstation to change the console type in i5/OS.
- a. Access service tools using SST.
 - b. Select **Work with service tools user IDs and devices**.
 - c. Select **Select console**. The value of the current console is present in the input field. A value of 0 means that the console value is not set. The console value must be one of the following values:

Console value	Console
1	Twinaxial console
2	Operations Console (Direct)
3	Operations Console (LAN)
4	HMC or Thin Console The HMC and Thin Console cannot be connected to the server at the same time.

If you are unable to select a new console value, see IBM i5/OS problem analysis to begin troubleshooting the problem.

7. To have the new console type recognized, complete *one* of the following tasks:
- Perform an initial program load (IPL) of the system.
Attention: Changing to or from a twinaxial console requires you to perform an IPL on the system.
 - Use the OPSCONSOLE RESTART macro. For more information about the macro, see Using the OPSCONSOLE macro.
 - Use the console service functions (65+21) by performing a sequence of functions: 65, 21, and 21. For more information, see Using the console service functions (65+21). It might take up to three minutes for the new console to start.

If you experience problems, see Troubleshooting the new console when the system is not managed by an HMC.

Changing the console hardware with the power off, and no other workstation is available:

Learn how to change a console without an HMC while the managed system is powered off, and no other workstation is available.

To change the console, complete the following steps:

1. Using the current console, power off the i5/OS logical partition. See Shutting down the i5/OS logical partition.
2. Depending on the current console, do *one* of the following:
 - If the current console is Operations Console, disconnect the connection:

- a. Select the configuration name (under **iSeries Connection**). This is the name that Operations Console uses to refer to a specific server.
 - b. From the **Connections** menu, click **Disconnect**. The connection status displays **Disconnecting**.
 - c. Wait for the status to display **Disconnected**.
 - If the current console is a twinaxial console or Thin Console, you can power off the device now.
 3. Remove any hardware or cables associated with the previous console, and add or move any hardware or cables needed for the new console. For more information about setting up the new console, see *Setting up a twinaxial console*, *Setting up Operations Console*, or *Cabling the Thin Console for System i5*.
 4. Select the option that best fits your situation. More than one option might apply.
 - If the new console is *not* Operations Console, power on the console device and start a connection at this time.
 - If you currently have a configured connection for Operations Console that you will not be using as a backup console, delete the configured connection:
 - a. Select the configuration name (under **iSeries Connection**).
 - b. Click **Delete** on the Connection menu.
 - c. Click **Yes** to confirm the deletion.
 - If you are changing the current console to Operations Console, create an Operations Console connection by following the instructions in *Setting up Operations Console*.
 5. Put the physical control panel in manual operating mode.
 6. Using the physical control panel, press the power button to power on the system and perform a manual IPL.
- Note:** The system will fail to find the console, which is expected, and the control panel will stop when the attention light is lit and a system reference code of A6005008 or A6000500x (where *x* is typically 1, 4, or 7 for the twinaxial console) is displayed.
7. Use the console service functions (65+21) to set the new console type value.
 8. Continue the manual IPL. If you were unable to verify the QAUTOCFG system value, verify that it is turned on at the IPL Options window during the IPL. This allows the system to process any resource changes necessary for the new console.

When the IPL is finished, the i5/OS command window is displayed. If you experience problems, see *Troubleshooting the new console when the system is not managed by an HMC*.

Changing the console with the managed system powered off

Learn how to change the console that manages the i5/OS operating system with the managed system powered off.

This procedure assumes you have a working console or another workstation that can use SST. If you have a failed console and want to make a console change, see *Using the console service functions (65+21)*.

Before you begin, plan to deallocate the LAN adapter if you will not be using a local console on a network (LAN) configuration, even as a backup, or if you will not be using the service tools server. After the LAN adapter is deallocated, you can move it or use it for another purpose. You must use a workstation other than a local console on a network (LAN) because the steps to deallocate the adapter will cause the console to disconnect.

Important: You must change the console tag to a value other than Operations Console (LAN). Otherwise, the adapter is reallocated the next time that you start the server.

To deallocate the LAN adapter currently associated with a local console on a network (LAN), use the system service tools (SST). However, you must unlock the SST option before you can use it. For additional information about SST, see Unlocking service tools device IDs in SST.

1. Access service tools using SST.
2. Select **Work with service tools user IDs and devices**.
3. Select **Configure service tools LAN adapter**.
4. Press F6 to clear the old values, and then F7 to store the new values.
5. Press F3 or F12 to exit.

To change the console, complete the following steps:

1. Using the current console or another workstation, shut down the i5/OS logical partition. For instructions, see Shutting down i5/OS logical partitions.
2. Depending on the current console, do *one* of the following:
 - If the current console is Operations Console, disconnect the connection:
 - a. Select the configuration name (under **iSeries Connection**). This is the name that Operations Console uses to refer to a specific server.
 - b. From the **Connections** menu, click **Disconnect**. The connection status displays Disconnecting.
 - c. Wait for the status to display Disconnected.
 - If the current console is a twinaxial console or Thin Console, power off the device now.
3. Remove any hardware or cables associated with the previous console, and add or move any hardware or cables needed for the new console. For more information about setting up the new console, see Setting up a twinaxial console, Setting up Operations Console, or Cabling the Thin Console for System i5.
4. Select the option that best fits your situation. More than one option might apply.
 - If the new console is *not* Operations Console, power on the console device and start a connection at this time.
 - If you currently have a configured connection for Operations Console and you will not be using it as a backup console, complete the following steps to delete the configuration:
 - a. Select the configuration name (under iSeries Connection).
 - b. Click **Delete** on the Connection menu.
 - c. Click **Yes** to confirm the deletion.
 - If you are changing the current console to Operations Console, create an Operations Console connection by following the instructions in Setting up Operations Console.
5. Using the HMC, power on the managed system.
 - a. In the navigation area, expand the **Server and Partition** folder.
 - b. Click the **Server Management** icon.
 - c. In the contents area, select the managed system.
 - d. From the menu, click **Selected** → **Power On**.
 - e. Select the power-on mode that you want to use and click **OK**.
6. Using the HMC, change the console device setting for the i5/OS partition profile.
 - a. In the navigation area, open **Server and Partition**.
 - b. Select **Server Management**.
 - c. In the contents area, open the server on which the i5/OS partition profile is located.
 - d. Open **Partitions**.
 - e. Open the i5/OS logical partition for the partition profile
 - f. Right-click the partition profile and select **Properties**.
 - g. Click **Tagged I/O**, clear the current console setting, and click **Select**.

- h. Expand the list in the **I/O devices in the profile** area so that the console device that you want to use is displayed.
- i. Select the console device that you want to use, and then click **Select**.

Note: If you selected an asynchronous communications adapter for Operations Console (Direct), you must also select the same asynchronous communications adapter in the **Operations Console** field.

- j. Click **OK**, and then click **OK** again.
7. Using the HMC, activate the i5/OS partition profile to allow the new profile setting to take effect.
 - a. In the navigation area, open **Server and Partition**.
 - b. Select **Server Management**.
 - c. In the contents area, open the server on which the i5/OS partition profile is located.
 - d. Open **Partitions**.
 - e. Open the logical partition for the partition profile.
 - f. Right-click the partition profile and select **Activate**.
 - g. Select the partition profile that you want to activate and click **OK**.

The new console becomes available when the IPL of the partition is complete or the console activation method completes. If you experience problems, see Troubleshooting the new console when the system is managed by an HMC.

Related concepts

Using the console service functions (65+21)

Shutting down i5/OS logical partitions

Setting up Operations Console

Troubleshooting the new console when the system is managed by an HMC

Related tasks

Unlocking service tools device IDs in SST

 Access service tools using SST

Setting up a twinaxial console

Cabling the Thin Console for System i5

Shutting down i5/OS logical partitions

The correct way to shut down an i5/OS logical partition safely is from an i5/OS command line.

If you cannot shut down the i5/OS logical partition from an i5/OS command line, you can shut down the i5/OS logical partition from the Shut Down Partition window on your HMC or from the remote control panel on the Operations Console. Using these methods can cause an abnormal shutdown and can result in loss of data.

Before you shut down an i5/OS logical partition, you must perform all of the basic i5/OS shutdown tasks. For example, all other users must be signed off of the i5/OS logical partition before you can shut it down. If you shut down the i5/OS logical partition without completing all of the required tasks, you can cause damage to data or cause the system to behave in unpredictable ways. For more information on what you must do before shutting down the i5/OS logical partition, see the i5/OS Basic system operations topic collection.

Shutting down i5/OS logical partitions using version 6 or earlier of the HMC:

You can shut down i5/OS logical partitions using the Hardware Management Console (HMC).

Before you shut down the i5/OS logical partition, complete the following:

1. If an Integrated xSeries® Adapter (IXA) is present on the system, shut down the IXA using i5/OS options.
2. Ensure that all jobs are completed and all applications are ended.
3. Ensure that your partition profiles are updated with any dynamic logical partitioning resource changes that you want to keep when you restart the logical partition.

The correct way to shut down an i5/OS logical partition from the HMC is to open an HMC 5250 emulator session and run the Power Down System (PWRDWN SYS) command.

To shut down an i5/OS logical partition version 6 or earlier of the HMC, follow these steps:

1. Open an HMC 5250 emulator session for an i5/OS logical partition. See *Connecting to a 5250 console* for instructions.
2. From the i5/OS command line in the emulator session, type PWRDWN SYS OPTION (*CNTRL D) DELAY (600) and press Enter. The system will only shut down the i5/OS logical partition you selected. The PWRDWN SYS command does not affect other i5/OS logical partitions on your system. If you enter the PWRDWN SYS command with the RESTART(*YES) option, the operating system restarts, and the resource specifications of the logical partition remain the same. If you do not use the RESTART(*YES) option, then the logical partition shuts down completely, and other logical partitions will be able to take and use the resources that were used by the logical partition. Also, when you reactivate the logical partition using a partition profile, the partition profile overlays the resource specifications of the logical partition with the resource specifications in the partition profile. Any resource changes that you made to the logical partition using dynamic logical partitioning are lost when you reactivate the logical partition using a partition profile. If the logical partition is set to start automatically when the managed system starts, you can preserve the resource specifications on that logical partition by restarting the entire managed system using the Partition autostart power-on mode. When the logical partitions start automatically, the logical partitions have the resource specifications that the logical partitions had when you shut down the managed system.
3. If the PWRDWN SYS command does not work, you can use either of the following methods to shut down the i5/OS logical partition.

Attention: Using these methods can cause an abnormal shutdown and can result in loss of data.

- Delayed shutdown. See *Performing a delayed shutdown of an i5/OS logical partition using version 6 or earlier of the HMC* for instructions.
- Immediate shutdown. See *Performing an immediate shutdown of an i5/OS logical partition using version 6 or earlier of the HMC* for instructions.

Performing a delayed shutdown of an i5/OS logical partition using version 6 or earlier of the HMC:

You can perform a delayed shutdown of a logical partition using the Hardware Management Console (HMC). Using delayed shutdown is equivalent to using the power button on the remote control panel. Use delayed shutdown only when you must shut down a logical partition, and the PWRDWN SYS command does not work.

When you use the delayed shutdown option, the logical partition waits a predetermined amount of time to shut down. This allows the logical partition time to end jobs and write data to disks. If the logical partition is unable to shut down within the predetermined amount of time, it will end abnormally and the next restart might take a long time.

To perform a delayed shutdown of an i5/OS logical partition using version 6 or earlier of the HMC, complete the following:

1. In the navigation area, open **Server and Partition**.
2. Select **Server Management**.
3. In the contents area, open the managed system on which the logical partition resides.
4. Open **Partitions**.

5. Right-click the logical partition that you want to shut down and select **Shut Down Partition**.
6. Select **Delayed** and click **OK**.

Performing an immediate shutdown of an i5/OS logical partition using version 6 or earlier of the HMC:

Use this procedure to perform an immediate shutdown of a logical partition using the Hardware Management Console (HMC).

Attention: Using immediate shutdown can cause an abnormal IPL of the i5/OS logical partition and possibly cause loss of data. Use immediate shutdown only when an i5/OS logical partition cannot shut down using PWRDWN SYS or delayed shutdown.

When you use the immediate shutdown option, the system shuts down without any preset delay. Using immediate shutdown is equivalent to using function 8 on the remote control panel.

To perform an immediate shutdown of an i5/OS logical partition using version 6 or earlier of the HMC, complete the following:

1. In the navigation area, open **Server and Partition**.
2. Select **Server Management**.
3. In the contents area, open the server on which the logical partition resides.
4. Open **Partitions**.
5. Right-click the logical partition that you want to shut down and select **Shut Down Partition**.
6. Select **Immediate** and click **OK**.

Shutting down i5/OS logical partitions using Operations Console:

You can shut down i5/OS logical partitions using Operations Console.

Before you shut down the i5/OS logical partition, complete the following:

1. If an Integrated xSeries Adapter (IXA) is present on the system, shut down the IXA using i5/OS options.
2. Ensure that all jobs are completed and all applications are ended.
3. Ensure that your partition profiles are updated with any dynamic logical partitioning resource changes that you want to keep when you restart the logical partition.

The correct way to shut down a logical partition is by using the i5/OS power down system (PWRDWN SYS) command.

From an i5/OS command line, type PWRDWN SYS OPTION (*CNTRLD) DELAY (600) and press Enter. The system will only shut down the i5/OS logical partition you selected. The PWRDWN SYS command does not affect other i5/OS logical partitions on your system.

If you enter the PWRDWN SYS command with the RESTART(*YES) option, the operating system restarts, and the resource specifications of the logical partition remain the same. If you do not use the RESTART(*YES) option, then the logical partition shuts down completely, and other logical partitions will be able to take and use the resources that were used by the logical partition. Also, when you reactivate the logical partition using a partition profile, the partition profile overlays the resource specifications of the logical partition with the resource specifications in the partition profile. Any resource changes that you made to the logical partition using dynamic logical partitioning are lost when you reactivate the logical partition using a partition profile. If the logical partition is set to start automatically when the managed system starts, you can preserve the resource specifications on that logical partition by restarting the entire managed system using the Partition autostart power-on mode. When the logical partitions start automatically, the logical partitions have the resource specifications that the logical partitions had when you shut down the managed system.

If the PWRDWN SYS command does not work, you can use the remote control panel through Operations Console to use control panel functions through a PC. The graphical user interface of the remote control panel looks similar to the physical control panel. The remote control panel installs through Operations Console. For more information on the remote control panel, see the i5/OS Remote control panel topic collection. Using the remote control panel to shut down the i5/OS logical partition can result in an abnormal IPL and loss of data.

Delayed shutdown

Use delayed shutdown only when you must shut down a logical partition, and the PWRDWN SYS command does not work.

When you use the delayed shutdown option, the partition waits a predetermined amount of time to shut down. This allows the partition time to end jobs and write data to disks. If the partition is unable to shut down within the predetermined amount of time, it will end abnormally and the next restart might take a long time.

Immediate shutdown

Use immediate shutdown only when an i5/OS logical partition cannot shut down using PWRDWN SYS or delayed shutdown.

When you use the immediate shutdown option, the system powers down without any preset delay.

Attention: This might cause an abnormal IPL of the i5/OS logical partition and possibly cause loss of data.

Use the remote control panel to perform a delayed shutdown or an immediate shutdown. The power button will start a delayed shutdown and function 8 will start an immediate shutdown of a system.

Changing the console with the managed system powered on

Learn how to change the console that manages the i5/OS operating system with the managed system powered on.

The following procedures assume that you have a working console or another workstation that can use SST. If you have a failed console and want to make a console change, see Using the console service functions (65+21).

Depending on the type of hardware changes you have to make, if any, select one of the following procedures to change the console with the managed system powered on:

- If you have no hardware changes to make, complete one of the following tasks:
 - “Changing the partition profile with an activation” on page 15
This task requires you to perform an initial program load (IPL).
 - “Completing a console change with the logical partition and managed system powered on” on page 21
This task does not require an IPL.
- If you need to exchange hardware, complete “Exchanging console adapters with the managed system powered on” on page 19.
- If you need to make multiple hardware changes, complete “Making multiple hardware changes with the managed system powered on” on page 24.

Related concepts

Using the console service functions (65+21)

Changing the partition profile with an activation

Learn how to change a console with the managed system powered on when you have no hardware changes to make. This procedure requires you to perform an initial program load (IPL).

Before you begin, consider the following:

- If you plan to use Operations Console (LAN) or Operations Console (Direct) as the new console, verify that you have satisfied the Operations Console hardware requirements.
- Plan to deallocate the LAN adapter if you will not be using a local console on a network (LAN) configuration, even as a backup, or if you will not be using the service tools server. After the LAN adapter is deallocated, you can move it or use it for another purpose. You must also use a workstation other than a local console on a network (LAN) because the steps to deallocate the adapter will cause the console to disconnect.

Note: You must change the console tag to a value other than Operations Console (LAN). Otherwise, the adapter is reallocated the next time you start the server.

To deallocate the LAN adapter currently associated with a local console on a network (LAN), use the system service tools (SST). However, you must unlock the SST option before you can use it. For additional information about SST, see Unlocking service tools device IDs in SST.

1. Access service tools using SST.
2. Select **Work with service tools user IDs and devices**.
3. Select **Configure service tools LAN adapter**.
4. Press F6 to clear the old values, and then F7 to store the new values.
5. Press F3 or F12 to exit.

To change the console, complete the following steps:

1. Using the current console or another workstation, shut down the i5/OS logical partition. For instructions, see Shutting down i5/OS logical partitions.
2. Depending on the current console, do *one* of the following:
 - If the current console is Operations Console, disconnect the connection:
 - a. Select the configuration name (under **iSeries Connection**). This is the name that Operations Console uses to refer to a specific server.
 - b. From the **Connections** menu, click **Disconnect**. The connection status displays Disconnecting.
 - c. Wait for the status to display Disconnected.
 - If the current console is a twinaxial console or Thin Console, you can power off the device now.
3. Select the option that best fits your situation. More than one option might apply.
 - If the new console is *not* Operations Console, start a connection from the console device at this time.
 - If you currently have a configured connection for Operations Console and you will not be using it as a backup console, complete the following steps to delete the configuration:
 - a. Select the configuration name (under iSeries Connection).
 - b. Click **Delete** on the Connection menu.
 - c. Click **Yes** to confirm the deletion.
 - If you are changing the current console to Operations Console, create an Operations Console connection by following the instructions in Setting up Operations Console.
4. Using the HMC, change the console device setting for the i5/OS partition profile.
 - a. In the navigation area, open **Server and Partition**.
 - b. Select **Server Management**.

- c. In the contents area, open the server on which the i5/OS partition profile is located.
- d. Open **Partitions**.
- e. Open the i5/OS logical partition for the partition profile.
- f. Right-click the partition profile and select **Properties**.
- g. Click **Tagged I/O**, clear the current console setting, and click **Select**.
- h. Expand the list in the **I/O devices in the profile** area so that the console device that you want to use is displayed.
- i. Select the console device that you want to use, and click **Select**.

Note: If you selected an asynchronous communications adapter for Operations Console (Direct), you must also select the same asynchronous communications adapter in the **Operations Console** field.

- j. Click **OK**, and then click **OK** again.
5. Using the HMC, activate the i5/OS partition profile to allow the new profile setting to take effect.
 - a. In the navigation area, open **Server and Partition**.
 - b. Select **Server Management**.
 - c. In the contents area, open the server on which the i5/OS partition profile is located.
 - d. Open **Partitions**.
 - e. Open the logical partition for the partition profile.
 - f. Right-click the partition profile and select **Activate**.
 - g. Select the partition profile that you want to activate and click **OK**.

The new console becomes available when the IPL of the partition is complete or the console activation method completes. If you experience problems, see *Troubleshooting the new console when the system is managed by an HMC*.

Related concepts

Shutting down i5/OS logical partitions

Setting up Operations Console

Troubleshooting the new console when the system is managed by an HMC

Related tasks

Unlocking service tools device IDs in SST



Access service tools using SST

Related reference

Operations Console hardware requirements

Shutting down i5/OS logical partitions:

The correct way to shut down an i5/OS logical partition safely is from an i5/OS command line.

If you cannot shut down the i5/OS logical partition from an i5/OS command line, you can shut down the i5/OS logical partition from the Shut Down Partition window on your HMC or from the remote control panel on the Operations Console. Using these methods can cause an abnormal shutdown and can result in loss of data.

Before you shut down an i5/OS logical partition, you must perform all of the basic i5/OS shutdown tasks. For example, all other users must be signed off of the i5/OS logical partition before you can shut it down. If you shut down the i5/OS logical partition without completing all of the required tasks, you can cause damage to data or cause the system to behave in unpredictable ways. For more information on what you must do before shutting down the i5/OS logical partition, see the i5/OS Basic system operations topic collection.

Shutting down i5/OS logical partitions using version 6 or earlier of the HMC:

You can shut down i5/OS logical partitions using the Hardware Management Console (HMC).

Before you shut down the i5/OS logical partition, complete the following:

1. If an Integrated xSeries Adapter (IXA) is present on the system, shut down the IXA using i5/OS options.
2. Ensure that all jobs are completed and all applications are ended.
3. Ensure that your partition profiles are updated with any dynamic logical partitioning resource changes that you want to keep when you restart the logical partition.

The correct way to shut down an i5/OS logical partition from the HMC is to open an HMC 5250 emulator session and run the Power Down System (PWRDWN SYS) command.

To shut down an i5/OS logical partition version 6 or earlier of the HMC, follow these steps:

1. Open an HMC 5250 emulator session for an i5/OS logical partition. See *Connecting to a 5250 console* for instructions.
2. From the i5/OS command line in the emulator session, type `PWRDWN SYS OPTION (*CNTRL D) DELAY (600)` and press Enter. The system will only shut down the i5/OS logical partition you selected. The PWRDWN SYS command does not affect other i5/OS logical partitions on your system. If you enter the PWRDWN SYS command with the `RESTART(*YES)` option, the operating system restarts, and the resource specifications of the logical partition remain the same. If you do not use the `RESTART(*YES)` option, then the logical partition shuts down completely, and other logical partitions will be able to take and use the resources that were used by the logical partition. Also, when you reactivate the logical partition using a partition profile, the partition profile overlays the resource specifications of the logical partition with the resource specifications in the partition profile. Any resource changes that you made to the logical partition using dynamic logical partitioning are lost when you reactivate the logical partition using a partition profile. If the logical partition is set to start automatically when the managed system starts, you can preserve the resource specifications on that logical partition by restarting the entire managed system using the Partition autostart power-on mode. When the logical partitions start automatically, the logical partitions have the resource specifications that the logical partitions had when you shut down the managed system.
3. If the PWRDWN SYS command does not work, you can use either of the following methods to shut down the i5/OS logical partition.

Attention: Using these methods can cause an abnormal shutdown and can result in loss of data.

- Delayed shutdown. See *Performing a delayed shutdown of an i5/OS logical partition using version 6 or earlier of the HMC* for instructions.
- Immediate shutdown. See *Performing an immediate shutdown of an i5/OS logical partition using version 6 or earlier of the HMC* for instructions.

Performing a delayed shutdown of an i5/OS logical partition using version 6 or earlier of the HMC:

You can perform a delayed shutdown of a logical partition using the Hardware Management Console (HMC). Using delayed shutdown is equivalent to using the power button on the remote control panel. Use delayed shutdown only when you must shut down a logical partition, and the PWRDWN SYS command does not work.

When you use the delayed shutdown option, the logical partition waits a predetermined amount of time to shut down. This allows the logical partition time to end jobs and write data to disks. If the logical partition is unable to shut down within the predetermined amount of time, it will end abnormally and the next restart might take a long time.

To perform a delayed shutdown of an i5/OS logical partition using version 6 or earlier of the HMC, complete the following:

1. In the navigation area, open **Server and Partition**.
2. Select **Server Management**.
3. In the contents area, open the managed system on which the logical partition resides.
4. Open **Partitions**.
5. Right-click the logical partition that you want to shut down and select **Shut Down Partition**.
6. Select **Delayed** and click **OK**.

Performing an immediate shutdown of an i5/OS logical partition using version 6 or earlier of the HMC:

Use this procedure to perform an immediate shutdown of a logical partition using the Hardware Management Console (HMC).

Attention: Using immediate shutdown can cause an abnormal IPL of the i5/OS logical partition and possibly cause loss of data. Use immediate shutdown only when an i5/OS logical partition cannot shut down using PWRDWN SYS or delayed shutdown.

When you use the immediate shutdown option, the system shuts down without any preset delay. Using immediate shutdown is equivalent to using function 8 on the remote control panel.

To perform an immediate shutdown of an i5/OS logical partition using version 6 or earlier of the HMC, complete the following:

1. In the navigation area, open **Server and Partition**.
2. Select **Server Management**.
3. In the contents area, open the server on which the logical partition resides.
4. Open **Partitions**.
5. Right-click the logical partition that you want to shut down and select **Shut Down Partition**.
6. Select **Immediate** and click **OK**.

Shutting down i5/OS logical partitions using Operations Console:

You can shut down i5/OS logical partitions using Operations Console.

Before you shut down the i5/OS logical partition, complete the following:

1. If an Integrated xSeries Adapter (IXA) is present on the system, shut down the IXA using i5/OS options.
2. Ensure that all jobs are completed and all applications are ended.
3. Ensure that your partition profiles are updated with any dynamic logical partitioning resource changes that you want to keep when you restart the logical partition.

The correct way to shut down a logical partition is by using the i5/OS power down system (PWRDWN SYS) command.

From an i5/OS command line, type PWRDWN SYS OPTION (*CNTRL D) DELAY (600) and press Enter. The system will only shut down the i5/OS logical partition you selected. The PWRDWN SYS command does not affect other i5/OS logical partitions on your system.

If you enter the PWRDWN SYS command with the RESTART(*YES) option, the operating system restarts, and the resource specifications of the logical partition remain the same. If you do not use the RESTART(*YES) option, then the logical partition shuts down completely, and other logical partitions will be able to take and use the resources that were used by the logical partition. Also, when you reactivate the logical partition using a partition profile, the partition profile overlays the resource specifications of the logical partition with the resource specifications in the partition profile. Any resource changes that you made to the logical partition using dynamic logical partitioning are lost when you reactivate the

logical partition using a partition profile. If the logical partition is set to start automatically when the managed system starts, you can preserve the resource specifications on that logical partition by restarting the entire managed system using the Partition autostart power-on mode. When the logical partitions start automatically, the logical partitions have the resource specifications that the logical partitions had when you shut down the managed system.

If the PWRDWN SYS command does not work, you can use the remote control panel through Operations Console to use control panel functions through a PC. The graphical user interface of the remote control panel looks similar to the physical control panel. The remote control panel installs through Operations Console. For more information on the remote control panel, see the i5/OS Remote control panel topic collection. Using the remote control panel to shut down the i5/OS logical partition can result in an abnormal IPL and loss of data.

Delayed shutdown

Use delayed shutdown only when you must shut down a logical partition, and the PWRDWN SYS command does not work.

When you use the delayed shutdown option, the partition waits a predetermined amount of time to shut down. This allows the partition time to end jobs and write data to disks. If the partition is unable to shut down within the predetermined amount of time, it will end abnormally and the next restart might take a long time.

Immediate shutdown

Use immediate shutdown only when an i5/OS logical partition cannot shut down using PWRDWN SYS or delayed shutdown.

When you use the immediate shutdown option, the system powers down without any preset delay.

Attention: This might cause an abnormal IPL of the i5/OS logical partition and possibly cause loss of data.

Use the remote control panel to perform a delayed shutdown or an immediate shutdown. The power button will start a delayed shutdown and function 8 will start an immediate shutdown of a system.

Exchanging console adapters with the managed system powered on

Learn how to change a console with the logical partition and managed system powered on when the current console resource is an adapter that you must remove and replace with a new adapter.

This procedure requires a workstation other than the current console device to make a console change. If you do not have another workstation available, you must shut down the i5/OS logical partition. For instructions, see Shutting down i5/OS logical partitions.

You must also use the Hardware Management Console (HMC) to exchange the console resource unless you plan to power off the managed system. For instructions, see Powering off a managed system.. If you must power off the managed system, return to Choosing the procedure to follow to change a console, interface, or terminal and answer the questions to find a procedure that best fits your situation.

Before you begin, plan to deallocate the LAN adapter if you will not be using a local console on a network (LAN) configuration, even as a backup, or if you will not be using the service tools server. After the LAN adapter is deallocated, you can move it or use it for another purpose. You must also use a workstation other than a local console on a network (LAN) because the steps to deallocate the adapter will cause the console to disconnect.

To deallocate the LAN adapter currently associated with a local console on a network (LAN), use the system service tools (SST). However, you must unlock the SST option before you can use it. For additional information about SST, see Unlocking service tools device IDs in SST.

1. Access service tools using SST.
2. Select **Work with service tools user IDs and devices**.
3. Select **Configure service tools LAN adapter**.
4. Press F6 to clear the old values, and then F7 to store the new values.
5. Press F3 or F12 to exit.

Important: When changing from or to a twinaxial console and the partition has completed an IPL into i5/OS, an additional IPL is required to complete the console change.

To exchange your hardware, complete the following steps:

1. Select the option that best fits your situation:
 - If the current console is Operations Console, disconnect the current connection.
 - a. Select the configuration name (under iSeries Connection). This is the name that Operations Console uses to refer to a specific server.
 - b. Click **Disconnect** on the Connections menu. The connection status displays Disconnecting.
 - c. Wait for the status to display Disconnected.
 - If the current console is the twinaxial console, use the Vary Configuration (VRYCFG) command to vary off all devices and the controller. You can then power off the device.

Important: This procedure must be performed using a PC or terminal not associated with the current console. If the adapter is active at the time you attempt to exchange it, the procedure to physically exchange the adapter will fail and you might have to power off the partition to make the changes for the console.

- If the current console is a Thin Console, you can power off and disconnect the device.
2. Using Service Focal Point on the HMC, select the **Exchange Parts** option and follow the instructions to replace the current console resource with the new console resource.
 3. Attach any necessary cables to the adapter.
 4. Select the option that best fits your situation. More than one option might apply.
 - If the new console is *not* Operations Console, start a connection from the console device at this time.
 - If you currently have a configured connection for Operations Console and you will not be using it as a backup console, complete the following steps to delete the configuration:
 - a. Select the configuration name (under iSeries Connection).
 - b. Click **Delete** on the Connection menu.
 - c. Click **Yes** to confirm the deletion.
 - If you are changing the current console to Operations Console, create an Operations Console connection by following the instructions in Setting up Operations Console.
 5. Complete the console change. For instructions, see completing a console change with the logical partition and managed system powered on.

Related concepts

Shutting down i5/OS logical partitions

Choosing the procedure to follow to change a console, interface, or terminal

Setting up Operations Console

Related tasks

Powering off a managed system

Unlocking service tools device IDs in SST

 Access service tools using SST

Completing a console change with the logical partition and managed system powered on

Completing a console change with the logical partition and managed system powered on:

After making all of the necessary hardware changes, complete the console change with the logical partition and managed system powered on. This procedure does not require an IPL.

Before you begin, ensure that the current configuration meets the following requirements:

- You have satisfied the hardware requirements for the new console. For instructions, see Setting up a twinaxial console, Setting up Operations Console, or Cabling the Thin Console for System i5.
- The Hardware Management Console (HMC) is set up and configured. For HMC setup instructions, see Installing the HMC.
- An i5/OS logical partition is configured, installed, and activated. For information about i5/OS logical partitions, see Partitioning for i5/OS with an HMC.
- You have a current backup of the system or logical partition (including operating systems, licensed programs, and data). For information about backing up the system or logical partition, see Backing up and recovering data.
- The QAUTOCFG system value is set to 0n. Use the WRKSYSVAL QAUTOCFG (Work with System Value) command to verify this.
- If you want to access the HMC command line using a local terminal connection, start an xterm shell on the HMC. To do this, open a terminal by right-clicking the background and selecting **Terminals** → **rshterm**.
- If you want to access the HMC command line using a remote terminal connection such as PuTTY, first set up secure script execution between SSH clients and the HMC. For instructions, see Setting up secure script execution between SSH clients and HMC. You must then start your remote terminal by specifying the name of the HMC that is managing the partition you will be working with.

The following procedure contains examples within the steps to help you complete a console change. In these examples, the system named *sysname* with partition identification number *1* is changing from the HMC to Operations Console (LAN) using an embedded Ethernet port. These variables are placeholders for your actual system name and partition ID number. In the following instructions, replace *sysname* with your system name and replace *1* with your partition identification number.

To make a console change without powering off the partition, complete the following steps:

1. List the current I/O configuration for the logical partition and locate the device that you want to make the system console device. If you already know which resource is being used for the console, continue with step 1b on page 22. Otherwise, complete step 1a to list the currently tagged resource for the console.
 - a. Type the following command on the HMC command line:

```
lshwres -m sysname -r io --rsubtype taggedio --filter lpar_ids=1 -F console_slot
```

This command returns none, hmc, or an eight-character hexadecimal string representing the dynamic reconfiguration connector (DRC) index of the current console adapter.

If you currently use Operations Console (Direct) as the console or backup console, or previously specified an asynchronous communications adapter for remote service, you can use the following command to display the current configured resource associated with the **Operations Console** tag:

```
lshwres -m sysname -r io --rsubtype taggedio --filter lpar_ids=1 -F op_console_slot
```

- b. To list the I/O owned by the logical partition, type the following command on the HMC command line:

```
lshwres -m sysname -r io --rsubtype slot --filter lpar_ids=1  
-F drc_index,drc_name,description
```

The system returns data in the following format:

```
21030001,U1234.001.123456A-P1-T6,PCI 10/100/1000Mbps Ethernet UTP 2-port  
21010003,U1234.001.123456A-P1-T12,PCI RAID Controller ...  
21010004,U1234.001.123456A-P1-C2,PCI 10/100/1000Mbps Ethernet UTP 2-port  
21010005,U1234.001.123456A-P1-C3,PCI 2-Line WAN w/Modem
```

The location of the resource DRC 21030001 is listed as P1-T6 and not P1-C n (where n is a slot number). The T n designation represents embedded resources. If you designate an actual adapter, the location is a value similar to P1-C2. This enables you to get the DRC index of the input/output adapter (IOA), which becomes the new console device.

- c. Identify the DRC index of the console IOA that you want. In the previous output example, the first entry is an Ethernet IOA with a DRC index of 21030001. The Ethernet port for this device is labeled T6 in unit 1234.001.123456A.
2. Change the **console** tag of the partition to the device that you want to become the next console device.
- a. Complete one of the following tasks to change the console type:

- **Change your console to the HMC**

To set the new **console** tag to the HMC 5250 console, type the following command:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a console_slot=hmc
```

- **Change your console to Operations Console (LAN)**

To set the new **console** tag to an IOA with a DRC index of 21030001 (the DRC index can be found in step 1 on page 21), type the following command:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a console_slot=21030001
```

- **Change your console to Operations Console (Direct)**

To set the new **console** tag to an IOA with a DRC index of 21010005 (the DRC index can be found in step 1 on page 21), type the following commands:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a console_slot=21010005
```

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a op_console_slot=21010005
```

- b. To verify your changes, repeat step 1 on page 21. (You must also update your partition profile settings later in step 5 on page 23.)

Notes:

- To clear the **console** tag, type the following command:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a console_slot=none
```
- To clear the **Operations Console** tag, type the following command:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a op_console_slot=none
```
- If entering none in the previous commands results in an error message, try entering eight zeros (00000000) instead.

3. Start a search for the console device by doing the following sequence of console service functions against the partition: **65**, **21**, and **21**. This sequence of three console service functions within 45 seconds for each function initiates a new search for the console device. For more information, see Using the console service functions (65+21).

- a. To perform function **65** (remote DST off), type the following command:
`chsysstate -m sysname -r lpar --id 1 -o remotdstoff`
- b. To perform function **21** (force DST), type the following command:
`chsysstate -m sysname -r lpar --id 1 -o dston`
- c. Perform step 3b again.
4. Try to connect with the newly selected console device and monitor the partition's system reference codes (SRCs). It can take up to three minutes for the console adapter change to be completed.

Note: To monitor the SRCs for the logical partition, type the following command to list the last 10 SRCs:

```
lsrefcode -m sysname -r lpar -n 10 --filter "lpar_ids=1"
```

SRCs are listed in order from newest to oldest. To list a different number, replace 10 in the command with the number of SRCs that you want returned. For more information about SRC data, see *Troubleshooting system reference code data*.

5. Update the partition profile on the HMC to match the dynamic console change.
 - a. In the navigation area, open **Server and Partition**.
 - b. Select **Server Management**.
 - c. In the contents area, open the server on which the i5/OS partition profile is located.
 - d. Open **Partitions**.
 - e. Open the i5/OS logical partition for the partition profile.
 - f. Right-click the partition profile and select **Properties**.
 - g. Click **Tagged I/O**, clear the current console setting, and click **Select**.
 - h. Expand the list in the **I/O devices in the profile** area so that the console device that you want is displayed.
 - i. Select the console device that you want, and click **Select**.

Note: If you selected an asynchronous communications adapter for Operations Console (Direct), you must also select the same asynchronous communications adapter in the **Operations Console** field.

- j. Click **OK**, and then click **OK** again.

If the previous steps were successful, the current console type for the logical partition no longer matches the console type in the partition profiles. If you want the new console type to be preserved across partition activations, go to the partition profiles and change the **console** tag to match the selection in the `chhwres` command in step 2 on page 22.

Related concepts

Setting up Operations Console

Installing the HMC

Partitioning for i5/OS with an HMC

Backing up and recovering data

Using the console service functions (65+21)

Related tasks

Setting up a twinaxial console

Cabling the Thin Console for System i5

Setting up secure script execution between SSH clients and the HMC

Related information

 Troubleshoot system reference code data

Making multiple hardware changes with the managed system powered on

Learn how to make multiple hardware changes, such as moving two or more adapters, while the logical partition and managed system remain powered on.

This procedure requires a workstation other than the current console device to make a console change. If you do not have another workstation available, you must shut down the i5/OS logical partition. For instructions, see Shutting down the i5/OS logical partition.

You must also use the Hardware Management Console (HMC) to install, add, or remove the console resource unless you plan to power off the managed system. For instructions, see Powering off a managed system. If you must power off the managed system, return to Choosing the procedure to follow to change a console, interface, or terminal and answer the questions to find a procedure that best fits your situation.

Before you begin, plan to deallocate the LAN adapter if you will not be using a local console on a network (LAN) configuration, even as a backup, or if you will not be using the service tools server. After the LAN adapter is deallocated, you can move it or use it for another purpose. You must also use a workstation other than a local console on a network (LAN) because the steps to deallocate the adapter will cause the console to disconnect.

Important: You must change the console tag to a value other than Operations Console (LAN). Otherwise, the adapter is reallocated the next time that you start the server.

To deallocate the LAN adapter currently associated with a local console on a network (LAN), use the system service tools (SST). However, you must unlock the SST option before you can use it. For additional information about SST, see Unlocking service tools device IDs in SST.

1. Access service tools using SST.
2. Select **Work with service tools user IDs and devices**.
3. Select **Configure service tools LAN adapter**.
4. Press F6 to clear the old values, and then F7 to store the new values.
5. Press F3 or F12 to exit.

Important: When changing from or to a twinaxial console and the partition has completed an IPL into i5/OS, an additional IPL is required to complete the console change.

To make multiple hardware changes, complete the following steps:

1. Select the option that best fits your situation:
 - If the current console is Operations Console, disconnect the current connection.

- a. Select the configuration name (under iSeries Connection). This is the name that Operations Console uses to refer to a specific server.
 - b. Click **Disconnect** on the Connections menu. The connection status displays Disconnecting.
 - c. Wait for the status to display Disconnected.
- If the current console is the twinaxial console, use the Vary Configuration (VRYCFG) command to vary off all devices and the controller. You can then power off the device.

Important: This procedure must be performed using a PC or terminal not associated with the current console. If the adapter is active at the time you attempt to exchange it, the procedure to physically exchange the adapter will fail and you might have to power off the partition to make the changes for the console.

- If the current console is a Thin Console, you can power off and disconnect the device.
2. Using Service Focal Point on the HMC, select the **Install/Add/Remove Hardware** option and follow the instructions to change the hardware.
 3. Attach any necessary cables to the adapter.
 4. Select the option that best fits your situation. More than one option might apply.
 - If the new console is *not* Operations Console, start a connection from the device at this time.
 - If you currently have a configured connection for Operations Console and you will not be using it as a backup console, complete the following steps to delete the configuration:
 - a. Select the configuration name (under iSeries Connection).
 - b. Click **Delete** on the Connection menu.
 - c. Click **Yes** to confirm the deletion.
 - If you are changing the current console to Operations Console, create an Operations Console connection by following the instructions in Setting up Operations Console.
 5. Complete the console change. For instructions, see completing a console change with the logical partition and managed system powered on.

Related concepts

Shutting down i5/OS logical partitions

Choosing the procedure to follow to change a console, interface, or terminal

Setting up Operations Console

Related tasks

Powering off a managed system

Unlocking service tools device IDs in SST

 Access service tools using SST

Completing a console change with the logical partition and managed system powered on

Completing a console change with the logical partition and managed system powered on:

After making all of the necessary hardware changes, complete the console change with the logical partition and managed system powered on. This procedure does not require an IPL.

Before you begin, ensure that the current configuration meets the following requirements:

- You have satisfied the hardware requirements for the new console. For instructions, see Setting up a twinaxial console, Setting up Operations Console, or Cabling the Thin Console for System i5.
- The Hardware Management Console (HMC) is set up and configured. For HMC setup instructions, see Installing the HMC.
- An i5/OS logical partition is configured, installed, and activated. For information about i5/OS logical partitions, see Partitioning for i5/OS with an HMC.

- You have a current backup of the system or logical partition (including operating systems, licensed programs, and data). For information about backing up the system or logical partition, see Backing up and recovering data.
- The QAUTOCFG system value is set to 0n. Use the WRKSYSVAL QAUTOCFG (Work with System Value) command to verify this.
- If you want to access the HMC command line using a local terminal connection, start an xterm shell on the HMC. To do this, open a terminal by right-clicking the background and selecting **Terminals** → **rshterm**.
- If you want to access the HMC command line using a remote terminal connection such as PuTTY, first set up secure script execution between SSH clients and the HMC. For instructions, see Setting up secure script execution between SSH clients and HMC. You must then start your remote terminal by specifying the name of the HMC that is managing the partition you will be working with.

The following procedure contains examples within the steps to help you complete a console change. In these examples, the system named *sysname* with partition identification number *1* is changing from the HMC to Operations Console (LAN) using an embedded Ethernet port. These variables are placeholders for your actual system name and partition ID number. In the following instructions, replace *sysname* with your system name and replace *1* with your partition identification number.

To make a console change without powering off the partition, complete the following steps:

1. List the current I/O configuration for the logical partition and locate the device that you want to make the system console device. If you already know which resource is being used for the console, continue with step 1b on page 22. Otherwise, complete step 1a on page 21 to list the currently tagged resource for the console.

- a. Type the following command on the HMC command line:

```
lshwres -m sysname -r io --rsubtype taggedio --filter lpar_ids=1 -F console_slot
```

This command returns none, hmc, or an eight-character hexadecimal string representing the dynamic reconfiguration connector (DRC) index of the current console adapter.

If you currently use Operations Console (Direct) as the console or backup console, or previously specified an asynchronous communications adapter for remote service, you can use the following command to display the current configured resource associated with the **Operations Console** tag:

```
lshwres -m sysname -r io --rsubtype taggedio --filter lpar_ids=1 -F op_console_slot
```

- b. To list the I/O owned by the logical partition, type the following command on the HMC command line:

```
lshwres -m sysname -r io --rsubtype slot --filter lpar_ids=1
-F drc_index,drc_name,description
```

The system returns data in the following format:

```
21030001,U1234.001.123456A-P1-T6,PCI 10/100/1000Mbps Ethernet UTP 2-port
21010003,U1234.001.123456A-P1-T12,PCI RAID Controller ...
21010004,U1234.001.123456A-P1-C2,PCI 10/100/1000Mbps Ethernet UTP 2-port
21010005,U1234.001.123456A-P1-C3,PCI 2-Line WAN w/Modem
```

The location of the resource DRC 21030001 is listed as P1-T6 and not P1-*Cn* (where *n* is a slot number). The *Tn* designation represents embedded resources. If you designate an actual adapter, the location is a value similar to P1-C2. This enables you to get the DRC index of the input/output adapter (IOA), which becomes the new console device.

- c. Identify the DRC index of the console IOA that you want. In the previous output example, the first entry is an Ethernet IOA with a DRC index of 21030001. The Ethernet port for this device is labeled T6 in unit 1234.001.123456A.
2. Change the **console** tag of the partition to the device that you want to become the next console device.

- a. Complete one of the following tasks to change the console type:

- **Change your console to the HMC**

To set the new **console** tag to the HMC 5250 console, type the following command:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a console_slot=hmc
```

- **Change your console to Operations Console (LAN)**

To set the new **console** tag to an IOA with a DRC index of 21030001 (the DRC index can be found in step 1 on page 21), type the following command:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a console_slot=21030001
```

- **Change your console to Operations Console (Direct)**

To set the new **console** tag to an IOA with a DRC index of 21010005 (the DRC index can be found in step 1 on page 21), type the following commands:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a console_slot=21010005
```

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a op_console_slot=21010005
```

- b. To verify your changes, repeat step 1 on page 21. (You must also update your partition profile settings later in step 5 on page 23.)

Notes:

- To clear the **console** tag, type the following command:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a console_slot=none
```

- To clear the **Operations Console** tag, type the following command:

```
chhwres -m sysname -r io --rsubtype taggedio --id 1 -o s -a op_console_slot=none
```

- If entering none in the previous commands results in an error message, try entering eight zeros (00000000) instead.

3. Start a search for the console device by doing the following sequence of console service functions against the partition: **65**, **21**, and **21**. This sequence of three console service functions within 45 seconds for each function initiates a new search for the console device. For more information, see Using the console service functions (65+21).

- a. To perform function **65** (remote DST off), type the following command:

```
chsysstate -m sysname -r lpar --id 1 -o remotedstoffs
```

- b. To perform function **21** (force DST), type the following command:

```
chsysstate -m sysname -r lpar --id 1 -o dston
```

- c. Perform step 3b on page 23 again.

4. Try to connect with the newly selected console device and monitor the partition's system reference codes (SRCs). It can take up to three minutes for the console adapter change to be completed.

Note: To monitor the SRCs for the logical partition, type the following command to list the last 10 SRCs:

```
lsrefcode -m sysname -r lpar -n 10 --filter "lpar_ids=1"
```

SRCs are listed in order from newest to oldest. To list a different number, replace 10 in the command with the number of SRCs that you want returned. For more information about SRC data, see Troubleshooting system reference code data.

5. Update the partition profile on the HMC to match the dynamic console change.

- a. In the navigation area, open **Server and Partition**.

- b. Select **Server Management**.

- c. In the contents area, open the server on which the i5/OS partition profile is located.

- d. Open **Partitions**.

- e. Open the i5/OS logical partition for the partition profile.

- f. Right-click the partition profile and select **Properties**.
- g. Click **Tagged I/O**, clear the current console setting, and click **Select**.
- h. Expand the list in the **I/O devices in the profile** area so that the console device that you want is displayed.
- i. Select the console device that you want, and click **Select**.

Note: If you selected an asynchronous communications adapter for Operations Console (Direct), you must also select the same asynchronous communications adapter in the **Operations Console** field.

- j. Click **OK**, and then click **OK** again.

If the previous steps were successful, the current console type for the logical partition no longer matches the console type in the partition profiles. If you want the new console type to be preserved across partition activations, go to the partition profiles and change the **console** tag to match the selection in the chhwres command in step 2 on page 22.

Related concepts

Setting up Operations Console

Installing the HMC

Partitioning for i5/OS with an HMC

Backing up and recovering data

Using the console service functions (65+21)

Related tasks

Setting up a twinaxial console

Cabling the Thin Console for System i5

Setting up secure script execution between SSH clients and the HMC

Related information

 Troubleshoot system reference code data

Troubleshooting

Learn about some possible solutions to problems that you might experience with your new console.

Troubleshooting the new console when the system is managed by an HMC

Learn about some possible solutions to problems that you might experience when you change consoles and the system is managed by a Hardware Management Console (HMC).

When your system is managed by an HMC, you can attempt to resolve the connection problem.

- Verify that the console adapter is correctly tagged in the partition profile, or specified if you used the HMC command prompt, to dynamically change the tag. For Operations Console (Direct), the **Operations Console** tag must also be set to the same resource as the **console** tag.
- Verify that the console device is powered on and connected correctly.
- For Operations Console (LAN), verify that the PC is active on the network. If you did not configure the service host name using your previous console, BOOTP is used to configure the system. For more information, see Operations Console networking.
 - Verify that you entered the system serial number correctly.
 - Verify that you specified the correct partition ID.

Important: IBM System i5 and eServer i5 models start counting logical partitions with the number 1 (even if it is the only partition) instead of a 0. For the console to connect correctly, your logical

partitions must also begin numbering at 1 instead of 0. This is especially true if you rely on the BOOTP process to configure the server with its network data.

- Ensure that your network passes BOOTP requests.
- For Operations Console (Direct), verify that the cable is plugged into the correct serial port on the PC and server.
- For a configured twinaxial console, the device must be on port 0 with an address of 0.
- For a configured twinaxial console, verify that the cursor is in the upper-left corner of the display. This indicates that the device is communicating with the controller correctly. If the cursor is in the upper-right corner, the device and controller are not communicating. You might have a defective adapter, the adapter might have to be reseated in the slot, or the controller is not varied on.
- When changing from or to a twinaxial console and the partition has completed an IPL into i5/OS, an additional IPL is required to complete the console change.

Related concepts

Operations Console networking

Troubleshooting HMC setup

Related tasks

IBM i5/OS problem analysis

Related reference

Operations Console hardware requirements

Troubleshooting Operations Console connections

Troubleshooting the new console when the system is not managed by an HMC

Learn about some possible solutions to problems that you might experience when you change consoles and the system is not managed by a Hardware Management Console (HMC).

If your system is not managed by an HMC, you can attempt to resolve the connection problem.

- Verify that the adapter used by the console is located correctly. The adapter that is used for the console must be located in a particular location based on the model. For more information, see Operations Console hardware requirements.
- Verify that the console device is powered on and connected correctly.
- For Operations Console (LAN), verify that the PC is active on the network. If you did not configure the service host name using your previous console, BOOTP is used to configure the system. For more information, see Operations Console networking.
 - Verify that you entered the system serial number correctly.
 - Verify that you specified the correct partition ID.

Important: IBM System i5 and eServer i5 models start counting logical partitions with the number 1 (even if it is the only partition) instead of a 0. For the console to connect properly, your logical partitions must also begin numbering at 1 instead of 0. This is especially true if you rely on the BOOTP process to configure the server with its network data.

- Ensure that your network infrastructure passes BOOTP requests.
- For Operations Console (Direct), verify that the cable is plugged into the correct serial port on the PC and server.
- For a configured twinaxial console, the device must be on port 0 with an address of 0.
- For a configured twinaxial console, verify that the cursor is in the upper-left corner of the display. This indicates the device is communicating with the controller correctly. If the cursor is in the upper-right corner, the device and controller are not communicating. You might have a defective adapter, the adapter might have to be reseated in the slot, or the controller is not varied on.

- When changing from or to a twinaxial console and the partition has completed an IPL into i5/OS, an additional IPL is required to complete the console change.

Related concepts

Operations Console networking

Related tasks

IBM i5/OS problem analysis

Related reference

Operations Console hardware requirements

Troubleshooting Operations Console connections

Related information for Changing consoles, interfaces, and terminals

Other information center topics contain information related to the Changing consoles, interfaces, and terminals topic.

Other information center topics

- Solution planning
- Managing the Hardware Management Console
- Managing the Advanced System Management Interface
- Remote and virtual control panels
- Managing the system management services
- Managing the HMC 5250 console
- Managing Operations Console
- Managing the Thin Console
- Managing the twinaxial console
- Managing AIX and Linux consoles and terminals

Appendix. Accessibility features

Accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products successfully.

The following list includes the major accessibility features:

- Keyboard-only operation
- Interfaces that are commonly used by screen readers
- Keys that are tactilely discernible and do not activate just by touching them
- Industry-standard devices for ports and connectors
- The attachment of alternative input and output devices

IBM and accessibility

See the IBM Accessibility Center at <http://www.ibm.com/able/> for more information about the commitment that IBM has to accessibility.

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Electronic emission notices

Class A Notices

The following Class A statements apply to the IBM System i models and IBM System p servers with the exception of those that are specifically identified as Class B.

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 respecte 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 Technical Regulations
Pascalstr. 100, Stuttgart, Germany 70569
Tele: 0049 (0)711 785 1176
Fax: 0049 (0)711 785 1283
E-mail: tjahn@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

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

This product is a Class A Information Technology Equipment and conforms to the standards set by the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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

Electromagnetic Interference (EMI) Statement - Korea

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Please note that this equipment has obtained EMC registration for commercial use. In the event that it has been mistakenly sold or purchased, please exchange it for equipment certified for home use.

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 der IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung der 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 Konformitätserklärung nach des EMVG ist die IBM Deutschland GmbH, 70548 Stuttgart.

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 model 9111-520 (stand-alone version), 9131-52A (stand-alone version), 7047-185 and the 9111-285.

Federal Communications Commission (FCC) statement

Note: 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 using other than recommended cables or 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 interferences, and (2) this device must accept any interferences 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 respecte est conforme à la norme NMB-003 du Canada.

European Community Compliance Statement

This product is in conformity with the protection requirements of EC 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 CISPR 22 / 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 devices.

Properly shielded and grounded cables and connectors must be used in order to reduce the potential for causing interference to radio and TV communications and to other electrical or electronic equipment. Such cables and connectors are available from IBM authorized dealers. IBM cannot accept responsibility for an interference caused by using other than recommended cables and connectors.

European Community contact:
IBM Technical Regulations
Pascalstr. 100, Stuttgart, Germany 70569
Tele: 0049 (0)711 785 1176
Fax: 0049 (0)711 785 1283
E-mail: tjahn@de.ibm.com

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取扱説明書に従って正しい取り扱いをして下さい。

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

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

IBM Taiwan Product Service 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

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Radio Protection for Germany

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.

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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 Konformitätserklärung nach des EMVG ist die IBM Deutschland GmbH, 70548 Stuttgart.

Generelle Informationen:

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

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