Hardware Information

Customer service, support, and troubleshooting

ESCALA POWER5

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Hardware

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Customer service, support, and troubleshooting

Customer service, support, and troubleshooting

This information helps you to understand and plan for the service and support options based on your requirements. You will learn about the tools and options you can use to connect to the service and support organization. If you need to perform manual problem analysis on your server, the troubleshooting information will help you understand, isolate, and resolve problems. Sometimes you will be able to resolve a problem on your own; at other times you will need to gather information to help the service technicians or call center to resolve your problem in a timely manner.

Your server hardware is equipped with tools to help you determine when you need to perform service or call for help. These servers have the capability to either automatically, or under your control, send information to the service and support organization to help them solve your problem.

Also, with your authorization, the system has the capability to allow the service and support organization to remotely connect to your system to assist you with your problem.

Note: If you are using the Integrated Virtualization Manager to manage your server, check Service Focal Point for the Integrated Virtualization Manager to see if you need to contact service and support.

If you need to perform manual problem analysis on your server, the troubleshooting information will help you understand, isolate, and resolve problems. For example, if the system attention light is on, you can find out what it means. Also, you can look up reference codes to understand what they mean and actions you can take to resolve them. Sometimes you will be able to resolve a problem on your own; at other times you will need to gather information to help the service technicians or call center resolve your problem in a timely manner.

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What's new

Learn what information is new or significantly changed for the Customer service, support, and troubleshooting topic.

What's new as of August 2006

Information on using a Secure Sockets Layer (SSL) connection from the HMC was added to the Setting up your service environment topic. For details, see Setting up AIX, Linux, and the HMC to connect to service and support.

Information was added about support sites for downloading firmware updates. For details, see Getting server firmware and power subsystem firmware fixes and upgrades.

Parent topic: Customer service, support, and troubleshooting

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Parent topic: Customer service, support, and troubleshooting

Fixes and upgrades

Learn about getting machine code fixes for your HMC, server firmware, power subsystem firmware (if you have a model 5/9*x* server), I/O adapter and device, as well as operating system fixes.

Fixes provide changes to your software, Licensed Internal Code, or machine code that fix known problems, add new function, and keep your server or HMC operating efficiently. For example, you might install fixes for your operating system in the form of a PTF (program temporary fix). Or, you might install a server firmware (Licensed Internal Code) fix with code changes that are needed to support new hardware or new functions of the existing hardware.

A good fix strategy is an important part of maintaining and managing your server. If you have a dynamic environment that changes frequently, install fixes on a regular basis. If you have a stable environment, you do not have to install fixes as frequently. However, you should consider installing fixes whenever you make any major software or hardware changes in your environment.

You can get fixes using a variety of methods, depending on your service environment. For example, if you use an HMC to manage your server, you can use the HMC interface to download, install, and manage your HMC and firmware (Licensed Internal Code) fixes. If you do not use an HMC to manage your server, you can use the functions specific to your operating system to get your fixes. In addition, you can download or order many fixes through Internet Web sites.

You must manage several types of fixes to maintain your hardware. The following figure shows the different types of hardware and software that might require fixes.

Figure 1. A diagram that shows the hardware and software that might require fixes, including the HMC, I/O adapters and devices firmware, server firmware, power subsystem firmware, and operating systems.
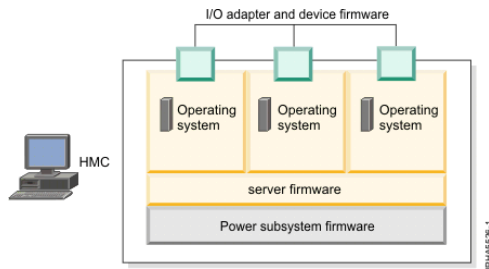
- **Concepts for getting fixes through the HMC**
  Learn about firmware levels, concurrent firmware fixes, and the permanent and temporary side of the service processor.
- **Getting fixes and upgrades**
  Learn how to apply fixes and upgrades, including for the HMC machine code, server firmware, power subsystem, I/O adapter and device, and operating system.
- **Managing firmware (Licensed Internal Code) fixes**
  Learn about tasks you can perform to manage your server and power subsystem firmware fixes.
- **Troubleshooting firmware (Licensed Internal Code) fixes**
  Find solutions to problems that you might have while applying a server or power subsystem firmware fix.
- **Additional information about getting fixes**
  Find additional information about getting fixes.

Parent topic: Customer service, support, and troubleshooting

Concepts for getting fixes through the HMC

Learn about firmware levels, concurrent firmware fixes, and the permanent and temporary side of the service processor.

- **Levels of firmware (Licensed Internal Code) on the HMC**
  Learn about the levels of server firmware and power subsystem firmware that are displayed on the HMC interface, such as current and backup levels, and the levels of server firmware and power subsystem firmware that you can download as fixes to your system.
- **Understanding concurrent firmware maintenance using the HMC**
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  Learn about the two sides of the service processor that store the server firmware.

Parent topic: Fixes and upgrades

Levels of firmware (Licensed Internal Code) on the HMC

Learn about the levels of server firmware and power subsystem firmware that are displayed on the HMC interface, such as current and backup levels, and the levels of server firmware and power subsystem firmware that you can download as fixes to your system.

If you use an HMC to manage your server, you can use the HMC interface to view the levels of server firmware and power subsystem firmware that are installed on your server, and are available to download and install.

Use the following information to find out about the levels of server firmware and power subsystem firmware on the server:

Parent topic: Concepts for getting fixes through the HMC

Existing levels of server firmware and power subsystem firmware

The server has the following levels of server firmware and power subsystem firmware installed:

Installed level
  This is the level of server firmware or power subsystem firmware that has been installed and will be installed into memory after the managed system is powered off and powered on.
Activated level
  This is the level of server firmware or power subsystem firmware that is active and running in memory.
Accepted level
  This is the backup level of server or power subsystem firmware. You can return to this level of server or power subsystem firmware if you decide to remove the installed level.
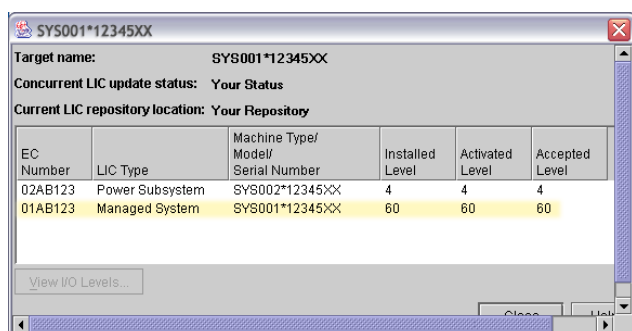
The existing levels of server firmware or power subsystem firmware are displayed on the HMC interface as shown in the highlighted row in the following figure.

Note: The values shown in the following figure are used for example purposes only.

Figure 1. A panel from the HMC interface that highlights the levels of server firmware on the target system.

For instructions on how to view the levels of server firmware and power subsystem firmware, see Viewing existing firmware (Licensed Internal Code) levels.

Available levels of server firmware and power subsystem firmware

When service and support releases server firmware and power subsystem firmware fixes, you can view the available levels that can be downloaded and installed from each repository to your server.

The following figure highlights the retrievable level of server firmware and power subsystem firmware. See the detailed descriptions that follow the figure.

Note: The values shown in the following figure are used for example purposes only.

Figure 2. This diagram shows a panel from the HMC interface that highlights the retrievable disruptive level of server firmware and power subsystem firmware.

- Retrievable disruptive activate level   This is the highest level of server or power subsystem firmware available at the selected repository. Activation of this level is a disruptive process. Therefore, you will be instructed to shut down all of the applications and logical partitions before initiating the installation. The managed system will be automatically returned to its original state at the end of the process.
- Retrievable concurrent activate level   This is the highest level of server or power subsystem firmware available at the selected repository that can be retrieved, installed, and activated concurrently. Activation of this level is a concurrent process. Therefore, it is not necessary to shut down the logical partitions or the managed system before initiating the update, and it is not necessary to power on and off the managed system to activate the fix.

For instructions on how to view the available levels of server firmware and power subsystem firmware, see Viewing available firmware (Licensed Internal Code) levels.

Understanding concurrent firmware maintenance using the HMC

Learn about performing concurrent firmware maintenance using the HMC.

Concurrent firmware maintenance allow you to apply firmware updates on a running system without shutting down and restarting logical partitions, servers, or stopping applications. However, not every firmware update is concurrent.

To perform concurrent activation requires an HMC, and updates through the operating system will still be disruptive.

Currently, server firmware fixes can be concurrent or disruptive. Power subsystem fixes are concurrent with respect to server operations. HMC machine code is updated in a separate fixpack. The HMC machine code fixes are concurrent with respect to the managed systems.

Only fixes within a release can be (but are not guaranteed to be) concurrent.

- The release level is indicated by the three numbers after "SF" in the level name. For example, in the firmware level SF230_126, the release level is 230.
- Installing a newer release is always disruptive. For example, if the server has SF225 installed, and you install SF230, the installation will be disruptive (the managed system will be shut down and restarted).

To update firmware, you will be performing the following steps:

1. Apply the firmware (update what is in flash).
2. Activate the firmware (cause the new firmware to be running on the system).

Not all fixes can be activated concurrently. The types of activations include:

- **Concurrent**: Apply and activate with partitions running.
- **Deferred**: Concurrent activation but contains fixes that affect the initial program load (IPL) path, which are not activated until the next time you shut down and restart the server.

    Note: The portions of the fix that can be activated concurrently are activated as described earlier.

- **Disruptive**: Platform shutdown and restart is required; that is, none of the fixes contents are activated until the next time you shut down and restart the server.

Parent topic: Concepts for getting fixes through the HMC

Applying firmware to multiple managed systems using an HMC

Learn more about applying firmware to multiple managed systems using an HMC.

When using the HMC to perform firmware updates and upgrades, you can select multiple managed systems to be updated simultaneously from the Target Object Selection window. If the DVD repository is used during an *upgrade*, then the upgrade will be performed sequentially. For details, refer to DVD repository limitations.

Also, if you are updating or upgrading a 5/75 system, review the following considerations in Considerations for updating firmware on a 5/75 system.

Parent topic: Concepts for getting fixes through the HMC

DVD repository limitations

The DVD drive will be locked while you are using the DVD as a repository. If you are updating within the same release, this will be performed simultaneously. When you are *upgrading* to a new release (for example: upgrading from the 230 release to the 235 release), this will be done sequentially. That is, the DVD drive will be locked for a longer period of time. Therefore, another repository might be preferred.

Note: Do not upgrade multiple managed systems to a new release from a DVD repository if you want the managed systems to be upgraded simultaneously.

Considerations for updating firmware on a 5/75 system

Updates of multiple managed systems in a 5/75 system can cause the potential for a lock conflict on the power frame. To obtain the most parallel processing during firmware updates on a 5/75 system, perform the following update sequence:

1. Select one managed system target in each power frame, and update the firmware. These targets will be updated in parallel.
2. Select all remaining managed system targets, and update the firmware. These targets will be updated in parallel.

Note: You can also update multiple managed systems from the HMC command line using the `updlic` command.

Temporary and permanent side of the service processor when using an HMC

Learn about the two sides of the service processor that store the server firmware.

The service processor maintains two copies of the server firmware. One copy is considered the permanent copy and is stored on the permanent side, sometimes referred to as the "p" side. The other copy is considered the temporary copy and is stored on the temporary side, sometimes referred to as the "t" side. It is recommended that you start and run the server from the temporary side.

When you install a server firmware fix, it is installed on the temporary side.

Note: By default, the server firmware is installed on the temporary side only after the existing contents of the temporary side are permanently installed on the permanent side. (This process is performed automatically when you install a server firmware fix.) If you want to preserve the contents of the permanent side, select Install and Activate from the Advanced Features on the HMC interface, and indicate that you do *not* want to automatically accept the firmware level.

You might want to use the new level of firmware for a period of time to verify that it works correctly. When you are sure that the new level of firmware works correctly, you can permanently install the server firmware fix. When you permanently install a server firmware fix, you copy the temporary firmware level from the temporary side to the permanent side.

Conversely, if you decide that you do *not* want to keep the new level of server firmware, you can remove the current level of firmware. When you remove the current level of firmware, you copy the firmware level that is currently installed on the permanent side from the permanent side to the temporary side.

Parent topic: Concepts for getting fixes through the HMC

Getting fixes and upgrades

Learn how to apply fixes and upgrades, including for the HMC machine code, server firmware, power subsystem, I/O adapter and device, and operating system.

How you apply fixes and upgrades will depend on the type of fix or upgrade that you are applying, whether you have an Internet connection from your HMC or server, and the operating system that you are using.

- **Getting HMC machine code fixes and upgrades**
  Learn how to apply HMC machine code fixes and upgrades.
- **Getting server firmware and power subsystem firmware fixes and upgrades**
  Learn how to apply server firmware and power subsystem firmware fixes and upgrades.
- **Getting I/O adapter and device firmware fixes**
  Learn how to apply I/O adapter and device firmware fixes.
- **Getting operating system fixes**
  Learn how to download and install fixes for your operating systems.
- **Getting fixes for the Virtual I/O Server**
  Learn about getting updates to the firmware on the Virtual I/O Server, and for the firmware on the devices that the Virtual I/O Server manages.
- **Getting fixes for a clustered environment**
  Learn how to get fixes for the clustered server.

Parent topic: Fixes and upgrades

Getting HMC machine code fixes and upgrades

Learn how to apply HMC machine code fixes and upgrades.

Fixes are periodically released for the HMC to add new functionality and to improve existing features.

- **Getting HMC machine code fixes with an Internet connection**
  Learn how to apply fixes for the machine code on your HMC when you have an Internet connection.
- **Getting HMC machine code fixes using CD or an FTP server**
  Learn how to apply fixes for the machine code on your HMC when you want to use CD or an FTP server to obtain the fix.
- **Updating the code on multiple HMCs using the remote command line**
  Learn how to use the HMC remote command line to update the code on more than one HMC at a time.
- **Upgrading your HMC machine code**
  Learn how to upgrade the HMC software from one release to the next while maintaining your HMC configuration data.

Parent topic: Getting fixes and upgrades

Getting HMC machine code fixes with an Internet connection

Learn how to apply fixes for the machine code on your HMC when you have an Internet connection.

To get HMC machine code fixes, perform Tasks 1 through 5.

Parent topic: Getting HMC machine code fixes and upgrades

Task 1. Ensure that you have an Internet connection

To download fixes from the service and support system or Web site to your HMC or server, you must have a connection to service and support either through a modem, direct or indirect Internet, or pass-through system.

To verify that the service connection is working, perform the following steps:

1. In the navigation area, open Service Applications.
2. Select Remote Support.
3. Select Customize Outbound Connectivity.
4. Select the tab for the type of outbound connectivity that you chose for your HMC (Local Modem, Internet VPN, or Pass-Through Systems). For more information about these settings, see Specifying the connection type from the HMC.

   Note: If a connection to service and support does not exist, set up the service connection before proceeding with this procedure. For instructions on how to set up a connection to service and support, see Setting up AIX, Linux, and the HMC to connect to service and support.

5. Click Test.
6. Verify that the test completes successfully. If the test is not successful, troubleshoot your connectivity and correct the problem before proceeding with this procedure.

Alternatively, you can refer to Getting HMC machine code fixes using CD or an FTP server.

Task 2. View the existing HMC machine code level

To determine the existing level of HMC machine code, follow these steps:

1. In the navigation area, expand the Licensed Internal Code Maintenance folder.
2. Select HMC Code Update.
3. In the Status area, look for the version and release of your HMC machine code.
4. Record the current version and release.

Task 3. View available HMC machine code levels

To find out if there are new HMC machine code fixes available, contact service and support.

Task 4. Apply the HMC machine code fix

1. Before you install fixes to the HMC machine code, back up critical console information on your HMC. For instructions, see Backing up critical HMC data. Then continue with the next step.
2. In the navigation area, expand the Licensed Internal Code Maintenance folder.
3. Select HMC Code Update.
4. Select Install Corrective Service. *Corrective service* refers to the HMC machine code fix.
5. On the Install Corrective Service window, select Download the corrective service file from a remote system, and then apply downloaded service file, and enter the following information:
   - Remote site: Contact service and support for details.
   - Patch file: Enter the following FTP directory and ZIP file name:
     `/software/server/hmc/fixes/`*`filename`*`.zip`

     Note: The name of the patch file changes with each new fix.
   - User ID: `anonymous`
   - Password: Your e-mail address
6. Click OK.
7. Follow the instructions to install the fixes.
8. Shut down and restart the HMC for the fixes to take effect.

Task 5. Verify that the HMC machine code installed successfully

To verify that the HMC fix installed successfully, perform these steps:

1. In the navigation area, expand the Licensed Internal Code Maintenance folder.
2. Select HMC Code Update.
3. In the Status area, look for the version and release of your HMC machine code.
4. Verify that the version and release match the fix that you installed.
5. If the level of firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.

Getting HMC machine code fixes using CD or an FTP server

Learn how to apply fixes for the machine code on your HMC when you want to use CD or an FTP server to obtain the fix.

To get HMC machine code fixes, perform Tasks 1 through 5.

Parent topic: Getting HMC machine code fixes and upgrades

Task 1. View the existing HMC machine code level

To determine the existing level of HMC machine code, follow these steps:

1. In the navigation area, expand the Licensed Internal Code Maintenance folder.
2. Select HMC Code Update.
3. In the Status area, look for the version and release of your HMC machine code.
4. Record the current version and release.

Task 2. View the available HMC machine code levels

To find out if there are new HMC machine code fixes available, contact service and support.

Task 3. Obtain the HMC machine code fix

To order the HMC machine code fix on CD, contact service and support.

Task 4. Apply the HMC machine code fix

1. Before you install fixes to the HMC machine code, back up critical console information on your HMC. For instructions, see Backing up critical HMC data. Then continue with the next step.
2. If you obtained or created the fix on CD, insert it into the CD drive on the HMC.
3. In the navigation area, expand the Licensed Internal Code Maintenance folder.
4. Select HMC Code Update.
5. Select Install Corrective Service. *Corrective service* refers to the HMC machine code fix.
6. On the Install Corrective Service window, choose from the following options:
   ◆ If you want to download the fix from an FTP server to your HMC, continue with step 7.
   ◆ If you want to get the fix from a CD, select Apply corrective service from removable media and continue with step 8.
7. If you previously downloaded the fix to an FTP server, select Download the corrective service file from a remote system, and then apply downloaded service file, and specify the following information:
   ◆ **Remote site**: The fully qualified host name of the FTP server to which you previously downloaded the patch file (zip file) that contains the fix.
   ◆ **Patch file**: The name of the patch file (zip file) that you downloaded to the FTP server.
   ◆ **User ID**: Your user ID for the FTP server.
   ◆ **Password**: Your password for the FTP server.
8. Click OK.
9. Follow the instructions to install the fixes.
10. Shut down and restart the HMC for the fixes to take effect.

Task 5. Verify that the HMC machine code installed successfully

To verify that the HMC fix installed successfully, perform these steps:

1. In the navigation area, expand the Licensed Internal Code Maintenance folder.
2. Select HMC Code Update.
3. In the Status area, look for the version and release of your HMC machine code.
4. Verify that the version and release match the fix that you installed.
5. If the level of firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.

Updating the code on multiple HMCs using the remote command line

Learn how to use the HMC remote command line to update the code on more than one HMC at a time.

To remotely install interim fixes, service packs, and cumulative maintenance releases on the HMC, use the updhmc command. The following example illustrates a scenario where an HMC code update is performed on multiple HMC machines from a remote system.

In this scenario, System A is a Linux system installed with OpenSSH. Assume that public key files have been previously deployed to all the HMCs, and these key files were generated with an empty passphrase.

```
for i in 1 2 3 4 5 6 7
do
        scp hmc_update.zip hscroot@hmc$i:/home/hscroot
done
for i in 1 2 3 4 5 6 7
do
        ssh hscroot@hmc$i   updhmc   t l   f /home/hscroot/hmc_update.zip   c   r"

done
```

The first <for> loop in the preceding code example copies an interim fix called hmc_update.zip to 7 HMC, with host name hmc1, hmc2, ..., hmc7. The second <for> loop runs the updhmc command on each of the 7 HMCs. When the updhmc command completes, it removes the file and shuts down and restarts the HMC.

Parent topic: Getting HMC machine code fixes and upgrades

Upgrading your HMC machine code

Learn how to upgrade the HMC software from one release to the next while maintaining your HMC configuration data.

Perform Tasks 1 through 9 to upgrade the HMC machine code.

Note: You cannot use this procedure to upgrade from a POWER4 HMC to a POWER5 HMC. You must do a full installation.

Parent topic: Getting HMC machine code fixes and upgrades

Task 1. Obtain the upgrade

To order the HMC machine code upgrade on DVD-RAM, contact service and support.

Task 2. View the existing HMC machine code level

To determine the existing level of HMC machine code so you can verify that it is upgraded, follow these steps:

1. In the navigation area, expand the Licensed Internal Code Maintenance folder.
2. Select HMC Code Update.
3. In the Status area, look for the version and release of your HMC machine code.
4. Record the current version and release.
5. Continue with Task 3. Back up the managed system's profile data.

Task 3. Back up the managed system's profile data

1. In the navigation area, select Server and Partition.
2. In the contents area, open Server Management. A task list displays.
3. Right-click the managed system and select Profile data > Backup.
4. Type a backup file name and record this information.
5. Click OK.
6. Repeat steps 3 through 5 for each managed system.
7. Continue with Task 4. Back up critical console information.

Task 4. Back up critical console information

Back up critical console information before installing a new version of HMC software so that previous levels can be restored in the event of a problem while upgrading the software. Do not use this critical console data after a successful upgrade to a new version of the HMC software.

Note: If you choose to back up the console data to removable media (that is, diskette or DVD), you will need to have a diskette or DVD available.

1. In the HMC Code Update window, choose from the following options:
     ♦ If you do *not* plan to back up to diskette or DVD-RAM, continue with the next step.
     ♦ If you plan to back up to diskette or DVD-RAM, perform the following steps:
          a. Insert the media into the drive.
          b. Select Format Removable Media.
          c. Select Format DVD-RAM or Format diskette.
          d. Click OK.
          e. Continue with the next step.
2. Select Back up Critical Console Data.
3. Select an archive option. You can back up to a DVD in the HMC, a remote system mounted to the HMC file system (for example, NFS), or send the back up to a remote site using File Transfer Protocol (FTP).
     ♦ To back up to DVD, choose Back up to DVD on local system and follow the instructions.
     ♦ To back up to a mounted remote system, choose Backup to mounted remote system and follow the instructions.
     ♦ To back up to a remote FTP site, choose Send backup critical data to remote site and follow the instructions.
4. Continue with Task 5. Record the current HMC configuration information.

Task 5. Record the current HMC configuration information

Before you upgrade to a new version of HMC software, as a precautionary measure, record HMC configuration information.

To record HMC configuration information, follow these steps:

1. In the navigation area, open HMC Management.
2. Select HMC Configuration.
3. In the tasks list, select Schedule Operations. The Scheduled Operations window displays with a list of all managed systems.
4. Select the HMC you plan to upgrade and click OK. All scheduled operations for the HMC are displayed.
5. Select Sort > By Object.
6. Select each object and record the following details:
   - Object Name
   - Schedule date
   - Operation Time (displayed in 24-hour format)
   - Repetitive (if Yes, perform the following steps:
     a. Select View > Schedule Details.
     b. Record the interval information.
     c. Close the scheduled operations window.
     d. Repeat for each scheduled operation.
7. Close the Customize Scheduled Operations window.
8. Continue with Task 6. Record remote command status.

Task 6. Record remote command status

1. In the navigation area, select HMC Management.
2. Select HMC Configuration.
3. In the tasks list, click Enable/Disable Remote Command Execution.
4. Record whether the Enable remote command execution using the ssh facility check box is selected.
5. Click Cancel.
6. Continue with Task 7. Save upgrade data.

Task 7. Save upgrade data

You can save the current HMC configuration in a designated disk partition on the HMC. Only save upgrade data immediately prior to upgrading your HMC software to a new release. This action allows you to restore HMC configuration settings after upgrading.

Note: Only one level of backup data is allowed. Each time you save upgrade data, the previous level is overwritten.

1. In the navigation area, open the Licensed Internal Code folder.
2. Select HMC Code Update.
3. Select Save Upgrade Data.
4. Select Hard Drive and click Continue.
5. Click Continue to start the task.
6. Wait for the task to complete. If the Save Upgrade Data task fails, contact your next level of support before proceeding.

Note: If the save upgrade data task fails, do not continue the upgrade process.

7. Click OK.
8. Click Close.
9. Continue with Task 8. Upgrade the HMC software.

Task 8. Upgrade the HMC software

To upgrade the HMC software, you restart the system with the DVD-RAM in the DVD-RAM drive.

1. Insert the HMC Product Installation DVD-RAM into the DVD-RAM drive.
2. From the HMC menu bar, select Console > Exit .
3. Click Exit now.
4. From the logout list, select Reboot Console and click OK. The HMC restarts and system information scrolls on the window.
5. Select Upgrade and click Next.
6. When the warning is displayed, choose from the following options:
    ♦ If you have saved upgrade data during the previous task, continue with the next step.
    ♦ If you did not save upgrade data previously in this procedure, you must save the upgrade data now before you continue.
7. Select Upgrade from media and click Next.
8. Confirm the settings and click Finish.
9. Follow the on-screen prompts.

   Note:

      ♦ If the screen goes blank, press the space bar to view the information.
      ♦ The first DVD can take approximately 20 minutes to install.

10. When prompted, remove the first media and then insert the second media into the DVD-RAM drive.
11. Select 1. Install additional software from media and press Enter. Press any key to confirm the installation. The HMC will display status messages as it installs the packages.
12. When the second media installation is complete, remove the media from the drive and close the drawer.
13. Select Option 2 Finish the installation and press Enter. The HMC will complete the booting process.
14. At the login prompt, log in using your user ID and password.
15. Accept the License Agreement for Machine Code twice. The HMC code installation is complete.
16. Continue with Task 9. Verify that the HMC machine code upgrade installed successfully.

Task 9. Verify that the HMC machine code upgrade installed successfully

To verify that the HMC upgrade installed successfully, perform these steps:

1. In the navigation area, expand the Licensed Internal Code Maintenance folder.
2. Select HMC Code Update.
3. In the Status area, look for the version and release of your HMC machine code.
4. Verify that the version and release match the fix that you installed.
5. If the level displayed is not the level that you installed, see Failed verification that the fix installed successfully.

Getting server firmware and power subsystem firmware fixes and upgrades

Learn how to apply server firmware and power subsystem firmware fixes and upgrades.

The server firmware is the part of the Licensed Internal Code that enables hardware, such as the service processor. When you install a server firmware fix, it is installed on the temporary side of the service processor.

The power subsystem firmware is the part of the Licensed Internal Code that enables the power subsystem hardware in the model 5/9x servers. You must use an HMC to update or upgrade power subsystem firmware.

How you apply fixes will depend on the type of fix that you are applying, and whether you have an Internet connection from your HMC or server.

- **Getting server firmware fixes for an ESCALA PL 245T/R ystem**
  Learn how to update or upgrade server firmware for an ESCALA PL 245T/R ystem.
- **Updating the Virtual I/O Server's firmware and device microcode**
  Learn how to update the Virtual I/O Server's firmware and device microcode.
- **Getting server and power subsystem firmware fixes through an HMC with an Internet connection**
  Learn how to update or upgrade server firmware and power subsystem firmware (if you have a model 5/9x server) through an HMC when you have an Internet connection from the HMC or server.
- **Getting server firmware and power subsystem firmware fixes through an HMC using a CD, FTP server, or hard drive**
  Learn how to update or upgrade server firmware and power subsystem firmware (if you have a model 5/9x server) through an HMC using a CD, FTP server, a hard drive to apply the fix.
- **Getting server firmware fixes through AIX or Linux without an HMC**
  Learn how to update or upgrade server firmware through AIX or Linux without an HMC.
- **Getting a specific firmware (Licensed Internal Code) fix with an HMC**
  Find out how to download and install a specific level of server firmware or power subsystem firmware rather than the highest level of firmware.
- **Installing a firmware (Licensed Internal Code) fix permanently**
  Find out how to permanently install a firmware fix.
- **Upgrading to a new firmware (Licensed Internal Code) release through the HMC**
  Find out how to upgrade to a new firmware (Licensed Internal Code) release through the HMC.

Parent topic: Getting fixes and upgrades

Getting server firmware fixes for an ESCALA PL 245T/R ystem

Learn how to update or upgrade server firmware for an ESCALA PL 245T/R ystem.

Installing server firmware fixes through the operating system is a disruptive process.

Perform tasks 1 through 6 to get server firmware fixes through AIX or Linux when you have an ESCALA PL 245T/R ystem.

Note: If you are unable to start your AIX or Linux operating system or server, refer to Getting server firmware fixes through AIX or Linux when you are unable to start the operating system or server.

Parent topic: Getting server firmware and power subsystem firmware fixes and upgrades

Task 1. View existing firmware levels for AIX or Linux

1. Choose from the following options:
   - ♦ To use the AIX command line (you must have AIX diagnostics installed on your server to perform this task), continue with step 2.
   - ♦ To use the Linux command line, continue with step 4.
2. At an AIX command line, enter the following command:

   ```
   lsmcode
   ```

   The existing levels of server firmware are displayed. For example, you might see output similar to the following:

   ```
   The current permanent system firmware image is AT061_055.
   The current temporary system firmware image is AT061_058.
   The system is currently booted from the temporary image.
   ```

   Note: When the lsmcode command is run on an ESCALA PL 245T/R ystem, the temporary or permanent side of the flash might report _UNKNOWN_ for the firmware level. This occurs because there is only one level of base motherboard controller firmware. The level is _UNKNOWN_ when it is not included with the system firmware.

   When you install new firmware, it is installed onto the temporary side by default. This new firmware level includes a new level of base motherboard controller code, and will cause _UNKNOWN_ to be reported for the permanent side. This is not a problem; it indicates that the firmware levels in the flash are not a combination that is included from the factory.

   To update the firmware so that _UNKNOWN_ is not reported, perform the following steps:

   a. Perform a commit operation using the appropriate operating system command.
   b. After the commit operation is complete, restart the system.
   c. When the system has restarted and the operating system is running, rerun the lsmcode command. Both the T and P should report a level (such as AT206_061) instead of _UNKNOWN_.

3. Continue with Continue with Task 2. Obtain the fix.
4. To view existing levels of server firmware for Linux, you must have the following service tools installed on your server:
   - ♦ Platform Enablement Library   librtas-xxxxx.rpm
   - ♦ Service Aids   ppc64-utils-xxxxx.rpm
   - ♦ Hardware Inventory   lsvpd-xxxxx.rpm
   where xxxxx represents a specific version of the RPM file.
5. After the service tools are installed to the server running Linux, enter the following at a Linux command line:

   ```
   lsmcode
   ```

   The existing levels of server firmware are displayed. For example, you might see output similar to the following:

   ```
   Version of system firmware is: AT061_058(t)  AT061_055(p)  AT061_058(t)
   ```

   Note: When the lsmcode command is run on an ESCALA PL 245T/R ystem, the temporary or permanent side of the flash might report _UNKNOWN_ for the firmware level. This occurs because there is only one level of base motherboard controller firmware. The level is _UNKNOWN_ when it is not included with the system firmware.

   When you install new firmware, it is installed onto the temporary side by default. This new firmware level includes a new level of base motherboard controller code, and will cause _UNKNOWN_ to be reported for the permanent side. This is not a problem; it indicates that the firmware levels in the flash are not a combination that is included from the factory.

   To update the firmware so that _UNKNOWN_ is not reported, perform the following steps:

      a. Perform a commit operation using the appropriate operating system command.
      b. After the commit operation is complete, restart the system.
      c. When the system has restarted and the operating system is running, rerun the lsmcode command. Both the T and P should report a level (such as AT206_061) instead of _UNKNOWN_.

The following provides descriptions for each of the server firmware levels displayed in the output.

AT061_058 (t)
> The temporary level.

AT061_055 (p)
> The permanent level.

AT061_058 (t)
> The level on which the server is currently running.

6. Continue with Task 2. Obtain the fix.

Task 2. Obtain the fix

1. Contact service and support to order the fix on CD.
2. After you have the CD, you will need to view and unpack the RPM file that contains the server firmware. Continue with Task 3. View and unpack the RPM file that contains the server firmware.

Task 3. View and unpack the RPM file that contains the server firmware

If you downloaded or created a CD with the RPM file, you will need to view and unpack the RPM file that contains the server firmware.

1. Insert the CD that contains the RPM file into the media drive on your server.
2. To mount the CD, choose from the following options (you will need to have root user authority):
   - If you are working on an AIX system, enter the following at an AIX command line:

     ```
     mount /dev/cd0 /mnt
     ```
   - If you are working on a Linux system, enter one of the following commands at a Linux command line:

     ```
     mount -t iso9660 /dev/cdrom /mnt
     ```

     or

     ```
     mount -t iso9660 /dev/dvdrom /mnt
     ```
3. Choose from the following options:
   - If the mount was *successful*, continue with step 5.
   - If the mount was *unsuccessful*, continue with the next step.
4. If you received the message, `mount: 0506-324 Cannot mount /dev/cd0 on /mnt`, perform the steps below to mount the CD:
   a. Enter the command:

      ```
      /usr/sbin/mount -v 'cdrfs' -f'' -p'' -r'' /dev/cd0 /mnt
      ```

      The quotation marks following the *f*, *p*, and *r* are two single quotation marks with no space between them.

      Note: If you prefer to use the System Management Interface Tool (SMIT) to mount the CD, see Using the System Management Interface Tool to mount the fix CD for AIX.

   b. Continue with the next step.
5. To view the RPM file name, enter the following command at the AIX or Linux command line:

   If the RPM file is on CD, type:

```
ls /mnt
```

If the RPM file is on the server, type:

```
ls /tmp/fwupdate
```

The name of the RPM file is displayed. For example, you might see output similar to the following:

```
AT2xx-yyy-2.rpm
```

6. To unpack the RPM file, enter one of the following commands at the AIX or Linux command line:
    ♦ If you want to unpack from a CD, enter:

    ```
    rpm -Uvh --ignoreos /mnt/filename.rpm
    ```
    ♦ If you want to unpack from the server's hard drive, enter:

    ```
    rpm -Uvh --ignoreos /tmp/fwupdate/filename.rpm
    ```

    where *filename* is the name of the RPM file that contains the server firmware. For example,
    AT2xx-yyy-2.rpm.

    Note: When you unpack the RPM file, the server firmware fix file is saved in the
    /tmp/fwupdate directory on the server's hard drive in the following format: AT2xx-yyy-2.img.

7. Continue with Task 4. Apply server firmware fixes through AIX or Linux to the temporary side of the
   service processor.

Task 4. Apply server firmware fixes through AIX or Linux to the temporary side of the service processor

1. Ensure you are starting the system from the temporary side of the service processor; the firmware
   installation will fail if the system has booted from the permanent side. To learn which side you are
   starting from, and how to change to the other side if necessary, refer to Working with the temporary
   and permanent side of the service processor.
2. To use the update_flash command (AIX or Linux) to install the server firmware, continue with step 3.

   Note: If you have AIX installed, and prefer to use the AIX diagnostics to install the fix, see Using the
   AIX diagnostics to install the server firmware fix through AIX. If you plan to install the fix from CD, you
   will need to obtain the *Microcode Updates Files & Discovery Tool* CD to use the AIX diagnostics.
3. You will need the server firmware fix file name in the next step. To view the name, enter the following
   at an AIX or Linux command line:

   ```
   ls /tmp/fwupdate
   ```

   The name of the server firmware fix file is displayed. For example, you might see output similar to the
   following:

   ```
   AT2xx-yyy-2.img
   ```

   Note: To perform this task, you must have root user authority.

4. To install the server firmware fix, choose from the following options:
    ♦ If you are updating AIX, enter the following at an AIX command line:

    ```
    cd /tmp/fwupdate
    /usr/lpp/diagnostics/bin/update_flash -f fwlevel
    ```

    where *fwlevel* is the specific server firmware fix file name, such as AT2xx-yyy-2.img
    ♦ If you are updating Linux, enter the following at a Linux command line:

    ```
    cd /tmp/fwupdate
    /usr/sbin/update_flash -f fwlevel
    ```

where *fwlevel* is the specific server firmware fix file name, such as AT2xx-yyy-2.img
During the server firmware installation process, reference codes CA2799FD and CA2799FF are alternately displayed on the control panel. After the installation is complete, the system is automatically powered off and powered on.

5. Continue with Task 5. Verify that the fix installed correctly.

Task 5. Verify that the fix installed correctly

1. To use the AIX or Linux command line (the operating system must be running and the diagnostics must be available), continue with the next step.
2. Enter the following at a command line:

```
lsmcode
```

The existing levels of server firmware are displayed. For example, you might see output similar to the following:

```
The current permanent system firmware image is AT061_055.
The current temporary system firmware image is AT061_058.
The system is currently booted from the temporary image.
```

Note: When the lsmcode command is run on an ESCALA PL 245T/R ystem, the temporary or permanent side of the flash might report _UNKNOWN_ for the firmware level. This occurs because there is only one level of base motherboard controller firmware. The level is _UNKNOWN_ when it is not included with the system firmware.

When you install new firmware, it is installed onto the temporary side by default. This new firmware level includes a new level of base motherboard controller code, and will cause _UNKNOWN_ to be reported for the permanent side. This is not a problem; it indicates that the firmware levels in the flash are not a combination that is included from the factory.

To update the firmware so that _UNKNOWN_ is not reported, perform the following steps:

a. Perform a commit operation using the appropriate operating system command.
b. After the commit operation is complete, restart the system.
c. When the system has restarted and the operating system is running, rerun the lsmcode command. Both the T and P should report a level (such as AT206_061) instead of _UNKNOWN_.

3. Verify that the level of server firmware displayed is the level that you installed.
4. If the level of server firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.

Task 6. (Optional) Install the server firmware fix permanently

You might want to use the new level of server firmware for a period of time to verify that it works correctly. When you are sure that the new level works correctly, you can permanently install the server firmware fix.

Note: If you install the server firmware fix permanently (copy the temporary firmware level from the temporary side to the permanent side, so that the temporary and permanent sides contain the same level of firmware), you cannot return to the level that was previously on the permanent side.

For instructions about how to install server firmware fixes permanently, see Installing a firmware (Licensed Internal Code) fix permanently.

Updating the Virtual I/O Server's firmware and device microcode

Learn how to update the Virtual I/O Server's firmware and device microcode.

You can update the Virtual I/O Server's firmware and device microcode through the Integrated Virtualization Manager or by using the command line interface.

If you do not have an Internet connection from the system, you will need to obtain the fix on CD.

You can use the information on the Virtual I/O Server update Web site to download and install the latest fix packs and updates on the management partition of the managed system.

- **Updating the Virtual I/O Server's firmware and device microcode through the Integrated Virtualization Manager with an Internet connection**
  Learn how to use the Integrated Virtualization Manager to generate a microcode survey of the managed system and to download and upgrade microcode when you have an Internet connection from your system.
- **Updating the Virtual I/O Server's firmware and device microcode through the Integrated Virtualization Manager without an Internet connection**
  Learn how to use the Integrated Virtualization Manager to update the Virtual I/O Server's firmware and device microcode when you do not have an Internet connection from the managed system.
- **Updating the Virtual I/O Server's firmware using the command line interface**
  Learn about using the command line interface to apply updates to the firmware on your Virtual I/O Server.

Parent topic: Getting server firmware and power subsystem firmware fixes and upgrades

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Updating the Virtual I/O Server's firmware and device microcode through the Integrated Virtualization Manager with an Internet connection

Learn how to use the Integrated Virtualization Manager to generate a microcode survey of the managed system and to download and upgrade microcode when you have an Internet connection from your system.

Perform Task 1 through 3 to update the Virtual I/O Server's firmware and device microcode through the Integrated Virtualization Manager when you have an Internet connection from the management partition.

Note: Updating server firmware is a disruptive process.

Parent topic: Updating the Virtual I/O Server's firmware and device microcode

Task 1. View the existing firmware level

1. Under the Service Management menu, click Updates. The Updates page is displayed.
2. Select the Microcode Updates tab.
3. Click Generate New Survey. A list of devices is displayed.
4. Record the current level of firmware that is displayed for *Type: system*.

Task 2. Apply firmware and device microcode using the Integrated Virtualization Manager

1. Note the following:
    - If you update the server firmware for device sys0, you will need to shut down all client logical partitions before applying the firmware.
    - If you update some device's microcode, you might need to take the device offline using the `rmdev` command before applying the firmware.
2. Under the Service Management menu, click Updates. The Updates page is displayed, which contains the Management Partition Updates tab and the Microcode Updates tab.
3. Select the Microcode Updates tab.
4. Click Generate New Survey. A list of devices is displayed.
5. From the Microcode Survey Results list, select one or more items to upgrade.

    Note: If you select to update the firmware for device sys0, the system will shut down and restart when you apply the firmware. If you select a device, you might need to take the device offline. You can view the Impact column to determine the action you need to take. You will want to perform the action before you issue the command to install the update in step 11.
6. Click the Download link in the task area. Information about the selected devices, such as the available microcode level and the commands you need in order to install the microcode updates, is displayed.
7. Record the commands, you will need them later in the procedure.
8. Select the Accept license check box in the work area.
9. Click OK to download the selected microcode and store it on the disk.
10. Log into the Integrated Virtualization Manager using a terminal session.
11. Issue the appropriate command to install the update that you recorded in step 7.

Task 3. Verify that the firmware updated correctly

If you prefer to use the command line, refer to Lsfware Command.

1. Under the Service Management menu, click Updates. The Updates page is displayed, which contains the Management Partition Updates tab and the Microcode Updates tab.
2. Select the Microcode Updates tab.
3. Click Generate New Survey. A list of devices is displayed.
4. Ensure that the current level of firmware that is displayed for *Type: system* matches the level you installed.

Updating the Virtual I/O Server's firmware and device microcode through the Integrated Virtualization Manager without an Internet connection

Learn how to use the Integrated Virtualization Manager to update the Virtual I/O Server's firmware and device microcode when you do not have an Internet connection from the managed system.

Perform Task 1 through 4 to update the Virtual I/O Server's firmware and device microcode through the Integrated Virtualization Manager when you do not have an Internet connection from the management partition.

Parent topic: Updating the Virtual I/O Server's firmware and device microcode

Task 1. View the existing firmware level

1. Under the Service Management menu, click Updates. The Updates page is displayed.

2. Select the Microcode Updates tab.
3. Click Generate New Survey. A list of devices is displayed.
4. Record the current level of firmware that is displayed for *Type: system*.

Task 2. Obtain the firmware update on CD

1. Contact service and support to order the firmware update on CD.
2. After you have the CD, continue with Task 3. Apply firmware and device microcode using the Integrated Virtualization Manager.

Task 3. Apply firmware and device microcode using the Integrated Virtualization Manager

1. Note the following:
   - If you update the server firmware for device sys0, you will need to shut down all client logical partitions before applying the firmware.
   - If you update some device's microcode, you might need to take the device offline using the `rmdev` command before applying the firmware.
2. Insert the CD into the CD drive for the managed system.
3. Under the Service Management menu, click Updates. The Updates page is displayed, which contains the Management Partition Updates tab and the Microcode Updates tab.
4. Select the Microcode Updates tab.
5. In the Microcode download base path field, type *optical_device_path*/microcode/ (for example, /dev/cd0/microcode/).

   Note: Ensure you type /microcode/ after the optical device path, or the firmware will not be found.
6. Click Generate New Survey. A list of devices is displayed.
7. From the Microcode Survey Results list, select one or more items to upgrade.
   Note: If you select to update the firmware for device sys0, the system will shut down and restart when you apply the firmware. If you select a device, you might need to take the device offline. You can view the Impact column to determine the action you need to take. You will want to perform the action before you issue the install command in step 13.

8. Click the Download link in the task area. Information about the selected devices, such as the available microcode level and the commands you need in order to install the microcode updates, is displayed.
9. Record the commands, you will need them later in the procedure.
10. Select the Accept license check box in the work area.
11. Click OK to download the selected microcode and store it on the disk.
12. Log into the Integrated Virtualization Manager using a terminal session.
13. Issue the appropriate install command that you recorded in step 9.

Task 4. Verify that the firmware updated correctly

If you prefer to use the command line, refer to Lsfware Command.

1. Under the Service Management menu, click Updates. The Updates page is displayed, which contains the Management Partition Updates tab and the Microcode Updates tab.
2. Select the Microcode Updates tab.
3. Click Generate New Survey. A list of devices is displayed.
4. Ensure that the current level of firmware that is displayed for *Type: system* matches the level you installed.

Updating the Virtual I/O Server's firmware using the command line interface

Learn about using the command line interface to apply updates to the firmware on your Virtual I/O Server.

To obtain updates to the management partition or to obtain microcode updates using the command line interface, refer to Updating the Virtual I/O Server using the command-line interface.

Parent topic: Updating the Virtual I/O Server's firmware and device microcode

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Getting server and power subsystem firmware fixes through an HMC with an Internet connection

Learn how to update or upgrade server firmware and power subsystem firmware (if you have a model 5/9*x* server) through an HMC when you have an Internet connection from the HMC or server.

Note: You *must* install HMC fixes before you install server firmware or power subsystem firmware fixes so that the HMC can handle any fixes or new function that you apply to the server. Also, if an HMC manages multiple servers at different firmware release levels, the HMC machine code level must be equal to or higher than the system firmware level on the server that is at the latest release level.

- For information on the recommended levels of system firmware and Hardware Management Console machine code, contact service and support.
- For instructions on how to update your HMC machine code, see Getting HMC machine code fixes and upgrades.

After you install HMC fixes, either install the power subsystem firmware and server firmware fixes together, or install the power subsystem firmware first (if you have a model 5/9*x* server), and then the server firmware second.

Perform tasks 1 through 6 to get server firmware and power subsystem firmware fixes (if you have a model 5/9*x* server).

Note: By default, the server firmware is installed on the temporary side only after the existing contents of the temporary side are permanently installed on the permanent side. (This process is performed automatically when you install a server firmware fix.) If you want to preserve the contents of the permanent side, select Install and Activate from the Advanced Features on the HMC interface, and indicate that you do *not* want to automatically accept the firmware level.

Parent topic: Getting server firmware and power subsystem firmware fixes and upgrades

Task 1. Ensure that you have an Internet connection

To download fixes from the service and support system or Web site to your HMC or server, you must have a connection to service and support either through a modem, direct or indirect Internet, or pass-through system.

To verify the service connection, follow these steps:

1. In the navigation area, open Service Applications.
2. Select Remote Support.
3. Select Customize Outbound Connectivity.
4. Select the tab for the type of outbound connectivity that you chose for your HMC (Local Modem, Internet VPN, or Pass-Through Systems). For more information about these settings, see Specifying the connection type from the HMC.

   Note: If a connection to service and support does not exist, set up the service connection before proceeding with this procedure. For instructions on how to set up a connection to service and support, see Setting up AIX, Linux, and the HMC to connect to service and support.

5. Click Test.
6. Verify that the test completes successfully. If the test is not successful, troubleshoot your connectivity and correct the problem before proceeding with this procedure.

Task 2. Review your HMC machine code version and release

The level of HMC machine code that you have will determine the available features, including concurrent server firmware maintenance and enhancements to upgrading to a new release.

1. In the navigation area, open Licensed Internal Code Maintenance.
2. Select HMC Code Update.
3. In the contents area, look for the version and release of your HMC machine code in the Status area.
4. Record the version and release.

Task 3. View existing firmware levels with an HMC

1. Ensure that the managed systems and power frames (if you have a model 5/9x server) are in the correct state.
   a. From the HMC, select Server and Partition.
   b. Select Server Management and ensure that the State is Power Off, Standby, or Operating.
   c. If you have a model 5/9x server, select Frame Management and ensure that the state is Standby.
2. From the HMC, expand the Licensed Internal Code Maintenance folder.
3. Click the Licensed Internal Code Updates icon.
4. In the Contents area, click Change Licensed Internal Code for the current release.
5. In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to verify the firmware level.
6. In the Change Licensed Internal Code window, select View system information, and click OK.
7. In the Specify LIC Repository window, select None, and click OK. A window is displayed that shows system information for the target system.
   ♦ The *Installed Level* indicates the level of firmware that has been installed and will be installed into memory after the managed system is powered off and powered on.
   ♦ The *Activated Level* indicates the level of firmware that is active and running in memory.
   ♦ The *Accepted Level* indicates the backup level of firmware. You can return to the backup level of firmware if you decide to remove the installed level.
8. Record the installed level and click Close.
9. Click Cancel.

Task 4. View available firmware levels

To view the available levels, follow these steps:

1. From the HMC, expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Internal Code for the current release.
4. In the Target Object Selection window, click the target system, and click OK.
5. In the Change Internal Code window, select View system information and click OK.
6. In the Specify LIC Repository window, select the repository location from which you want to view available firmware fixes, and click OK. The following options are available:
   - **Service Web site** (This site provides the most recent level of fixes. You need a direct Internet connection to access this site.)
   - Support system (This site provides all available levels of fixes. You can use a modem or direct Internet connection to access this site.)
   - **DVD-RAM media**: Select this option if you previously put the fix on CD and it is in the DVD drive on the HMC.

     Note: If you choose the DVD-RAM media repository and receive an I/O Error when using a CD that you created, it might mean that the software you used to create the CD does not conform to the writing of temporary records requirements of the HMC.

   - FTP site: Select this option if you previously downloaded the fix to an FTP site. (This site would be setup previously by your organization's advanced support personnel.) An FTP server is any system on which the FTP server protocol is activated. If you select the FTP site, you need to know the following information:

     Note: Usually, a PC has only the FTP client active.

       ◊ FTP site - The fully qualified host and domain name of the FTP server from which you want to download the fix.
       ◊ User ID - Your user ID for the FTP server.
       ◊ Password - Your password for the FTP server.
       ◊ Directory - The directory on the FTP server that holds the server or power subsystem firmware fix. You can specify the default directory `/opt/ccfw/data` if you placed the fix in that directory, or you can change the directory path if the fix is in a directory other than the default directory. For example, if you downloaded the fix and copied it to a unique directory on the FTP server, you can specify that directory.
   - Hard drive: Select this option if you previously downloaded the fix to the hard disk drive on your HMC. (This repository can be selected after a successful Code Update for this release was the last completed update to another Managed System or Power Subsystem by this HMC.)

     Note: For more information about each of the repository locations, click Help.

   A window is displayed that shows system information for the target system, including the retrievable levels of firmware.

   Note: If no firmware fixes are available at the selected repository, the columns in the table will be empty.

7. Record the available firmware level or levels.

Task 5. Update a current release or upgrade to a new release

Note: If you receive an error during the code update and are sent to the Service Focal Point application in the HMC, it means that you need to repair and close any open events that caused the code update to fail. For details, see Using Service Focal Point for the HMC. If you receive an HSCF*xxxx* reference code during the update, refer to the HSCFxxxx Licensed Internal Code error codes.

To update a current release or upgrade to a new release, follow these steps:

1. You *must* install HMC fixes before you install server firmware or power subsystem firmware fixes so that the HMC can handle any fixes or new function that you apply to the server. Also, if an HMC manages multiple servers at different firmware release levels, the HMC machine code level must be equal to or higher than the system firmware level on the server that is at the latest release level. For instructions on how to update your HMC machine code, see Getting HMC machine code fixes and upgrades. Then you should either install the power subsystem firmware and server firmware fixes together, or install the power subsystem firmware first (if you have a model 5/9*x* server), and then the server firmware second.
2. Ensure that the managed systems and power frames (if you have a model 5/9*x* server) are in the correct state.
      a. From the HMC, select Server and Partition.
      b. Select Server Management and ensure that the State is Power Off, Standby, or Operating.
      c. If you have a model 5/9*x* server, select Frame Management and ensure that the state is Standby.
3. Expand the Licensed Internal Code Maintenance folder.
4. Click the Licensed Internal Code Updates icon.
5. Choose from the following options:
      ♦ To update a current release, continue with Task 5.1. Update a current release.
      ♦ To upgrade to a new release, continue with Task 5.2. Upgrade to a new release.

   Note: If you are unsure about whether to select an update or upgrade, select Task 5.1. Update a current release.

Task 5.1. Update a current release

1. In the Contents area, click Change Licensed Internal Code for the current release.
2. In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to update.

   Note: You can select multiple managed systems to be updated simultaneously. If you have a 5/75 system, there are some considerations you should review before choosing to update or upgrade multiple managed systems. For details, refer to Applying firmware to multiple managed systems using an HMC.
3. In the Change Licensed Internal Code window, select Start Change Licensed Internal Code wizard and click OK.
4. In the Specify LIC Repository window, select the repository location from which you want to download the server firmware or power subsystem firmware fixes, and click OK. The following options are available:

- **Service Web site** (This site provides the most recent level of fixes. You need a direct Internet connection to access this site.)
- Support system (This site provides all available levels of fixes. You can use a modem or direct Internet connection to access this site.)
  Note: Downloading server firmware or power subsystem firmware fixes over a modem might take several hours.

- **DVD-RAM media**: Select this option if you previously put the fix on CD and it is in the DVD drive on the HMC.

  Note: If you choose the DVD-RAM media repository and receive an I/O Error when using a CD that you created, it might mean that the software you used to create the CD does not conform to the writing of temporary records requirements of the HMC.

- FTP site: Select this option if you previously downloaded the fix to an FTP site. (This site would be set up previously by your organization's advanced support personnel.) An FTP server is any system on which the FTP server protocol is activated. If you select the FTP site, you need to know the following information:

  Note: Usually, a PC has only the FTP client active.

    ◊ FTP site - The fully qualified host and domain name of the FTP server from which you want to download the fix.
    ◊ User ID - Your user ID for the FTP server.
    ◊ Password - Your password for the FTP server.
    ◊ Directory - The directory on the FTP server that holds the server or power subsystem firmware fix. You can specify the default directory `/opt/ccfw/data` if you placed the fix in that directory, or you can change the directory path if the fix is in a directory other than the default directory. For example, if you downloaded the fix and copied it to a unique directory on the FTP server, you can specify that directory.
- Hard drive: Select this option if you previously downloaded the fix to the hard disk drive on your HMC. (This repository can be selected after a successful Code Update for this release was the last completed update to another Managed System or Power Subsystem by this HMC, or the fix was downloaded using the Retrieve function from the Advanced Features on the HMC interface.)

  Note: For more information about each of the repository locations, click Help.

5. In the welcome window, click Next. One of the following will occur:
   - If the selected repository has only an update to the current release available, continue with step 6.
   - If a message displays stating that there is a new upgrade level available, choose from the following options:
       ◊ Click Cancel to switch to an upgrade to a new release. You will *not* have to reselect the repository. Then continue with step 4 in Task 5.2.
       ◊ Click OK to proceed with an update for the current release, and continue with step 6.
   - If there are no updates or upgrades available for your current release, a message displays indicating that targets are up to date. In this situation, click Cancel to end the task.
6. In the Change Licensed Internal Code wizard window, ensure that Managed System and Power LIC is selected and choose from the following options:
   - If the window contains a grayed out message across from 'Current Installation type selection' continue with step 7.
   - If the window contains a message regarding the availability of a concurrent update across from 'Current Installation type selection' choose from the following options:
       ◊ To continue with a concurrent update, follow these steps:
           a. Read the message that is displayed.

```
Notice:  Do not perform any configuration or management
 operations on the managed system while
Licensed Internal Code is being updated.
```

Note: Do not perform any tasks on the managed system that is being updated until the firmware update is complete. If an operation does occur, both the code update and operation might complete correctly. However, if there is a failure, allow the update to complete before retrying a new operation. If the concurrent firmware update fails, remove the corrupted image and retry the concurrent Licensed Internal Code update. For details, see Removing the current firmware (Licensed Internal Code) level.

      b. Continue with step 7.
    ◊ To change to disruptively install and activate the update, click Advanced Options.
        a. In the Concurrency window, select the target that you want to update. The type of installation is shown in the Concurrency Status field.
        b. In the Select the type of installation to perform area, choose from the available options, which might include:
            • Concurrent install and activate
            • Concurrent only, with deferred disruptive activate
            • Disruptive install and activate
        c. Click OK and continue with step 7.
7. Click Next. The Hardware Management Console License Agreement window is displayed.
8. In the License Agreement window, read the agreement and click Accept.
9. In the Confirm the Action window, perform the required actions, and click Finish.

If the following message is displayed on the HMC interface, you will need to manually shut down all of the applications and logical partitions to prevent the system from shutting them down abnormally during the process. `Quiesce any applications currently running on your operating systems for the systems listed below.`

Use the usual procedures to shut down the logical partitions:

    ♦ To shut down AIX logical partitions, see Shutting down AIX.
    ♦ To shut down Linux logical partitions, see Shutting down Linux.
At the end of a disruptive process, the managed system automatically returns to its original state.
10. To verify that the fix installed correctly, see Task 6. Verify that the fix installed correctly.

Task 5.2. Upgrade to a new release

1. To upgrade to a new release, click Upgrade Licensed Internal Code to a new release in the Contents area.
2. In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to upgrade the firmware to a new release.

Note: You can select multiple managed systems to be updated simultaneously (unless the DVD repository is used during an *upgrade*, then the upgrade will be performed sequentially). Also, if you have a 5/75 system, there are some considerations you should review before choosing to update or upgrade multiple managed systems. For details on using the DVD repository during an upgrade, or for considerations when updating or upgrading a 5/75 system, refer to Applying firmware to multiple managed systems using an HMC.
3. In the Specify LIC Repository window, select the repository location from which you want to download the server firmware or power subsystem firmware fixes, and click OK.
Note: If you receive a message that you can only use the DVD-RAM media repository, it means that you do not have the correct HMC machine code release installed. You will need to update your HMC machine code before you continue. For details, see Getting HMC machine code fixes and upgrades.

The following options are available:

♦ **Service Web site** (This site provides the most recent level of fixes. You need a direct Internet connection to access this site.)
♦ Support system (This site provides all available levels of fixes. You can use a modem or direct Internet connection to access this site.)

Note: Downloading server firmware or power subsystem firmware fixes over a modem might take several hours.

♦ **DVD-RAM media**: Select this option if you previously put the fix on CD and it is in the DVD drive on the HMC.

Note: If you choose the DVD-RAM media repository and receive an I/O Error when using a CD that you created, it might mean that the software you used to create the CD does not conform to the writing of temporary records requirements of the HMC.

Note: If you selected to upgrade multiple managed systems, the DVD-RAM media repository will perform the upgrade sequentially. For details, refer to Applying firmware to multiple managed systems using an HMC.

♦ FTP site: Select this option if you previously downloaded the fix to an FTP site. (This site would be setup previously by your organization's advanced support personnel.) An FTP server is any system on which the FTP server protocol is activated. If you select the FTP site, you need to know the following information:

Note: Usually, a PC has only the FTP client active.

◊ FTP site - The fully qualified host and domain name of the FTP server from which you want to download the fix.
◊ User ID - Your user ID for the FTP server.
◊ Password - Your password for the FTP server.
◊ Directory - The directory on the FTP server that holds the server or power subsystem firmware fix. You can specify the default directory `/opt/ccfw/data` if you placed the fix in that directory, or you can change the directory path if the fix is in a directory other than the default directory. For example, if you downloaded the fix and copied it to a unique directory on the FTP server, you can specify that directory.

4. In the License Agreement window, read the agreement and click Accept.
5. In the Confirm the Action window, perform the required actions, and click Finish.

If the following message is displayed on the HMC interface, you will need to manually shut down all of the applications and logical partitions to prevent the system from shutting them down abnormally during the process. `Quiesce any applications currently running on your operating systems for the systems listed below.`

Use the usual procedures to shut down the logical partitions:

♦ To shut down AIX logical partitions, see Shutting down AIX.
♦ To shut down Linux logical partitions, see Shutting down Linux.
At the end of a disruptive process, the managed system automatically returns to its original state.
6. To verify that the fix installed correctly, see Task 6. Verify that the fix installed correctly.

Task 6. Verify that the fix installed correctly

1. Ensure that the managed systems and power frames (if you have a model 5/9*x* server) are in the correct state.
   a. From the HMC, select Server and Partition.
   b. Select Server Management and ensure that the State is Power Off, Standby, or Operating.
   c. If you have a model 5/9*x* server, select Frame Management and ensure that the state is Standby.
2. From the HMC, expand the Licensed Internal Code Maintenance folder.
3. Click the Licensed Internal Code Updates icon.
4. In the Contents area, click Change Licensed Internal Code.
5. In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to verify the firmware level.
6. In the Change Licensed Internal Code window, select View system information, and click OK.
7. In the Specify LIC Repository window, select None, and click OK. A window is displayed that shows system information for the target system.
8. Verify that the installed and activated levels of firmware match the fix that you installed.
9. If the installed and activated levels of firmware do not match the fix that you installed, see Failed verification that the fix installed successfully.

Getting server firmware and power subsystem firmware fixes through an HMC using a CD, FTP server, or hard drive

Learn how to update or upgrade server firmware and power subsystem firmware (if you have a model 5/9*x* server) through an HMC using a CD, FTP server, a hard drive to apply the fix.

Note: You *must* install HMC fixes before you install server firmware or power subsystem firmware fixes so that the HMC can handle any fixes or new function that you apply to the server. Also, if an HMC manages multiple servers at different firmware release levels, the HMC machine code level must be equal to or higher than the system firmware level on the server that is at the latest release level.

- For information on the recommended levels of system firmware and Hardware Management Console machine code, contact service and support.
- For instructions on how to update your HMC machine code, see Getting HMC machine code fixes and upgrades.

After you install HMC fixes, either install the power subsystem firmware and server firmware fixes together, or install the power subsystem firmware first (if you have a model 5/9*x* server), and then the server firmware second.

To get server firmware and power subsystem firmware fixes (if you have a model 5/9*x* server), perform tasks 1 through 5.

Note: By default, the server firmware is installed on the temporary side only after the existing contents of the temporary side are permanently installed on the permanent side. (This process is performed automatically when you install a server firmware fix.) If you want to preserve the contents of the permanent side, select Install and Activate from the Advanced Features on the HMC interface, and indicate that you do *not* want to automatically accept the firmware level.

Parent topic: Getting server firmware and power subsystem firmware fixes and upgrades

Task 1. View existing firmware levels with an HMC

1. Ensure that the managed systems and power frames (if you have a model 5/9x server) are in the correct state.
   a. From the HMC, select Server and Partition.
   b. Select Server Management and ensure that the State is Power Off, Standby, or Operating.
   c. If you have a model 5/9x server, select Frame Management and ensure that the state is Standby.
2. From the HMC, expand the Licensed Internal Code Maintenance folder.
3. Click the Licensed Internal Code Updates icon.
4. In the Contents area, click Change Licensed Internal Code for the current release.
5. In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to verify the firmware level.
6. In the Change Licensed Internal Code window, select View system information, and click OK.
7. In the Specify LIC Repository window, select None, and click OK. A window is displayed that shows system information for the target system.
   ♦ The *Installed Level* indicates the level of firmware that has been installed and will be installed into memory after the managed system is powered off and powered on.
   ♦ The *Activated Level* indicates the level of firmware that is active and running in memory.
   ♦ The *Accepted Level* indicates the backup level of firmware. You can return to the backup level of firmware if you decide to remove the installed level.
8. Record the installed level and click Close.
9. Click Cancel.

Task 2. Review your HMC machine code version and release

The level of HMC machine code that you have will determine the available features, including concurrent server firmware maintenance and enhancements to upgrading to a new release.

1. In the navigation area, open Licensed Internal Code Maintenance.
2. Select HMC Code Update.
3. In the contents area, look for the version and release of your HMC machine code in the Status area.
4. Record the version and release.

Task 3. Obtain the fix

Contact service and support to obtain the fix. Then continue with Task 4. Update a current release or upgrade to a new release.

Task 4. Update a current release or upgrade to a new release

Note: If you receive an error during the code update and are sent to the Service Focal Point application in the HMC, it means that you need to repair and close any open events that caused the code update to fail. For details, see Using Service Focal Point for the HMC. If you receive an HSCF*xxxx* reference code during the update, refer to the HSCFxxxx Licensed Internal Code error codes.

To update a current release or upgrade to a new release, follow these steps:

1. You *must* install HMC fixes before you install server firmware or power subsystem firmware fixes so that the HMC can handle any fixes or new function that you apply to the server. Also, if an HMC manages multiple servers at different firmware release levels, the HMC machine code level must be

equal to or higher than the system firmware level on the server that is at the latest release level. For instructions on how to update your HMC machine code, see Getting HMC machine code fixes and upgrades. Then you should either install the power subsystem firmware and server firmware fixes together, or install the power subsystem firmware first (if you have a model 5/9*x* server), and then the server firmware second.

2. If you obtained a fix CD for this procedure, insert it into the CD drive on the HMC.
3. Ensure that the managed systems and power frames (if you have a model 5/9*x* server) are in the correct state.
   a. From the HMC, select Server and Partition.
   b. Select Server Management and ensure that the State is Power Off, Standby, or Operating.
   c. If you have a model 5/9*x* server, select Frame Management and ensure that the state is Standby.
4. Expand the Licensed Internal Code Maintenance folder.
5. Click the Licensed Internal Code Updates icon.
6. Choose from the following options:
   ♦ To update a current release, continue with Task 4.1. Update a current release.
   ♦ To upgrade to a new release, go to Task 4.2. Upgrade to a new release.

   Note: If you are unsure, select Task 4.1. Update a current release.

Task 4.1. Update a current release

1. **In the Contents area, click Change Licensed Internal Code for the current release.**
2. **In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to update.**

   Note: You can select multiple managed systems to be updated simultaneously. If you have a 5/75 system, there are some considerations you should review before choosing to update or upgrade multiple managed systems. For details, refer to Applying firmware to multiple managed systems using an HMC.

3. **In the Change Licensed Internal Code window, select Start Change Licensed Internal Code wizard and click OK.**
4. **In the Specify LIC Repository window, select the repository location from which you want to download the server firmware or power subsystem firmware fixes, and click OK. The following options are available:**
   ♦ **Service Web site (This site provides the most recent level of fixes. You need a direct Internet connection to access this site.)**
   ♦ **Support system (This site provides all available levels of fixes. You can use a modem or direct Internet connection to access this site.)**
     Note: Downloading server firmware or power subsystem firmware fixes over a modem might take several hours.

   ♦ **DVD-RAM media: Select this option if you previously put the fix on CD and it is in the DVD drive on the HMC.**

   Note: If you choose the DVD-RAM media repository and receive an I/O Error when using a CD that you created, it might mean that the software you used to create the CD does not conform to the writing of temporary records requirements of the HMC.

   ♦ **FTP site: Select this option if you previously downloaded the fix to an FTP site. (This site would be set up previously by your organization's advanced support personnel.) An FTP server is any system on which the FTP server protocol is activated. If you select the FTP site, you need to know the following information:**

Note: Usually, a PC has only the FTP client active.

- ◊ **FTP site - The fully qualified host and domain name of the FTP server from which you want to download the fix.**
- ◊ **User ID - Your user ID for the FTP server.**
- ◊ **Password - Your password for the FTP server.**
- ◊ **Directory - The directory on the FTP server that holds the server or power subsystem firmware fix. You can specify the default directory `/opt/ccfw/data` if you placed the fix in that directory, or you can change the directory path if the fix is in a directory other than the default directory. For example, if you downloaded the fix and copied it to a unique directory on the FTP server, you can specify that directory.**
- ♦ **Hard drive: Select this option if you previously downloaded the fix to the hard disk drive on your HMC. (This repository can be selected after a successful Code Update for this release was the last completed update to another Managed System or Power Subsystem by this HMC, or the fix was downloaded using the Retrieve function from the Advanced Features on the HMC interface.)**

Note: For more information about each of the repository locations, click Help.

5. **In the welcome window, click Next. One of the following will occur:**
   - ♦ **If the selected repository has only an update to the current release available, continue with step 6.**
   - ♦ **If a message displays stating that there is a new upgrade level available, choose from the following options:**
     - ◊ **Click Cancel to switch to an upgrade to a new release. You will *not* have to re-select the repository. Then continue with step 4 in Task 5.2.**
     - ◊ **Click OK to proceed with an update for the current release, and continue with step 6.**
   - ♦ **If no change fixes are available, a message displays indicating that no fixes are available and targets are up to date. In this situation, click Cancel to end the task.**
6. **In the Change Licensed Internal Code wizard window, ensure that Managed System and Power LIC is selected and choose from the following options:**
   - ♦ **If the window contains a grayed out message across from 'Current Installation type selection' continue with step 7.**
   - ♦ **If the window contains a concurrent message across from 'Current Installation type selection' choose from the following options:**
     - ◊ **To continue with a concurrent update, follow these steps:**
       - a. **Read the message that is displayed.**

```
Notice:  Do not perform any configuration or management
operations on the managed system while
Licensed Internal Code is being updated.
```

   Note: Do not perform any tasks on the managed system that is being updated until the firmware update is complete. If an operation does occur, both the code update and operation might complete correctly. However, if there is a failure, allow the update to complete before retrying a new operation. If the concurrent firmware update fails, remove the corrupted image and retry the concurrent Licensed Internal Code update. For details, see Removing the current firmware (Licensed Internal Code) level.

       - b. **Continue with step 7.**
     - ◊ **To change to a disruptive install and activate, click Advanced Options.**
       - a. **In the Concurrency window, select the target you want to update. The type of installation is shown in the Concurrency Status field.**

       b. In the Select the type of installation to perform area, choose from the available options, which might include:
- **Concurrent install and activate**
- **Concurrent only, with deferred disruptive activate**
- **Disruptive install and activate**

       c. Click OK and continue with step 7.

7. **Click Next. The Hardware Management Console License Agreement window is displayed.**
8. **In the License Agreement window, read the agreement and click Accept.**
9. **In the Confirm the Action window, perform the required actions, and click Finish.**

If the following message is displayed on the HMC interface, you will need to manually shut down all of the applications and logical partitions to prevent the system from shutting them down abnormally during the process. `Quiesce any applications currently running on your operating systems for the systems listed below.`

Use the usual procedures to shut down the logical partitions:

- ♦ **To shut down AIX logical partitions, see Shutting down AIX.**
- ♦ **To shut down Linux logical partitions, see Shutting down Linux.**

At the end of a disruptive process, the managed system automatically returns to its original state.

10. **To verify that the fix installed correctly, see Task 5. Verify that the fix installed correctly.**

Task 4.2. Upgrade to a new release

1. **To upgrade to a new release, click Upgrade Licensed Internal Code to a new release in the Contents area.**
2. **In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to upgrade the firmware to a new release.**

Note: You can select multiple managed systems to be updated simultaneously (unless the DVD repository is used during an *upgrade*, then the upgrade will be performed sequentially). Also, if you have a 5/75 system, there are some considerations you should review before choosing to update or upgrade multiple managed systems. For details on using the DVD repository during an upgrade, or for considerations when updating or upgrading a 5/75 system, refer to Applying firmware to multiple managed systems using an HMC.

3. **In the Specify LIC Repository window, select the repository location from which you want to download the server firmware or power subsystem firmware fixes, and click OK.**
Note: If you receive a message that you can only use the DVD-RAM media repository, it means that you do not have the correct HMC machine code release installed. You will need to update your HMC machine code before you continue. For details, see Getting HMC machine code fixes and upgrades.

The following options are available:

- ♦ **Service Web site (This site provides the most recent level of fixes. You need a direct Internet connection to access this site.)**
- ♦ **Support system (This site provides all available levels of fixes. You can use a modem or direct Internet connection to access this site.)**

Note: Downloading server firmware or power subsystem firmware fixes over a modem might take several hours.

- ♦ **DVD-RAM media: Select this option if you previously put the fix on CD and it is in the DVD drive on the HMC.**

Note: If you choose the DVD-RAM media repository and receive an I/O Error when using a CD that you created, it might mean that the software you used to create the CD does not

conform to the writing of temporary records requirements of the HMC.

Note: If you selected to upgrade multiple managed systems, the DVD-RAM media repository will perform the upgrade sequentially. For details, refer to Applying firmware to multiple managed systems using an HMC.

♦ **FTP site: Select this option if you previously downloaded the fix to an FTP site. (This site would be setup previously by your organization's advanced support personnel.) An FTP server is any system on which the FTP server protocol is activated. If you select the FTP site, you need to know the following information:**

Note: Usually, a PC has only the FTP client active.

◊ **FTP site - The fully qualified host and domain name of the FTP server from which you want to download the fix.**
◊ **User ID - Your user ID for the FTP server.**
◊ **Password - Your password for the FTP server.**
◊ **Directory - The directory on the FTP server that holds the server or power subsystem firmware fix. You can specify the default directory `/opt/ccfw/data` if you placed the fix in that directory, or you can change the directory path if the fix is in a directory other than the default directory. For example, if you downloaded the fix and copied it to a unique directory on the FTP server, you can specify that directory.**

4. **In the License Agreement window, read the agreement and click Accept.**
5. **In the Confirm the Action window, perform the required actions, and click Finish.**

If the following message is displayed on the HMC interface, you will need to manually shut down all of the applications and logical partitions to prevent the system from shutting them down abnormally during the process. `Quiesce any applications currently running on your operating systems for the systems listed below.`

Use the usual procedures to shut down the logical partitions:

♦ **To shut down AIX logical partitions, see Shutting down AIX.**
♦ **To shut down Linux logical partitions, see Shutting down Linux.**

At the end of a disruptive process, the managed system automatically returns to its original state.

6. **To verify that the fix installed correctly, see Task 5. Verify that the fix installed correctly.**

Task 5. Verify that the fix installed correctly

1. **Ensure that the managed systems and power frames (if you have a model 5/9*x* server) are in the correct state.**
   a. **From the HMC, select Server and Partition.**
   b. **Select Server Management and ensure that the State is Power Off, Standby, or Operating.**
   c. **If you have a model 5/9*x* server, select Frame Management and ensure that the state is Standby.**
2. **From the HMC, expand the Licensed Internal Code Maintenance folder.**
3. **Click the Licensed Internal Code Updates icon.**
4. **In the Contents area, click Change Licensed Internal Code.**
5. **In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to verify the firmware level.**
6. **In the Change Licensed Internal Code window, select View system information, and click OK.**
7. **In the Specify LIC Repository window, select None, and click OK. A window is displayed that shows system information for the target system.**
8. **Verify that the installed and activated levels of firmware match the fix that you installed.**

9. **If the installed and activated levels of firmware do not match the fix that you installed, see Failed verification that the fix installed successfully.**

Getting server firmware fixes through AIX or Linux without an HMC

Learn how to update or upgrade server firmware through AIX or Linux without an HMC.

Installing server firmware fixes through the operating system is a disruptive process.

Perform tasks 1 through 6 to get server firmware fixes through AIX or Linux when you do not have an HMC.

Note: By default, the server firmware is installed on the temporary side only after the existing contents of the temporary side are permanently installed on the permanent side. (This process is performed automatically when you install a server firmware fix.)

Note: If you are unable to start your AIX or Linux operating system or server, refer to Getting server firmware fixes through AIX or Linux when you are unable to start the operating system or server.

Parent topic: Getting server firmware and power subsystem firmware fixes and upgrades

Task 1. View existing firmware levels for AIX or Linux

1. Choose from the following options:
   - ♦ To use the ASMI (AIX or Linux): On the ASMI Welcome pane, view the existing level of server firmware in the upper-right corner below the copyright statement, for example, SF220_006.
   - ♦ To use the AIX command line (you must have AIX diagnostics installed on your server to perform this task), continue with step 2.
   - ♦ To use the Linux command line, continue with step 4.
2. At an AIX command line, enter the following command:

   ```
   lsmcode
   ```

   The existing levels of server firmware are displayed. For example, you might see output similar to the following:

   ```
   The current permanent system firmware image is SF220_005.
   The current temporary system firmware image is SF220_006.
   The system is currently booted from the temporary image.
   ```

   Note:

   a. The permanent level is also known as the backup level.
   b. The temporary level is also known as the installed level.
   c. The system was booted from the temporary side, so at this time the temporary level is also the activated level.

3. Continue with Task 2. Obtain the fix.
4. To view existing levels of server firmware for Linux, you must have the following service tools installed on your server:
   - ♦ Platform Enablement Library   librtas-xxxxx.rpm

♦ Service Aids   ppc64-utils-xxxxx.rpm
♦ Hardware Inventory   lsvpd-xxxxx.rpm

where xxxxx represents a specific version of the RPM file.

5. After the service tools are installed on the server running Linux, enter the following at a Linux command line:

```
lsmcode
```

The existing level of server firmware is displayed. For example, you might see output similar to the following:

```
Version of system firmware is: SF220_006 (t)  SF220_005 (p)  SF220_006 (t)
```

The following table provides descriptions for each of the server firmware levels displayed in the output.

Server firmware levels displayed		
SF220_006 (t)	SF220_005 (p)	SF220_006 (t)
The installed level.	The backup level.	The activated level.
Also known as the temporary level.	Also known as the permanent level.	The level on which the server is currently running.

6. Continue with Task 2. Obtain the fix.

Task 2. Obtain the fix

1. Contact service and support to order the fix on CD.
2. After you have the CD, you will need to view and unpack the RPM file that contains the server firmware. Continue with Task 3. View and unpack the RPM file that contains the server firmware.

Task 3. View and unpack the RPM file that contains the server firmware

1. Insert the CD that contains the .iso image or the RPM file into the media drive on your server.
2. To mount the CD, choose from the following options (you will need to have root user authority):
    ♦ If you are working on an AIX system, enter the following at an AIX command line:

    ```
    mount /dev/cd0 /mnt
    ```
    ♦ If you are working on a Linux system, enter one of the following commands at a Linux command line:

    ```
    mount -t iso9660 /dev/cdrom /mnt
    ```

    or

    ```
    mount -t iso9660 /dev/dvdrom /mnt
    ```
3. Choose from the following options:
    ♦ If the mount was successful, continue with step 5.
    ♦ If the mount was unsuccessful, continue with the next step.
4. If you received the message, `mount: 0506-324 Cannot mount /dev/cd0 on /mnt,` perform the steps below to mount the CD:
    a. Enter the command:

    ```
    /usr/sbin/mount -v 'cdrfs' -f'' -p'' -r'' /dev/cd0 /mnt
    ```

    The quotation marks following the *f*, *p*, and *r* are two single quotation marks with no space between them.

    Note: If you prefer to use the System Management Interface Tool (SMIT) to mount the CD, see Using the System Management Interface Tool to mount the fix CD for AIX.

        b. Continue with the next step.
5. To view the RPM file name, enter the following command at the AIX or Linux command line:
    ♦ If the RPM file is on CD, type:

        `ls /mnt`
    ♦ If the RPM file is on the server, type:

        `ls /tmp/fwupdate`
    The name of the RPM file is displayed. For example, you might see output similar to the following:

    `01SF2xx_yyy_zzz.rpm`

6. To unpack the RPM file, enter one of the following commands at the AIX or Linux command line:
    ♦ If you want to unpack from a CD, enter:

        `rpm -Uvh --ignoreos /mnt/`*`filename`*`.rpm`
    ♦ If you want to unpack from the server's hard drive, enter:

        `rpm -Uvh --ignoreos /tmp/fwupdate/`*`filename`*`.rpm`

        where *filename* is the name of the RPM file that contains the server firmware. For example,
        01SF2xx_yyy_zzz.rpm.

        Note: When you unpack the RPM file, the server firmware fix file is saved in the
        /tmp/fwupdate directory on the server's hard drive in the following format: 01SF2xx_yyy_zzz.

7. Continue with Task 4. Apply server firmware fixes through AIX or Linux to the temporary side of the
   service processor.

Task 4. Apply server firmware fixes through AIX or Linux to the temporary side of the service processor

1. Do you have a model 5/9*x* server?
    ♦ **No**: Continue with the next step.
    ♦ **Yes**: You must use the HMC to install server firmware fixes. Refer to one of these
      procedures:
          ◊ Getting server and power subsystem firmware fixes through an HMC with an Internet
            connection.
          ◊ Getting server firmware and power subsystem firmware fixes through an HMC using
            a CD, FTP server, or hard drive.
2. Is your AIX or Linux system or logical partition, or your server managed by an HMC?
    ♦ **No**: Continue with the next step.
    ♦ **Yes**: You must use the HMC to apply the fix. Refer to one of these procedures:
          ◊ Getting server and power subsystem firmware fixes through an HMC with an Internet
            connection.
          ◊ Getting server firmware and power subsystem firmware fixes through an HMC using
            a CD, FTP server, or hard drive.
3. Ensure you are starting the system from the temporary side of the service processor; the firmware
   installation will fail if the system has booted from the permanent side. To learn which side you are
   starting from, and how to change to the other side if necessary, refer to Working with the temporary
   and permanent side of the service processor.
4. To use the update_flash command (AIX or Linux) to install the server firmware, continue with step 5.

    Note: If you have AIX installed, and prefer to use the AIX diagnostics to install the fix, see Using the
    AIX diagnostics to install the server firmware fix through AIX. If you plan to install the fix from CD, you
    will need to obtain the *Microcode Updates Files & Discovery Tool* CD to use the AIX diagnostics.
5. You will need the server firmware fix file name in the next step. To view the name, enter the following
   at an AIX or Linux command line:
   Note: To perform this task, you must have root user authority.

```
ls /tmp/fwupdate
```

The name of the server firmware fix file is displayed. For example, you might see output similar to the following:

```
01SF2xx_yyy_zzz
```

6. To install the server firmware fix, choose from the following options:
   - If you are updating AIX, enter the following at an AIX command line:

     ```
     cd /tmp/fwupdate
     /usr/lpp/diagnostics/bin/update_flash -f fwlevel
     ```

     where *fwlevel* is the specific server firmware fix file name, such as 01SF2xx_yyy_zzz.
   - If you are updating Linux, enter the following at a Linux command line:

     ```
     cd /tmp/fwupdate
     /usr/sbin/update_flash -f fwlevel
     ```

     where *fwlevel* is the specific server firmware fix file name, such as 01SF2xx_yyy_zzz.
   During the server firmware installation process, reference codes CA2799FD and CA2799FF are alternately displayed on the control panel. After the installation is complete, the system is automatically powered off and powered on.

   Note: If you receive a message stating: `This partition does not have the authority to perform the requested function`, see Message regarding a server that was previously managed by an HMC.

7. Continue with Task 5. Verify that the fix installed correctly.

Task 5. Verify that the fix installed correctly

1. Choose from the following options:
   - To use the AIX or Linux command line (the operating system must be running and the diagnostics must be available), continue with the next step.
   - To use the ASMI, view the level of server firmware displayed in the upper-right corner below the copyright statement on the ASMI Welcome pane; for example, SF220_006. If the level of server firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.
2. Enter the following at a command line:

   ```
   lsmcode
   ```

   The existing levels of server firmware are displayed. For example, you might see output similar to the following:

   ```
   The current permanent system firmware image is SF220_005.
   The current temporary system firmware image is SF220_006.
   The system is currently booted from the temporary image.
   ```

   Note:

   a. The permanent level is also known as the backup level.
   b. The temporary level is also known as the installed level.
   c. The system was booted from the temporary side, so at this time the temporary level is also the activated level.
3. Verify that the level of server firmware displayed is the level that you installed.
4. If the level of server firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.

Task 6. (Optional) Install the server firmware fix permanently

You might want to use the new level of server firmware for a period of time to verify that it works correctly. When you are sure that the new level works correctly, you can permanently install the server firmware fix.

Note: If you install the server firmware fix permanently (copy the temporary firmware level from the temporary side to the permanent side, so that the temporary and permanent sides contain the same level of firmware), you cannot return to the level that was previously on the permanent side.

For instructions about how to install server firmware fixes permanently, see Installing a firmware (Licensed Internal Code) fix permanently.

Getting a specific firmware (Licensed Internal Code) fix with an HMC

Find out how to download and install a specific level of server firmware or power subsystem firmware rather than the highest level of firmware.

You can download and install a specific level of firmware rather than the highest (most recent) level fix.

To get a specific firmware (Licensed Internal Code) fix, follow these steps:

1. Expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Internal Code.
4. In the Target Object Selection window, click the target system, and click OK.
5. In the Change Internal Code window, select Select advanced features, and click OK.
6. In the Advanced features window, select Install and activate (implied retrieve), and click OK.
7. In the Specify LIC Repository window, select the repository location from which you want to download and install the specific firmware fix, and click OK. For more information about each of the repositories, click Help.
8. In the Install and Activate (Implied Retrieve) window, choose from the following options:
   ♦ If you want to get the highest level, click OK. Then continue with step 12.
   ♦ If you want a specific level, select Specific levels for LIC level type, and click OK. Then continue with the next step.
9. In the Specify LIC Levels window, select the LIC type for which you want to choose a specific level, and click Change Level. For example, you might select Managed system.
10. In the Select LIC Level window, select the LIC level you want to install, and click OK. Select None if you do not want to update the selected LIC type. The Specify LIC Levels window is displayed again, showing the LIC type and LIC level that you selected.
11. Verify that the LIC type and LIC level displayed are correct, and click OK.
12. This step applies only if the process is disruptive. In the Select Installation Type window, select Concurrent install only, with deferred disruptive activate if you want to install the firmware fix now and activate the firmware fix later, or select Disruptive install and activate if you want to install and activate the firmware level immediately, and click OK.
13. In the Hardware Management Console License Agreement window, read the agreement and click Accept.
14. In the Confirm the Action window, perform the required actions, and click Finish.

    If the following message is displayed on the HMC interface, you will need to manually shut down all of the applications and logical partitions to prevent the system from shutting them down abnormally during the process. `Quiesce any applications currently running on your operating systems for the systems listed below.`

Use the usual procedures to shut down the logical partitions:

- ♦ To shut down AIX logical partitions, see Shutting down AIX.
- ♦ To shut down Linux logical partitions, see Shutting down Linux.

At the end of a disruptive process, the managed system automatically returns to its original state.

Parent topic: Getting server firmware and power subsystem firmware fixes and upgrades

Installing a firmware (Licensed Internal Code) fix permanently

Find out how to permanently install a firmware fix.

After you download and install a firmware fix, the fix is temporarily installed until you install it permanently. You might want to use the new level of firmware for a period of time to verify that it works correctly. When you are sure that the new level of firmware works correctly, you can permanently install the firmware fix. Be aware that if you install the firmware fix permanently (copy the temporary firmware level from the temporary side to the permanent side, so that the temporary and permanent sides contain the same level of firmware), you cannot return to the level that was previously on the permanent side.

Note: You might recognize the process of installing the firmware fix permanently by different terms, depending on the type of hardware or software you use. For example, if you use AIX or Linux, you might refer to this process as *committing* the fix. If you use an HMC, you might refer to this process as *accepting* the fix.

- **Using the HMC to install a firmware (Licensed Internal Code) fix permanently**
  Find out how to use the HMC to permanently install a firmware fix.
- **Using AIX commands to install a firmware fix permanently**
  Find out how to use AIX commands to install a firmware fix permanently.
- **Using Linux commands to install a firmware fix permanently**
  Find out how to use Linux commands to install a firmware fix permanently.

Parent topic: Getting server firmware and power subsystem firmware fixes and upgrades

Using the HMC to install a firmware (Licensed Internal Code) fix permanently

Find out how to use the HMC to permanently install a firmware fix.

You might recognize the process of installing the firmware fix permanently by different terms, depending on the type of hardware or software you use. For example, if you use AIX or Linux, you might refer to this process as *committing* the fix. If you use an HMC, you might refer to this process as *accepting* the fix.

To permanently install the firmware fix with an HMC, follow these steps:

1. Expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Internal Code.
4. In the Target Object Selection window, click the target system, and click OK. The target is the managed system on which you want to permanently install the firmware fix.
5. In the Change Internal Code window, select Select advanced features and click OK.

6. In the Advanced Features window, select Accept, and click OK.
7. In the Confirm the Action window, click OK.

Parent topic: Installing a firmware (Licensed Internal Code) fix permanently

Using AIX commands to install a firmware fix permanently

Find out how to use AIX commands to install a firmware fix permanently.

You might recognize the process of installing the firmware fix permanently by different terms, depending on the type of hardware or software you use. For example, for AIX or Linux, you might refer to this process as *committing* the fix.

Note: To perform this task, you must meet the following criteria:

- You must have root user authority.
- You must start your server from the *temporary* side. For details, see Working with the temporary and permanent side of the service processor.

Use one of the following methods to install a firmware fix permanently:

- Using the flash command
- Using the AIX diagnostic service aids

Using the flash command

1. At an AIX command line, type the following:

   ```
   /usr/lpp/diagnostics/bin/update_flash –c
   ```

   The update_flash -c command might run for 10 or more minutes.
2. After the update completes, choose from the following options:
   - If you are committing a firmware fix level that begins with SF220, use the manual process to shut down and restart the server. **This ends the procedure.**
   - If you are committing a firmware fix level that begins with SF222 or higher, there is no need to shut down and restart the server. **This ends the procedure.**

Using the AIX diagnostic service aids

1. On the AIX command line, type `diag`.
2. Initialize the terminal type, if requested.
3. On the function selection screen, select **Tasks and Service Aids**.
4. On the task selection screen, scroll to the bottom of the list of options, and select **Update and Manage Flash**. A screen similar to the following is displayed:

   ```
   UPDATE AND MANAGE SYSTEM FLASH

   The current permanent system firmware image is SF220_005.
   The current temporary system firmware image is SF220_006.
   The system is currently booted from the temporary image.

   Validate and Update System Firmware
   Update System Firmware
   Commit the Temporary Image
   ```
5. Select **Commit the Temporary Image**, and press Enter. The process might run for 10 or more minutes.

6. After the update is complete, choose from the following options:
   - ♦ If you are committing a firmware fix level that begins with SF220, use the manual process to shut down and restart the server. **This ends the procedure.**
   - ♦ If you are committing a firmware fix level that begins with SF222 or higher, there is no need to shut down and restart the server. **This ends the procedure.**

Parent topic: Installing a firmware (Licensed Internal Code) fix permanently

Using Linux commands to install a firmware fix permanently

Find out how to use Linux commands to install a firmware fix permanently.

You might recognize the process of installing the firmware fix permanently by different terms, depending on the type of hardware or software you use. For example, for AIX or Linux, you might refer to this process as *committing* the fix.

Note: To perform this task, you must meet the following criteria:

- • You must have root user authority.
- • You must start your server from the *temporary* side. For details, see Working with the temporary and permanent side of the service processor.

1. Ensure you have the following service tools installed on your server:
   - ♦ Platform Enablement Library   librtas-*xxxxx*.rpm
   - ♦ Service Aids   ppc64-utils-*xxxxx*.rpm
   where *xxxxx* represents a specific version of the RPM file.
2. If you do not have the service tools on your server, refer to Obtaining service and productivity tools for Linux.
3. After the service tools are installed to the server or partition running Linux, type the following at a Linux command prompt:

   ```
   /usr/sbin/update_flash -c
   ```

   The update_flash -c command might run for 10 or more minutes.
4. Once the update completes, choose from the following options:
   - ♦ If you are committing a firmware fix level that begins with SF220, use the manual process to shut down and restart the server. **This ends the procedure.**
   - ♦ If you are committing a firmware fix level that begins with SF222 or higher, there is no need to shut down and restart the server. **This ends the procedure.**

Parent topic: Installing a firmware (Licensed Internal Code) fix permanently

Upgrading to a new firmware (Licensed Internal Code) release through the HMC

Find out how to upgrade to a new firmware (Licensed Internal Code) release through the HMC.

The instructions for upgrading to a new firmware release through an HMC are included in the procedures for updating firmware through the HMC. For details, see the following:

- Getting server and power subsystem firmware fixes through an HMC with an Internet connection
- Getting server firmware and power subsystem firmware fixes through an HMC using a CD, FTP server, or hard drive

Note: Upgrading firmware through an operating system is identical to updating the firmware.

Parent topic: Getting server firmware and power subsystem firmware fixes and upgrades

Getting I/O adapter and device firmware fixes

Learn how to apply I/O adapter and device firmware fixes.

How you apply fixes will depend on the type of fix you are applying, whether you have an Internet connection from your HMC or server, and the operating system you are using.

- **Getting I/O adapter and device firmware fixes through an HMC with an Internet connection (AIX only)**
  Learn how to get I/O adapter and device firmware fixes with an HMC with an Internet connection.
- **Getting I/O adapter and device firmware fixes through an HMC using CD or an FTP server (AIX only)**
  Learn how to get I/O adapter and device firmware fixes through an HMC when you want to use a CD or an FTP server to obtain the fix (for AIX only).
- **Getting I/O adapter and device firmware fixes through AIX or Linux**
  Learn how to get I/O adapter and device firmware fixes through AIX or Linux.
- **Updating the firmware of the devices that the Virtual I/O Server manages**
  Learn how to update the firmware of the devices that the Virtual I/O Server manages.

Parent topic: Getting fixes and upgrades

Getting I/O adapter and device firmware fixes through an HMC with an Internet connection (AIX only)

Learn how to get I/O adapter and device firmware fixes with an HMC with an Internet connection.

The I/O adapter and device firmware is the part of the Licensed Internal Code that enables hardware, such as Ethernet PCI adapters or disk drives.

Parent topic: Getting I/O adapter and device firmware fixes

Task 1. Ensure that you have an Internet connection

To download fixes from the service and support system or Web site to your HMC or server, you must have a connection to service and support either through a modem, direct or indirect Internet, or pass-through system.

To verify that the service connection is working, perform the following steps:

1. In the navigation area, open Service Applications.
2. Select Remote Support.
3. Select Customize Outbound Connectivity.

4. Select the tab for the type of outbound connectivity that you chose for your HMC (Local Modem, Internet VPN, or Pass-Through Systems). For more information about these settings, see Specifying the connection type from the HMC.

Note: If a connection to service and support does not exist, set up the service connection before proceeding with this procedure. For instructions on how to set up a connection to service and support, see Setting up AIX, Linux, and the HMC to connect to service and support.

5. Click Test.
6. Verify that the test completes successfully. If the test is not successful, troubleshoot your connectivity and correct the problem before proceeding with this procedure.

Task 2. Apply the I/O adapter and device firmware fix

1. From the HMC, expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Licensed Internal Code.
4. In the Target Object Selection window, click the target system, and click OK.
5. In the Change Licensed Internal Code window, select Start Change Licensed Internal Code wizard, and click OK.
6. In the Specify LIC Repository window, choose from the following options:
   - If the HMC or server *is* connected to the Internet, select the repository location from which you want to download the fix, and click OK. The following options are available:
     - ◊ Service Web site (This site provides the most recent level of fixes. You need a direct Internet connection to access this site.)
     - ◊ Support system (This site provides all available levels of fixes. You can use a modem or direct Internet connection to access this site.)
     For more information about each of the repository locations, click Help.
7. In the Change Licensed Internal Code wizard welcome window, click Next.

Note: If there are no fixes available, a message is displays that no fixes are available and targets are up to date. In this situation, click Cancel to end the task.

One of two windows is displayed, depending on the type of firmware fixes that are currently available to download and install from the selected repository:

   - If server firmware fixes or power subsystem firmware fixes are available, the Change Licensed Internal Code wizard window is displayed with Managed System and Power LIC preselected.
   Choose one of the following options:
     - ◊ If you want to download and install the server firmware fixes or power subsystem fixes now, click Next, and follow the instructions in the subsequent windows to install the server firmware fixes or power subsystem fixes.
       Note:
         a. For all models except model 5/7*x* and 5/9*x* servers, install HMC fixes before you install server firmware fixes.
         b. For model 5/7*x* and 5/9*x* servers, you *must* install HMC fixes before you install server or power subsystem firmware fixes. Then either install the server and power subsystem firmware fixes together, or install the power subsystem and then the server firmware fixes.

     - ◊ If you do not want to install the server firmware fixes or power subsystem fixes now, deselect Managed System and Power LIC, and click Next.
   - If I/O adapter and device firmware fixes are available, the Change Licensed Internal Code wizard window is displayed, with I/O LIC either preselected or not selected.
8. In the Change Licensed Internal Code wizard window, ensure that I/O LIC is selected, and click Advanced Options.
9. In the Licensed Internal Code Survey Results window, select the adapters or devices for which you want to download and install firmware fixes, and click OK.

Note: The system preselects the adapters or devices with the following characteristics:

- ♦ The HMC can manage the adapters or devices.
- ♦ Firmware fixes are currently available.
- ♦ The adapters or devices do not need to be taken offline when you install the firmware fixes.

You can change the preselected adapters or devices in the table to identify the I/O adapter and device firmware fixes that you want to install.

Use the information in the Effect column to determine whether the adapters or devices require you to shut down the adapter or device when you install the I/O adapter or device firmware fixes.

Use the information in the Suggested Action column to determine whether the HMC can manage the I/O adapters or devices listed in the table. If the Suggested Action column indicates `Cannot Manage,` you need to download and install the I/O adapter and device firmware fix through the operating system. Refer to the procedure to get the fixes through the operating system.

For more information about the table, click Help.

10. In the Change Licensed Internal Code wizard window, click Next.
11. In the Hardware Management Console License Agreement window, read the agreement and click Accept.
12. In the Confirm the Action window, perform the required actions, and click Finish.

Task 3. Verify that the fix installed correctly

1. Ensure that the managed systems and power frames (if you have a model 5/9*x* server) are in the correct state.
   a. From the HMC, select Server and Partition.
   b. Select Server Management and ensure that the State is Power Off, Standby, or Operating.
   c. If you have a model 5/9*x* server, select Frame Management and ensure that the state is Standby.
2. From the HMC, expand the Licensed Internal Code Maintenance folder.
3. Click the Licensed Internal Code Updates icon.
4. In the Contents area, click Change Licensed Internal Code.
5. In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to verify the firmware level.
6. In the Change Licensed Internal Code window, select View system information, and click OK.
7. In the Specify LIC Repository window, select None, and click OK. A window is displayed that shows system information for the target system.
8. In the window, click View I/O Levels.
9. In the Licensed Internal Code Survey Results window, verify that the firmware level indicated in the Current Level column matches the fix that you installed.
10. If the level of server firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.

Getting I/O adapter and device firmware fixes through an HMC using CD or an FTP server (AIX only)

Learn how to get I/O adapter and device firmware fixes through an HMC when you want to use a CD or an FTP server to obtain the fix (for AIX only).

The I/O adapter and device firmware is the part of the Licensed Internal Code that enables hardware, such as Ethernet PCI adapters or disk drives.

Parent topic: Getting I/O adapter and device firmware fixes

Task 1. Obtain the I/O adapter and device firmware fix

To obtain the I/O adapter and device fix, contact your next level of support.

Task 2. Apply the I/O adapter and device firmware fix

1. From the HMC, expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Licensed Internal Code.
4. In the Target Object Selection window, click the target system, and click OK.
5. In the Change Licensed Internal Code window, select Start Change Licensed Internal Code wizard, and click OK.
6. In the Specify LIC Repository window, choose from the following options:
   - If you have a fix CD for this procedure, select DVD drive to install the fix from CD, and click OK.
   - If you put the fix on an FTP server, select FTP site and click OK.

   For more information about each of the repository locations, click Help.
7. In the Change Licensed Internal Code wizard welcome window, click Next.

   Note: If there are no fixes available, a message is displays that no fixes are available and targets are up to date. In this situation, click Cancel to end the task.

   One of two windows is displayed, depending on the type of firmware fixes that are currently available to download and install from the selected repository:

   - If server firmware fixes or power subsystem firmware fixes are available, the Change Licensed Internal Code wizard window is displayed with Managed System and Power LIC preselected.
     Choose one of the following options:
     - ◊ If you want to download and install the server firmware fixes or power subsystem fixes now, click Next, and follow the instructions in the subsequent windows to install the server firmware fixes or power subsystem fixes.
       Note:
         a. For all models except model 5/7x and 5/9x servers, install HMC fixes before you install server firmware fixes.
         b. For model 5/7x and 5/9x servers, you *must* install HMC fixes before you install server or power subsystem firmware fixes. Then either install the server and power subsystem firmware fixes together, or install the power subsystem and then the server firmware fixes.

     - ◊ If you do not want to install the server firmware fixes or power subsystem fixes now, deselect Managed System and Power LIC, and click Next.
   - If I/O adapter and device firmware fixes are available, the Change Licensed Internal Code wizard window is displayed, with I/O LIC either preselected or not selected.
8. In the Change Licensed Internal Code wizard window, ensure that I/O LIC is selected, and click Advanced Options.
9. In the Licensed Internal Code Survey Results window, select the adapters or devices for which you want to download and install firmware fixes, and click OK.

   Note: The system preselects the adapters or devices with the following characteristics:

   - The HMC can manage the adapters or devices.
   - Firmware fixes are currently available.
   - The adapters or devices do not need to be taken offline when you install the firmware fixes.

   You can change the preselected adapters or devices in the table to identify the I/O adapter and device firmware fixes that you want to install.

Use the information in the Effect column to determine whether the adapters or devices require you to shut down the adapter or device when you install the I/O adapter or device firmware fixes.

Use the information in the Suggested Action column to determine whether the HMC can manage the I/O adapters or devices listed in the table. If the Suggested Action column indicates `Cannot Manage,` you need to download and install the I/O adapter and device firmware fix through the operating system. Refer to the procedure to get the fixes through the operating system.

For more information about the table, click Help.

10. In the Change Licensed Internal Code wizard window, click Next.
11. In the Hardware Management Console License Agreement window, read the agreement and click Accept.
12. In the Confirm the Action window, perform the required actions, and click Finish.

Task 3. Verify that the fix installed correctly

1. Ensure that the managed systems and power frames (if you have a model 5/9x server) are in the correct state.
   a. From the HMC, select Server and Partition.
   b. Select Server Management and ensure that the State is Power Off, Standby, or Operating.
   c. If you have a model 5/9x server, select Frame Management and ensure that the state is Standby.
2. From the HMC, expand the Licensed Internal Code Maintenance folder.
3. Click the Licensed Internal Code Updates icon.
4. In the Contents area, click Change Licensed Internal Code.
5. In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to verify the firmware level.
6. In the Change Licensed Internal Code window, select View system information, and click OK.
7. In the Specify LIC Repository window, select None, and click OK. A window is displayed that shows system information for the target system.
8. In the window, click View I/O Levels.
9. In the Licensed Internal Code Survey Results window, verify that the firmware level indicated in the Current Level column matches the fix that you installed.
10. If the level of server firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.

Getting I/O adapter and device firmware fixes through AIX or Linux

Learn how to get I/O adapter and device firmware fixes through AIX or Linux.

The I/O adapter and device firmware is the part of the Licensed Internal Code that enables hardware, such as Ethernet PCI adapters or disk drives.

If you do not use an HMC to manage your server, you must get your fixes through your operating system.

To download and install the I/O adapter and device firmware fixes, contact service and support.

Parent topic: Getting I/O adapter and device firmware fixes

Updating the firmware of the devices that the Virtual I/O Server manages

Learn how to update the firmware of the devices that the Virtual I/O Server manages.

To update the firmware for devices managed by the Virtual I/O Server or Integrated Virtualization Manager, choose from the following options:

- To update the device's firmware using the Integrated Virtualization Manager, see Updating the Virtual I/O Server's firmware and device microcode
- To update the device's firmware using the command-line interface, refer to the following command descriptions:
    - invscout Command
    - Lsfware Command
    - Ldfware Command

Parent topic: Getting I/O adapter and device firmware fixes

Getting operating system fixes

Learn how to download and install fixes for your operating systems.

To keep your operating system or logical partitions running smoothly, it is important that you install fixes for your operating system code when fixes are available.

To learn how to access fixes for your operating systems, contact service and support.

Parent topic: Getting fixes and upgrades

Getting fixes for the Virtual I/O Server

Learn about getting updates to the firmware on the Virtual I/O Server, and for the firmware on the devices that the Virtual I/O Server manages.

Choose from the following options:

- To update the firmware on the Virtual I/O Server, refer to Updating the Virtual I/O Server's firmware and device microcode.
- To update the firmware on the devices that the Virtual I/O Server manages, refer to Updating the firmware of the devices that the Virtual I/O Server manages.

Parent topic: Getting fixes and upgrades

Getting fixes for a clustered environment

Learn how to get fixes for the clustered server.

There are several types of fixes you might need to apply when you use a clustered environment. The fixes include server firmware, HMC if you have one, I/O adapter and devices, and for your switches.

Choose the type of fixes you want to apply:

- For details on getting HMC machine code fixes, see Getting HMC machine code fixes and upgrades.
- For details on getting Server firmware fixes, see Getting server firmware and power subsystem firmware fixes and upgrades.
- For details on getting I/O adapter and device fixes, see Getting I/O adapter and device firmware fixes.
- For details on getting Operating system fixes, see Getting operating system fixes.

Parent topic: Getting fixes and upgrades

Managing firmware (Licensed Internal Code) fixes

Learn about tasks you can perform to manage your server and power subsystem firmware fixes.

- **Ensuring you have a connection to service and support**
  Find out how to ensure that you have a connection to service and support.
- **Determining your HMC machine code version and release**
  Find out how to view the HMC machine code version and release.
- **Viewing the firmware history or fix cover letter**
  Find out how to view the firmware history or fix cover letter.
- **Viewing existing firmware (Licensed Internal Code) levels**
  Find out how to view the level of firmware that currently runs on your server.
- **Viewing available firmware (Licensed Internal Code) levels**
  Find out how to view the levels of firmware that are available for you to download as fixes.
- **Downloading a fix to an FTP server**
  Find out how to download a fix to an FTP server.
- **Removing the current firmware (Licensed Internal Code) level**
  Find out how to remove the current level of firmware so you can return to a previous level of server firmware or power subsystem firmware.

Parent topic: Fixes and upgrades

Ensuring you have a connection to service and support

Find out how to ensure that you have a connection to service and support.

To download fixes from the service and support system or Web site to your HMC or server, you must have a connection to service and support either through a modem, direct or indirect Internet, or pass-through system.

To verify that the service connection is working, perform the following steps:

1. In the navigation area, open Service Applications.
2. Select Remote Support.
3. Select Customize Outbound Connectivity.
4. Select the tab for the type of outbound connectivity that you chose for your HMC (Local Modem, Internet VPN, or Pass-Through Systems). For more information about these settings, see Specifying

the connection type from the HMC.

> **Note:** If a connection to service and support does not exist, set up the service connection before proceeding with this procedure. For instructions on how to set up a connection to service and support, see Setting up AIX, Linux, and the HMC to connect to service and support.

5. Click Test.
6. Verify that the test completes successfully. If the test is not successful, troubleshoot your connectivity and correct the problem before proceeding with this procedure.

Parent topic: Managing firmware (Licensed Internal Code) fixes

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Determining your HMC machine code version and release

Find out how to view the HMC machine code version and release.

The level of HMC machine code that you have will determine the available features, including concurrent server firmware maintenance and enhancements to upgrading to a new release.

1. In the navigation area, open Licensed Internal Code Maintenance.
2. Select HMC Code Update.
3. In the contents area, look for the version and release of your HMC machine code in the Status area.
4. Record the version and release.
5. If you need to update your HMC machine code version and release, see Getting HMC machine code fixes and upgrades.

Parent topic: Managing firmware (Licensed Internal Code) fixes

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Viewing the firmware history or fix cover letter

Find out how to view the firmware history or fix cover letter.

Server and power subsystem firmware fixes can correct known problems or add new function to the code in your current firmware release. To find out what problems the firmware fix will correct, or to find out what new function is included in the firmware fix, you can view the firmware history or fix cover letter.

- **Viewing the firmware cover letter with an HMC**
  Find out how to view the firmware cover letter with an HMC.
- **Viewing the firmware history for AIX or Linux**
  Find out how to view the firmware history information for AIX or Linux.

Parent topic: Managing firmware (Licensed Internal Code) fixes

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Viewing the firmware cover letter with an HMC

Find out how to view the firmware cover letter with an HMC.

To view the firmware cover letter, follow these steps:

1. Expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Internal Code.
4. In the Target Object Selection window, click the target system, and click OK.
5. In the Change Internal Code window, select Start Change Internal Code wizard, and click OK.
6. In the Specify LIC Repository window, select the repository location from which you want to view the fix cover letter, and click OK. For more information about each of the repositories, click Help.
7. In the Change Internal Code wizard welcome window, click Next

   Note: If no fixes are available, a message is displayed that indicates no fixes are available and targets are up to date. In this situation, click Cancel to end the task.

8. In the Change Internal Code wizard window, ensure that Managed System and Power LIC is selected, and click Advanced Options.
9. In the Managed System and Power Licensed Internal Code (LIC) Concurrency window, select the managed system, and click View information.
10. In the Managed System and Power Licensed Internal Code (LIC) Level Details window, select the LIC Type for which you want to view the firmware fix cover letter, and click View Details.

    For example, you might select Managed System. The firmware fix cover letter is displayed.
11. Read the cover letter to learn about what problems the firmware fix will correct, or to find out what new function is included in the firmware fix.

Parent topic: Viewing the firmware history or fix cover letter

Viewing the firmware history for AIX or Linux

Find out how to view the firmware history information for AIX or Linux.

You can either view the firmware history information that accompanies the fix CDs, or contact service and support for more information.

Parent topic: Viewing the firmware history or fix cover letter

Viewing existing firmware (Licensed Internal Code) levels

Find out how to view the level of firmware that currently runs on your server.

You can view the current and backup levels of server and power subsystem firmware on the managed system.

- **Using the HMC to view the existing firmware (Licensed Internal Code) levels**
  Learn how to view the level of firmware that currently runs on your server using the HMC.
- **Using the ASMI to view the existing level of server firmware**
  Find out how to use the ASMI to view the level of firmware that currently runs on your server.

- **Using the AIX or Linux command line to view the existing firmware level**
  Learn how to view the current firmware level using the AIX or Linux command line.

Parent topic: Managing firmware (Licensed Internal Code) fixes

Using the HMC to view the existing firmware (Licensed Internal Code) levels

Learn how to view the level of firmware that currently runs on your server using the HMC.

1. From the HMC, expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Licensed Internal Code for the current release.
4. In the Target Object Selection window, click the target system, and click OK. The target is the managed system for which you want to verify the firmware level.
5. In the Change Licensed Internal Code window, select View system information, and click OK.
6. In the Specify LIC Repository window, select None, and click OK. A window is displayed that shows system information for the target system.
   - ♦ The *Installed Level* indicates the level of firmware that has been installed and will be installed into memory after the managed system is powered off and powered on.
   - ♦ The *Activated Level* indicates the level of firmware that is active and running in memory.
   - ♦ The *Accepted Level* indicates the backup level of firmware. You can return to the backup level of firmware if you decide to remove the installed level.
7. Record the installed level and click Close.
8. Click Cancel.

Parent topic: Viewing existing firmware (Licensed Internal Code) levels

Using the ASMI to view the existing level of server firmware

Find out how to use the ASMI to view the level of firmware that currently runs on your server.

On the ASMI Welcome pane, view the existing level of server firmware in the upper-right corner below the copyright statement, for example, SF220_006.

Parent topic: Viewing existing firmware (Licensed Internal Code) levels

Using the AIX or Linux command line to view the existing firmware level

Learn how to view the current firmware level using the AIX or Linux command line.

You must have AIX diagnostics installed on your server to perform this task

1. Choose from the following options:
   - ♦ To use the AIX command line, continue with the next step.
   - ♦ To use the Linux command line, continue with step 3.
   - ♦ To use the AIX or Linux command line when you are using an ESCALA PL 245T/R ystem, continue with step 5.
2. At an AIX command line, enter the following command:

   ```
   lsmcode
   ```

The existing levels of server firmware are displayed. For example, you might see output similar to the following:

```
The current permanent system firmware image is SF220_005.
The current temporary system firmware image is SF220_006.
The system is currently booted from the temporary image.
```

Note:

      a. The permanent level is also known as the backup level.
      b. The temporary level is also known as the installed level.
      c. The system was booted from the temporary side, so at this time the temporary level is also the activated level.

3. To view existing levels of server firmware for Linux, you must have the following service tools installed on your server:
   ♦ Platform Enablement Library   librtas-xxxxx.rpm
   ♦ Service Aids   ppc64-utils-xxxxx.rpm
   ♦ Hardware Inventory   lsvpd-xxxxx.rpm
   where xxxxx represents a specific version of the RPM file.
4. After the service tools are installed on the server running Linux, enter the following at a Linux command line:

```
lsmcode
```

The existing level of server firmware is displayed. For example, you might see output similar to the following:

```
Version of system firmware is: SF220_006 (t)  SF220_005 (p)  SF220_006 (t)
```

The following table provides descriptions for each of the server firmware levels displayed in the output.

Server firmware levels displayed		
SF220_006 (t)	SF220_005 (p)	SF220_006 (t)
The installed level. Also known as the temporary level.	The backup level. Also known as the permanent level.	The activated level. The level on which the server is currently running.

5. If you have an ESCALA PL 245T/R ystem, choose from the following options:
   ♦ If are using AIX, continue with the next step.
   ♦ If you are using Linux, continue with step 7.
6. At an AIX command line, enter the following command:

```
lsmcode
```

The existing levels of server firmware are displayed. For example, you might see output similar to the following:

```
The current permanent system firmware image is AT061_055.
The current temporary system firmware image is AT061_058.
The system is currently booted from the temporary image.
```

Note: When the lsmcode command is run on an ESCALA PL 245T/R ystem, the temporary or permanent side of the flash might report _UNKNOWN_ for the firmware level. This occurs because there is only one level of base motherboard controller firmware. The level is _UNKNOWN_ when it is not included with the system firmware.

When you install new firmware, it is installed onto the temporary side by default. This new firmware level includes a new level of base motherboard controller code, and will cause _UNKNOWN_ to be

reported for the permanent side. This is not a problem; it indicates that the firmware levels in the flash are not a combination that is included from the factory.

To update the firmware so that _UNKNOWN_ is not reported, perform the following steps:

     a. Perform a commit operation using the appropriate operating system command.
     b. After the commit operation is complete, restart the system.
     c. When the system has restarted and the operating system is running, rerun the lsmcode command. Both the T and P should report a level (such as AT206_061) instead of _UNKNOWN_.

7. To view existing levels of server firmware for Linux, you must have the following service tools installed on your server:
     ♦ Platform Enablement Library   librtas-xxxxx.rpm
     ♦ Service Aids   ppc64-utils-xxxxx.rpm
     ♦ Hardware Inventory   lsvpd-xxxxx.rpm
where xxxxx represents a specific version of the RPM file.
8. After the service tools are installed to the server running Linux, enter the following at a Linux command line:

```
lsmcode
```

The existing levels of server firmware are displayed. For example, you might see output similar to the following:

```
Version of system firmware is: AT061_058(t)  AT061_055(p)  AT061_058(t)
```

Note: When the lsmcode command is run on an ESCALA PL 245T/R ystem, the temporary or permanent side of the flash might report _UNKNOWN_ for the firmware level. This occurs because there is only one level of base motherboard controller firmware. The level is _UNKNOWN_ when it is not included with the system firmware.

When you install new firmware, it is installed onto the temporary side by default. This new firmware level includes a new level of base motherboard controller code, and will cause _UNKNOWN_ to be reported for the permanent side. This is not a problem; it indicates that the firmware levels in the flash are not a combination that is included from the factory.

To update the firmware so that _UNKNOWN_ is not reported, perform the following steps:

     a. Perform a commit operation using the appropriate operating system command.
     b. After the commit operation is complete, restart the system.
     c. When the system has restarted and the operating system is running, rerun the lsmcode command. Both the T and P should report a level (such as AT206_061) instead of _UNKNOWN_.

The following table provides descriptions for each of the server firmware levels displayed in the output.

Server firmware levels displayed		
AT061_058 (t)	AT061_055 (p)	AT061_058 (t)
The temporary level.	The permanent level.	The level on which the server is currently running.

Parent topic: Viewing existing firmware (Licensed Internal Code) levels

Viewing available firmware (Licensed Internal Code) levels

Find out how to view the levels of firmware that are available for you to download as fixes.

To view available firmware fixes without an HMC, contact service and support.

- **Viewing available firmware levels with an HMC (with an Internet connection)**
Find out how to view the levels of firmware that are available for you to download as fixes.

Parent topic: Managing firmware (Licensed Internal Code) fixes

Viewing available firmware levels with an HMC (with an Internet connection)

Find out how to view the levels of firmware that are available for you to download as fixes.

1. From the HMC, expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Internal Code for the current release.
4. In the Target Object Selection window, click the target system, and click OK.
5. In the Change Internal Code window, select View system information and click OK.
6. In the Specify LIC Repository window, select the repository location from which you want to view available firmware fixes, and click OK. The following options are available:
   - **Service Web site** (This site provides the most recent level of fixes. You need a direct Internet connection to access this site.)
   - Support system (This site provides all available levels of fixes. You can use a modem or direct Internet connection to access this site.)
   - **DVD-RAM media**: Select this option if you previously put the fix on CD and it is in the DVD drive on the HMC.

     Note: If you choose the DVD-RAM media repository and receive an I/O Error when using a CD that you created, it might mean that the software you used to create the CD does not conform to the writing of temporary records requirements of the HMC.

   - FTP site: Select this option if you previously downloaded the fix to an FTP site. (This site would be setup previously by your organization's advanced support personnel.) An FTP server is any system on which the FTP server protocol is activated. If you select the FTP site, you need to know the following information:

     Note: Usually, a PC has only the FTP client active.

       ◊ FTP site - The fully qualified host and domain name of the FTP server from which you want to download the fix.
       ◊ User ID - Your user ID for the FTP server.
       ◊ Password - Your password for the FTP server.
       ◊ Directory - The directory on the FTP server that holds the server or power subsystem firmware fix. You can specify the default directory `/opt/ccfw/data` if you placed the fix in that directory, or you can change the directory path if the fix is in a directory other than the default directory. For example, if you downloaded the fix and copied it to a unique directory on the FTP server, you can specify that directory.
   - Hard drive: Select this option if you previously downloaded the fix to the hard disk drive on your HMC. (This repository can be selected after a successful Code Update for this release

was the last completed update to another Managed System or Power Subsystem by this HMC.)

Note: For more information about each of the repository locations, click Help.

A window is displayed that shows system information for the target system, including the retrievable levels of firmware.

Note: If no firmware fixes are available at the selected repository, the columns in the table will be empty.

7. Record the available firmware level or levels.

Parent topic: Viewing available firmware (Licensed Internal Code) levels

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Downloading a fix to an FTP server

Find out how to download a fix to an FTP server.

To use this method, your HMC must be connected to an open network. This method requires two steps. First you go to a Web site from which you download the fixes to the FTP server. Second, you use the HMC interface to install the fixes from the FTP server to the HMC.

To download an HMC fix to an FTP server, follow these steps:

Parent topic: Managing firmware (Licensed Internal Code) fixes

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Removing the current firmware (Licensed Internal Code) level

Find out how to remove the current level of firmware so you can return to a previous level of server firmware or power subsystem firmware.

You can remove the current level of firmware (Licensed Internal Code) if you want to return to a previous level. Use one of the following methods to remove the current level of server or power subsystem firmware, depending on your service environment.

- **Using an HMC to remove the current firmware (Licensed Internal Code) level**
  Find out how to remove the current level of firmware with an HMC so you can return to a previous level of server firmware or power subsystem firmware.
- **Using AIX commands and tools to remove the current server firmware level**
  Find out how to remove the current level of server firmware when you are using AIX.
- **Using the Linux command line to remove the current server firmware level**
  Find out how to use the Linux command line to remove the current level of firmware.

Parent topic: Managing firmware (Licensed Internal Code) fixes

---

Using an HMC to remove the current firmware (Licensed Internal Code) level

Find out how to remove the current level of firmware with an HMC so you can return to a previous level of server firmware or power subsystem firmware.

To remove the current level of firmware, follow these steps:

1. Expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the Contents area, click Change Internal Code.
4. In the Target Object Selection window, click the target system, and click OK. The target is the managed system from which you want to remove the current level of firmware.
5. In the Change Internal Code window, select Select advanced features and click OK.
6. In the Advanced Features window, select Remove and activate, and click OK.
7. In the Confirm the Action window, perform the required actions, and click OK.

   If the process is disruptive, the following message is displayed on the HMC interface: `Quiesce any applications currently running on your operating systems for the systems listed below`. In this situation, you need to manually shut down all of the applications and logical partitions to prevent the system from shutting them down abnormally.

   Use the usual procedures to shut down the logical partitions:

   ♦ AIX logical partitionsFor instructions, see Shutting down AIX.
   ♦ Linux logical partitionsFor instructions, see Shutting down Linux.
   At the end of a disruptive process, the managed system automatically returns to its original state.

Parent topic: Removing the current firmware (Licensed Internal Code) level

---

Using AIX commands and tools to remove the current server firmware level

Find out how to remove the current level of server firmware when you are using AIX.

Use one of the following methods to remove the current level of firmware:

- Using the diagnostic service aids to remove the current firmware level
- Using the update_flash command

Using the diagnostic service aids to remove the current firmware level

Note: To perform this task, you must meet the following criteria:

- You must have root user authority.
- You must start your server from the *permanent* side. For details, see Working with the temporary and permanent side of the service processor.

1. On the AIX command line, type `diag`.
2. Initialize the terminal type, if requested.
3. On the function selection screen, select **Tasks and Service Aids**.
4. On the task selection screen, scroll to the bottom of the list of options, and select **Update and Manage Flash**.
5. A screen similar to the following is displayed:

```
UPDATE AND MANAGE SYSTEM FLASH

The current permanent system firmware image is SF220_005.
The current temporary system firmware image is SF220_006.
The system is currently booted from the permanent image.

Validate and Update System Firmware
Update System Firmware
Reject the Temporary Image
```

6. Select Reject the Temporary Image, and press Enter.

Using the update_flash command to remove the current firmware level

Note: To perform this task, you must meet the following criteria:

- You must have root user authority.
- You must start your server from the *permanent* side. For details, see Working with the temporary and permanent side of the service processor.

Type the following at an AIX command line:

```
/usr/lpp/diagnostics/bin/update_flash -r
```

Parent topic: Removing the current firmware (Licensed Internal Code) level

Using the Linux command line to remove the current server firmware level

Find out how to use the Linux command line to remove the current level of firmware.

Note: To perform this task, you must meet the following criteria:

- You must have root user authority.
- You must start your server from the *permanent* side. For details, see Working with the temporary and permanent side of the service processor.

1. Ensure you have the following service tools installed on your server:
   ♦ Platform Enablement Library   librtas-*xxxxx*.rpm
   ♦ Service Aids   ppc64-utils-*xxxxx*.rpm

Note: The *xxxxx* represents a specific version of the RPM file.

2. Choose from the following options:
   ♦ If you do not have the service tools on your server, contact service and support.
   ♦ After the service tools are installed to the server or partition running Linux, type the following at a Linux command line:

   ```
   /usr/sbin/update_flash -r
   ```

Parent topic: Removing the current firmware (Licensed Internal Code) level

Troubleshooting firmware (Licensed Internal Code) fixes

Find solutions to problems that you might have while applying a server or power subsystem firmware fix.

- **HMC system information panel shows all zeros**
  Use this procedure to find out what to do when the system information panel shows all zeros in the fields for *installed*, *activated*, and *accepted levels*.
- **Message regarding a server that was previously managed by an HMC**
  Use this procedure to find out what to do if you receive a message regarding a server that was previously managed by an HMC.
- **Failed verification that the fix installed successfully**
  Find out what to do if the verification that the fix installed successfully fails.
- **Getting server firmware fixes through AIX or Linux when you are unable to start the operating system or server**
  Learn how to apply server firmware fixes through AIX or Linux when you are unable to start the operating system or server.

Parent topic: Fixes and upgrades

HMC system information panel shows all zeros

Use this procedure to find out what to do when the system information panel shows all zeros in the fields for *installed*, *activated*, and *accepted levels*.

1. Determine the current level of server firmware using the ASMI or the operating system. See Viewing existing firmware (Licensed Internal Code) levels.
2. Determine the current flash side by issuing the following command from the command line.

   ```
   lssyscfg -r sys
   ```
3. Record the information that is displayed in the results for curr_power_on_side (either temp or perm). You will need this information later in this procedure.
4. Prepare the managed system to shut down and restart on the other service processor flash side by performing these steps:
   a. Expand the Licensed Internal Code Maintenance folder.
   b. Click the Licensed Internal Code Updates icon.
   c. In the contents area, click Flash Side Selection.
   d. To shut down and restart to the other flash side of the service processor: In the Flash Side Selection window, select p-side or t-side based on the information recorded in step 3. If you recorded temp, select p-side, if you recorded perm, select t-side.
   e. Click OK.
   f. In the Confirm Flash Side Selection window, click OK.
5. Restart the managed system.

Note: This process is disruptive. You need to manually shut down all the applications and logical partitions to prevent the system from shutting them down abnormally during the process.

Use the usual procedures to shut down the logical partitions:

- ♦ To shut down AIX logical partitions, see Shutting down AIX.
- ♦ To shut down Linux logical partitions, see Shutting down Linux.

6. Perform a disruptive activate from the HMC:
    a. Expand the Licensed Internal Code Maintenance folder.
    b. Click the Licensed Internal Code Updates icon.
    c. In the Contents area, click Change Internal Code.
    d. In the Target Object Selection window, click the target system, and click OK.
    e. In the Change Internal Code window, select Select advanced features, and click OK.
    f. In the Advanced Features window, select Disruptive activate, and click **OK**. At the end of a disruptive process, the managed system automatically returns to its original state.

7. After the system restarts, use the HMC's system information panel to determine the activated level. Refer to Viewing existing firmware (Licensed Internal Code) levels.

8. Choose from the following options:
    - ♦ If the activated level is still 0, then there is a problem with both flash sides. Contact your next level of support to proceed.
    - ♦ If the activated level is a level other than 0, you can use the advanced feature "Install and activate (implied Retrieve)" option to install either the highest level or the specific update level you want. For details, see Getting a specific firmware (Licensed Internal Code) fix with an HMC.

Parent topic: Troubleshooting firmware (Licensed Internal Code) fixes

Message regarding a server that was previously managed by an HMC

Use this procedure to find out what to do if you receive a message regarding a server that was previously managed by an HMC.

The following message might be displayed if you previously used an HMC to manage the server, but you disconnected the HMC because you no longer want to use the HMC to manage the server:

```
This partition does not have the authority to perform the requested function.
Verify that this partition has service authority. If the problem persists after
granting the partition service authority, then contact your service support
structure.
```

In this situation, you need to perform the following tasks to solve the problem:

1. If you have logical partitions, ensure that one of your logical partitions is designated to be a service partition for the managed system. For more information, see Designating the service partition for your managed system.
2. Change the firmware update policy from Hardware Management Console (HMC) to Operating System. For instructions about how to change the policy, see Changing the firmware update policy.

Parent topic: Troubleshooting firmware (Licensed Internal Code) fixes

Failed verification that the fix installed successfully

Find out what to do if the verification that the fix installed successfully fails.

Perform this procedure if the verification that the fix installed successfully fails. Choose from the following options:

- Using the HMC
- Without an HMC

Failed verification of fix using an HMC

Follow these steps if the fix verification procedure failed:

1. Check the network connection on the HMC.
2. Retry the firmware update using a different repository.
3. If the problem persists, contact your next level of support.

Failed verification of fix without an HMC

Follow these steps if the fix verification procedure failed:

1. Retry the firmware update. If you created a CD or DVD for this procedure, use a new media.
2. If the problem persists, contact your next level of support.

Parent topic: Troubleshooting firmware (Licensed Internal Code) fixes

Getting server firmware fixes through AIX or Linux when you are unable to start the operating system or server

Learn how to apply server firmware fixes through AIX or Linux when you are unable to start the operating system or server.

The server firmware is the part of the Licensed Internal Code that enables hardware, such as the service processor.

Note: Installing the server firmware fixes through the operating system is a disruptive (nonconcurrent) process.

Perform tasks 1 through 4.

Parent topic: Troubleshooting firmware (Licensed Internal Code) fixes

Task 1. Determine the existing level of firmware

Use this procedure to determine the existing level of server firmware when you are unable to start the AIX or Linux operating system or server.

1. Insert the Standalone Diagnostics Version xxxxx CD into the CD drive on the server and boot the CD. If you need more information about how to boot the Standalone Diagnostics Version xxxxx CD, see Running the stand-alone diagnostics from CD.
2. Initialize the terminal type, if requested.

3. On the function selection screen, select Tasks and Service Aids.
4. On the task selection screen, scroll to the bottom of the list of options, and select Update and Manage Flash

Note: When the lsmcode command is run on an ESCALA PL 245T/R ystem, the temporary or permanent side of the flash might report _UNKNOWN_ for the firmware level. This occurs because there is only one level of base motherboard controller firmware. The level is _UNKNOWN_ when it is not included with the system firmware.

When you install new firmware, it is installed onto the temporary side by default. This new firmware level includes a new level of base motherboard controller code, and will cause _UNKNOWN_ to be reported for the permanent side. This is not a problem; it indicates that the firmware levels in the flash are not a combination that is included from the factory.

To update the firmware so that _UNKNOWN_ is not reported, perform the following steps:

a. Perform a commit operation using the appropriate operating system command.
b. After the commit operation is complete, restart the system.
c. When the system has restarted and the operating system is running, rerun the lsmcode command. Both the T and P should report a level (such as AT206_061) instead of _UNKNOWN_.

5. Record the information for the current temporary system firmware image.

Task 2. Obtain the Microcode Update Files & Discovery Tool CD

You will need to obtain the *Microcode Update Files & Discovery Tool* CD.

Task 3. Apply the server firmware fix

1. Insert the *Microcode Update Files & Discovery Tool* CD into the media device, select Validate and Update System Firmware, and press Enter.

   Note: If you receive a message stating: `This partition does not have the authority to perform the requested function,` see Message regarding a server that was previously managed by an HMC.
2. Select the appropriate device and press Enter.
3. Press F4. A list of firmware fix image files is displayed.
4. Select the image file that is similar to /microcode/SqnP5/01SF2xx_yyy_zzz.img.
5. Press F7. The server firmware level that you selected will be installed on the temporary side.

Task 4. Verify that the fix installed correctly

Use this procedure to verify the fix installed correctly.

1. Choose from the following options:
   ♦ To use the AIX or Linux command line (the operating system must be running and the diagnostics must be available), continue with the next step.
   ♦ To use the ASMI, view the level of server firmware displayed in the upper-right corner below the copyright statement on the ASMI Welcome pane; for example, SF220_006. If the level of

server firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.

2. Enter the following at a command line:

```
lsmcode
```

The existing levels of server firmware are displayed. For example, you might see output similar to the following:

```
The current permanent system firmware image is SF220_005.
The current temporary system firmware image is SF220_006.
The system is currently booted from the temporary image.
```

> **Note:**
>
> a. The permanent level is also known as the backup level.
> b. The temporary level is also known as the installed level.
> c. The system was booted from the temporary side, so at this time the temporary level is also the activated level.

3. If you are using an ESCALA PL 245T/R ystem, note the following:

> **Note:** When the lsmcode command is run on an ESCALA PL 245T/R ystem, the temporary or permanent side of the flash might report _UNKNOWN_ for the firmware level. This occurs because there is only one level of base motherboard controller firmware. The level is _UNKNOWN_ when it is not included with the system firmware.
>
> When you install new firmware, it is installed onto the temporary side by default. This new firmware level includes a new level of base motherboard controller code, and will cause _UNKNOWN_ to be reported for the permanent side. This is not a problem; it indicates that the firmware levels in the flash are not a combination that is included from the factory.
>
> To update the firmware so that _UNKNOWN_ is not reported, perform the following steps:
>
> a. Perform a commit operation using the appropriate operating system command.
> b. After the commit operation is complete, restart the system.
> c. When the system has restarted and the operating system is running, rerun the lsmcode command. Both the T and P should report a level (such as AT206_061) instead of _UNKNOWN_.

4. Verify that the level of server firmware displayed is the level that you installed.
5. If the level of server firmware displayed is not the level that you installed, see Failed verification that the fix installed successfully.

Additional information about getting fixes

Find additional information about getting fixes.

- **Using the AIX diagnostics to install the server firmware fix through AIX**
  Use this procedure if you want to use the AIX diagnostics to install the server firmware fix through AIX to the temporary side of the service processor.
- **Using the System Management Interface Tool to mount the fix CD for AIX**
  Use this procedure if you want to use SMIT to mount the fix CD for AIX.
- **Obtaining service and productivity tools for Linux**
  Find out about obtaining service and productivity tools for Linux.
- **Working with the temporary and permanent side of the service processor**
  Find out how to determine which side you are booting from, and how to switch to the other side if necessary.

Parent topic: Fixes and upgrades

Using the AIX diagnostics to install the server firmware fix through AIX

Use this procedure if you want to use the AIX diagnostics to install the server firmware fix through AIX to the temporary side of the service processor.

Note: If you plan to install the fix from CD using the AIX diagnostics, you will need to obtain the *Microcode Update Files & Discovery Tool* CD. The instructions are included in the procedure.

To install the server firmware fix using the AIX diagnostics, follow these steps:

1. Choose from the following options:
     - If you plan to install the fix from your hard drive, continue with step 2.
     - If you need to obtain the *Microcode Update Files & Discovery Tool* CD, contact service and support. Then continue with step 2.
2. On the AIX command line, enter the following:

   ```
   diag
   ```
3. Initialize the terminal type, if requested.
4. On the function selection screen, select Tasks and Service Aids.
5. On the task selection screen, scroll to the bottom of the list of options, and select Update and Manage Flash. A screen similar to the following is displayed:

   ```
   UPDATE AND MANAGE SYSTEM FLASH

   The current permanent system firmware image is SF220_005.
   The current temporary system firmware image is SF220_006.
   The system is currently booted from the temporary image.

   Validate and Update System Firmware
   Update System Firmware
   Commit the Temporary Image
   ```
6. Select Validate and Update System Firmware, and press Enter. A screen similar to the following is displayed:

   ```
   UPDATE AND MANAGE SYSTEM FLASH

   This service aid updates the system firmware. The flash update image
   file is copied from the source selected below, to
   the file /var/update_flash_image. Then the system is rebooted
   to perform the flash update.

   Select the source of the flash update image file:

   Removable Media
   File System
   ```

   Note: If you receive a message stating: `This partition does not have the authority to perform the requested function,` see Message regarding a server that was previously managed by an HMC.

   During the server firmware installation process, reference codes CA2799FD and CA2799FF are alternately displayed on the control panel. After the installation is complete, the system is automatically powered off and powered on.

7. Choose from the following options:
    a. If the fix is located on your hard drive, continue with step 8.
    b. If the fix is located on a CD, continue with step 12.
8. Select File System. A screen similar to the following is displayed.

```
UPDATE AND MANAGE SYSTEM FLASH


Enter the fully qualified path name of the file with the flash update
image.  The file will be copied to /var/update_flash_image.

When finished, use 'Commit' to continue.

    flash update image file
```

9. Enter the fully qualified path name of the file with the flash update image. The file will be copied to the **/var/update_flash_image** directory.
10. When finished, select Commit. The server firmware level that you selected will be installed on the temporary side.
11. Continue with step 17.
12. Insert the *Microcode Update Files & Discovery Tool* CD that contains the .img update file into the media drive on your server and select Removable Media. A screen similar to the following is displayed:

```
UPDATE AND MANAGE SYSTEM FLASH


This service aid updates the system firmware.
The file must be on removable media to update the flash.
The flash update image file is copied from the media,
then the system is rebooted to perform the flash update.
Select the device containing flash update image files.
Make selection, use 'Enter' to continue.
/dev/cd0
/dev/cd1
```

Note: If you receive a message stating: `This partition does not have the authority to perform the requested function,` see Message regarding a server that was previously managed by an HMC.

13. Select the appropriate device and press Enter. A screen similar to the following is displayed:

```
UPDATE AND MANAGE SYSTEM FLASH


Enter the flash update image file on the device. The file
will be copied to /var/update_flash_image.

When finished, use 'Commit' to continue.

flash update image file /microcod> +
```

14. Press F4. A list of firmware fix image files is displayed.
15. Select the image file that is similar to: **/microcode/SqnP5/01SF2xx_yyy_zzz.img**.
16. Press F7. The server firmware level that you selected will be installed on the temporary side.
17. To verify that the server firmware fix installed successfully, see Task 5. Verify that the fix installed correctly.
18. If you want to install the fix permanently, refer to Installing a firmware (Licensed Internal Code) fix permanently.

Parent topic: Additional information about getting fixes

Using the System Management Interface Tool to mount the fix CD for AIX

Use this procedure if you want to use SMIT to mount the fix CD for AIX.

If you are applying a server firmware fix through AIX and receive a message regarding mounting the CD, `mount: 0506-324 Cannot mount /dev/cd0 on /mnt`, use this procedure to fix the problem.

1. At an AIX command line, type one of the following commands depending on whether you use a graphics terminal or an ASCII terminal:
   - ♦ If you use a graphics terminal, type the following command:

     ```
     smit
     ```
   - ♦ If you use an ASCII terminal, type the following command:

     ```
     smitty
     ```

   Note: If you are unfamiliar with the System Management Interface Tool (SMIT), select Using Smit (information only) for information about how to use SMIT.

2. On the System Management screen, select System Storage Management (Physical and Logical Storage).
3. On the System Storage Management (Physical and Logical Storage) screen, select File Systems.
4. On the File Systems screen, select Mount a File System.
5. On the Mount a File System screen, specify the following values in the entry fields, and press Enter. Do not press Enter until you specify values in all of the required fields.

Table 1. Descriptions and entry field values in the System Management Interface Tool (SMIT)

Description	Entry Field
FILE SYSTEM name	`/dev/cd0`
DIRECTORY over which to mount	`/mnt`
TYPE of file system	`cdrfs`
FORCE the mount?	`yes`
REMOTE NODE containing the file system to mount	Note: Leave this field blank.
Mount as a REMOVABLE file system?	`yes`
Mount as a READ-ONLY system?	`yes`
Disallow DEVICE access via this mount?	`no`
Disallow execution of SUID and sgid programs in this file system?	`no`

6. To exit SMIT, press F3 several times or press F10.
7. To verify that the CD mounted successfully, type the following at an AIX command line:

   ```
   mount
   ```

   If the CD mounted successfully, a line of output similar to the following is displayed along with the date and time:

   ```
   /dev/cd0 /mnt cdrfs
   ```
8. Choose from the following options:
   - ♦ If the output is displayed, continue with the next step.
   - ♦ If the output is not displayed, repeat steps 2 through 7.
9. Continue with step 6 in "Task 3. View and unpack the RPM file that contains the server firmware" in the "Getting server firmware fixes through AIX or Linux" procedure.

Parent topic: Additional information about getting fixes

Obtaining service and productivity tools for Linux

Find out about obtaining service and productivity tools for Linux.

While performing firmware updates, running diagnostics, or running other commands at a Linux command line, you might need to have service and productivity tools installed for Linux. These tools might include the following:

- Platform Enablement Library   librtas-xxxxx.rpm
- Service Aids   ppc64-utils-xxxxx.rpm
- Hardware Inventory   lsvpd-xxxxx.rpm

  where xxxxx represents a specific version of the RPM file.

If your server *is not* connected to the Internet, you need to download the service tools to a PC or server that is connected to the Internet and burn a CD that contains the service tools. Next, you install the service tools from the CD to the server.

To download and unpack the service tools to your server or CD, contact service and support.

Parent topic: Additional information about getting fixes

Working with the temporary and permanent side of the service processor

Find out how to determine which side you are booting from, and how to switch to the other side if necessary.

- **Using the HMC to work with the temporary and permanent side of the service processor**
  Learn how to use the HMC to determine which side of the service processor you are booting from.
- **Using AIX or Linux commands to work with the temporary and permanent side of the service processor**
  Learn how to use AIX or Linux commands to determine which side of the service processor you are booting from.
- **Switching to the other side of the service processor**
  Learn how to use the HMC or ASMI to switch to the other side of the service processor, if necessary.

Parent topic: Additional information about getting fixes

Using the HMC to work with the temporary and permanent side of the service processor

Learn how to use the HMC to determine which side of the service processor you are booting from.

Note: You should usually be running on the Temporary side.

1. From the HMC command line, issue the following command:

```
lssyscfg -r sys
```

2. Identify the managed system you are working with by looking for the system number at the beginning of the block of output, and look for this parameter: curr_power_on_side.
3. Record the information that is displayed in the results for curr_power_on_side (either `temp` or `perm`). You will need this information later in this procedure if you decide to change the boot side.
4. If you need to change the boot side, refer to Switching to the other side of the service processor.

Parent topic: Working with the temporary and permanent side of the service processor

Using AIX or Linux commands to work with the temporary and permanent side of the service processor

Learn how to use AIX or Linux commands to determine which side of the service processor you are booting from.

Note: You should usually be running on the Temporary side.

1. Issue the following command at the AIX or Linux command line:

   ```
   lsmcode
   ```

   Note: If the `lsmcode` command does not work on the Linux command line, you need to obtain the Linux tools. See Obtaining service and productivity tools for Linux.

2. Record the information that is displayed. You will need this information later in this procedure if you need to change the boot side. The information that is displayed is similar to:
   ♦ AIX: The system is currently booted from the xx image (either temporary or permanent).
   ♦ Linux: The (b) booted side shows whether the firmware matches the temporary or permanent side code.

   ```
   system:SF220_006 (t)  SF220_005 (p)  SF220_006 (b)
   ```
3. If you need to change the boot side, refer to Switching to the other side of the service processor.

Parent topic: Working with the temporary and permanent side of the service processor

Switching to the other side of the service processor

Learn how to use the HMC or ASMI to switch to the other side of the service processor, if necessary.

- **Using the ASMI to switch to the other side of the service processor**
  Learn how to use the ASMI to switch to the other side of the service processor, if necessary.
- **Using the HMC to switch to the other side of the service processor**
  Learn how to use the HMC to switch to the other side of the service processor, if necessary.

Parent topic: Working with the temporary and permanent side of the service processor

Using the ASMI to switch to the other side of the service processor

Learn how to use the ASMI to switch to the other side of the service processor, if necessary.

Note:

1. You should usually be running on the Temporary side.
2. If you are working on an ESCALA PL 245T/R ystem, there is no way to force a boot from the permanent side if the image on the temporary side is valid and bootable. A permanent side boot will only occur if the temporary side image is corrupted.

Follow these steps to change the boot side and shut down and restart the system using the ASMI:

1. Use the normal procedures to shut down the logical partitions.

   Note: This process is disruptive. You need to manually shut down all the applications and logical partitions to prevent the system from shutting them down abnormally during the process.

     ♦ To shut down AIX logical partitions, see Shutting down AIX.
     ♦ To shut down Linux logical partitions, see Shutting down Linux.
2. On the ASMI Welcome pane, specify your user ID and password, and click Log In.
3. In the navigation area, expand Power/Restart Control and select Power On/Off System.
4. In the Firmware boot side for the next boot field, indicate to boot to the other boot side of the service processor. Select Permanent or Temporary based on the information you recorded earlier. If you recorded temp , select Permanent, if you recorded perm , select Temporary.
5. Choose one of the following to shut down and restart the managed system based on the state of the server:
     ♦ Click Save settings to save the selected options. The power state does not change.
     ♦ Click Save settings and power on/off. All selected options are saved and the system turns on or off. The power-on option is available only if the system is powered off. The power-off option is only available if the system is powered on.
     ♦ Click Save settings and continue server firmware boot to save the selected options, and turn the server firmware on or off. The option is available only if the server firmware is in *standby* mode.

Parent topic: Switching to the other side of the service processor

Using the HMC to switch to the other side of the service processor

Learn how to use the HMC to switch to the other side of the service processor, if necessary.

You should usually be running on the Temporary side.

Note: If you are working on an ESCALA PL 245T/R ystem, there is no way to force a boot from the permanent side if the image on the temporary side is valid and bootable. A permanent side boot will only occur if the temporary side image is corrupted.

Additional information about getting fixes

Follow these steps to change the boot side and shut down and restart the system using an HMC:

1. Expand the Licensed Internal Code Maintenance folder.
2. Click the Licensed Internal Code Updates icon.
3. In the contents area, click Flash Side Selection.
4. Indicate to shut down and restart to the other flash side of the service processor. In the Flash Side Selection window, select p-side or t-side based on the information you recorded earlier. If you recorded temp, select p-side, if you recorded perm, select t-side.
5. Click OK.
6. In the Confirm Flash Side Selection window, click OK.
7. Shut down and restart the managed system using the usual procedures to shut down the logical partitions:

   Note: This process is disruptive. You need to manually shut down all the applications and logical partitions to prevent the system from shutting them down abnormally during the process.

   ♦ To shut down AIX logical partitions, see Shutting down AIX.
   ♦ To shut down Linux logical partitions, see Shutting down Linux.
   At the end of a disruptive process, the managed system automatically returns to its original state.
8. Perform a disruptive activate from the HMC by completing the following steps.
   a. Expand the Licensed Internal Code Maintenance folder.
   b. Click the Licensed Internal Code Updates icon.
   c. In the Contents area, click Change Internal Code.
   d. In the Target Object Selection window, click the target system, and click OK.
   e. In the Change Internal Code window, select Select advanced features, and click OK.
   f. In the Advanced Features window, select Disruptive activate, and click **OK**.

   At the end of a disruptive process, the managed system automatically returns to its original state.

Parent topic: Switching to the other side of the service processor

Getting started with troubleshooting

Learn how you and your server can manage problems, and ways you can detect that problems have occured.

- **Managing problems**
  Use this information to determine what you should do to manage problems, including how to use your systems to help you manage problems.
- **Detecting problems**
  Learn how to detect problems that have occurred on your system by using the attention light, messages, and reference codes.

Parent topic: Customer service, support, and troubleshooting

Managing problems

Use this information to determine what you should do to manage problems, including how to use your systems to help you manage problems.

Your system provides functions for problem logging, tracking, reporting, analysis, and correction. However, oftentimes you will also need to detect, analyze, and report a problem too.

- **How you manage problems**
  Learn about how you can detect, analyze and report a problem.

- **How your system manages problems**
  Learn how your system can provide functions for problem logging and tracking, reporting, analysis, and correction.

Parent topic: Getting started with troubleshooting

How you manage problems

Learn about how you can detect, analyze and report a problem.

When your server was purchased, you might have purchased a server with warranty options that enable you or someone in your company to repair the server, even during the warranty period. Use the following list to determine your troubleshooting and service course of action.

1. You might receive an indication that your server has a problem. For example, the system attention light comes on or you receive notification of a problem. Sometimes you might sense something is wrong without any precise indication.
2. You perform procedures to determine the source of the problem, find possible recovery actions, and gather detailed information about the problem. See Beginning problem analysis.
3. If you are unable to correct the problem, contact your next level of support or your service provider.
4. If your service provider is contacted, one of the following will occur:
   - If the service action is a customer responsibility, you will be instructed to take the appropriate action. If a part needs to be replaced that is customer-replaceable, it will be included with a pointer to the installation instructions. For details, see Installing features.
   - If the service action requires assistance, you will be directed to contact your next level of support or your hardware service provider.

If you performed a service action, you will be directed to the appropriate verification procedure.

Parent topic: Managing problems

How your system manages problems

Learn how your system can provide functions for problem logging and tracking, reporting, analysis, and correction.

Your system provides functions for problem logging and tracking, problem reporting, problem analysis, and problem correction. The problem management process helps you and your service provider quickly and accurately manage problems as they occur on the system.

Note: In this topic, control panel and operator panel are synonymous.

Here is an example of the flow when managing a problem:

1. The server or operating system detects an error.

2. A problem record is created with configuration information, a reference code, the name of the reporting device, and other information.
3. The error is recorded.
4. One or more of the following events will occur:
    ♦ An error notification is sent to the system console. Possible consoles include the following:
        ◊ Hardware Management Console (HMC)
        ◊ Advanced System Management Interface (ASMI)
        ◊ Integrated Virtualization Manager
        ◊ ASCII terminal
    ♦ If you configured the e-mail notification option, an e-mail notification is sent to a designated user. You can enable e-mail notification by using the Electronic Service Agent on the HMC.
    ♦ The system attention light comes on.
    ♦ A reference code might be displayed on the control panel or on the HMC.
    ♦ If you are using an HMC, a serviceable event is shown in the Service Focal Point application on the HMC.
5. After there is a message or reference code available, you can use that information to begin problem analysis. See Beginning problem analysis.

The results of problem analysis are automatically stored, along with the data that was collected. At this point, you can manually report the problem to your hardware service provider, or you can configure your server, HMC, or other console for electronic problem reporting. To learn how to set up your service environment for electronic problem reporting, see Setting up your server to connect to service and support.

Various tools are available to help you manage the problems on your server. See the following information to help you troubleshoot problems on the server:

- Detecting problems
- Beginning problem analysis
- Reporting problems

Parent topic: Managing problems

Detecting problems

Learn how to detect problems that have occurred on your system by using the attention light, messages, and reference codes.

- **Attention light overview**
  Learn more about the attention light and how you can use it to identify a problem.
- **Messages overview**
  Learn more about messages and how you can use them to identify a problem.
- **Reference codes overview**
  Learn more about the various types of reference codes and how they can help you identify a problem.

Parent topic: Getting started with troubleshooting

Attention light overview

Learn more about the attention light and how you can use it to identify a problem.

The attention indicator is activated whenever server firmware or logical partitions detect an event that is logged as a service action. The service action might be correctable by the system administrator, or it might require involvement of a service provider to do problem determination or exchange parts. The attention indicator is therefore a visual prompt to check the serviceable event logs.

All serviceable events will activate the attention indicator, and will prompt notification functions (if this feature is configured) in the operating systems or the HMC depending on where the error occurred, and if the server

is managed by an HMC.

The diagnostics in the server's firmware and in the operating systems determine if the event is severe enough that it should be reported to service and support, if electronic reporting has been configured. All serviceable events cause the attention indicator to be activated and the notification function to be prompted, including pager or e-mail, if it has been configured. Serviceable events that require a service provider will automatically prompt an electronic problem report to service and support if electronic problem reporting to service and support is configured.

Examples of serviceable events that activate the attention indicator but do not prompt electronic problem reporting include:

Note: These events will not automatically trigger electronic problem reporting to service and support but through the operating system or HMC, but the system administrator can choose to have the problems electronically reported if the electronic reporting function has been configured.

- Configuration errors, such as I/O adapters in the wrong slot.
- Ambient air temperature problems.
- Loss of communication between the server and the HMC where the most likely cause is a network problem

Examples of serviceable events that activate the attention indicator and will prompt electronic problem reporting:

- Adapter and device failures in an operating system
- Power supply failures in the server and I/O expansion units

The system attention indicator is designed to be activated when a serviceable event occurs and thereby provide a visual indication that the serviceable event logs have a new event. The administrator can then deactivate the system attention indicator using the HMC or the operating system depending on your environment. This allows the administrator to be alerted to a new problem if a new problem occurs. It is not necessary to wait until a problem is resolved before deactivating the system attention indicator. Deactivation is at the administrator's discretion.

Differences between the server firmware and the operating systems:

- **Serviceable event detected by server firmware**: The system attention indicator is activated and a serviceable event log is passed to the operating systems and to the HMC, if you have one. The HMC will provide notification and electronic problem reporting functions if the system is managed by an HMC. Otherwise, the operating system provides the notification and electronic problem reporting function.
- **Serviceable event detected by AIX and Linux**: The server or logical partition's attention indicator is activated, which also causes the system attention indicator on the server to be activated. The server or logical partition's attention indicator can be deactivated from the console in the diagnostic tools.
  - For HMC managed systems, the logical partition's attention indicator is on the HMC with the logical partition management functions. The serviceable event is sent to the HMC, and the HMC notification and electronic problem reporting functions are triggered.
  - For systems not managed by the HMC, the AIX or Linux notification and problem reporting functions are triggered.

There are several examples of why the attention light can be on, and what it might mean:

- If the system attention indicator is on (lit continuously), and there *is not a reference code* displayed in function 11 on the control panel or on the HMC, it means that you have a serviceable event in one of the logical partitions. See Beginning problem analysis.
- If the system attention indicator is on (lit continuously), and there *is a reference code* displayed in function 11 on the control panel or on the HMC, it means you need to analyze the problem. See Beginning problem analysis.

Where you view the attention light on your server will depend on the model you have. Also, if you have an HMC and your physical attention light illuminates, you will be notified with an attention icon that is displayed over the icon of the server that is affected. If there are logical partitions, the attention icon might also be seen over the logical partition that requires service. The attention icon is a yellow triangle with an exclamation point

!. When this icon is shown, check the physical attention light to verify that it is on.

Figure 1. Server icon with the attention light icon

Figure 2. Server icon without the attention light icon

To see where the attention light is shown on your server, choose the model that you are working with:

- All models *except* model ESCALA PL 850R/PL 1650R/R+ and ESCALA PL 6450R
- Model ESCALA PL 850R/PL 1650R/R+

Figure 3. Attention light for all models except model ESCALA PL 850R/PL 1650R/R+ and ESCALA PL 6450R
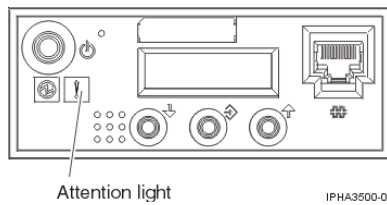
Figure 4. Attention light for model ESCALA PL 850R/PL 1650R/R+
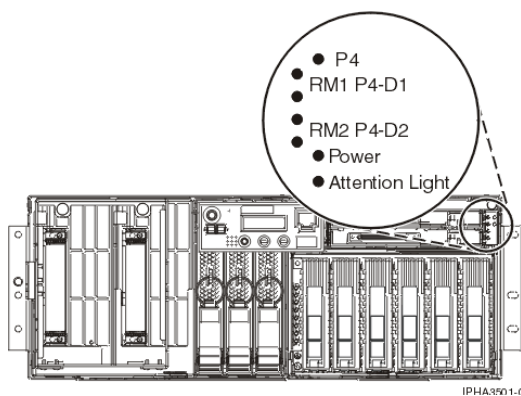
Note: The attention light for the model ESCALA PL 850R/PL 1650R/R+ is located in the upper-right corner, not on the control panel.

Parent topic: Detecting problems

Messages overview

Learn more about messages and how you can use them to identify a problem.

Your server sends informational and inquiry messages that provide you with important system information. Inquiry messages require you to respond. Informational messages allow you to keep track of system activities, jobs, users, and errors. Because messages provide information about your system, you should know how to handle messages when detecting and correcting problems.

Depending on which operating system is reporting the error, and whether you have a Hardware Management Console (HMC), the message is sent to one of the following places:

- AIX error messages are displayed in a window on your console. They also are e-mailed to a specified user or users. By default this is the root user, but notification might be sent to any e-mail address of your choice. You can use the Automatic Error Log and Notification task to configure this. For details, see Viewing AIX messages.
- HMC messages are sent to an e-mail address (if set up) and reported to the Service Focal Point. Refer to Using Service Focal Point for details. To view a list of HMC error codes, see HMC error codes.
- For Linux messages, see Viewing Linux messages.

Parent topic: Detecting problems

Reference codes overview

Learn more about the various types of reference codes and how they can help you identify a problem.

Reference codes are diagnostic aids that help determine the source of a hardware or operating system problem. When you perform the procedures in Beginning problem analysis, you will learn how to locate and record the reference codes, which can help you better understand the problem and how to fix it. Also, you might be able to find the code in the Reference codes list for customers for more information about resolving it.

The following are categories of status indicators that can be displayed in the control panel or console of the system or operating system.

- **Progress codes**: Progress codes (or checkpoints) offer information about the stages involved in powering on and performing an initial program load (IPL). Progress codes do not indicate an error, although in some cases, your server can pause indefinitely (hang). Only when you experience such a hang condition should you take any action based on a progress code. Progress codes appear in several formats:
    - An 8-digit hexadecimal number that begins with a C or D
    - A 3-digit hexadecimal number
    - A 4-digit hexadecimal number that begins with a 0 or 2
- **System reference codes (SRCs)**: System reference codes indicate a problem has originated in hardware, in Licensed Internal Code, or in the operating system. A server component generates an error code when it detects a problem. SRCs are strings of either 6 or 8 alphanumeric characters. SRCs appear in the following format:
    - An 8-character code, for example, A2xx1150, except those that begin with a C or D (progress codes) or H (HMC error codes)
    - A 6-character code, for example, xxxxxx, except those that begin with a 0 (HMC error codes)
- **HMC error codes**: The HMC error codes can be displayed in a window on the HMC during system configuration and operations. They contain messages and recovery actions regarding the HMC. They appear in the following formats:
    - A 6-digit error code that begins with 0
    - An 8-digit error code that begins with the letter H
- **Service request numbers (SRNs)**: These can be received after performing online or stand-alone diagnostics, or by error log analysis. They are used to determine the source of a hardware or operating-system problem. They are 5 to 8 characters in length, with hyphens appearing in SRNs that are 6, 7, or 8 characters in length (one example is 2600-101). If you receive an SRN, you should record it and contact your next level of support or your hardware service provider for help interpreting what it means.

As a group, these codes are referred to as *reference codes*. The type of code that is shown depends on the operating system you are using and the process you were performing when the code appeared. The codes are either displayed in an error message, recorded in a problem log entry, shown on the system control panel, e-mailed to a designated user, shown on the HMC in a window, or some combination of these. The system attention light might come on if the system detects a hardware error it cannot correct, or when an action is required.

Parent topic: Detecting problems

Beginning problem analysis

Start here to determine what caused a problem and learn how to recover from it.

Follow these steps to begin analyzing and handling the problem you are having.

1. Is your server an ESCALA PL 245T/R ?
    - ◆ Yes: Go to Diagnosing a problem with a 1/85 server.
    - ◆ No: Continue with the next step.
2. Are you troubleshooting the keyboard, video, and mouse (KVM) switch for the 1x8 or 2x8 console manager?
    - ◆ Yes: Go to Troubleshooting the keyboard, video, and mouse (KVM) switch for the 1x8 and 2x8 console manager.
    - ◆ No: Continue with the next step.
3. Is there an HMC attached to the failing server?
    - ◆ Yes: Continue with step 5.
    - ◆ No: Continue with the next step.
4. Is your system being managed by the Integrated Virtualization Manager?
    - ◆ Yes: Continue with step 13.
    - ◆ No: Refer to the appropriate procedure:
        - ◊ If you are having a problem with an AIX server, go to AIX problem analysis.
        - ◊ If you are having a problem with a Linux server, go to Linux problem analysis
5. Is the HMC functional?
    - ◆ Yes: Continue with the next step.
    - ◆ No: Contact your service provider.
6. Do you have a reference code on the HMC?

    Note: For details on viewing reference codes using the HMC, refer to Collecting reference codes and system information.

    - ◆ Yes: Record the reference codes, and refer to Reference codes list for customers to further isolate the problem.
    - ◆ No: Continue with the next step to check for serviceable events.
7. In the navigation area of the HMC that is used to manage the server, open Service Applications > Service Focal Point > Manage Serviceable Events.
8. Select the criteria for the serviceable events that you want to view, and click OK. The Serviceable Event Overview window opens. The list shows all serviceable events that match your selection criteria. You can use the menu options to perform actions on the serviceable events.
9. Select an event listed in the Serviceable Event Overview window, and select Selected > View Details. The Serviceable Event Details window opens showing detailed information about the serviceable event. The upper table shows information, such as problem number and reference code. The lower table shows the field replaceable units (FRUs) associated with this event.
10. Select the Serviceable Event for which you want to view comments and history, and follow these steps:
    a. Select View Comments from the **Actions** menu. When you are finished viewing the comments, click Close.

     b. Select View Service History from the Actions menu. The Service History window opens, showing service history associated with the selected error. When you are finished viewing the service history, click Close.

11. When you are finished, click Cancel twice to close the Serviceable Event Details window and the Serviceable Event Overview window.

12. If you have not determined or resolved the problem, choose from the following options:
    - If you are having a problem with an AIX system or logical partition, continue with AIX problem analysis.
    - If you are having a problem with a Linux system or logical partition, continue with Linux problem analysisLinux problem analysis.

13. Are you able to log on to the Integrated Virtualization Manager interface?
    - **Yes**: Continue with the next step.
    - **No**: Refer to Connecting to the Integrated Virtualization Manager.

14. Did you receive a reference code on the Integrated Virtualization Manager?

   Note: For details on viewing reference codes using the Integrated Virtualization Manager, refer to Collecting reference codes and system information.

    - No: Continue with the next step to check for serviceable events.
    - Yes: Does the reference code begin with B1*xx*?
        - ◊ **No**: Record the reference codes, and refer to Reference codes list for customers to further isolate the problem.
        - ◊ **Yes**: Refer to (B1xx) Service processor firmware reference codes.

15. In the Integrated Virtualization Manager Navigation bar, select Manage Serviceable Events (under Service Management).

16. In the Serviceable Event Selection Criteria field, select the criteria for the serviceable events that you want to view, and click Apply. The Serviceable Events appear in the table below. The list shows all serviceable events that match your selection criteria. You can use the Tasks options to perform actions on the serviceable events.

17. Choose from the following options:
    - To view properties, continue with step 18.
    - To view associated FRUs, continue with step 19.
    - To close a serviceable event, continue with step 20.
    - To view additional details for a serviceable event, continue with step 21.

18. To view properties for a serviceable event, select the serviceable event that you want to view properties for and select Properties. The Serviceable Event Comments window opens.

19. To view associated field replaceable units (FRUs), select the serviceable event that you want to view FRUs for, and select View associated FRUs. The Serviceable Event window opens.

20. To close a serviceable event, select one or more of the serviceable events that you want to close, and select Close event. The Serviceable Event Comments window opens.
    a. Enter comments if necessary, and click Close Events.
    b. On the Close Serviceable Event dialog, click Yes to close the serviceable event.

21. If you have SRUser role or DEUser role, you can view additional details for a serviceable event. Select the serviceable event that you want to view additional details for and select View additional details. The Serviceable Event Comments window opens listing additional service objects, each of which has a Properties task.

22. If you have not determined or resolved the problem, choose from the following options:
    - If you are having a problem with an AIX system or logical partition, continue with AIX problem analysis.
    - If you are having a problem with a Linux system or logical partition, continue with Linux problem analysis.

- **AIX problem analysis**
  Use this procedure to perform AIX problem analysis.
- **Linux problem analysis**
  Use this procedure to perform Linux problem analysis.
- **HMC problem analysis**
  Use this information to diagnose and repair problems that are related to the Hardware Management Console (HMC).
- **Troubleshooting the keyboard, video, and mouse (KVM) switch for the 1x8 and 2x8 console manager**
  Learn about troubleshooting the KVM switch on a 1x8 and 2x8 Console Manager.

AIX problem analysis

Use this procedure to perform AIX problem analysis.

If you experience a problem with your AIX server or logical partition, you should attempt to gather more information about the problem to either solve it, or to help your next level of support or your hardware service provider to solve it more quickly and accurately.

Keep the following in mind while troubleshooting AIX server problems :

- Has there been an external power outage or momentary power loss?
- Has the hardware configuration changed?
- Has server software been added?
- Have any new programs or program updates been installed recently?

Check the following connections:

- Verify that the power cord is plugged in.
- Verify that all your cables are attached securely.

Has your server ever been configured with one or more logical partitions?

- No: Go to The server *has never been* partitioned and there is no HMC or Integrated Virtualization Manager.
- Yes: Go to The server *has been* partitioned and there is an HMC or an Integrated Virtualization Manager.

The server *has never been* partitioned and there is no HMC or Integrated Virtualization Manager

1. Is the server turned on, or can you turn on your server?
    - No: Go to step 2.
    - Yes: Ensure that the server is turned on and then go to step 4.
2. Perform the following steps to verify that the server is receiving power:
    a. If your server is protected by an emergency power off (EPO) circuit, check that the EPO switch is not activated.
    b. If you have an uninterruptible power supply, verify that the cables are correctly connected to the server, and that it is functioning correctly.
    c. When a good power source is connected to the server, one of the following occurs:
        ◊ If you have a control panel, the Function/Data display on the control (operator) panel is illuminated.
        ◊ If you do not have a control panel, the Bulk Power Controller system lights are illuminated.
3. Is the control (operator) panel illuminated?
    - Yes: Start the server by either pressing the power button on the control (operator) panel, and then go to step 4.

        Note: If the server stops with a reference code appearing in the Function/Data display on the control (operator) panel, record the reference code and any related information, and go to Reference codes list for customers. **This ends the procedure.**

    - No: There is a power problem. Verify that the power source to the server is functioning correctly (for example, the wall outlet is functioning correctly and the power cord is not damaged). If you cannot find a problem with the power source, contact your next level of support or your hardware service provider. **This ends the procedure.**
4. Is the control (operator) panel blank?

- Yes: Go to step 9.
- No: Continue with the next step.

5. Is the Attention light on the control (operator) panel illuminated?
    - Yes: Go to step 9.
    - No: Continue with the next step.

6. Are any additional messages related to this problem displayed on the system console or sent to you in e-mail from the operating system?
    - Yes: Continue with the next step.
    - No: Contact your next level of support or your hardware service provider.

7. Record any additional message information that is available from the control (operator) panel, attached displays, or e-mail from the operating system.

8. If the additional message information contains recovery instructions, follow these instructions.

    Did this solve the problem?

    - Yes: **This ends the procedure.**
    - No: Continue with the next step.

9. Is the operating system functioning?
    - **Yes**: Continue with the next step.
    - **No**: Perform the following steps:
        a. Obtain a list of error and event log entries from the ASMI's Error/Event Logs. For details, see the Displaying error and event logs topic.
        b. Continue with step 11.

10. Record any SRN information that is displayed or available through e-mail.

    Note: If you have not found an SRN, it is possible to display an SRN using the operating system. Perform the following to display previous diagnostic results from online diagnostics in concurrent mode:

    a. Log in to the AIX operating system as root user, or use CE login. If you need help, contact the system administrator.
    b. Enter the `diag` command to load the diagnostic controller, and display the online diagnostic menus.
    c. At the Function selection menu, select Task selection.
    d. From the Task selection list menu, select Display previous diagnostic results.
    e. From the Previous diagnostic results menu, select Display diagnostic log summary.

    A Display diagnostic log will be shown with a time ordered table of events from the error log. Look in the T column for the most recent entry that has an S entry. Press Enter to select the row in the table and then select Commit. The details of this entry from the table will be displayed; look for the SRN entry shown near the end of the entry and record the information shown.

11. Record all other reference codes (if any are displayed) that you are receiving on the control (operator) panel. See Collecting reference codes and system information for details.

12. Go to the Reference codes list for customers.

The server _has been_ partitioned and there is an HMC or an Integrated Virtualization Manager.

If you have an HMC, it must be attached and functioning correctly.

1. Choose from the following options:
    - If you have an HMC, ensure you performed the steps in Beginning problem analysis. Then return here if you are directed to do so.
    - If you are using an Integrated Virtualization Manager, continue with the next step.

2. Can you start the server and at least one logical partition on your server?
    - No: Go to step 3.
    - Yes: Go to step 5.

3. Perform the following steps to verify that the server is receiving power:
    a. If your server is protected by an emergency power off (EPO) circuit, check that the EPO switch is not activated.
    b. If you have an uninterruptible power supply, verify that the cables are correctly connected to the server, and that it is functioning correctly.

      c. When a good power source is connected to the server, one of the following occurs:
- ◊ If you have a control panel, the Function/Data display on the control (operator) panel is illuminated.
- ◊ If you do not have a control panel, the Bulk Power Controller system lights are illuminated.

4. Is the control (operator) panel or Bulk Power Controller illuminated?
- ♦ No: There is a power problem. Verify that the power source to the server is functioning correctly (for example, the wall outlet is functioning correctly and the power cord is not damaged). If you cannot find a problem with the power source, contact your next level of support or your hardware service provider. This ends the procedure.
- ♦ Yes: Start the server.

      Note:

      If the server stops with a reference code appearing in the Function/Data display on the control (operator) panel, or on the HMC, or on the Integrated Virtualization Manager, record the reference code and any related information, and go to the Reference codes list for customers for further information. This ends the procedure.

5. Is the server's control (operator) panel, the HMC, or Integrated Virtualization Manager displaying function 11?

    Note: If you are using the control panel, use the increment or decrement buttons to cycle through the functions to determine if function 11 exists. You can alternate between the function number and the data by pressing Enter. For details, see Collecting reference codes and system information.

- ♦ Yes: Go to step 9.
- ♦ No: Continue with the next step.

6. Is the system attention light on?
- ♦ Yes: Go to step 9.
- ♦ No: Continue with the next step.

7. Did you receive a message related to this problem either through the mail function or shown on the HMC or Integrated Virtualization Manager?
- ♦ Yes: Continue with the next step.
- ♦ No: Contact your next level of support or your hardware service provider.

8. Record the additional message information on the problem reporting form. For details, see Using the problem reporting forms. Then follow the recovery instructions on the Additional Message Information display. Did this solve the problem?
- ♦ Yes: This ends the procedure.
- ♦ No: Continue with the next step.

9. Perform the following:
- a. Record all the reference codes that you are receiving on the control (operator) panel, the HMC, or the Integrated Virtualization Manager. For details, see Collecting reference codes and system information.
- b. Go to the Reference codes list for customers.

Parent topic: Beginning problem analysis

Linux problem analysis

Use this procedure to perform Linux problem analysis.

If you experience a problem with your Linux system or logical partition, attempt to gather more information about the problem to either solve it, or to help your next level of support or your hardware service provider to solve it more quickly and accurately.

Note: While troubleshooting Linux, you might need to have available service tools. For details, see Obtaining service and productivity tools for Linux.

Keep the following in mind while troubleshooting Linux problems:

- Has there been an external power outage or momentary power loss?
- Has the hardware configuration changed?
- Has system software been added?
- Have any new programs or program updates been installed recently?

Check the following connections:

- Verify that the power cord is plugged in.
- Verify that your cables are attached securely.

Has your server ever been configured with one or more logical partitions?

- No: Go to The server *has never been* partitioned and there is no HMC or Integrated Virtualization Manager.
- Yes: Go to The server *has been* partitioned and there is an HMC or Integrated Virtualization Manager.

The server *has never been* partitioned and there is no HMC or Integrated Virtualization Manager

1. Is the server turned on, or can you turn on your server?
   - No: Go to step 2.
   - Yes: Ensure that the server is turned on and then go to step 4.
2. Perform the following steps to verify that the server is receiving power:
   a. If your server is protected by an emergency power off (EPO) circuit, check that the EPO switch is not activated.
   b. If you have an uninterruptible power supply, verify that the cables are correctly connected to the server, and that it is functioning correctly.
   c. When a good power source is connected to the server, one of the following occurs:
      ◊ If you have a control panel, the Function/Data display on the control (operator) panel is illuminated.
      ◊ If you do not have a control panel, the Bulk Power Controller system lights are illuminated.
3. Is the control (operator) panel illuminated?
   - Yes: Start the server by pressing the power button on the control (operator) panel, and then go to step 4.

      Note: If the server stops with a reference code appearing in the Function/Data display on the control (operator) panel, record the reference code and any related information, and go to Reference codes list for customers. **This ends the procedure.**

   - No: There is a power problem. Verify that the power source to the server is functioning correctly (for example, the wall outlet is functioning correctly and the power cord is not damaged). If you cannot find a problem with the power source, contact your next level of support or your hardware service provider. **This ends the procedure.**
4. Is the control (operator) panel displaying a reference code?
   - Yes: Continue with the next step.
   - No: Go to step 9.
5. Is the Attention light on the control (operator) panel illuminated?
   - Yes: Go to step 9.
   - No: Continue with the next step.

6. Are any additional messages (for example a device is not available or reporting errors) related to this problem displayed on the system console or sent to you in e-mail from the operating system?
   ♦ Yes: Continue with the next step.
   ♦ No: Contact your next level of support or your hardware service provider.
7. Record any additional message information that is available from the control (operator) panel, attached displays, or e-mail from the operating system.
8. If the additional message information contains recovery instructions, follow these instructions.

   Did this solve the problem?

   ♦ Yes: **This ends the procedure.**
   ♦ No: Continue with the next step.
9. Is the operating system functioning?
   ♦ **Yes**: Continue with the next step.
   ♦ **No**: Perform the following steps:
      a. Refer to the ASMI's Error/Event Logs to obtain a list of error and event log entries. For details, see the Displaying error and event logs topic.
      b. Continue with step 11.
10. Run the stand-alone diagnostics in Problem Determination mode. For details, see Running the stand-alone diagnostics from CD-ROM. Record any SRN information that is displayed or available through e-mail. When you run the stand-alone diagnostics in Problem Determination mode, you are given the option to test the resources that the diagnostic programs find in your server. Be sure to check the list of available resources in your server to make sure that all resources that you know are installed are also available to be tested. If you find that a resource you know to be installed in your system is not available to be tested, record any information that is available about the missing resource, and check to ensure that the missing resource is installed correctly. If you cannot correct the problem with a missing resource, replace the missing resource (contact your service provider if necessary).
11. Record all other reference codes (if any are displayed) that you are receiving on the control (operator) panel. See Collecting reference codes and system information for details.
12. Go to the Reference codes list for customers.

The server *has been* partitioned and there is an HMC or Integrated Virtualization Manager.

If you have an HMC, it must be attached and functioning correctly.

1. Choose from the following options:
   ♦ If you have an HMC, ensure you performed the steps in Beginning problem analysis. Then return here if you are directed to do so.
   ♦ If you are using an Integrated Virtualization Manager, continue with the next step.
2. Can you start the server and at least one logical partition on your server?
   ♦ No: Go to step 3.
   ♦ Yes: Go to step 5.
3. Perform the following steps to verify that the server is receiving power:
   a. If your server is protected by an emergency power off (EPO) circuit, check that the EPO switch is not activated.
   b. If you have an uninterruptible power supply, verify that the cables are correctly connected to the server, and that it is functioning correctly.
   c. When a good power source is connected to the server, one of the following occurs:
      ◊ If you have a control panel, the Function/Data display on the control (operator) panel is illuminated.
      ◊ If you do not have a control panel, the Bulk Power Controller system lights are illuminated.
4. Is the control (operator) panel or Bulk Power Controller illuminated?
   ♦ No: There is a power problem. Verify that the power source to the server is functioning correctly (for example, the wall outlet is functioning correctly and the power cord is not damaged). If you cannot find a problem with the power source, contact your next level of support or your hardware service provider. **This ends the procedure.**
   ♦ Yes: Start the server.

   Note:

If the server stops with a reference code appearing in the Function/Data display on the control (operator) panel, or on the HMC, or on the Integrated Virtualization Manager, record the reference code and any related information, and go to the Reference codes list for customers for further information. **This ends the procedure.**

5. Is the server's control (operator) panel, HMC, or Integrated Virtualization Manager displaying function 11?

   Note: If you are using the control panel, use the increment or decrement buttons to cycle through the functions to determine if function 11 exists. You can alternate between the function number and the data by pressing Enter. For details, see Collecting reference codes and system information.

   - ◆ Yes: Go to step 10.
   - ◆ No: Continue with the next step.
6. Is the system attention light on?
   - ◆ Yes: Go to step 10.
   - ◆ No: Continue with the next step.
7. Did you receive a message related to this problem either through the mail function or shown on the HMC or Integrated Virtualization Manager?
   - ◆ Yes: Continue with the next step.
   - ◆ No: Contact your next level of support or your hardware service provider.
8. Record the additional message information on the problem reporting form. For details, see Using the problem reporting forms. Then follow the recovery instructions on the Additional Message Information display. Did this solve the problem?
   - ◆ Yes: **This ends the procedure.**
   - ◆ No: Continue with the next step.
9. Record any SRN information that is displayed or available through e-mail. If you do not have any SRN information, run the stand-alone diagnostics in Problem Determination mode. For details, see Running the stand-alone diagnostics from CD-ROM and perform any repair actions.
10. Perform the following:
    a. Record all the reference codes that you are receiving on the control (operator) panel, the HMC, or the Integrated Virtualization Manager. For details, see Collecting reference codes and system information.
    b. Go to the Reference codes list for customers.

Parent topic: Beginning problem analysis

HMC problem analysis

Use this information to diagnose and repair problems that are related to the Hardware Management Console (HMC).

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

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

- Connect power to this unit only with the provided power cord. Do not use the provided power cord for any other product.
- Do not open or service any power supply assembly.
- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.

- Connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.
  To Disconnect:
  1. Turn off everything (unless instructed otherwise).
  2. Remove the power cords from the outlets.
  3. Remove the signal cables from the connectors.
  4. Remove all cables from the devices

  To Connect:

  1. Turn off everything (unless instructed otherwise).
  2. Attach all cables to the devices.
  3. Attach the signal cables to the connectors.
  4. Attach the power cords to the outlets.
  5. Turn on the devices.
  (D005)

If you were directed here from the Beginning problem analysis procedure because your HMC is not functioning correctly, continue with the Entry point for HMC problem determination.

To perform other maintenance tasks on your HMC, refer to the following procedures:

- For general maintenance information on the base personal computer that is used to build the HMC, see HMC diagnostics overview.
- For instructions to replace an HMC, see Replacing an HMC.
- For HMC parts information, refer to the following:
  - ◆ Hardware Management Console (HMC) parts. Because the personal computer that is used for your HMC can be serviced by the customer, you are the service provider for your HMC.
  - ◆ To find links to the appropriate personal computer hardware maintenance information, see Equivalent maintenance information for the HMC's personal computer hardware.
- For removing and replacing HMC parts, see Removing and replacing parts on the HMC.
- For backing up critical disk drive information on the HMC, refer to the Backing up critical HMC data topic.
- For restoring disk drive information on the HMC, refer to Reinstalling the HMC machine code .
- For checking modem settings, refer to the Cabling the HMC topic.
- For troubleshooting setting up an HMC or installing the remote client, see Troubleshooting HMC setup.

- **Maintaining the HMC**
  Learn about maintaining and servicing the HMC.
- **HMC diagnostics overview**
  Learn about the HMC diagnostic path and how to find additional information on the base hardware.
- **Removing and replacing parts on the HMC**
  Learn how to remove and replace parts on the HMC.
- **Analyzing HMC machine code problems**
  Learn about analyzing HMC machine code problems with the help of support personnel.
- **Powering on managed systems after a power outage when your HMC is configured as a DHCP server**
  Learn how to correctly power on your managed systems after a power outage when your HMC is configured as a Dynamic Host Configuration Protocol (DHCP) server.

Parent topic: Beginning problem analysis

Entry point for HMC problem determination

Find the symptom you are having in the Symptom column of the following table. Then perform the action described in the Action column.

Symptom	Action
Operator reported that the HMC did not start, but no other problems were reported.	Go to Beginning HMC problem determination.
Operator reported "Communication not active" on the HMC.	Go to Testing the HMC's Ethernet adapter.
Operator reported communication problems with a remotely connected HMC or a managed system.	Go to Testing the modem connection to the managed system.
Power problems	Go to Testing for a power problem.
HMC boot problems	Go to Beginning HMC problem determination.
Display problem	Go to Testing the HMC's display.
DVD-RAM drive problem	Go to Testing the HMC's DVD-RAM.
Disk drive or diskette drive problem	Go to Testing the HMC's disk drive.
Ethernet LAN problem	Go to Testing the HMC's Ethernet adapter.
A problem with any of the following: • display • diskette drive • DVD-RAM Drive • disk drive • Ethernet LAN	Go to Performing system unit testing using PC-Doctor.
Eight character error code beginning with *HMC* was received when using the HMC graphical user interface.	Go to the HMC error codes.
HMC does not communicate through the modem.	Go to Testing the HMC's modem connection.
PC-Doctor diagnostic tests detected an error.	For PC hardware maintenance manuals to help isolate the problem to a failing part, refer to Equivalent maintenance information for the HMC's personal computer hardware.
Problems understanding the usage of the HMC.	Go to Managing your server using the Hardware Management Console.
All other problems (for example: HMC GUI is unresponsive, parity errors, power, POST codes, blank display, mouse, or keyboard).	Go to Beginning HMC problem determination.
Symptoms not in this list.	Go to Beginning HMC problem determination.

Beginning HMC problem determination

Use this procedure to determine if there is a problem with the HMC hardware. This procedure might direct you to procedures in various sections of this information or to personal computer maintenance information.

Step 1. HMC problem determination

1. If the HMC is running, shut down the console by exiting the graphical user interface, the PC should turn off the power automatically. If the PC cannot turn off the power, then turn the power switch off.
2. Turn on the HMC power.
3. Watch the console and allow enough time for the system to complete the POST and load the HMC machine code.
4. Watch and listen for the following failing symptoms during power-on:
   - POST error condition.
   - A series of beeps that indicate an error condition.
   - The HMC login screen and user interface fails to start.
   - A reference code or any other error information is displayed.
5. Do you have any of the failing symptoms during power on?
   - **No**: Continue with step 6.
   - **Yes**: Go to the "General Checkout" section of the hardware maintenance manual for your machine type. For details, see Equivalent maintenance information for the HMC's personal computer hardware.
6. Perform system unit testing using PC-Doctor. For details, see Performing system unit testing using PC-Doctor.
7. Does the PC-Doctor diagnostics diskette start and allow tests to be run on the PC system unit?
   - **No**: Go to Testing for a power problem.
   - **Yes**: Go to Step 2. HMC problem determination.

Step 2. HMC problem determination
Perform system unit testing using PC-Doctor. For details, see Performing system unit testing using PC-Doctor. Select System Unit > Run All Selected.
Did the system unit tests detect errors?
No: Go to Step 3. HMC problem determination.
Yes: Continue with step 3.
Use the PC-Doctor diagnostics and the maintenance procedures for the type of PC that you are working on to isolate the failure and exchange customer replaceable units (CRUs). Refer to the publications listed in the Equivalent maintenance information for the HMC's personal computer hardware.
When the problem is repaired, or if the problem cannot be isolated, continue with Step 4. HMC problem determination.
Step 3. HMC problem determination

Attention: This step requires HMC support assistance. Contact HMC support before continuing.

If you are directed to reload the HMC from the recovery DVD and then reload the backup profile and configuration data, see Recovering the HMC.
After reloading the machine code from the recovery DVD, does the HMC start correctly?
No: Contact your next level of support.
Yes: This ends the procedure.

Step 4. HMC problem determination

Note: If you reach this step and you have not been able to isolate a failure, contact your next level of support for assistance.

Reinstall all CRUs that did not fix the problem.
You must have performed a repair action to continue. If you have not already done so, verify the repair. For instructions, see Performing system unit testing using PC-Doctor.
Did the system unit tests run without errors?
No: To troubleshoot the error, return to Performing system unit testing using PC-Doctor. Then return here and continue with step 4.
Yes: Continue with step 4.
Does the HMC communicate with all connected managed systems?
No: Go to Testing the modem connection to the managed system.
Yes: Did you exchange the system board or the system board battery?
No: This ends the procedure.
Yes: Recover the HMC. For details, see Recovering the HMC. This ends the procedure.

Testing the HMC

Use these procedures when you are directed to them from the HMC problem analysis procedure to test the HMC. If a failure is detected, you will be instructed to fix the failing part and then verify the repair.

Testing for a power problem

To troubleshoot a power problem on the PC, refer to the service documentation for the PC on which your HMC is based. For PC hardware maintenance manuals to help isolate the problem to a failing part, refer to the publications listed in Equivalent maintenance information for the HMC's personal computer hardware.

Performing diagnostic procedures

You should have been directed here to test a specific part of the HMC. For the following problem areas, see Performing system unit testing using PC-Doctor:
Display
Keyboard
Mouse
Floppy Drive
DVD-RAM
DASD (disk drive)
Memory
Power
Run All Selected
SCSI
System Port/Modem
16/4 Port Serial
Ethernet
To access the HMC diagnostic information, follow the procedures in HMC diagnostics overview.

Performing system unit testing using PC-Doctor

This section provides information to help you use the PC-Doctor diagnostics. For information on running PC-Doctor, go to HMC diagnostics overview.

Note: Performing procedures other than those specified in the following steps might cause errors.

Start the PC-Doctor diagnostics.
From the diagnostic selection display, select either Diagnostics or Interactive Tests for a list of devices to test:
Devices that require manual intervention (keyboard, video, mouse, diskette, optical drive) might be selected from the interactive tests task bar.
Devices that do not require manual intervention (processor, system board, I/O ports, fixed disks, memory) and predefined test sequences (Run Normal/Quick Test) can be selected from the diagnostic task bar.
Select the task containing the device or devices or test or tests and follow the instructions. If you were instructed to Run All Selected, continue with that selection.
If the diagnostics report a failure on the PC hardware, refer to the service documentation for the PC on which your HMC is based. For PC hardware maintenance manuals to help isolate the problem to a failing part, refer to the publications listed in Equivalent maintenance information for the HMC's personal computer hardware.
If the diagnostics do not report a failure, the HMC PC hardware is functioning correctly. If you still have a problem, go to Beginning HMC problem determination.

Testing the modem connection to the managed system

Use this procedure to test the modem connection to the PC for the HMC.
Can the HMC be used to communicate through the modem?
No: Go to step 2.
Yes: This ends the procedure.
Is a device other than a modem attached to system port 2 on the HMC?

Note: If the HMC is a rack-mounted model, answer no to this question.

No: Go to Testing the HMC's modem connection.
Yes: Go to step 3.
System port 2 of the HMC is reserved for external modem use only. Move the serial cable from serial port 2 of the HMC to another HMC system port. Connect the modem to system port 2 and go to step 1.

Note: If the HMC is a rack-mounted model, an internal modem is installed to handle the connection of the HMC to the telephone line. If a redundant telephone connection is required, connect an external modem to the system port on the rear of the HMC. If needed, go to the MultiTech MultiModem[II] installation guide for modem installation instructions. If you do not have access to a hardcopy version of the MultiTech MultiModem[II] documentation, go to the MultiTech Web site at
http://www.multitech.com/documents/families/multimodemII/manuals.asp.

Testing the HMC's modem connection

Use this procedure to test the modem connection to the PC for the HMC.
Verify that the modem and the telephone line are functioning correctly by performing the following steps:
On the HMC console, open the Service Agent application.
Select Test Tools.
Initiate a Test PMR.
Monitor the call log to verify that the call is completed successfully. If the call is completed successfully, the modem is functioning correctly.
Is the installed modem currently functioning on the HMC?
No: Go to step 3.
Yes: The problem is not in the modem. This ends the procedure.
Are the HMC configurations, relating to the modem operation, correct?
No: Correct the HMC configuration arguments. Return to step 1.
Yes: Continue with step 4.
Is the modem powered on? (Are any indicators lit?)
No: Ensure the modem is powered on. For details, see 1. After power on verification is completed, continue with step 5.
Yes: Go to step 5.
Is the serial cable between the serial (COM) port connector of the HMC and the modem attached?
No: Attach the serial cable between the serial (COM) port connector of the HMC and the modem.
Yes: Load the PC-Doctor diagnostics.
If you are working on a desktop model HMC, load the PC-Doctor from diskette or CD.
If you are working on a rack-mounted model HMC, load the PC-Doctor from diskette using an external USB diskette drive, CD or selecting F12 during a system shut down and restart.

Note: If you are using a CD or diskette to load PC-Doctor, shut down and restart the HMC and wait until the PC-Doctor's main menu is displayed.

Click Diagnostics > Other Devices > Modem to perform the modem diagnostic test.
Did the diagnostic pass?
No: Go to step 8.
Yes: Go to 9.
Is the modem connected correctly to a working telephone line (or equivalent)?

Note: This can be checked by connecting a known good telephone to the line in place of the modem and making a telephone call.

No: Correctly connect the telephone line (or equivalent) to the modem. Go to step 1. After completing the telephone line and modem verification test, continue with step 9.
Yes: Go to step 9.
Verify the COM port by performing the following steps:
Disconnect the modem cable from the COM port of the HMC.
Select Diagnostics from the top menu.
Select System Ports from the pull-down menu. The *SERIAL PORT TEST CATEGORY* screen displays.
Ensure the following:
On desktop HMC models - IRQ numbers 4 and 3 are assigned to COM 1 and COM 2, and the planar to COM 2 connector cable is present and correctly installed.
On rack-mounted models - IRQ number 4 is assigned from COM 1.

Note: If the preceding information is not correct, the COM port might be disabled, or might be incorrectly configured. This can be resolved by accessing the setup utility (by pressing the F1 key) during power on.

Ensure all diagnostics except "External Loopback" are selected
Select Run Screen from the bottom menu.
Ensure all selected diagnostics show `Passed`

Note: If any diagnostics fail, replace the planar.

Verify the external modem by performing the following steps:
Reconnect the modem cable to the correct COM port.
Ensure that the modem is powered on, connected to a working telephone line, and is securely cabled to the communications cable.
Press Esc to return to the PC-Doctor main menu or shut down and restart the HMC.
Select Hardware Info from the top menu
Select COM and LPT Ports from the pull-down menu. The hardware query displays COM and LPT port information.
Verify the following:
A modem was detected on the correct COM port
The modem test returned `Passed`
Dial tone: `Detected`
ATI1: Displays the modem's model information

Note:
If you were not able to get the desired results in step 10.f, refer to the MultiTech MultiModem [II] user's guide, installation guide, or reference guide for your modem. To access the MultiTech MultiModem [II] documentation, go to the MultiTech Web site at http://www.multitech.com/documents/families/multimodemII/manuals.asp.

If necessary, after you have completed the MultiTech MultiModem^{II} documentation, come back here to complete the final step of this procedure.

Choose from the following options:
If the modem was not detected, replace and verify the following customer replaceable parts in the order listed:
Communications cable
Modem
If the modem test did not return with `Passed`**, replace the modem.**
If the dial tone did not return with `Detected`**, verify the telephone line operation then retest. If the failure reoccurs, replace the modem.**

Testing the HMC's Ethernet adapter

Use this procedure to test the Ethernet adapter in the HMC.
Is the Ethernet port currently functioning though normal operation of the HMC?
No: Go to step 2.
Yes: This ends the procedure.
Are the Ethernet configuration values set correctly? (IP address, subnet mask, and so on.)
No: Set the Ethernet configuration values to their correct settings. Then go back to step 1.
Yes: Go to step 3.
Can the IP address of the HMC be 'pinged' by another system that should be able to 'see' the HMC on the network?
No: Go to step 4.
Yes: Go to step 10.
Is the Ethernet cable attached correctly to the HMC and the network?
No: Attach the HMC to the network using an Ethernet cable with the correct pinout. Then go to step 1.
Yes: Go to step 5.
Is the Ethernet cable the correct pinout? (There are two types of Ethernet cables in use, which are distinguished by different pinouts. The network will determine which version of cable to use.)
No: Replace the Ethernet cable with the correct version. Then go to step 1.
Yes: Go to step 6.
Perform the following steps:
Install the PC-Doctor diskette into drive A of the HMC: (floppy drive).
Shut down and restart the HMC and wait until the PC-Doctor main menu is displayed.
To run the Ethernet diagnostics, select Diagnostics > Other Devices > Intel Ethernet.
Did the diagnostic pass?
No: Go to step 7.
Yes: Go to step 10.
Refer to the Ethernet hardware's hardware maintenance manual to determine if there are any internal settings or jumpers that might disable the Ethernet port.
Are there any internal settings or jumpers?
No: Go to step 8.
Yes: Go to step 9.
Replace the Ethernet hardware in the HMC. (This might be a PCI card or system board replacement, depending on the HMC hardware.) Go to step 1.
Set the internal settings/jumpers to enable the Ethernet port on the HMC. Go to step 1.
The failure does not seem to be in the HMC.

Testing the HMC's disk drive

Use this procedure to test the disk drive in the HMC.
Did the disk drive test fail?
No: Go to step 5.
Yes: Continue with the next step.
Perform the following steps:
Exchange the CRUs called by the diagnostics one at a time. For CRU removal and replacement instructions, refer to the PC hardware maintenance manual for the system on which you are working. See Equivalent maintenance information for the HMC's personal computer hardware to access the hardware maintenance manual for your HMC personal computer model.
After each CRU is exchanged, test the repair using the information in Performing system unit testing using PC-Doctor.
Select Hard Disk Drive problem area.
Did the disk drive test fail?
No: Continue with the next step.
Yes: Contact your next level of support.
Ensure the following and then continue with the next step:
If you exchanged the disk drive and there are jumpers or tab settings on the new disk drive, ensure that the settings are the same as the old drive.
If there is a SCSI cable-terminating resistor device, ensure it is secured to the cable and (if necessary) reattached to its original location on the PC.
Go to "Hard Disk Jumper Settings" in the PC hardware maintenance manual. See Equivalent maintenance information for the HMC's personal computer hardware to access the hardware maintenance manual for your HMC personal computer model.
If you exchanged the disk drive, restore the HMC image to the new disk drive.
Use the information in Performing system unit testing using PC-Doctor to test the PC. Select Run All Selected problem area.
If the tests fail, isolate the problem using the Beginning HMC problem determination procedure.

If the tests run without errors, turn off the PC power and then turn on the power. Ensure that the system boots and the HMC screen displays. This ends the procedure.

Testing the HMC's DVD-RAM

Use this procedure to test the DVD drive in the PC for the HMC.
Determine the media in the DVD-RAM drive:
Compact Disk Recordable (CD-R) similar to a CD
DVD-RAM media cartridge
Is the media a CD-R?
No: Go to step 4.
Yes: Continue with the next step.
Perform the following steps:
Clean the compact disk as follows:
Hold the disk by its edges. Do not touch the surface.
Remove dust and fingerprints from the surface by wiping from the center to the outside using a dry, soft cloth.
Reinstall the CD, with the label-side facing up.
Continue with the next step.
Retry the failing task using the original media.
Does the failure occur again?
No: Continue with the next step.
Yes: Go to step 4.
This ends the procedure.
Ensure the write protect tab is in the "disabled" (down) position.
Was the write protect tab in the "disabled" (down) position?
No: Go to step 3.
Yes: Continue with the next step.
Perform the following steps:
With the original media in the drive, note the following:
If you are attempting a restore procedure, turn off the PC power.
For any other operation, shut down the HMC, and then turn off the PC power.

Note: For shutdown procedures, see Powering on and off.

Turn on the PC power and test the DVD-RAM drive using the information in Performing system unit testing using PC-Doctor.
Select DVD-RAM Drive problem area.
When the test is complete, return here and continue with the next step.
Did the DVD-RAM test fail while testing with the original media?
No: Go to step 1.
Yes: Continue with the next step.
Exchange the original media with a new one.

Note: If you are replacing DVD-RAM media, the new cartridge must be formatted. If possible, use another HMC to format the new cartridge.

Turn off the PC power.
Turn on the PC power, and test the DVD-RAM drive with the new media. Use the information in Performing system unit testing using PC-Doctor to test the PC. Select DVD-RAM Drive problem area.
Did the DVD-RAM test fail while testing with the new media?
No: The original media was defective. This ends the procedure.
Yes: Continue with the next step.
Verify the following:
All DVD-RAM drive data and power cables are secure.
The DVD-RAM drive is jumpered as "master" and is cabled to the secondary IDE bus.
If the diagnostics continue to fail, exchange the DVD-RAM drive. When complete, run the DVD-RAM test again.

Note: If there are any jumpers or tab settings on the new drive, ensure that the settings match the old drive.

Did the DVD-RAM Drive test continue to fail?
No: The original DVD-RAM drive was defective. This ends the procedure.
Yes: Continue with the next step.
Continue exchanging CRU from the CRU list and running the DVD-RAM drive tests.
If the CRUs fix the problem, this ends the procedure.
If you cannot isolate the problem, call your next level of support for assistance.
The PC resources (for example: interrupt, I/O address) might be configured incorrectly. Verify the PC resources are correctly configured.
Select System Unit for the configuration area, and verify configuration for the system unit and all adapters.
When you complete the verification, retry the failing procedure and continue with the next step.
Does the failing procedure continue to fail?
No: The resource settings were incorrect. This ends the procedure.
Yes: If you cannot isolate the problem, contact your next level of support for assistance. This ends the procedure.

Testing the HMC's disk drive

Use this procedure to test the disk drive in the PC for the HMC.

Perform the following steps:

Turn on the PC power and test the diskette drive using the information in Performing system unit testing using PC-Doctor.

Select System Unit problem area and the test of Diskette Drive.

Note: Do not test with the diskette on which the errors occurred. Use a new diskette.

When the test is complete, continue with the next step.

Did the diskette test fail while testing with a new diskette?

No: Go to step 7.

Yes: Continue with the next step.

Exchange the diskette drive and run the diskette test again.

Did the diskette test fail again?

No: The original diskette drive was failing. This ends the procedure.

Yes: Continue with the next step.

Continue exchanging CRUs from the CRU list and running tests. If the CRUs fix the problem, this ends the procedure.

Choose from the following options:

If the problem is resolved by replacing a CRU, this ends the procedure.

If you cannot resolve the problem, contact your next level of support for assistance. This ends the procedure.

Did the original failure occur while writing to a diskette?

No: Go to step 9.

Yes: Continue with the next step.

Retry the original task using a new diskette.

If the failure occurs again, go to step 11.

If no failures occur, the original diskette was failing. This ends the procedure.

Re-create the information on the diskette, or obtain a new diskette with the information.

Retry the original task.

If the failure occurs again, continue with the next step.

If no failures occur, the original diskette was failing. This ends the procedure.

Test the diskette drive, using the information in Performing system unit testing using PC-Doctor. Select System Unit problem area and the test of Diskette Drive.

If the tests fail, isolate the problem using the procedures found in the PC hardware maintenance manual. For additional PC maintenance information, see Equivalent maintenance information for the HMC's personal computer hardware to access the hardware maintenance manual for your HMC personal computer model.

For the latest information regarding maintenance of your HMC PC, system board specifications, and parts, contact service and support.

If the tests do not isolate the problem, contact your next level of support for assistance.

Testing the HMC's display

Use this procedure when you are having a display problem with the HMC.

Is the display type a 95xx (17P, 17X, 21P)?

No: Continue with the next step.

Yes: 95xx-xxx repairs might require replacing internal display CRUs.

Repair and test the display using the procedures in S41G-3317.

Is the display type a 65xx (P70, P200)?

No: Continue with the next step.

Yes: 65xx-xxx repairs might require replacing the entire display. There are no internal display CRUs. Repair and test the display using the procedures in S52H-3679.

When the test and repair are complete, continue with step 5.

Is the display type a 65xx (P72, P202)?

No: Continue with the next step.

Yes: 65xx-xxx repairs might require replacing the entire display. There are no internal display CRUs. Repair and test the display using the procedures in .

When the test and repair are complete, continue with step 5.

Repair and test the display using the documentation included with the display. When the test and repair are complete, continue with step 6.

Verify the repair using the information in Performing system unit testing using PC-Doctor. Select System Unit for the problem area and the Test for Display.

When the test and repair are complete, continue to step 6.

Return the system to normal operations. This ends the procedure.

Maintaining the HMC

Learn about maintaining and servicing the HMC.

The HMC connects to one or more managed systems to perform various functions. The HMC's primary functions include the following:

- Providing a console for system administrators and service representatives to manage server hardware.
- Creating and maintaining a multiple partitioned environment on a managed system.
- Detecting, reporting, and storing changes in hardware conditions.
- Acting as a service focal point for service representatives to determine an appropriate service strategy.
- Displaying operating system session terminals for each partition.

The HMC system is delivered with its machine code preinstalled on the disk drive. After the system is installed and connected to a managed system, system management tasks can begin.

The HMC machine code does not have provisions for loading or running additional applications that are not related to hardware management or service. All the tasks you need to maintain the managed system, the underlying operating system, and the HMC's machine code are available by using the HMC's management interface.

Parent topic: HMC problem analysis

Managed system operation

The HMC's graphical user interface provides the functions needed to create and maintain a partitioned environment on a managed system. Using the interface allows for direct manipulation of HMC-defined objects and increased information regarding detected changes in hardware conditions.

The managed system can be run as a partitioned system, sometimes referred to as *logically partitioned*. This means that the managed system can run multiple operating systems simultaneously. The system can also run as a large single partition, which is known as the *manufacturing default configuration* when the system is delivered. If the system has been partitioned, then a the single partition that uses all the system resources is referred to as a *full system partition*.

Partitioning provides users with the ability to divide a single managed system into several systems. Each of these systems, running in a partition, is capable of running applications in multiple, independent environments simultaneously. Logical partitioning makes it possible for a user to run a single application using different sets of data on separate partitions, as if that application were running independently on separate physical systems. By creating partitions, for example, a company can test its programs in one partition while developing the same program in another, at the same time, all using the same system. This "same system" partitioning method is more cost-effective, potentially eliminating the need for a separate test system.

The full system partition is no different from the traditional way of using a system. The single server uses all of its resources as one system.

HMC system diagnostics

Your HMC system also provides a set of diagnostic procedures that should be followed when troubleshooting HMC problems. For details on accessing the HMC diagnostics, see HMC diagnostics overview.

Powering on and off the HMC

During the process of powering on, the HMC checks to see which managed systems are available and communicating with the console. To ensure that each managed system is available before you power on the

HMC, managed systems must be in standby mode or actively operating. Standby mode is indicated by the `OK` shown in the operator panel after the managed system has the power connected and the initial tests are complete.

Note: If the managed system is in an emergency power off (EPOW) condition, the managed system must be brought to standby mode before the HMC can be used to power on the system.

To power on the HMC, do the following:

1. Press the Power button once to turn on the power.
2. When the system has finished the power-on self-test (POST), log in to the HMC.

Power off the HMC

To power off the HMC, do the following:

1. Log in to the HMC and select Power Off.
2. The HMC shuts down any applications that are running, and then turns off the HMC.

Power-on self-test

After power is turned on and before the operating system is loaded, the system does a power-on self-test (POST). This test performs checks to ensure that the hardware is functioning correctly before the operating system is loaded. During the POST, codes indicating the progress of the POST might be displayed. After the POST is complete, the HMC operating machine code loads and a login prompt is displayed.

Specifications and system unit locations

Your HMC system is based on a model of personal computer. For information about system specifications and system unit locations, use the appropriate personal computer hardware maintenance manuals, see Equivalent maintenance information for the HMC's personal computer hardware.

HMC external AC power cable

To avoid electrical shock, a power cable with a grounded attachment plug is provided. Use only properly grounded outlets.

Power cables used in the United States and Canada are listed by Underwriter's Laboratories (UL) and certified by the Canadian Standards Association (CSA). These power cords consist of the following:

- Electrical cables, type ST
- Attachment plugs complying with National Electrical Manufacturers Association (NEMA) L6-30P

 • Appliance couplers complying with International Electrotechnical Commission (IEC) Standard 320, Sheet C13 and C14

Power cables used in other countries consist of the following:

 • Electrical cables, type HD21 or HD22
 • Attachment plugs approved by the appropriate testing organization for the specific countries where they are used
 • Appliance couplers complying with the International Electrotechnical Commission (IEC) Standard 320, Sheet C13 and C14

HMC diagnostics overview

Learn about the HMC diagnostic path and how to find additional information on the base hardware.

The first step to service a managed system or an attached HMC is to go to the Beginning problem analysis procedure. You will then be directed to the appropriate documentation depending on the type of problem that is to be isolated and repaired.

If a problem is determined to be in your HMC system, you are directed to the HMC problem analysis for diagnostic and repair information.

The HMC problem analysis procedure will guide you to the appropriate repair action. Occasionally, you will be directed to the maintenance documentation for the HMC's base personal computer. When this occurs, the maintenance documentation for the personal computer is used to complete the repair action.

Connector and hard disk drive restrictions for the HMC

The following table contains connector and hard disk drive restrictions that you will need to know when cabling or adding hard disk drives to your HMC.

Table 1. Connector and hard disk drive restrictions for the HMC

HMC machine type, and model number	Connector restrictions for cabling an HMC
10C/R2	The following are not supported: • Use of the parallel port **Note:** The HMC is a closed system and as such, the hardware is used in a limited manner. No device drivers or code support any peripheral devices that use a parallel port. • The C2T IN and ISM ports The CR2 only supports a USB keyboard and mouse. When the keyboard and mouse are connected to any of the three USB connectors, the third unconnected USB connector is *not* supported.

<table>
<tr><td></td><td>To view the location of each connector identified above, refer to Cabling the HMC, then scroll to the back view of the model you are cabling.</td></tr>
<tr><td></td><td>

The following are not supported:

- Use of the parallel port

  Note: The HMC is a closed system and as such, the hardware is used in a limited manner. No device drivers or code support any peripheral devices that use a parallel port.

- Use of the HMC system management connector
- Use of the serial port
- Use of the DVD drive

The HMC supports only the USB keyboard and mouse that are shipped with the HMC. No other USB devices are supported when connecting to the third USB connector. There is no requirement that you must use a specific USB port for the keyboard and mouse. When a set of USB connectors is being used for a keyboard and mouse, all other USB and the PS/2 connectors are rendered inoperable. When the PS/2 connectors are being used for a keyboard and mouse, all USB connectors are rendered inoperable.

To view the location of each connector identified above, refer to Cabling the HMC, then scroll to the back view of the model you are cabling.

</td></tr>
<tr><td>10C/03</td><td>

The following are not supported:

- Use of the parallel port

  Note: The HMC is a closed system and as such, the hardware is used in a limited manner. No device drivers or code support any peripheral devices that use a parallel port.

- Use of the audio connectors
- Use of the diskette drive

The HMC supports only the USB keyboard and mouse that are shipped with the HMC. No other USB devices are supported when connecting to the third USB connector. There is no requirement that you must use a specific USB port for the keyboard and mouse. When a set of USB connectors is being used for a keyboard and mouse, all other USB and the PS/2 connectors are rendered inoperable. When the PS/2 connectors are being used for a keyboard and mouse, all USB connectors are rendered inoperable.

To view the location of each connector identified above, refer to Cabling the HMC, then scroll to the back view of the model you are cabling.

</td></tr>
<tr><td>10C/04</td><td>

The following are not supported:

- Use of the parallel port

  Note: The HMC is a closed system and as such, the hardware is used in a limited manner. No device drivers or code support any peripheral devices that use a parallel port.

- Use of the serial connectors
- Use of the audio connectors
- Use of the diskette drive

</td></tr>
</table>

	The HMC supports only the USB keyboard and mouse that are shipped with the HMC. No other USB devices are supported when connecting to the third USB connector. There is no requirement that you must use a specific USB port for the keyboard and mouse. When a set of USB connectors is being used for a keyboard and mouse, all other USB and the PS/2 connectors are rendered inoperable. When the PS/2 connectors are being used for a keyboard and mouse, all USB connectors are rendered inoperable. To view the location of each connector identified above, refer to Cabling the HMC, then scroll to the back view of the model you are cabling.
10C/05	The following are not supported: • Use of the parallel port **Note:** The HMC is a closed system and as such, the hardware is used in a limited manner. No device drivers or code support any peripheral devices that use a parallel port. • Use of more than one hard disk drive To view the location of each connector identified above, refer to Cabling the HMC, then scroll to the back view of the model you are cabling.

Equivalent maintenance information for the HMC's personal computer hardware

For the latest information regarding maintenance of your HMC PC, system board specifications, and parts, contact service and support.

Diagnostics, test, and recovery

The following tools are available to help identify and resolve hardware-related problems:

- Power-on self-test (POST)
    - POST beep codes
    - Error code format
- PC-Doctor

Note: For additional information about items in the previous list, see the appropriate personal computer hardware maintenance manual. To access the personal computer hardware maintenance documentation, refer to the Equivalent maintenance information for the HMC's personal computer hardware.

PC-Doctor

PC-Doctor is a set of diagnostic and system information tools included with the HMC. In rack-mounted HMC models, PC-Doctor is preinstalled on the system. PC-Doctor is included on the HMC Recovery CDs for Release 3 Version 3.0 (or later) for HMC models that are not rack-mounted.

Running PC-Doctor on an HMC that is not rack-mounted

Before accessing the PC-Doctor application on the HMC, you need to create a bootable diskette (referred to as the PC-Doctor diskette in the remainder of this section).

To create the diskette:

1. On a machine running Windows, insert a high-density floppy diskette in your diskette drive.
2. Insert volume 2 of HMC Recovery CD into the CD drive.
3. Select Start > My Computer.
4. Open the CD and go to the `pc_diag` directory.
5. Open the readme file and follow the instructions for creating the PC-Doctor diskette using the `pc_diag.exe` tool.

To run PC-Doctor:

1. Power off the HMC.
2. Insert the PC-Doctor diskette you created.
3. Power on the HMC.

If the HMC does not read the PC-Doctor diskette upon startup, it might be due to the startup sequence. To make the PC-Doctor diskette the primary startup media, do the following:

1. Power off the HMC.
2. Power on the HMC and press F1 when the Setup Utility prompts during startup.
3. Select the Startup tab.
4. Highlight Startup Sequence and press Enter.
5. Under Primary Startup Sequence, make sure the first startup device is set to Removable. Then follow the remainder of the instructions on the screen to complete the procedure.

Running PC-Doctor on a rack-mounted HMC

Note: A rack-mounted HMC has PC-Doctor preinstalled. You can upgrade your PC-Doctor using a bootable CD that has PC-Doctor installed. To use a bootable diskette copy of PC-Doctor on a rack-mounted HMC, you must use an external USB diskette drive.

To run PC-Doctor on a rack-mounted HMC:

1. Turn off the power to the HMC.
2. If you are using a bootable CD or diskette to run PC-Doctor, insert it into the appropriate drive.
3. Turn the power to the HMC back on and press F2 when the message `F2 for Diagnostics` is displayed.
4. If prompted, type the appropriate password, then press Enter.
5. Select either Extended or Basic from the top of the screen.
6. From the diagnostic screen, select the test you want to run from the list and then follow all instructions.

Note: For additional information about HMC diagnostics, go to the diagnostics section in the appropriate personal computer hardware maintenance manual. To access the personal computer hardware maintenance documentation, refer to Equivalent maintenance information for the HMC's personal computer hardware.

Parent topic:

Removing and replacing parts on the HMC

Learn how to remove and replace parts on the HMC.

You can do most of the procedures for the personal computer on which your HMC is based. This section contains instructions to help you access the procedures that are needed for removing and replacing parts on your HMC.

Note: Depending on the system configuration, when you are directed to exchange parts, run tests, or change configuration data, the interface to the managed systems will be unavailable. If possible, before starting any of these tasks, ensure that all system management tasks are completed and all critical data is backed up.

Attention: Removing power from an HMC might cause loss of data on the disk drives. If power must be removed, select Power Off from the HMC user interface. This action shuts down the operating system and turns off the power to the HMC. See Power off the HMC.

HMC maintenance procedures

The procedures in this section help you to perform maintenance tasks and to install updates to the HMC.

Attention: The system board, adapters, memory modules, and processor modules can be damaged by electrostatic discharge. If you are directed to exchange a part in an HMC, refer to the "Handling Electro-Static Discharge (ESD) Sensitive Devices" in the appropriate PC maintenance information manuals.

When you are referred to the hardware maintenance manual for the personal computer, use the hardware maintenance manual for the appropriate personal computer machine type. To access the personal computer hardware maintenance documentation, refer to the Equivalent maintenance information for the HMC's personal computer hardware.

System board specifications

Your HMC system is based on one of the following personal computer machine types and models.

- 8676 Model 22X is used for the 10C/R2
- 8837 Model 22U is used for the 10C/R3
- 8187 Model F4U(without POV) is used for the 10C/03
- 8141 Model 31U is used for the 10C/04
- 8485 Model 3AU is used for the 7310-C05

To find documentation about the base HMC personal computer and its components, refer to Equivalent maintenance information for the HMC's personal computer hardware.

Recovering the HMC

If the HMC has had a problem and you need to recover the HMC, the procedure can be found in Recovering the HMC.

Attention: This procedure will restore the HMC image onto the disk drive in the HMC personal computer. Before performing this procedure, contact HMC support and also ensure that there are backups for all critical console data.

Backup Profiles

Ensure that critical data which is stored on the HMC is also regularly maintained on backup media. The procedure can be found in Backing up critical HMC data.

HMC fixes

For information about getting fixes or updates for the HMC code, refer to Fixes and upgrades.

Recovering an HMC after replacing a disk drive

If you have to replace a disk drive, you will have to recover the HMC image and restore your stored profile data. Go to Recovering the HMC for more information.

Performing the firmware (BIOS/VPD) update procedure (after replacing the system board)

When your replace the system board, you should always perform the firmware update procedure for your HMC personal computer.

Attention: Refer to the information label located inside the system unit cover for any model-specific information.

To perform the firmware (BIOS/VPD) update procedure, perform the following steps:

1. To find documentation about the base HMC personal computer and its components, refer to Equivalent maintenance information for the HMC's personal computer hardware.
2. Review the section in your HMC personal computer information for "Updating the firmware".
3. Perform the procedures to update the new system board with the latest BIOS firmware.

4. Perform the procedures to update the Vital Product Data (VPD) information with the machine type, model, and serial number for the HMC.
5. Return the HMC to normal operations.

Parent topic: HMC problem analysis

Analyzing HMC machine code problems

Learn about analyzing HMC machine code problems with the help of support personnel.

Only perform this procedure if your hardware service provider directs you to do so. The support organization uses the *pesh* command to look at the HMC's internal machine code to determine how to fix a machine code problem. Only a service representative or service representative can access this feature.

Parent topic: HMC problem analysis

Starting an xterm shell

You might need to start an xterm shell to perform directed support from the support center. This might be required if the support center needs to analyze a system dump in order to better understand machine code operations at the time of a failure. To start an xterm shell, perform the following:

1. Open a terminal by right-clicking the background and selecting Terminals > rshterm.
2. Type the *pesh* command followed by the serial number of the HMC and press Enter.
3. You will be prompted for a password, which you must obtain from your next level of support.

Powering on managed systems after a power outage when your HMC is configured as a DHCP server

Learn how to correctly power on your managed systems after a power outage when your HMC is configured as a Dynamic Host Configuration Protocol (DHCP) server.

The following models require that your HMC be configured as a DHCP server:

- server 5/75
- server ESCALA PL 3250R
- server ESCALA PL 6450R

To power on your managed systems after a power outage, perform the following steps:

1. Choose from the following options:
   - If the location's main power *has not* been restored, go to step 2.
   - If the location's main power *has* been restored, perform the following steps:
     a. Allow the servers and HMC to power on completely.
     b. Log on to the HMC interface.
     c. Continue with step 5.

2. Perform an Emergency Power Off (EPO) procedure on the servers. This can be completed in the following ways:
    ♦ Using the ASMI. For details, see Performing an immediate power off .
    ♦ Flipping the EPO switch on your managed system   s Operator panel.
3. After the location's main power has been restored, power on the HMC.
4. After the HMC powers on and you have logged on to the HMC interface, restore base power to the managed systems by turning on the EPO switches on the managed systems.
5. Verify that the managed systems are powered on to the correct operating state.
    a. In the Navigation area on the HMC interface, click Server and Partition.
    b. In the Navigation area, select Frame Management.
    c. In the Contents area, verify that the virtual operator panel displays `Standby/Standby` for each frame managed by your HMC.
    d. In the Navigation area, select Server Management. The managed systems power on to the last state they were in when power was lost.
    e. In the Contents area, verify that the virtual operator panel displays the correct operating state.

    Note: For more information about other managed system operating states, see Managed system states.

6. Perform the following actions as necessary:
    ♦ If your HMC is configured as a DHCP server, perform the actions listed in Verifying that your HMC DHCP private network is configured correctly.
    ♦ If the virtual operator panel displays `Version Mismatch` in the Contents area, the HMC most likely has an IP connection identified as a one type of IP address, when in actuality the IP is communicating with another type of IP address. If `Version Mismatch` displays in the virtual operator panel, contact your next level of support for assistance.
    ♦ If the system did not power on automatically, power on the managed system from the HMC. For more information, see Powering on a managed system.
7. Verify that I/O is assigned correctly.
    a. In the Contents area, right-click the frame and select Properties.
    b. In the Properties window, click the I/O Units tab.
    c. Ensure that the I/O locations are correct by comparing the physical location code of the I/O unit on the left with the managed system serial number on the right.
8. Choose from the following options:
    ♦ If the I/O units are assigned correctly, your managed systems are powered on and ready for use.
    ♦ If the I/O units are assigned to an incorrect managed system, you have a network communication problem. Contact your next level of support for assistance.

Parent topic: HMC problem analysis

Troubleshooting the keyboard, video, and mouse (KVM) switch for the 1x8 and 2x8 console manager

Learn about troubleshooting the KVM switch on a 1x8 and 2x8 Console Manager.

Use this procedure to isolate a problem on a 1x8 or 2x8 console manager. You will use this procedures in conjunction with the Console switch installation and user's guide (680 KB) and the Local 2x8 Console manager user's guide (6000 KB).

1. Choose from the following options:
    ♦ If you are troubleshooting a 1x8 console manager, continue with step 5.
    ♦ If you are troubleshooting a 2x8 console manager, refer to the Local 2x8 Console manager user's guide (6000 KB) and run the onboard diagnostics. When finished, return here and continue with step 2.
2. Do the onboard diagnostics for the 2x8 Console Manager report any problems, or were you unable to run the diagnostics?

◆ **No**: Continue with step 3.
◆ **Yes**: Continue with step 5.

3. Do the onboard diagnostics of the 2x8 console manager indicate a no firmware cyclical redundancy check (CRC) error?
   ◆ **No**: To download the latest firmware updates onto your KVM switch, go to Local 2x8 Console manager User's Guide. Then return here and continue with step 5.
   ◆ **Yes**: Continue with step 4.
4. Do the onboard diagnostics indicate that there are no conversion option (CO) cables that are suspect?
   ◆ **No**: Replace the CO cable that caused a problem, then go to 5.
   ◆ **Yes**: Continue with step 5.
5. Is the monitor blank?
   ◆ **No**: Continue with the next step.
   ◆ **Yes**: Refer to Troubleshooting monitor problems when connected to a KVM switch for the 1x8 and 2x8 console manager.
6. Is your keyboard input recognized?
   ◆ **No**: Refer to Troubleshooting keyboard problems when connected to a KVM switch for the 1x8 or 2x8 console manager.
   ◆ **Yes**: Continue with the next step.
7. Can the OSCAR menu be displayed?

Note: For more information on using the OSCAR interface, which uses step by step menus that allow you to view, configure and select target devices connected to the KVM switch, refer to the following user guides:

   ◆ Console switch installation and user's guide (680 KB)
   ◆ Local 2x8 Console manager user's guide (6000 KB)

   ◆ **No**: Refer to Troubleshooting user port problems for the (KVM) switch on a 1x8 or 2x8 console manager.
   ◆ **Yes**: Continue with the next step.
8. Is the KVM switch powering on?

Note: Check the green power LED that is located on the front of the KVM switch, approximately 2 in. to the right of the power on/off switch.

   ◆ **No**: Refer to Troubleshooting a power problem for the KVM switch on the 1x8 or 2x8 console manager
   ◆ **Yes**: **This ends the procedure**.

• **Troubleshooting monitor problems when connected to a KVM switch for the 1x8 and 2x8 console manager**
  Use this procedure to diagnose monitor problems when the monitor is connected to a KVM switch on a 1x8 or 2x8 Console Manager.
• **Troubleshooting keyboard problems when connected to a KVM switch for the 1x8 or 2x8 console manager**
  Learn about troubleshooting the KVM switch on a 1x8 and 2x8 Console Manager.
• **Troubleshooting user port problems for the (KVM) switch on a 1x8 or 2x8 console manager**
  Learn about troubleshooting the user port for the KVM switch on a 1x8 and 2x8 Console Manager.
• **Troubleshooting a power problem for the KVM switch on the 1x8 or 2x8 console manager**
  Learn about troubleshooting a power problem for the KVM switch on a 1x8 or 2x8 Console Manager.

Parent topic: Beginning problem analysis

Troubleshooting monitor problems when connected to a KVM switch for the 1x8 and 2x8 console manager

Use this procedure to diagnose monitor problems when the monitor is connected to a KVM switch on a 1x8 or 2x8 Console Manager.

Before beginning this isolation procedure, invoke the OSCAR interface on your monitor, as described in "Starting the OSCAR interface". Information on using OSCAR can be found in your Console switch installation and user's guide (680 KB) or Local 2x8 Console manager user's guide (6000 KB). The OSCAR interface uses step by step menus that appear on your monitor allowing you to view, configure and select target devices connected to the KVM switch.

1. Can you start OSCAR?
    - ♦ **No**: Go to Troubleshooting user port problems for the (KVM) switch on a 1x8 or 2x8 console manager.
    - ♦ **Yes**: Go to step 2.
2. Are there any servers that, when selected from OSCAR, display on the monitor?
    - ♦ **No**: Go to step 4.
    - ♦ **Yes**: Go to step 3.
3. On servers that do not display, is the conversion option (CO) cable connected correctly to the graphics adapter?
    - ♦ **No**: Reseat the cable and check the monitor.
    - ♦ **Yes**: Go to step 5.
4. Is your monitor cable seated correctly at the KVM switch?
    - ♦ **No**: Reseat the cable and check the monitor.
    - ♦ **Yes**: Go to step 6.
5. Is your monitor refresh rate set at or below 1280 x 1024 resolution?
    - ♦ **No**: Set the refresh rate at or below 1280 x 1024.
    - ♦ **Yes**: Go to step 8.
6. Perform the following steps:
    a. Connect a different monitor to the same user port on the KVM switch.
    b. Ensure both switch and monitor are plugged in and powered on (green LED indicates power on) and that the correct monitor input is selected.
   Is the monitor still blank?

    - ♦ **No**: Follow the problem determination guide for the monitor you replaced.
    - ♦ **Yes**: Go to step 7.
7. Power cycle your KVM switch by toggling the On/Off switch back and forth, ending with the On/Off switch in the "On" position.

   Is your monitor still blank?

    - ♦ **No**: **This ends the procedure.**
    - ♦ **Yes**: Replace the KVM switch.
8. Is your server powered on?
    - ♦ **No**: Power on the server.
    - ♦ **Yes**: Go to step 9.
9. Replace the KVM conversion option (KCO) or the USB conversion option (UCO). This will be dependent on the option that is in use and connects to your server.

   Is the monitor still blank?

    - ♦ **No**: **This ends the procedure.**
    - ♦ **Yes**: Go to step 10.
10. Change the port on your KVM switch to which the CAT5 cable going to the KCO or to the UCO is attached.

    Is the monitor still blank?

    - ♦ **No**: **This ends the procedure.**
    - ♦ **Yes**: Replace the KVM switch.

Troubleshooting keyboard problems when connected to a KVM switch for the 1x8 or 2x8 console manager

Learn about troubleshooting the KVM switch on a 1x8 and 2x8 Console Manager.

Before beginning this isolation procedure, invoke the OSCAR interface on your monitor. The OSCAR interface uses step-by-step menus allowing you to view, configure and select target devices connected to your KVM switch. Information on using OSCAR can be found in your Console switch installation and user's guide (680 KB) or Local 2x8 Console manager user's guide (6000 KB).

1. Does your keyboard invoke OSCAR?
     - ♦ **No**: Go to step 4.
     - ♦ **Yes**: Go to step 2.
2. When selected, do any of your powered on servers accept input from the keyboard?
     - ♦ **No**: Go to step 4.
     - ♦ **Yes**: Go to step 3.
3. Is the cable connected properly to the PS/2 or USB port on the server that does accept keyboard input?
     - ♦ **No**: Reseat the cable and check the keyboard.
     - ♦ **Yes**: Go to step 7.
4. Is the keyboard seated correctly at the KVM switch?
     - ♦ **No**: Reseat the cable and check the keyboard.
     - ♦ **Yes**: Go to step 5.
5. Connect a different keyboard to the same user port on the KVM switch. Ensure the keyboard cable is correctly seated.

   Is your keyboard now functioning?

     - ♦ **No**: Follow the problem determination guide for the keyboard you replaced.
     - ♦ **Yes**: Go to step 6.
6. Power cycle your KVM switch by toggling the On/Off switch back and forth, ending with the On/Off switch in the "On" position.

   Is the keyboard working?

     - ♦ **No**: Replace the KVM switch.
     - ♦ **Yes**: **This ends the procedure**.
7. Replace the KVM conversion option (KCO) or the USB conversion option (UCO). This will be dependent on the option that is in use and connects to your server.

   Is your keyboard working?

     - ♦ **No**: Go to step 8.
     - ♦ **Yes**: **This ends the procedure**.
8. Change the port on your KVM switch to which the CAT5 cable going to the KCO or to the UCO is attached.

   Is your keyboard working?

     - ♦ **No**: Replace the KVM switch.
     - ♦ **Yes**: **This ends the procedure**.

Troubleshooting user port problems for the (KVM) switch on a 1x8 or 2x8 console manager

Learn about troubleshooting the user port for the KVM switch on a 1x8 and 2x8 Console Manager.

1. Is your keyboard properly connected to your KVM switch?
    - ♦ **No**: Properly connect the keyboard to your KVM switch and invoke the OSCAR interface.
    - ♦ **Yes**: Go to step 2.
2. Connect a different keyboard to the switch.

    Was the OSCAR interface successfully invoked?

    - ♦ **No**: Go to step 3.
    - ♦ **Yes**: **This end the procedure.**
3. Connect the keyboard and the monitor to different user ports on the KVM switch.

    Was the OSCAR interface successfully invoked?

    - ♦ **No**: Go to step 4.
    - ♦ **Yes**: The KVM Switch has bad user ports. Replace the KVM switch.
4. Power cycle your KVM switch by toggling the On/Off switch back and forth, ending with the On/Off switch in the "On" position.

    Was the OSCAR interface successfully invoked?

    - ♦ **No**: Go to step 5.
    - ♦ **Yes**: **This end the procedure.**
5. Download the latest firmware to the KVM switch via a serial connection. Depending on the KVM switch model you are servicing refer to either the Console switch installation and user's guide (680 KB) or the Local 2x8 Console manager user's guide (6000 KB) for information on downloading firmware updates.

    Was the OSCAR interface successfully invoked?

    - ♦ **No**: Replace the KVM switch.
    - ♦ **Yes**: **This ends the procedure**.

Parent topic: Troubleshooting the keyboard, video, and mouse (KVM) switch for the 1x8 and 2x8 console manager

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Troubleshooting a power problem for the KVM switch on the 1x8 or 2x8 console manager

Learn about troubleshooting a power problem for the KVM switch on a 1x8 or 2x8 Console Manager.

1. When you power on your KVM switch does the green power LED light up?
    - ♦ **No**: Check that the power cable is properly connected to the power source and the KVM switch. Then go to step 2.
    - ♦ **Yes**: **This ends the procedure**.
2. Was the power cable seated correctly to the power source and the KVM switch?
    - ♦ **No**: Reseat the power cable connection to the power source and the KVM switch. Then go to step 3.
    - ♦ **Yes**: Continue with step 3.
3. Power on your KVM switch.

    Does the green power LED light up?

    - ♦ **No**: Power down the KVM switch and replace the power cable to the KVM switch. Then go to step 4.
    - ♦ **Yes**: **This ends the procedure**.
4. Power on your KVM switch.

    Does the green power LED light up?

- ♦ **No**: Power down the KVM switch and connect the KVM switch to a different power source.
  Then go to step 5.
- ♦ **Yes**: **This ends the procedure**.
5. Power on your KVM switch.

   Does the KVM switch power on?

   - ♦ **No**: Replace the KVM switch.
   - ♦ **Yes**: **This ends the procedure**.

Parent topic: Troubleshooting the keyboard, video, and mouse (KVM) switch for the 1x8 and 2x8 console manager

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Collecting reference codes and system information

Learn how to collect reference codes and other system information.

The reference codes and system information can help determine the correct solution to fix a problem. The reference codes and system information can appear on the HMC or on the server's control panel. If you have logical partitions, you will need to use the HMC.

Note: Ensure you have a printed copy of the appropriate problem reporting form to document the information you collect here. For details, see Using the problem reporting forms.

- **Using the HMC to collect reference codes and system information**
  Learn how to collect reference codes and other system information with an HMC.
- **Using the Integrated Virtualization Manager to collect reference codes and system information**
  Learn how to use the Integrated Virtualization Manager to collect reference codes and other system information.
- **Using the control panel to collect reference codes and system information**
  Learn how to use the control panel to collect reference codes and other system information.
- **Using AIX tools to collect reference codes and system information**
  Learn how to use AIX tools to collect reference codes and other system information.
- **Using Linux tools to collecting reference codes and system information**
  Learn how to use Linux tools to collect reference codes and other system information.

Parent topic: Customer service, support, and troubleshooting

Using the HMC to collect reference codes and system information

Learn how to collect reference codes and other system information with an HMC.

Perform these steps to collect reference codes (functions 11-19) and system information (function 20) on an HMC.

Note: Ensure you have a printed copy of the appropriate problem reporting form to document the information you collect here. For details, see Using the problem reporting forms.

1. In the navigation area, expand Server and partition > Server Management.
2. To view the reference code that corresponds to function 11 on the control panel: In the contents area, select the system or logical partition and view the associated value in the Operator panel value column.
3. To view reference codes that correspond to function 12-19 on the control panel: In the contents area, expand the system.
4. Select the system or logical partition.
5. Right-click the system or logical partition and select Properties.
6. Select the Reference Code tab.
7. Select the entry that corresponds to the time stamp you want to view.
8. Click the Details button.
9. Record the values that correspond to functions 12 through 19 on the control panel.
10. When finished, click OK twice.
11. To collect system information that corresponds to function 20 on the control panel: In the navigation area, open the Service Applications folder.
12. Select Service Focal Point.
13. In the contents area, select Service Utilities.
14. In the Service Utilities window, select the system and select Selected > Operator Panel Service Functions.
15. Choose from the following options:
     - To view function 20 for the selected system, select System Function > System Type, Model, and Feature Code (20).
     - To view function 20 for a logical partition, select the logical partition from the list and select System Function > System Type, Model, and Feature Code (20).
16. Record the machine type, model, processor feature code, and IPL type information.

For additional details on how to perform control panel functions on the HMC, see Accessing the control panel functions using the HMC.

Parent topic: Collecting reference codes and system information

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Using the Integrated Virtualization Manager to collect reference codes and system information

Learn how to use the Integrated Virtualization Manager to collect reference codes and other system information.

Note: Ensure you have a printed copy of the appropriate problem reporting form to document the information you collect here. For details, see Using the problem reporting forms.

Choose the method you plan to use:

For details on collecting reference codes using the Integrated Virtualization Manager, see Viewing partition reference codes.

Parent topic: Collecting reference codes and system information

Using the control panel to collect reference codes and system information

Learn how to use the control panel to collect reference codes and other system information.

Follow these steps to collect reference codes and system information (functions 11 through 20) using the control panel:

Note: Ensure you have a printed copy of the appropriate problem reporting form to document the information you collect here. For details, see Using the problem reporting forms.

1. On the control panel, press the increment button until `11` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code: 16 characters from the first line, and 16 characters from the second line of the Function/Data display.
2. Press the increment button until `12` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code.
3. Press the increment button until `13` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code.
4. Press the increment button until `14` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code.
5. Press the increment button until `15` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code.
6. Press the increment button until `16` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code.
7. Press the increment button until `17` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code.
8. Press the increment button until `18` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code.
9. Press the increment button until `19` is shown on the Function/Data display.
   a. Press Enter.
   b. Record the 32-character code.
10. Press the increment button again until `20` is shown on the first line of the Function/Data display.
    a. Press Enter.
    b. Record the machine type, model, and serial number that is shown.

Note:

1. If `11` is shown in the Function/Data display on the control panel display, the numbers that follow are the reference codes.
2. If a number other than `11` is shown in the Function/Data display, the number might not indicate a problem with the system. These reference codes might indicate functions you select from the control panel display.

3. If you have a console with Type and Reference Code columns on it, record the data under the Type column as the first 4 characters of function 11 on the problem reporting form. For details, see Using the problem reporting forms. If an A, B, C, or D is displayed as the first character in the Type column, use the data in the Reference Code column as the last 4 characters of function 11. For information about who to contact if you need more help, contact service and support.

Parent topic: Collecting reference codes and system information

Using AIX tools to collect reference codes and system information

Learn how to use AIX tools to collect reference codes and other system information.

Note: Ensure you have a printed copy of the appropriate problem reporting form to document the information you collect here. For details, see Using the problem reporting forms.

1. Log in as root user, or use CE login.
2. At the command line, type `diag` and press Enter.
3. From the Function Selection menu, select Task Selection and press Enter.
4. Select Display Previous Diagnostic Results and press Enter.
5. From the Display Previous Diagnostic Results display, select Display Diagnostic Log Summary. The Display Diagnostic Log is displayed showing a chronological list of events.
6. Look in the T column for the most recent S entry.
7. Select this row in the table and press Enter.
8. Choose Commit. The details of this log entry are shown.
9. Record the SRN value shown near the end of the entry.
10. Exit to the command line.

Parent topic: Collecting reference codes and system information

Using Linux tools to collecting reference codes and system information

Learn how to use Linux tools to collect reference codes and other system information.

Note: Ensure you have a printed copy of the appropriate problem reporting form to document the information you collect here. For details, see Using the problem reporting forms.

For details, see Identify a failing part on a Linux system or logical partition.

Parent topic: Collecting reference codes and system information

Reference codes list for customers

Learn more about the various types of reference codes and how they can help with problem analysis.

To use reference codes effectively, you must use them in conjunction with other service and support procedures. If you were not directed here by another procedure, see Beginning problem analysis.

Use these codes to locate the reference code you are receiving. The xxxx can be any number 0 through 9 or letter A through F. The codes are grouped in ranges, although the recovery for each range might not apply to every reference code within the range. If you cannot find your code range, contact your next level of support or your hardware service provider for help interpreting what it means.

If your code is 5 characters in length, or contains a hyphen (-), then it is a service request number (SRN). For details, refer to Service request numbers (SRNs).

The reference codes are organized by their first character, with numbers preceding letters. To navigate this listing, click the number or letter that matches the first character of your code. Then select your code, if available, from the list provided.

Note: The 8-digit references codes will be displayed as xxxxxxxx on your control panel or interface. For ease of reading, there is a space between the first 4 and last 4 digits in this documentation.

0 2 3 4 6 7 9 A B C D E H V #

0

Table 1. Reference codes that start with 0.

Reference code	Description/Action
0xxxxx	A *No Connection* state occurred on a system managed by an HMC. Refer to 0xxxxx connection error codes.

2

Table 2. Reference codes that start with 2.

Reference code	Description/Action
20A8xxxx	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
20Dxxxxx	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
20EExxxx	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
20FFxxxx	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
2102xxxx	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
220xxxxx	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
25Axxxxx	

	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
25C*xxxx*	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
2602*xxxx*	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
2803*xxxx*	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
2B2*xxxxx*	See (20A8, 20Dx, 20EE, 20FF, 2102, 220x, 25Ax, 25Cx, 2602, 2803, 2B2x) Model ESCALA PL 245T/R reference (error) codes.
26443136	It might indicate a software installation error. For more information, see Common SRCs for software installation.

3

Table 3. Reference codes that start with 3.

Reference code	Description/Action
3490*xxxx*	It might indicate a tape unit problem.
3494*xxxx*	It might indicate a tape library problem.
3570*xxxx*	It might indicate a tape unit problem.
358*xxxxx*	It might indicate a tape unit problem.
359*xxxxx*	It might indicate a tape unit problem.

4

Table 4. Reference codes that start with 4.

Reference code	Description/Action
40*xxxxxxx*	See (40xx) Model ESCALA PL 245T/R reference (error) codes.
4685*xxxx*	It might indicate a tape or tape library problem.
4B20*xxxx*	See (4B20) Model ESCALA PL 245T/R reference (error) codes.

6

Table 5. Reference codes that start with 6.

Reference code	Description/Action
63*xxxxxx*	It might indicate an CD drive error.

7

Table 6. Reference codes that start with 7.

Reference code	Description/Action
7207*xxxx*	It might indicate a CD drive error.
7208*xxxx*	

	See (7208) Tape drive reference codes. The information in this topic is intended for service providers.

9

Table 7. Reference codes that start with 9.

Reference code	Description/Action
9348*xxxx*	See (9348) Tape unit reference codes. The information in this topic is intended for service providers.
9427*xxxx*	See (9427) Tape unit reference codes. The information in this topic is intended for service providers.

A

Table 8. Reference codes that start with A.

Reference code	Description/Action
A1*xxxxxx*	See (A1xx) Service processor reference (attention) codes. Most of the information in this topic is intended for service providers.
A2*xxxxxx*	It might indicate a logical partition error. See (A2xx, B2xx) Logical partition reference codes. The information in this topic is intended for service providers.
A6*xxxxxx*	Check the following for a specific A6xx reference code. If you do not see your reference code, it might indicate a Licensed Internal Code error was detected.

A6*xx*0277	A compression disk unit cannot complete an operation.
	
	1. Do not turn off the system.
	2. Look at the 4 characters that are to the left of the Data display of function 17. These 4 characters indicate the type of problem that exists and the recovery action to perform.
	3. Is this numeral 8402 or 2002?
	    ◆ No: Continue with the next step.
	    ◆ Yes: The compression disk unit is temporarily full of data. The command to the compression disk is being held. When the subsystem controller has created sufficient space on the compression disk unit to contain the data, the command that is being held is released and the system resumes normal processing. If the system does not resume normal processing within 20 minutes, contact your next level of support or your hardware service provider.
	4. If this numeral is 8400 or 2000, the compression disk unit is full of data. The command to the compression disk is being held.

A60011*xx*	It might indicate a software installation error.
A6*xx*500*x*	It might indicate a workstation controller error.
A60050*xx*	Not applicable.
A900*xxxx*	Not applicable.

A9002000	It might indicate an IPL error.
	
	1. If the system completed the IPL, check the QSYSARB job log for a message, and follow the corrective actions indicated. To view the QSYSARB job log:
	    a. Use the Work with Active Jobs (WRKACTJOB) command, and then type 5 (Work with) next to the QSYSARB job.
	    b. Select Option 10 (Display jobs) to view the job log. You need *QSECOFR user class, or *ALLOBJ and *JOBCTL special authority to view the job log.
	2. If the problem persists, contact your next level of support or your hardware

	service provider.
AA*xxxxxx*	See the (AAxx) Partition firmware reference (attention) codes⬚. The information in this topic is intended for service providers.

B

Table 9. Reference codes that start with B.

Reference code	Description/Action
B0*xxxxxx*	Check the following for a specific B0xx reference code. If you do not see your reference code, it might indicate a communications error.
B1*xxxxxx*	Check the following for a specific B1xx reference code. If you do not see your reference code, it might indicate one of the following: • A service processor firmware error. For details, see (B1xx) Service processor firmware reference codes⬚. The information in this topic is intended for service providers. • An IPL load device error.
B1*xx*45*xx*	It might indicate a software installation error.
B2*xxxxxx*	See (A2xx, B2xx) Logical partition reference codes⬚. The information in this topic is intended for service providers.
B3*xxxxxx*	See (B3xx) Connection monitoring reference codes⬚. The information in this topic is intended for service providers.
B6*xxxxxx*	Check the following for a specific B6xx reference code. If you do not see your reference code, it might indicate a Licensed Internal Code or hardware event was detected. If the reference code is in the Problem Log or the Service Action Log, then it requires service and you should contact your next level of support or your hardware service provider.
B600500*x*	It might indicate an Operations Console error. See Troubleshoot system reference code (SRC) data for Operations Console.
B6081105	It might indicate a software installation error. See Common SRCs for software installation for more information.
B9*xxxxxx*	Check the following for a specific B9xx reference code.
B9003121	It might indicate a software installation error. See Common SRCs for software installation for more information.
BA*xxxxxx*	See the (BAxx) Partition firmware reference (error) codes⬚. The information in this topic is intended for service providers.

C

Table 10. Reference codes that start with C.

Reference code	Description/Action
C1*xxxxxx*	See (C1xx) Service processor progress codes (checkpoints)⬚. The information in this topic is intended for service providers.
C2*xxxxxx*	See (C2xx) Virtual service processor progress codes⬚. The information in this topic is intended for service providers.
C3*xxxxxx*	See IPL status codes⬚. The information in this topic is intended for service providers.
C5*xxxxxx*	See IPL status codes⬚. The information in this topic is intended for service providers.
C6*xxxxxx*	See IPL status codes⬚. The information in this topic is intended for service providers.
C7*xxxxxx*	These reference codes show the status of the server firmware IPL. For details, see Server firmware IPL status progress codes ⬚. The information in this topic is intended for service providers.

C9*xxxxxx*	Not applicable.
CA*xxxxxx*	See the (CAxx) Partition firmware progress codes. The information in this topic is intended for service providers.
Comm 65*x*	When using a virtual terminal (VTERM), you might see an error code displayed in the bottom-left corner of the VTERM window. For a list of the error codes and recovery actions, see the Virtual terminal errors (Comm) error codes.

D

Table 11. Reference codes that start with D.

Reference code	Description/Action
D1*xxxxxx*	These codes can show progress or dump status. See either: • (D1xx) Service processor progress codes (service processor dump and platform dump). • (D1xx) Service processor status progress codes. The information in these topics is intended for service providers.
D2*xxxxxx*	Show the status of an IPL or a system shutdown process. This is a normal indication while the panel functions and system code are shutting down the system.
D6*xxxxxx*	See (D6xx) General status progress codes. The information in this topic is intended for service providers.
D9*xxxxxx*	See (D9xx) General status progress codes. The information in this topic is intended for service providers.
DA*xxxxxx*	These reference codes show the status of an IPL.
DLPAR_REM_FAIL_REASON	A trunk priority value that was not valid was specified.

E

Table 12. Reference codes that start with E.

Reference code	Description/Action
E2*xxxxxx*	Refer to (E2xx) Licensed Internal Code reference codes.
E3*xxxxxx*	Refer to (E3xx) Licensed Internal Code reference codes.
ERR_CONC_MINT_RMC_CMD_EXCEPTION	{0} operation for {1} resource has failed on partition {2}.
ERR_CONC_MAINT_RMC_CMD_ERROR_NO_OUT	{0} operation for {1} resource has failed on partition {2}. The partition standard output/error is not available.
ERR_CONC_MAINT_RMC_CMD_ERROR	{0} operation for {1} resource has failed on partition {2}. The partition standard output is: {2} The partition standard output is: {3} The partition standard error is: {4}
ERR_CONC_MAINT_RMC_AIX_CMD_ERROR	{0} operation for {1} resource has failed on partition {2}.

	The partition command is: {3}
	The partition standard output is: {4}
	The partition standard error is: {5}

H

Table 13. Reference codes that start with H.

Reference code	Description/Action
HCA_RELATED_FAILURE	The command failed during an HCA related operation.
HCA_DUPLICATE	The specified HCA data {0} is not valid because it has been assigned to the profile already. Select another adapter or remove the current assignment of the adapter and retry the operation.
HCA_INVALID_INPUT	The specified HCA data {0} is not valid for the operation. Either the adapter ID or GUID does not exist, the resource capability is not valid, or the data is not in the format 'Adapter ID/GID/Capabilities'. Correct and retry the operation.
HCA_UNSUPPORTED	Not applicable.
HSC*xxxxx*	Indicates an HMC message. For details, see HMC error codes.

V

Table 14. Reference codes that start with a V.

Reference code	Description/Action
VALIDATE_SYS_PROF_*	Follow the actions that are displayed with the reference code.

#

Table 15. Reference codes that start with a # (number sign).

Reference code	Description/Action
# followed by numbers, for example: #2533902	See Reference codes that begin with a number sign. The information in this topic is intended for service providers.

- **HMC error codes**
  These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.
- **Service request numbers (SRNs)**
  Service request numbers (SRNs) can appear when AIX online diagnostics or stand-alone diagnostics are run on your server.

Parent topic: Customer service, support, and troubleshooting

HMC error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Use this information to determine what a specific error or information message means and the recovery action, if applicable, to help you determine a recovery strategy.

Note: This is not a complete list of all the HMC error codes you might receive. If the code begins with ACT, HSCW, or HSCU, contact your next level of support or your service provider for more information.

- **0xxxxx connection error codes**
- **ESA0xxxx Electronic Service Agent error codes**
- **HSCExxxx console events error codes**
- **HSCFxxxx Licensed Internal Code error codes**
- **HSCIxxxx Inventory Scout Services error codes**
- **HSCLxxxx error codes**
- **HSCL00xx Profile data error codes**
- **HSCL01xx managed system error codes**
- **HSCL02xx error codes**
- **HSCL03xx managed system resource error codes**
- **HSCL04xx logical partition error codes**
- **HSCL05xx logical partition error codes**
- **HSCL06xx error codes**
- **HSCL07xx error codes**
- **HSCL09xx system profile error codes**
- **HSCL0Bxx attention light messages**
- **HSCL0Dxx operating system reset error codes**
- **HSCL0Fxx error codes**
- **HSCL11xx backup and restore error codes**
- **HSCL13xx utility class error codes**
- **HSCL14xx error codes**
- **HSCL15xx CIMOM error codes**
- **HSCL17xx HMC console error codes**
- **HSCL19xx WEBSM/AUIML error codes**
- **HSCL25xx user management error codes**
- **HSCL29xx user management error codes**
- **HSCL3xxx error codes**
- **HSCL70xx error codes**
- **HSCL80xx error codes**
- **HSCL90xx error codes**
- **HSCLAxxx error codes**
- **HSCPxxxx platform management error codes**
- **HSCSxxxx Service Focal Point error codes**
- **Virtual terminal errors (Comm) error codes**

Parent topic: Reference codes list for customers

0*xxxxx* connection error codes

If the HMC displays a state of `No Connection` in the managed system state column, it means that the HMC is unable to establish a connection to the managed system. There are several reasons why the HMC fails to establish connection, and often it is due to network issues. It is important to first check the network setting on both the HMC and the managed system. However, there are times a no connection state is caused by another problem unrelated to network settings. Use the following tables to find the error code you are receiving, and the recovery action if available.

Choose the range from the list below:

- 0x00*xx*
- 0x01*xx*
- 0x02*xx*
- 0x04*xx*
- 0x08*xx*
- 0x0B*xx*
- 0x10*xx*

Range 0x00*xx*: Connection related failures during runtime (after initial command sequencing is complete)

0x00*xx* error codes (hex)	Text displayed	Recovery action
0x0000	Connecting	
0x0001	Connecting	1. If the HMC does not recover automatically within a few minutes, do the procedure in Resetting the managed system connection from the HMC. 2. If the managed system is still showing No Connection on the HMC, contact your next level of support or your hardware service provider.
0x0002	Connecting	1. If the HMC does not recover automatically within a few minutes, do the procedure in Resetting the managed system connection from the HMC. 2. If the managed system is still showing No Connection on the HMC, contact your next level of support or your hardware service provider.
0x0003	Connecting	A reset connection of the managed system was initiated on the HMC. If the HMC does not recover automatically within a few minutes, contact your next level of support or your hardware service provider. **Note:** The managed system should not stay in this state for long. The HMC will re-establish connection to the system, and change to another state.
0x0004	Temporary disconnection	
0x0005	Permanent disconnection	
0x0006	Forced disconnection	If you no longer want your server to be HMC-managed, you must reset the server to a nonpartitioned server before removing the HMC. See Resetting the server to a nonpartitioned configuration for details.
0x0007	Connecting	1. If the HMC does not recover automatically within a few minutes, do the procedure in Resetting the managed system connection from the HMC. 2. If the managed system is still showing No Connection on the HMC, contact your next level of support or your hardware service provider.
0x0008	Duplicate IP	

		1. There is another managed system with the same IP address. Check whether there is an IP conflict. See Check for IP conflict. 2. Reset the managed system connection from the HMC. See Resetting the managed system connection from the HMC for details. 3. If the managed system is still showing `No Connection` on the HMC, contact your next level of support or your hardware service provider.
0x00FF	Connecting	1. Reset the managed system connection from the HMC. See Resetting the managed system connection from the HMC for details. 2. If the managed system is still showing `No Connection` on the HMC, contact your next level of support or your hardware service provider.

Range 0x01xx: Socket-level connect failures

0x01xx error codes (hex)	Message	Recovery action
0x0101	DNS failure	1. The HMC is unable to resolve the host name entered for the managed system through the domain name server. Check whether the DNS is down. 2. If the failure continues, remove the managed system connection and add it back using the IP address. **Note:** Leaving a connection in the DNS failed state might cause performance problems for other HMC connections.
0x0102	Connecting	The HMC is unable to establish a network connection to the managed system. Ensure that the managed system network is configured correctly.
0x0103	Connecting	1. The target IP address of the managed system is refusing a connection from the HMC. Ensure that the IP specified is a valid managed system IP and that the managed system's network is configured correctly. 2. A connection might also be refused if the service processor firewall is configured to block this HMC IP address. Check the network configuration setting of your managed system to ensure that the HMC IP is not being blocked.
0x0104	IP unreachable	1. The HMC is unable to establish a network connection to the managed system. Ensure the HMC and managed system are not on either side of a firewall, or if a firewall exists, ensure that the firewall is configured correctly. 2. Ensure that the managed system network is configured correctly. A common cause for this might be an invalid IP configuration on the

		HMC (for example, bad routing tables or default gateway).
0x01FF	Connecting	The HMC is unable to establish a network connection to the managed system. Ensure that the managed system network is configured correctly.

Range 0x02*xx*: SSL level connect failures

0x02*xx* error codes (hex)	Message	Recovery action
0x02FF	Connecting	1. The HMC is unable to establish a secure network connection to the managed system. Reset the connection from the HMC. See Resetting the managed system connection from the HMC for details. 2. If the problem persists, contact your next level of support or your hardware service provider.

Range 0x04*xx*: Interface version related connection failures

0x04*xx* error codes (hex)	Message	Recovery action
0x0401	Interface version timed out	1. If the HMC does not recover automatically within a few minutes, do the procedure in Resetting the managed system connection from the HMC. 2. If the managed system is still showing `No Connection` on the HMC, contact your next level of support or your hardware service provider.
0x0402	Already connected	1. The managed system already has a connection established from the same HMC. If the HMC does not recover automatically within a few minutes, do the procedure in Resetting the managed system connection from the HMC. 2. If the managed system is still showing `No Connection`, then restart the HMC. 3. If the problem persists, contact your next level of support or your hardware service provider.
0x0403	All connections in use	All connections available for HMCs are already in use. Determine what other HMCs are connected to the managed system, and remove the managed system connections from the other HMCs. **Note:** Contact your administrator to find out which HMCs can connect to the managed system.
0x0404	Version mismatch	

		This version of HMC is unable to manage the system. Update the HMC image.
0x0405	Duplicate MTMS	There is already a managed system with the same machine type, model, and serial number. Contact your next level of support or your hardware service provider.
0x0406	Firmware not ready	1. If the HMC does not recover automatically within a few minutes, do the procedure in Resetting the managed system connection from the HMC. 2. If the managed system is still showing `No Connection` on the HMC, contact your next level of support or your hardware service provider.
0x04FF	Connecting	1. If the HMC does not recover automatically within a few minutes, do the procedure in Resetting the managed system connection from the HMC. 2. If the managed system is still showing `No Connection` on the HMC, your hardware service provider.

Range 0x08*xx*: Authentication related connection failures

0x08*xx* error codex (hex)	Message	Recovery action
0x0801	Authentication timed out	1. Reset the managed system connection from the HMC. See Resetting the managed system connection from the HMC for details. 2. If the managed system is still showing `No Connection` on the HMC, contact your next level of support or your hardware service provider.
0x0802	Incorrect password	The password entered for the managed system is not correct. Check with your administrator to ensure that the password is correct and update the managed system password that the HMC is sending to the managed system. See Overview of the passwords for details.
0x0803	Firmware password locked	1. There have been too many unsuccessful login attempts to the same managed system and the password is locked. Wait for five minutes, and reset the connection from the HMC. See Resetting the managed system connection from the HMC. 2. If the problem persists, contact your next level of support or your hardware service provider.
0x08FF	Connecting.	1. If the HMC does not recover automatically within a few minutes, reset the managed system connection from the HMC. See Resetting the managed system connection from the HMC. 2. If the managed system is still showing `No Connection` on the HMC, contact your next

		level of support or your hardware service provider.

Range 0x0B*xx*: Password change pending related connection failures

0x0B*xx* error codes (hex)	Message	Recovery action
0x0BFF	Connecting.	1. If the HMC does not recover automatically within a few minutes, reset the managed system connection from the HMC. See Resetting the managed system connection from the HMC. 2. If the managed system is still showing `No Connection` on the HMC, contact your next level of support or your hardware service provider.

Range 0x10*xx*: Get interface implementation limits related connection failures

0x10*xx* error codes (hex)	Message	Recovery action
0x1001	Command timed out.	1. If the HMC does not recover automatically within a few minutes, reset the managed system connection from the HMC. See Resetting the managed system connection from the HMC. 2. If the managed system is still showing `No Connection` on the HMC, contact your next level of support or your hardware service provider.
0x10FF	Connecting	1. If the HMC does not recover automatically within a few minutes, reset the managed system connection from the HMC. See Resetting the managed system connection from the HMC. 2. If the managed system is still showing `No Connection` on the HMC, contact your next level of support or your hardware service provider.

Parent topic: HMC error codes

ESA0*xxxx* Electronic Service Agent error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

ESA0*xxxx* error codes	Message	Recovery action
ESA00001	You must enter a valid ID.	
ESA00002	Issuing authorization request for the following IDs: {0}	
ESA00003	Issuing authorization request for the following ID's: {0}{1}	
ESA00004	Your Hardware Management Console is not currently configured for remote service. Ensure that this Hardware Management Console is configured for remote service under Remote Support.	See Enabling remote support on the HMC.
ESA00005	The application can not currently find access to a call home server. Ensure that one of your Hardware Management Console's is configured as a call home server under Remote Support.	See Enabling remote support on the HMC.
ESA00006	Your Hardware Management Console is not currently configured for remote service and can not currently find access to a call home server. Ensure that this Hardware Management Console is configured for remote service and that one of your Hardware Management Console's is configured as a call home server under Remote Support.	See Enabling remote support on the HMC.
ESA00007	Remote Support is not currently supported on this Hardware Management Console.	
ESA00008	A request to authorize users was successfully created.	
ESA00009	An attempt to create an authorize users request was unsuccessful.	
ESA0000A	You must select an email address to perform the desired operation.	
ESA0000B	Successfully removed the following email addresses: {0}	
ESA0000C	Successfully sent email to the following addresses: {0}	
ESA0000D	Transmit of email request was unsuccessful. Ensure that the SMTP server and Port number specified are correct.	
ESA0000E	A request to transmit service information has been successfully created. Once the data has been gathered it will be transmitted.	
ESA0000F	Successfully updated the frequency and time when the scheduled transmission of service information will occur.	
ESA00010	Successfully updated settings.	
ESA00011	Unsuccessfully sent email to the following addresses: {0} Ensure	

	that the email address(es) is specified correctly and retry the operation.	
ESA00012	When you enable email notification, you must specify both an SMTP server and port number.	
ESA00013	A request to transmit performance management information has been successfully created. Once the data has been gathered it will be transmitted.	

Parent topic: HMC error codes

HSCE*xxxx* console events error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

HSCE*xxxx* error codes	Message	Recovery action
HSCE2066	A scheduled backup of critical console data failed with a return code of {0}.	The possible return code values are: • A 4 indicates that the removable media could not be mounted. Verify that the media is inserted correctly in the drive and try the operation again. • A 5 indicates that the removable media is write protected. Remove write protection and try the operation again. • Any value except 4 or 5 is an internal HMC error. Perform the procedure in Backing up critical HMC data. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCF*xxxx* Licensed Internal Code error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

	Message	Recovery action

HSCF*xxxx* error codes		
HSCF0001	Select at least one Licensed Internal Code type to be updated.	
HSCF0002	Flash side selected for next activation: t-side	No recovery action is needed.
HSCF0003	Flash side selected for next activation: p-side Attention: Selecting p-side for next activation will disable concurrent LIC update. The selection is for the next activation. To make it the currently active side, the target must be activated.	To switch to the temporary side, refer to Working with the temporary and permanent side of the service processor.
HSCF0004	An error occurred trying to survey the target {0}. The task will be terminated.	
HSCF0005	Managed System and Power LIC is selected for updating, but no target is currently selected. Ensure that the Managed System and Power LIC checkbox is not checked, or click Advanced Options to select a target.	
HSCF0006	I/O LIC is selected for updating, but no device is currently selected. Ensure that the I/O LIC checkbox is not checked, or click Advanced Options to select a device.	
HSCF0007	An error was encountered while reconfiguring the target {0} for updating through the Hardware Management Console. The selected action can not be performed at this time.	
HSCF0008	The selected installation type indicates to install and activate concurrently, but one or more selected targets have a disruptive concurrency status. Either select a different installation type, or ensure there are no targets selected with a concurrency status of "All must be disruptively activated."	
HSCF0009	Failure importing the following I/O microcode {0}	
HSCF0010	I/O level details are not available.	
HSCF0011	Select a row in the table, and try the operation again.	
HSCF0012	Permanent flash side is active.	To switch to the temporary side, refer to Working with the temporary and permanent side of the service processor.
HSCF0013	There are no applicable levels for displaying cover letter information.	
HSCF0014		

	At least one target has its flash p-side active. Contact a user with service mode authority to use the Flash Side Selection task to make the flash t-side active, and then start this task again. The affected target(s): {0}.	To switch to the temporary side, refer to Working with the temporary and permanent side of the service processor.
HSCF0015	An internal code error occurred on the target {0}. The task will be terminated	
HSCF0016	The operation failed because the drive is in use or can not be accessed for some other reason.	
HSCF0017	The DVD does not contain any applicable upgrade updates. Insert another DVD, and click {0}.	
HSCF0018	At least one target does not have an applicable upgrade update. Start the task again without selecting the following target(s): {0}.	
HSCF0019	Retrieving updates.	
HSCF0020	Installing updates.	
HSCF0021	Activating updates - Power Off.	
HSCF0022	Activating updates - Restarting FSP.	
HSCF0023	Activating updates - Power On.	
HSCF0024	Activating updates - FSP.	
HSCF0025	Activating updates - PHYP.	
HSCF0026	Activating updates - PFW.	
HSCF0027	Update complete.	
HSCF0028	Removing updates.	
HSCF0029	Saving accepted level.	
HSCF0030	Saving accepted level.	
HSCF0031	Unable to contact the service web site.	
HSCF0032	Unable to contact the support system.	
HSCF0033	Unable to contact the FTP site.	
HSCF0034	Unable to log into the FTP site using the specified user ID and password.	
HSCF0035	Unable to access the specified FTP site directory.	
HSCF0036	The connection to the target was lost during a reboot of the FSP.	
HSCF0037	Licensed Internal code was changed as requested, but a failure occurred returning the managed system to its original state.	
HSCF0038	Retrieve of licensed internal code failed.	
HSCF0039	{0} of {1} FRUs updated during phase {2} of power ACDL on {3}	
HSCF0040	Power ACDL started on {0}.	

HSCF0041	Licensed Internal Code update cannot be started because ACDL is pending on {0}.	
HSCF0042	Licensed Internal Code update cannot be started because {0} has N mode power.	The system has power to only one of the two AC power cords. In general, N mode power means the system is not operating in a redundant state (N+1 power means the system can survive the loss of that particular power component). If both line cords are not powered, only one Bulk Power Controller (BPC) will be powered. Both BPCs need to be powered to load LIC.
HSCF0043	The installation type for Managed System and Power LIC indicates to install and activate disruptively. I/O LIC cannot be updated when that installation type is selected. Ensure that either the I/O LIC checkbox is not checked, or click the Back button and ensure that the Managed System and Power LIC checkbox is not checked. When the LIC update completes, you can restart the Change Internal Code wizard to install the other LIC updates.	
HSCF0044	Select a single row in the table, and try the operation again.	
HSCF0045	Firmware update was successful to all primary service processors for the targeted object. There was a failure attempting to update the backup service processor for {0}.	
HSCF0046	Firmware update was successful to all primary service processors for the targeted object. There was a failure attempting to update I/O microcode on {0}.	
HSCF0047	This message was used temporarily in a previous release only.	
HSCF0048	Power code download failed.	
HSCF0049	Failure downloading file {0} from the service web site.	
HSCF0050	The repository does not contain any applicable upgrade updates.	
HSCF0051	There is a new upgrade release available at the repository.	
HSCF0071E	Communication error to Side A|B BPC on tttt-mmm*ssssssss: No connection exists.	There is no connection data found for the Bulk Power Controller.
HSCF0071E	Communication error to Side A|B BPC on tttt-mmm*ssssssss: Surveillance command failed.	1. Correct any open issues in the Service Focal Point. For details see Using Service Focal Point for the HMC. 2. Retry the Licensed Internal Code update. 3. If the problem persists, contact your next level of support.

HSCF0071E	Communication error to Primary|Secondary FSP on tttt-mmm*ssssssss: No connection exists.	1. Correct any open issues in the Service Focal Point. For details see Using Service Focal Point for the HMC. 2. Retry the Licensed Internal Code update. 3. If the problem persists, contact your next level of support.
HSCF0071E	Communication error to Primary|Secondary FSP on tttt-mmm*ssssssss: Surveillance command failed.	1. Correct any open issues in the Service Focal Point. For details see Using Service Focal Point for the HMC. 2. Retry the Licensed Internal Code update. 3. If the problem persists, contact your next level of support.
HSCF0079E	Managed system state *state* on ttt-mmmm*ssssssss is incorrect. Valid states are: Operating, Power Off, Error Terminated, Standby.	1. Correct the managed system operating state. For details see Correcting the managed system operating state. 2. Retry the Licensed Internal Code update. 3. If the problem persists, contact your next level of support.
HSCF0080E	Side A|B BPC on tttt-mmm*ssssssss has failed a redundancy test.	1. Correct any open issues in the Service Focal Point. For details see Using Service Focal Point for the HMC. 2. Retry the Licensed Internal Code update. 3. If the problem persists, contact your next level of support.
HSCF0081E	ACDL is pending for Side A|B BPC on tttt-mmm*ssssssss.	1. Correct any open issues in the Service Focal Point. For details see Using Service Focal Point for the HMC. 2. Retry the Licensed Internal Code update. 3. If the problem persists, contact your next level of support.
HSCF0083E	Side A|B BPC on tttt-mmm*ssssssss has reported an error condition: reason. Reason could be one of the following: Fault indicator is true All Good indicator is false Mailbox Present indicator is false BPF Good indicator is false	1. Correct any open issues in the Service Focal Point. For details see Using Service Focal Point for the HMC. 2. Retry the Licensed Internal Code update. 3. If the problem persists, contact your next level of support.
HSCF0083E	Primary FSP on tttt-mmm*ssssssss has reported an error condition: reason. Reason could be one of the following: Secondary FSP is not functional Secondary FSP is guarded	1. Correct any open issues in the Service Focal Point. For details see Using Service Focal Point for the HMC. 2. Retry the Licensed Internal Code update. 3. If the problem persists, contact your next level of support.

Parent topic: HMC error codes

HSCI*xxxx* Inventory Scout Services error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

HSCI*xxxx* error codes	Message	Recovery action
HSCI0100	No managed systems were detected that are attached to this system console.	
HSC0101	No logical partitions have been defined for this managed system.	
HSC0102	A blank or invalid entry was entered in the partition password field.	Enter a valid password value.
HSC0103	A blank or invalid entry was entered in the listening port field.	Enter a valid port value.
HSC0104	A blank or invalid entry was entered in the IP address field.	Enter a valid IP address value.
HSC0110	The Inventory Scout Services command completed successfully.	
HSC0111	The Inventory Scout Services command request failed	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. Contact your next level of support or your service provider.
HSC0112	The removable media cannot be mounted. Ensure the media is inserted correctly in the drive and retry the operation.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. Contact your next level of support or your service provider.
HSC0113	The media specified is write protected. Adjust the media and retry.	Remove write protection and try the operation again.
HSC0114	The Inventory Scout Services request failed. Ensure the removable media is correctly inserted in the drive.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. Contact your next level of support or your service provider.
HSC0115	An error occurred while copying the Inventory Scout Services data. Verify that a blank formatted diskette is inserted correctly in the drive and retry the operation.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media.

		3. Run PC Doctor to determine if there is a problem with the hardware. 4. Contact your next level of support or your service provider.
HSC0116	An error occurred while compressing the Inventory Scout Services data. Retry the operation.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. Contact your next level of support or your service provider.
HSC0117	An error occurred while trying to unmount the media.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. Contact your next level of support or your service provider.
HSC0118	The Inventory Scout Services daemon was restarted successfully.	
HSC0119	The Inventory Scout Services daemon could not be restarted.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware to determine if there is a hardware problem. 4. Contact your next level of support or your service provider.
HSC0120	The internal managed system name is malformed. Exit this task and retry the operation.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor. 4. Contact your next level of support or your service provider.
HSC0121	The Inventory Scout Services request failed. An error occurred while copying data to removable media.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. Contact your next level of support or your service provider.
HSC0122	The system partitions did not respond to query attempts.	1. Check that the HMC host name and the host name of the partition are fully qualified domain names (not a short host name). If they are not, this must be corrected for remote security to work. 2. Verify that the network routing is set up so the HMC can use ping to reach the partition and vice versa. If one or both cannot be reached from the other, correct the routing. 3. Ensure that /var is not full on the partition, which would prevent certain processes from

running correctly.
4. Verify that the following file sets have been installed correctly on the AIX logical partitions:
    ♦ rsct.core
    ♦ csm.client
    ♦ devices.chrp.base.ServiceRM
5. Log in to one of the logical partitions and issue the following command:

   ```
   lssrc -s ctcas
   ```
6. If the output shows `ctcasd` is inoperative, issue the command:

   ```
   ls -l
   ```

   on the /var/ct/cfg/ directory.
7. If the files ct_has.pkf and ct_has.qkf are zero-length, there was an (AIX) installation configuration problem. These zero-length files should be removed.
8. Issue the command

   ```
   startsrc -s ctcas
   ```

   If the `startsrc -s ctcas` command does not work, the AIX lpp might not have been installed.
9. If the output is still blank, shut down and restart the HMC.
10. After the shutdown and restart occurs, wait at least 10 minutes before trying again to ensure all the logical partitions have resynchronized their information with the HMC.
11. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL*xxxx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

The HSCL error codes in this list are organized by their first character, with numbers coming before letters.

00xx	05xx	0Dxx	15xx	3xxx
01xx	06xx	0Fxx	17xx	70xx
02xx	07xx	11xx	19xx	80xx
03xx	09xx	13xx	25xx	90xx
04xx	0Bxx	14xx	29xx	Axxx

HSCL00*xx* Profile data error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL00*xx* error codes	Message	Recovery action
HSCL0003	The profile data save area is full. Remove any profiles that are no longer needed.	Remove the profiles that are no longer needed.
HSCL0004	A profile with name {0} already exists in the partition with ID {1} in the profile data of the managed system. Provide another name for this profile.	Rename the profile to a name that is not already in use in this partition.
HSCL0005	Cannot find information regarding profile data of the managed system. Run a rebuild managed system operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0006	The managed system's profile data has been corrupted. You must either restore or reinitialize the profile data.	1. Restore the profile data. For details, see Recovering partition data on a managed system. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0007	The profile data of the managed system cannot be accessed or modified. Run a rebuild managed system operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0008	Could not construct or initialize profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0009	Could not construct or initialize the profile data from the backup file, {0}. Repeat the operation.	1. Repeat the operation. 2. If the problem persists, see Recovering partition data on a managed system. 3. If the problem persists, contact your next level of support or your service provider.
HSCL000A	Could not build the profile for the managed system. Repeat the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL000B		

	Could not get the activated partition profile from the profile data. Perform a rebuild managed system operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL000C	Could not get the activated system profile from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL000D	Could not get all the system profiles from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL000E	Could not get the default system profile from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL000F	Could not get the default system profile from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0010	Could not get the partition profile from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0011	Could not get the partition profiles for the partition from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0012	Could not get the system profile from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0013	Could not remove the partition profile from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0014	Could not remove the system profile from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0015	Could not save the LPAR profile to the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information.

		2. If the problem persists, contact your next level of support or your service provider.
HSCL0016	Could not save the system profile to the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0017	Could not create the partition profile in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0018	Could not create the system profile in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0019	Could not set the activated partition profile in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL001A	Could not set the activated system profile in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL001B	Could not set the default partition profile in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL001C	Could not set the default system profile in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL001D	Could not clean up the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL001E	Could not update the profile data cache. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL001F	Could not check for duplicate partition name. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.

HSCL0020	Could not remove the partition profile from the system profile content in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0021	Could not add the partition profile to the system profile in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0022	Could not get the partition name from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0023	Could not get all the partition names from the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0024	Could not set the partition name in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0025	Could not build the profile data from the local file, {0}. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0026	Could not write the data to the managed system. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0027	Could not back up the profile data to a file. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0028	Could not read profile data from the managed system. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0029	Could not delete profiles at the partition with ID of {0} in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL002A	Could not modify the system profiles containing the LPAR slot ID of {0} in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information.

		2. If the problem persists, contact your next level of support or your service provider.
HSCL002B	Could not perform a priority restore on the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL002C	Could not merge the profile information in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL002D	Could not merge partition name data in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL002E	Could not merge default and activated list data in the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0030	Could not initialize the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0031	The profile data has been cleared. Either restore or reinitialize the profile data save area.	1. Restore the profile data. For details, see Recovering partition data on a managed system. 2. If the problem persists, contact your next level of support or your service
HSCL0032	Could not set the system profile's user-defined name to the profile data. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0033	This managed system version, {0}, is unknown to HMC. Update to an HMC release that can handle this version of managed system.	1. Rebuild managed system. For details, see Updating managed system or frame information for details. 2. If the same error occurs, update to an HMC release that can handle this version of managed system. 3. If you are not sure what version to use, contact your next level of support or your service provider.
HSCL0034	The levels of managed system and profile data area are not matching. Managed system version: {0}, profile data area version: {1}. Upgrade the managed system version to the correct level.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. If the same error occurs, update the managed system to a correct version. 3. If you are not sure what version to use, contact your next level of support or your service provider.

HSCL0035	Cannot restore profile data with two different versions of profile save data.	1. Perform the operation again. 2. If the same error occurs, restore using another profile data file. For details, see Recovering partition data on a managed system. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0036	Migrate profile data failed.	1. Perform the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0037	This level of profile data, {0}, is unknown to this HMC. Update to an HMC version that can handle this level of profile data.	1. Perform the operation again. 2. If the problem persists, update to an HMC version that can handle this level of profile data. 3. If you are not sure what version to use, contact your next level of support or your service provider.
HSCL0038	Creation of logical partition profiles failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0039	Deletion of logical partitions failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL003A	Removal of system profiles failed at profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL003B	Setting of partition information failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL003C	Retrieval of all logical partition information failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL003D	Retrieval of partition information failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0041	Migration of partition information failed in the profile data save area.	

		1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0042	Migration of profile names failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0043	Migration of default profile list failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0044	Migration of activated profile list failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0046	Migration of I/O unit and profile information failed in the profile data save area.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0047	Migration of time stamps of profile data save area failed.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0048	Migration of checksums of the profile data save area failed.	1. Rebuild the managed system. For details, see Updating managed system or frame information for details. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0049	Unable to get next available profile ID from the HMC profile data.	
HSCL004A	HMC Save Area Set Fast Activation failed.	
HSCL004B	HMC Save Area Get Fast Activation failed.	
HSCL004C	Unable to open the HMC Save Area file.	
HSCL004D	The HMC could not retrieve information from the managed system.	
HSCL004E	Unable to set partition information in the profile data. Execute a rebuild managed system operation.	
HSCL004F	HMC Save Area Get System Credential Information failed.	
HSCL0050	HMC Save Area Set System Credential Information failed.	
HSCL0051	Cannot retrieve virtual Ethernet MAC address prefix.	1. Try the operation again.

		2. If the problem persists, contact your next level of support or your service provider.
HSCL0052	Cannot set virtual Ethernet MAC address prefix.	1. Try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0053	Attempt to update profile information failed due to invalid resource lock type.	1. Try the operation again. 2. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL01*xx* managed system error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL01*xx* error codes	Message	Recovery action
HSCL01F7	Unable to get the current time from the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL01F8	This property cannot be altered.	
HSCL01F9	Could not create managed system instance in object manager.	1. Try the task again. 2. Shut down and restart the HMC. For details, see Shutting down, rebooting, and logging of the HMC. 3. Try the task again.
HSCL01FA	The managed system is already powered off.	The managed system was already powered off before your attempt to power it off. No action is required.
HSCL01FB	The number of parameters is incorrect. Specify a different value.	
HSCL01FC	The parameter specified is not valid. Specify a different value.	
HSCL01FD	Power on failed. Try again.	1. Retry starting the managed system. 2. If the problem persists, contact your next level of support or your service provider.
HSCL01FE	The managed system is already powered on.	
HSCL01FF	Could not rebuild. Shut down and restart the Hardware Management Console.	1. Retry the task. 2. If it fails again, shut down and restart the HMC. For details, see Shutting down,

		rebooting, and logging of the HMC.
		3. Check the state of the managed system. Refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state.
		4. Try the task again.
		5. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL02*xx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL02*xx* error codes	Message	Recovery action
HSCL0201	Service processor command failed after {0} attempts: Invalid response.	Wait several minutes and try the task again.
HSCL0203	Command sent to service processor failed. Error response {0}.	1. Try the task again. 2. Check the state of the managed system. Refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0204	Command failed. Unknown error.	1. Shut down and restart the HMC. For details, see Shutting down, rebooting, and logging of the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0205	The managed system is in the error state and is unable to continue with the task.	The recovery partition data task cannot be run until the managed system is no longer in error state. 1. Record the error message. 2. Check the state of the managed system. Refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state.
HSCL0206	Unable to power on the managed system. Unable to continue with the power on task.	1. Check the Operator panel value column for the managed system to verify that it is in the `No power state` and that the managed system is not in the `Error state`.

		2. If the managed system is in the error state, refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. Verify that no other task is being performed, and then retry the task. 4. If the problem persists, contact your next level of support or your service provider.
HSCL0208	Unable to power on the managed system. Unable to continue with the power on task.	1. Check the Operator panel value column of the managed system to verify that it is in the `No power state` and that the managed system is not in the `Error state`. 2. If the managed system is in the error state, refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. Verify that no other task is being performed while processing this task, and then retry the task. 4. If the problem persists, contact your next level of support or your service provider.
HSCL0209	Remote virtual terminal sessions are not allowed. Check the remote virtual terminal settings.	Virtual terminal cannot open remotely at this time. If this feature is needed, use the Enable/Disable Remote Virtual Terminal task in the System Configuration menu to enable remote connections.
HSCL020A	The power on system profile operation timed out. Activate the system profile manually after the managed system is powered on.	Activate the system profile manually after the managed system is powered on.
HSCL020D	The command you issued contained incorrect data.	Contact your next level of support or your service provider.
HSCL0211	The requested function is currently disabled.	Shut down the managed system, and start it again.
HSCL0212	The managed system is not capable of Power On Demand (POD) at the present time.	1. Ensure that the managed system is powered on. 2. If it is powered on, check the managed system's properties window to verify that the system is *not* POD capable. 3. Contact your local representative for more information about this feature.
HSCL0213	The managed system does not support Power On Demand upgrades for processors.	Contact your local representative for more information about this feature.
HSCL0214	The managed system does not support Power On Demand upgrades for memory.	Contact your local representative for more information about this feature.
HSCL0215	There was an error trying to save processor order information to a diskette.	Verify that the diskette is writable, and retry the operation again. If the error persists, contact your next level of support or your service provider.
HSCL0222	The operation cannot be done because the managed system is not capable of LPAR.	1. If you believe that the managed system should be capable of logical partitioning, restart the HMC and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0223	Firmware is not ready to accept the specified command. Try again later.	1. Retry the task.

		2. If the problem persists, contact your next level of support or your service provider.
HSCL0224	There was an error dumping the LPAR configuration. Check the console event log.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0225	There was an error clearing the LPAR configuration. Check the console event log.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0226	The firmware power off policy returned from the service processor is not valid. Unable to determine whether the firmware should power off or stay running after last partition powers off.	1. Check that the inputs are correct. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0228	The managed system could not be found in the database. Rebuild the managed system, and try again.	1. Shut down and restart the HMC. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0229	Memory specified, {0}, is not a multiple of the system memory region size, {1}. Modify the value to be a multiple of the memory region size and try again.	1. Modify the value of the memory specified to be a multiple of the memory region size and try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL022A	Not applicable.	
HSCL022C	The managed system is not in a valid state to perform the operation. Check the state of the managed system and retry the operation.	1. Try the task again. 2. Refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. If the problem persists, contact your next level of support or your service provider.
HSCL022D	Unable to perform a get or a set operation on the managed system's platform IPL parameters.	1. Try the task again. 2. Perform the appropriate actions to put the managed system in the correct state. For details, see Correcting the managed system operating state. 3. If the problem persists, contact your next level of support or your service provider.
HSCL022E	Unable to restore the profile data when the managed system is not in the Operating or Standby state.	1. Verify that the managed system is in the Operating or Standby state, and retry the operation. 2. If the managed system is not in the correct state, refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. If the problem persists, contact your next level of support or your service provider.
HSCL022F	Unable to delete the profile data backup file, {0}.	1. Try the task again. 2. Rebuild the managed system and try the task again. For details, see Updating managed system or frame information.

		3. If the problem persists, contact your next level of support or your service provider.
HSCL0230	Unable to get managed system credential information.	1. Rebuild the managed system. For details, see Updating managed system or frame information. Then try the task again. 2. Restart the HMC and then retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0231	Unable to set managed system credential information.	1. Rebuild the managed system. For details, see Updating managed system or frame information. Then try the task again. 2. Restart the HMC and then retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0233	Unable to change the service partition to the partition with ID of {0}. Check your current setting(s) and ensure this change is allowed.	The service partition cannot be changed. 1. Check current settings and verify that this change is allowed. 2. Rebuild the managed system and try the operation again. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0234	Failed to transition out of standby state. Rebuild the managed system and try again.	Rebuild the managed system. For details, see Updating managed system or frame information. Then try the task again. If the problem persists, contact your next level of support or your service provider.
HSCL0235	Cannot change service partition from one partition to another if either one of them is not in the Not Activated state.	1. Ensure that the current service partition is not activated. 2. Ensure that the partition user who tried to assign the server authority is not activated. 3. Rebuild the managed system. For details, see Updating managed system or frame information. Then try the task again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL0236	The name specified contains unprintable or invalid characters listed: {0}. Remove the invalid characters and try again.	1. Ensure that all the characters specified in the name are valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0240	The {0} password is locked and cannot be changed while it is locked.	The password has been locked. Contact your next level of support or your hardware service provider to unlock the password.
HSCL0241	The {0} password is locked.	The password has been locked. Contact your next level of support or your hardware service provider to unlock the password.
HSCL0242	Not applicable.	
HSCL0243	The Machine Code (Licensed Internal Code) on your managed system does not support viewing the Virtualization Engine systems technologies activation history log. In order to view the history log on your managed system, you need to	1. Contact your service provider to determine which level of HMC Machine Code supports viewing the Virtualization Engine systems technologies activation history log. 2. Update your managed system's Machine Code to that level or greater. For details, see

	update your managed system's Machine Code (Licensed Internal Code).	Getting fixes and upgrades. 3. Try the task again.
HSCL0250	The managed system machine type, model, and serial number (MTMS) is empty.	
HSCL0251	Service processor command {0} failed. The connection to the hardware server is broken.	Ensure that the network connection is working. If the problem persists, contact your next level of support or your service provider.
HSCL0252	Service processor command {0} failed. The connection to service processor is not available.	Ensure that the network connection is working. If the problem persists, contact your next level of support or your service provider.
HSCL0253	Service processor command {0} failed. The managed system has been deleted.	Ensure that the network connection is working. If the problem persists, contact your next level of support or your service provider.
HSCL0254	Hardware server command {0} failed. No response package.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0255	Hardware server command {0} failed. The request ID has been deleted from the ID table.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0256	Issuing a service processor pass-through failed. HMC server is trying to reconnect to the hardware server.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0257	Issuing a service processor pass-through failed. HMC server re-established a connection to the hardware server after this command was issued.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0258	Issuing a service processor pass through failed. An expected exception with message {0} was thrown.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0259	Service processor lock failed. The lock manager is not active.	Restart the HMC. If the problem persists, contact your next level of support or your service provider.
HSCL025A	Service processor lock failed. The conflict lock is owned by HMC: {0}. Its request ID is {1}. Try again later.	1. Another HMC might be performing this operation. 2. Try again later. 3. If the problem persists, contact your next level of support or your service provider.
HSCL025B	Query service processor data failed. The error code is {0}.	
HSCL025C	Service processor command {0} failed. Service processor authentication needs to be done first.	1. Ensure that the managed system is authenticated first. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL025D	Service processor command {0} failed. The Hypervisor is not ready to accept commands.	1. Rebuild the managed system. For details, see Updating managed system or frame information 2. If the problem persists, contact your next level of support or your service provider.
HSCL025E	The lock table in the managed system is full. Try again.	Wait and then try the operation again.

HSCL025F	There is a managed system lock.	Wait and then try the operation again.
HSCL0260	Unexpected error happened when trying to acquire a managed system lock. The command return status is {0}.	Wait and then try the operation again.
HSCL0261	Unexpected error happened when trying to acquire a managed system lock.	Report the problem to your next level of support or your service provider.
HSCL0262	Supplement lock operation failed.	Check the input and permission and try the task again.
HSCL0263	Service processor does not support more than one HMC connection. No service processor lock is needed.	contact your next level of support or your service provider.
HSCL0264	The console command manager is not active.	1. Try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0265	No destination was specified for command {0}. The command cannot be sent.	1. Try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0266	The request to query data on the managed system failed with error code {0}.	1. Try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0267	The connection to the service processor has been lost. A long-running task was stopped.	Verify the completion of the long-running task. If the task did not complete successfully, try the task again
HSCL0268	An unexpected error occurred in a long-running task.	Verify the completion of the long-running task. If the task did not complete successfully, try the task again.
HSCL0269	Managed system with IP address {0} cannot be found.	Verify the specified IP address. Specify a valid IP address and try the request again.
HSCL026A	The specified managed system name {0} is not valid with the specified IP address {1}. The managed system cannot be removed.	Specify a valid managed system name and a valid IP address. Then try the request again.
HSCL026B	Cannot find a managed system with the specified name {0}.	Verify the specified system name. Specify a valid managed system name and try the request again.
HSCL026C	The request to add a new managed system with IP address {0} failed.	Verify the specified IP address. Specify a valid IP address and try the request again.
HSCL026D	Lock type {0} is not valid for the managed system.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL026E	The lock manager for managed system {0} is not active.	Try the request again later. If the problem persists, contact your service provider.
HSCL026F	Either the managed system name or the IP address is not specified in the request to remove the managed system.	Specify both the managed system name and the IP address. Then try the request again.
HSCL0270	The specified command destination {0} cannot be found. The command {1} cannot be sent.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0271	The connection state of the specified command destination {0}	The connection to the managed system has been lost. Try the request again later.

	is not valid. The command {1} cannot be sent.	
HSCL0280	The service processor managed system state is not valid. The power state is {0}. The run state is {1}.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0281	The operation cannot be done because the managed system is not shared processor capable.	No recovery action is required.
HSCL0282	The virtual Ethernet adapter in virtual I/O slot {0} cannot be defined because the partition with ID {1} already defines a trunk adapter in its virtual I/O slot {2}. Modify the profile accordingly and reactivate the partition.	Modify the profile accordingly and reactivate the partition.
HSCL0285	The managed system does not support SNI message passing.	No recovery action.
HSCL0288	The managed system is not ready for service processor failover.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL023A	This operation is allowed only when the managed system is powered off.	No recovery action.
HSCL023B	This operation is allowed only after the managed system has been powered on at least once, and then powered off.	No recovery action.

Parent topic: HMC error codes

HSCL03*xx* managed system resource error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL03*xx* error codes	Message	Recovery action
HSCL03EA	There is an insufficient number of processors: Obtained - {0}, Required - {1}. Check that there are enough processors available to activate the partition. If not, create a new profile or modify the existing profile with the available resources, and then activate the partition. If the partition must be activated with the specified number of processors, deactivate any active logical partitions using the	1. Check the managed system properties window to ensure that enough processors are available to activate the partition. 2. If there are not enough processors available, create a new profile or modify the existing profile with the available resources. Then activate the partition. 3. If the partition must be activated at any cost, deactivate any running partition that is using the resource and then activate the partition.

	resource, and then activate the partition.	4. If the problem persists, contact your service provider.
HSCL03EB	Unable to allocate the I/O slot {0} for activation. This I/O slot is identified as a required adapter to activate this partition. Verify that the specified I/O is available to activate the partition. If it is not available, either create a new profile or modify the existing profile to identify the I/O adapter as a non-required resource, and then try to activate the partition again. If the partition must be activated with these resources, deactivate any running partition that is using the resource, and then try to activate this partition again.	1. Check the managed system properties window to ensure that enough I/O slots are available to activate the partition. 2. If there are not enough I/O slots available, create a new profile or modify the existing profile with the available resources. Then activate the partition. 3. If the partition must be activated at any cost, deactivate any running partition that is using the resource and then activate the partition. **Note:** If you must activate the partition and you have tried unsuccessfully to recover using the above action, edit the profile for the partition you are activating and remove all slots that are associated with the identified slot's PHB. See the PCI Adapter Placement Reference, order number SA38-0538 for information on PHB slot associations. 4. If the problem persists, contact your service provider.
HSCL03EC	There is not enough memory: Obtained - {0}, Required - {1}. Check that there is enough memory available to activate the partition. If not, create a new profile or modify the existing profile with the available resources, then activate the partition. If the partition must be activated with these resources, deactivate any running partition or partitions using the resource, then activate this partition.	1. Check the managed system properties window to ensure that enough memory is available to activate the partition. 2. If there is not enough available memory, create a new profile or modify the existing profile with the available resources and then activate the partition. 3. If the partition must be activated at any cost, deactivate any running partition using the resource, and activate the partition. 4. If the problem persists, contact your service provider.
HSCL03ED	The I/O unit specified by this ID cannot be found and might have been deleted from the managed system. Modify the profile.	Modify the partition profile so that the unit that cannot be found is no longer part of the profile's resources.
HSCL03EE	The specified slot number cannot be found. Ensure the profile is not using I/O unit slots that do not exist in the managed system.	The adapter specified cannot be found. Modify partition profiles so that the slot that cannot be found is not part of any partition profile.
HSCL03EF	The number of system units, slots, and I/O required and desired information stored in the properties do not match. The profile might be corrupted. Perform the Restore Profile Data task.	1. The profile might be corrupted. Restore the profile data. For details, see Restoring profile data. 2. If the problem persists, delete the profile and create a new profile.
HSCL03F0	Could not allocate the I/O slot for activation in I/O drawer {0}. Slot {1} is currently being used by another partition. Perform one of the following three actions: 1) Remove this I/O slot from the profile, 2) Change the I/O slot from Required to Desired in the profile, or 3)	Perform one of the following actions: • Remove this I/O slot from the profile. • Change the I/O slot from Required to Desired in the profile. • Remove the I/O slot from the other partition.

	Remove the I/O slot from the other partition.	
HSCL03F4	Not enough processing resources to meet the allocation setting	1. Ensure there is enough processors to start the partition. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL03F5	There is an insufficient amount of shared processing resources: Virtual processor obtained - {0}, processing units obtained - {1}, Required virtual processors - {2}, Required processing units - {3}. Check that there is enough processing resources available to activate the partition. If not, create a new profile or modify the existing profile with the available resources, then activate the partition. If the partition must be activated with the specified amount of processing resources, deactivate any active partitions using the resource then activate this partition.	1. Ensure there is enough processing to start the partition. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL03F6	The 5250 CPW needed by the partition exceeds the system limit. Amount allowable at this point is {0}.	1. Check the 5250 CPW. 2. If the problem persists, contact your next level of support or your service provider.
HSCL03F7	Insufficient amount of 5250 CPW for allocation: Obtained - {0}, required - {1}.	1. Ensure there are enough 5250 CPW to start the partition. 2. Rebuild managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL03F8	The 5250 CPW set by user is below the partition minimum allowed: minimum = {0}.	1. Ensure the 5250 CPW setting is correct. 2. If the problem persists, contact your next level of support or your service provider.
HSCL03F9	Not enough memory resources to meet the allocation setting.	1. Ensure there is enough memory to start the partition. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL03FA	Unable to gather I/O information of the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL03FB	Unable to gather virtual I/O information of the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task.

		3. If the problem persists, contact your next level of support or your service provider.
HSCL03FC	The MAC address prefix specified was not valid. The MAC address prefix must be 6 characters long, and only contain hexadecimal values (0-9 and A-F).	1. Ensure the MAC address conforms with the rule specified. 2. If the problem persists, contact your next level of support or your service provider.
HSCL03FD	The MAC address prefix cannot have the multicast bit on. The multicast bit is 0x010000.	1. Ensure the multicast bit is not on 2. If the problem persists, contact your next level of support or your service provider.
HSCL03FE	There was an error updating a virtual Ethernet adapter MAC address.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL03FF	Failed to extract system resources information. Ensure the managed system is powered on.	1. Retry the task. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL04*xx* logical partition error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL04*xx* error codes	Message	Recovery action
HSCL0400	Failed to determine the minimum amount of memory required for the amount of maximum specified.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0401	Failed to determine the valid 5250 CPW range with the amount of processing given.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0402	Not enough system firmware memory is available to perform this task. The managed system needs an additional {0} MB of memory. You can free memory resources by removing memory through dynamic logical partitioning or by deleting partitions that are not being used.	The managed system needs additional memory. Remove memory through dynamic logical partitioning or deleting unused partitions to release memory resources.
HSCL0403	Not applicable.	Not applicable.
HSCL0404	Not applicable.	
HSCL0406		

	The maximum memory setting exceeds the maximum system memory capacity. Please check the capacity and modify the maximum memory setting in the profile accordingly.	Check the capacity and modify the maximum memory setting in the profile accordingly.
HSCL0407	Not enough huge page memory regions resources to meet the allocation setting.	1. Ensure there is enough pages of huge page memory to start the partition. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL05*xx* logical partition error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL05*xx* error codes	Message	Recovery action
HSCL0500	The operation violates the Workload Management Policy. It may be due to one of the following reasons: 1. Deleting a partition which belongs to a cluster. 2. Changing a partition cluster ID from one cluster to another cluster. 3. Running dynamic partitioned move operation between two partitions which belong to the same cluster.	Check the operation. 1. For deleting a clustered partition, first move it out of the cluster and then delete it. 2. For changing a cluster ID, first change it to a non-clustered partition, then change to the destination cluster. 3. It is not allowed to move processor or memory between two clusters.
HSCL0589	Could not delete partition {0}. Refresh the interface and check whether the operation was performed. If not, try the operation again.	1. Refresh the interface and check whether the operation was performed. 2. If not, rebuild the managed system, and try the task again. For details, see Updating managed system or frame information. 3. If the operation still fails, contact your next level of support or your service provider.
HSCL058A	Could not activate the logical partition on logical partition {0} with ID {1}. Refresh the interface and check whether the operation was performed. If not, try the operation again.	1. Perform a rebuild of the managed system. For details, see Updating managed system or frame information. 2. Try the task again. 3. If the operation still fails, contact your next level of support or your service provider.

HSCL058C	User defined name cannot be blank or empty.	1. Set a non-blank user defined name for this partition. 2. If the problem persists, contact your next level of support or your service provider.
HSCL058D	The user defined name cannot be longer than {0} characters.	1. The partition's user-defined name is too long. Shorten this partition's user-defined name, and try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL058F	Cannot activate a LPAR when the managed system state is No Power.	1. Verify that the managed system is in the Operating or Standby state and try the task again. 2. If the state is not Operating or Standby, refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. If the problem persists, contact your next level of support or your service provider.
HSCL059A	Cannot activate the logical partition. The profile's maximum memory amount exceeds the managed system's memory limit. Change the profile's maximum memory amount.	Change the profile's maximum memory amount, and retry the operation.
HSCL059D	This panel function is not enabled at this time.	
HSCL059E	Failed to get supported panel functions from firmware.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL05DC	The partition does not have Virtual IO Server capability.	Choose the correct partition and retry the command.
HSCL05DD	Could not get logical partition state. Repeat the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL05DE	A logical partition in the managed system already uses the name {0}. Provide another name for this logical partition.	Rename the logical partition to a name that is not yet used by other logical partitions in the same managed system. Refer to the logical partition help text for details.
HSCL05DF	The logical partition is not in a state under which this operation can be performed. Check the state of the logical partition.	1. Verify that the operation is allowable under this logical partition state. 2. Refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state.
HSCL05E0	The logical partition {0} is in an undefined state. Rebuild the managed system.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Restart the HMC. 3. If the problem persists, contact your next level of support or your service provider.
HSCL05E1	Only {0} logical partitions can be allocated on this managed system can be allocated. There are no more unallocated logical partitions available. Delete unused or unwanted logical partitions for this	Delete unused or unwanted logical partitions. Logical partitions in the ready state are currently not in use. Refer to the logical partition help text for details.

	managed system and retry the operation. Logical partitions in the ready state are currently not in use.	
HSCL05E2	Partition is in an unrecognized state.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Try the operation again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL05E3	Partition is in an unrecognized state.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Try the operation again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL05E5	Unable to create partition when the managed system is in {0} state. Ensure that the managed system is in the Operating or Standby state .	1. Verify that the managed system is in the Operating or Standby state. 2. If it is not in the Operating or Standby state refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. If the problem persists, contact your next level of support or your service provider.
HSCL05E6	Logical partition {0} delete failed. Cannot delete a partition when its state is not in the Not Activated state. Perform a shut down operation then delete the partition.	1. Verify the partition is in Not Activated state. 2. Perform a Rebuild Managed System operation. For details, see Updating managed system or frame information. 3. Then try the task again.
HSCL05E7	The profile you tried to activate does not belong to the logical partition {0} you specified. Select the correct LPAR profile.	Verify that you selected the correct logical partition profile to activate.
HSCL05E9	Could not activate the logical partition. Ensure that the partition is not already activated and that the managed system is in the Operating or Standby state.	1. Verify that the logical partition is not already activated, and the state and power-on condition of the managed system are correct, and try the operation again. 2. If necessary, refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. If the problem persists, contact your next level of support or your service provider.
HSCL05EA	Cannot activate the partition when it is in state {0}. Ensure the partition is in the Not Activated state.	1. Verify that the logical partition is not in the running, booting, or open firmware state. 2. If necessary, refer to Correcting the managed system operating state and perform the appropriate procedure to put the managed system in the correct state. 3. If it still fails, contact your next level of support or your service provider.
HSCL05EB	Could not create the partition. Make sure that all requirements are met for creating a logical partition.	1. To verify that all the requirements for creating a logical partition are met, refer to Partitioning the server. 2. If all requirements are met, do a rebuild of the managed system. For details, see

		Updating managed system or frame information. 3. Retry the task. 4. If the problem persists, contact your next level of support or your service provider.
HSCL05EC	Could not delete logical partition {0}. Ensure that all requirements are met for deleting a logical partition.	1. Verify that all the requirements for deleting a logical partition are met. 2. Perform a rebuild of the managed system. For details, see Updating managed system or frame information. 3. Retry the task. 4. If it still fails, contact your next level of support or your service provider.
HSCL05ED	Could not set the properties for logical partition {0}. Try again	1. Repeat the operation. 2. If the operation still fails, contact your next level of support or your service provider.
HSCL05EE	Could not get the managed system's service provider. processor log entry. Try again	1. Repeat the operation. 2. If the operation still fails, contact your next level of support or your service provider.
HSCL05EF	This new logical partition does not have a user-defined name. Specify a name for the logical partition.	1. Set the user-defined name for this logical partition. For details, see Viewing information about the managed system. 2. If it still fails, contact your next level of support or your service provider.
HSCL05F3	Could not display the OS reset dialog for logical partition {0}. Try again.	1. Refresh the interface and check whether the operation was performed. 2. If not, rebuild the managed system. For details, see Updating managed system or frame information. 3. Retry the task. 4. If the operation still fails, contact your next level of support or your service provider.
HSCL05F4	Could not display the logical partition activate dialog for logical partition {0}. Try again.	1. Log off and then log in to the HMC and try the operation again. 2. If this does not correct the problem, contact your next level of support or your service provider.
HSCL05F5	Could not display the create logical partition dialog for the managed system: {0}. Try again.	1. Log off and then log in to the HMC and try the operation again. 2. If this does not correct the problem, contact your next level of support or your service provider.
HSCL05F7	Could not open the virtual terminal for logical partition {0} with ID {1}.	1. Refresh the interface and check whether the operation was performed. 2. If not, rebuild the managed system, and try the task again. For details, see Updating managed system or frame information. 3. If the operation still fails, contact your next level of support or your service provider.
HSCL05F8	Could not perform the OS reset {0} reset on logical partition {1} with ID {2}.	1. Refresh the interface and check whether the operation was performed. 2. If not, rebuild the managed system, and try the task again. For details, see Updating managed system or frame information.

		3. If the operation still fails, contact your next level of support or your service provider.
HSCL05F9	Could not delete logical partition {0}. Refresh the interface and check whether the operation was performed. If not, try the operation again.	1. Verify that the logical partition displays on the graphical user interface. 2. Delete the logical partition again, and check the graphical user interface to see if it is updated appropriately. 3. Log off and log back in to the HMC. 4. Contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL06*xx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL06*xx* error codes	Message	Recovery action
HSCL0601	Cannot create partition with bootable definition state setting.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0602	Partition with the same ID is already defined in the managed system.	1. Check the entry and try again. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0604	Could not read the dump.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0605	The initialize dump request failed because the managed system is already in the process of creating a dump of the specified type.	The keylock position of the managed system needs to be set to manual mode.
HSCL0607	Dump partition does not exist.	1. Ensure that the dump partition has been mounted. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0608	Could not mount the dump partition.	1. Retry the operation.

		2. If the problem persists, contact your next level of support or your service provider.
HSCL0611	Could not read dump as a temporary file.	1. Ensure that the dump partition has been mounted and has an access to it. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0612	Could not process dump header.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0613	Could not query the dump.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0616	Cannot use the 5250 CPW setting. Check whether the setting is valid.	1. Ensure the 5250 CPW setting is correct. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0619	Cannot use the I/O setting for allocation. Check whether the setting is valid.	1. Check the I/O setting is valid. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL061A	Cannot use the virtual I/O setting for allocation. Check whether the setting is valid.	1. Check that the setting is valid 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL061B	Operation failed to set partition activation policies.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL061C	Operation failed to allocate memory for the partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL061D	Operation failed to allocate virtual I/O for the partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL061E	Operation failed to allocate 5250 CPW for the partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL061F	Operation failed to allocate processing resource for the	

	partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0620	Operation failed to allocate I/O slots for the partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0621	Cannot use the LPAR profile for partition operation since its dedicated processor setting is not correct. Check the processor setting in the profile, and ensure the setting is valid.	1. Check the processors settings 2. If the problem persists, contact your next level of support or your service provider.
HSCL0622	Cannot use the LPAR profile for partition operation since its shared processor setting is not correct. Check the processor setting in the profile, and ensure the setting is valid.	1. Check the processors settings 2. If the problem persists, contact your next level of support or your service provider.
HSCL0623	Partition cluster ID cannot be modified when the partition is not in the Not Activated state.	1. Ensure the partition is in *Not Activated state*. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0624	Unable to launch Update Password Dialog. Try again.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0625	Cannot activate partition when the managed system state is not in the Operating or Standby state.	1. Ensure the partition is in Operating or Standby state. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0626	Cannot find the LPAR profile to activate the partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0627	The virtual I/O specified for tagged I/O is not valid.	1. Check that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0628	Resource specified as load source must be required.	1. Ensure the load source device is specified as required. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0629		

	Must specify resource for load source setting.	1. Ensure the load source device is specified as required. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL062A	Cluster ID specified, {0}, is greater than maximum allowable value, {1}.	1. Ensure the setting is valid. 2. Retry the operation.
HSCL062B	Cannot change maximum virtual I/O Slots value when partition is not in the Not Activated state.	1. Ensure the setting is valid. 2. Retry the operation.
HSCL062D	The partition is currently in a state of Running, Initializing or Open Firmware, and cannot be deleted.	A partition cannot be deleted when it is in Running, Initializing, or Open Firmware state. 1. Deactivate the partition and retry the operation. 2. If you believe that the partition is already stopped, rebuild the managed system. For details, see Updating managed system or frame information. 3. Retry the operation. 4. If the problem persists, contact your next level of support or your service provider.
HSCL062E	Unable to shut down the partition using operation system command.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL062F	You must select one profile to activate the partition with or select Cancel.	1. Only one partition profile can be used to activate a partition. Either retry the operation, selecting a profile to activate the partition with, or select Cancel. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0630	Could not display the partition activate advance dialog for partition: {0}. Try the operation again.	1. Refresh the graphical user interface and retry the operation. For details, see Updating managed system or frame information. 2. Log off and then log back in to the HMC and try the operation again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0631	Could not display the partition reboot dialog. Try the operation again.	1. Refresh the graphical user interface and retry the operation. For details, see Updating managed system or frame information. 2. Log off and then log back in to the HMC and try the operation again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0632	Could not perform the reboot partition operations. Refresh the interface and check whether the operation was performed. If not, try the operation again.	1. Refresh the interface and check whether the operation was performed. 2. If not, rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0633	Could not display the partition shut down dialog. Try the operation again.	1. Refresh the graphical user interface and retry the operation. For details, see Updating managed system or frame information.

		2. Log off and then log back in to the HMC and try the operation again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0634	Could not perform the shut down partition operations. Refresh the interface and check whether the operation was performed. If not, try the operation again.	1. Refresh the interface and check whether the operation was performed. 2. If not, rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0635	Could not display the change default profile dialog. Try the operation again.	1. Refresh the graphical user interface and retry the operation. For details, see Updating managed system or frame information. 2. Log off and then log back in to the HMC and try the operation again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0636	Unable to modify processing information of the partition with ID of {0}. The information could be out of sync. Rebuild the managed system and try again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0637	Unable to modify processing information of the partition with ID of {0}. The information could be out of sync. Rebuild the managed system and try again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0638	Unable to modify 5250 CPW information of the partition with ID of {0}. Rebuild the managed system and try again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0639	Unable to modify OptiConnect setting of the partition with ID of {0}. Rebuild the managed system and try again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL063A	Unable to extract partition's virtual I/O information.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL063B	Failed to set I/O adapter {0} for the partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL063C		

	Failed to set tagged I/Os for the partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL063D	Failed to change the partition's processor type.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL063E	Failed to change the partition's processor settings.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL063F	Cannot assign a storage device under I/O processor to AIX/Linux partition.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0640	Not applicable.	
HSCL0641	Cannot activate a profile using full system resources while other partitions are powered on.	1. Ensure there are no partitions running. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. Retry the task. 4. If the problem persists, contact your next level of support or your service provider.
HSCL0642	Partition ID specified is over max number of partition supported by the system. Check the entry and try again.	1. Ensure the partition ID specified does not exceed the maximum number of logical partitions supported. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0643	Virtual I/O server command {0} for partition {1} failed.	The I/O server command for the partition failed. The reason or cause is included in the error message. Check the command and retry. If the error persists, contact your next level of support or your service provider.
HSCL0644	The number of processing units must be less than or equal to the number of virtual processors.	In the partition profile properties, make sure the number of processing units is less than or equal to the number of virtual processors.
HSCL0645	The ratio of processing units to virtual processors must be equal to or greater than {0}.	In the partition profile properties, make sure the ratio of processing units to virtual processors is equal to or greater than the value that is specified.
HSCL0646	Processor pool ID specified is over maximum processor pools system allowed.	Make sure the processor pool ID specified is not over the maximum processor pools system allowed.
HSCL0647	The workload group setting for the partition could not be changed. Try the operation again. If the problem persists, contact your technical support provider.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.

HSCL0648	The setting for power controlling partitions could not be changed. Try the operation again. If the problem persists, contact your technical support provider.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0649	The opticonnect settings for the partition could not be changed. Try the operation again. If the problem persists, contact your technical support provider.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL064A	Cannot use the SMA setting for allocation. Check whether the setting is valid.	
HSCL064B	Cannot use the HCA setting for allocation. Check whether the setting is valid.	Ensure that this HCA adapter is not allocated to another Active partition and retry the operation.
HSCL0650	Not applicable.	
HSCL0651	Not applicable.	Not applicable.
HSCL0652	Not applicable.	Not applicable.
HSCL0653	Not applicable.	Not applicable.
HSCL0654	The HCA device {0} has a hardware error. You cannot active the profile containing a GUID from this device. Clear the adapter configuration from the profile and try again or contact your service provider.	If the device is needed for the partition, contact your next level of support or service provider.
HSCL0655	The profile contains a GUID for an HCA device {0} not managed by the HMC. Clear the adapter configuration from the profile and try again.	If the device should be managed from the HMC, or if the device is needed for the partition, contact your next level of support or service provider.

Parent topic: HMC error codes

HSCL07*xx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL07*xx* error codes	Message	Recovery action
HSCL07C0	Not applicable.	
HSCL07C1	The virtual serial client adapter cannot be created because the partition does not have virtual I/O server capability.	
HSCL07C2	Managed system was in checkstop state and unable to send the dump. A post-checkstop IPL was	1. Perform the operation again after the system was re-IPLed.

	initiated. Please retry the operation.	2. If the problem persists, contact your next level of support or your service provider.
HSCL07C5	This operation cannot be performed because the HMC is not connected to service processor. Check the connection and try the operation again	1. Ensure that the HMC is connected to the service processor. 2. If the problem persists, contact your next level of support or your service provider.
HSCL07C6	Cannot use the huge page memory regions resource setting. Check whether the setting is valid or not.	1. Ensure the page setting is correct. 2. If the problem persists, contact your next level of support or your service provider.
HSCL07C7	There is not enough huge page memory regions: Obtained : {0}, Required : {1}. Check that there is enough huge page memory regions available to activate the partition. If not, create a new profile or modify the existing profile with the available resources, then activate the partition. If the partition must be activated with these resources, deactivate any running partition(s) using the resource then activate this partition.	1. Check the managed system properties window to ensure that enough pages of huge page memory is available to activate the partition. 2. If there is not enough available pages of huge page memory, create a new profile or modify the existing profile with the available resources and then activate the partition. 3. If the partition must be activated at any cost, deactivate any running partition using the resource, and activate the partition. 4. If the problem persists, contact your next level of support or your service provider.
HSCL07C8	Operation failed to allocate huge page memory regions for the partition."	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL07D0	This partition is not bootable therefore a profile cannot be generated according to the partition's current configuration.	A "Save profile" cannot be done when the partition is not bootable. The resource of this partition might have been taken by another partition. Try to activate the partition with an appropriate profile.
HSCL07D1	This logical partition profile is currently active in its logical partition and cannot be modified or deleted. To make the profile inactive, bring the partition to the Not Activated state, then repeat the operation.	Partition profiles that are active in a logical partition cannot be deleted. 1. Perform an operating system reset on the partition to bring it to the Not Activated state, at which time the profile will no longer be active. For details, see Resetting the operating system on a partition . 2. If it still fails, contact your next level of support or your service provider.
HSCL07D2	This logical partition profile is the logical partition's default profile and cannot be deleted. If you still want to delete it, change the default profile for this logical partition or, if necessary, create another logical partition profile to be the default profile.	All logical partitions must have at least one partition profile, which is designated as the default profile because it is the profile implicitly used when the logical partition is activated with no profile specified. 1. If you still want to delete it, change the default profile for this logical partition (create another logical partition profile if necessary). 2. If it still fails, contact your next level of support or your service provider.
HSCL07D3	The logical partition profile could not be found in the HMC save area. The HMC is either out of sync with the console save area, or the console save area has been corrupted. Rebuild this logical partition profile's managed system.	1. Ensure that the inputs are correct. 2. Restore the profile data. For details, see Restoring profile data. 3. If the problem persists, contact your next level of support or your service provider.

HSCL07D4	A profile named {0} already exists for this logical partition in the Hardware Management Console save area. Choose a different name for the new system profile.	1. All partition profiles for a logical partition must have unique names. Choose a different name for the new profile. 2. If the problem persists, contact your next level of support or your service provider.
HSCL07D8	Deleting default profile associations within the current context is not allowed.	
HSCL07D9	Setting a default profile association is only allowed during create.	
HSCL07DA	The logical partition profile used for the operation cannot be found in the profile data.	1. Verify that you entered the correct information. 2. If the problem persists, contact your next level of support or your service provider.
HSCL07DB	An attempt to create a profile failed.	1. Try the task again. 2. If problem persists, contact your next level of support or your service provider.
HSCL07DC	An attempt to modify a profile failed.	1. Try the task again. 2. If problem persists, contact your next level of support or your service provider.
HSCL07DD	The LPAR profile's processing resources setting is not valid. Check profile processing resource setting.	1. Check the processing resources setting. 2. If the problem persists, contact your next level of support or your service provider.
HSCL07DE	The LPAR profile's 5250 CPW setting is not valid. Check profile processing resource setting.	1. Check the 5250 CPW. 2. If the problem persists, contact your next level of support or your service provider.
HSCL07DF	Virtual slot 0 and 1 are set to default as virtual serial adapters when a partition is created. No modification can be made regarding these 2 slots.	
HSCL07E0	The partition profile could not be found in the database. Perform a rebuild managed system operation, and try again.	1. Rebuild the managed system. See Updating managed system or frame information for details. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL07E1	An error occurred while changing the default profile for the partition. Retry the operation.	1. Rebuild the managed system. See Updating managed system or frame information for details. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL07E2	Required processor information is not specified in the partition profile. Make sure values are provided in the partition profile for minimum processing units, desired processing units, maximum processing units, processing mode, and sharing mode.	1. Ensure that the setting is valid. 2. Try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL07E3	Failed to delete LPAR profile, {0}, from partition, {1}.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service.

HSCL07E5	The critical I/O setting is incorrect. Check the setting and try again.	1. Ensure the tagged I/O setting is correct. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL07E8	SNI device IDs may not be specified in this profile because the managed system does not support SNI message passing.	No recovery action is needed.
HSCL07E9	SNI device IDs may not be specified in this profile because the partition is not AIX or Linux.	No recovery action is needed.
HSCL07EA	SNI device IDs may not be specified in this profile because no SNI adapters are installed in the managed system.	

Parent topic: HMC error codes

HSCL09*xx* system profile error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL09*xx* error codes	Message	Recovery action
HSCL09C6	Could not find the system profile in memory. It might be corrupted. Restore the profile data.	The system profile might be corrupted. 1. Restore the profile data. For details, see Restoring profile data. 2. If the problem persists, delete and re-create a new system profile. Refer to Creating a system profile. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09C7	A system profile named {0} already exists for this managed system in the Hardware Management Console save area. Choose a different name for the new system profile.	Every system profile created for an individual managed system must have a unique name. Choose a different name for the new system profile. If it still fails, contact your next level of support or your service provider.
HSCL09C8	Could not open the Copy System Profile dialog. Try again.	1. Log off the HMC, and log back in. 2. Try the task again. For details, see Copy a system profile. 3. If it still fails, contact your next level of support or your service provider.
HSCL09C9	Could not copy the system profile {0}. Try again.	1. Log off the HMC, and log back in. 2. Try the task again. Refer to Copy a system profile. 3. If it still fails, contact your next level of support or your service provider.

HSCL09CA	Could not delete the system profile. Try the task again.	1. Log off the HMC, and log back on. 2. Try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09CF	Validation of system profile failed. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL09D0	Cannot validate system profile if the managed system is not in Operating or Standby state.	1. Ensure that the managed system is in the Operating or Standby state and then retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL09D2	The following partition or partitions failed to activate: {0}	A logical partition that is part of the system profile failed to activate. 1. Ensure that you have enough available resources to activate the desired partition profile. 2. If so, rebuild the managed system. For details, see Updating managed system or frame information. 3. Retry the operation. 4. If the problem persists, contact your next level of support or your service provider.
HSCL09D3	An unknown error occurred during system profile activation. Retry the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09D4	Update of the system profile failed. Retry the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09D5	An unknown error occurred during system profile creation. Retry the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09D6	An unknown error occurred during deletion of the system profile. Retry the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09D7	The system profile that you have chosen to validate could not be found.	The system profile might be corrupted. 1. Restore the profile data. For details, see Restoring profile data. 2. If the problem persists, delete and re-create a new system profile. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09D8		

	System profile {0} could not be {1} because profile {2} was not found in the managed system.	A profile that is part of the system profile cannot be found in the managed system. 1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09D9	System profile {0} could not be {1} because profiles {2} and {3} belong to the same partition. Take one of the profiles out of the system profile list and try again.	There is more than one profile in the system profile that belongs to the same partition. 1. Ensure that each partition has at most one profile in the system profile, and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL09DA	System profile {0} could not be {1} because LPAR profile {2}, belonging to partition {3}, is listed more than once. Take one of the profiles out of the system profile list and try again.	A profile is listed more than once in the system profile. 1. Ensure that all partition profiles are only listed once in the system profile, and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL09DB	Partition {0} could not be activated because it is already active.	This error occurs when a logical partition listed in the system profile is already activated. 1. If the logical partition is not activated, rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09DC	System profile {0} could not be {1} because profile {2} is a full system partition profile. There cannot be any other partition profiles listed in the system profile.	If a full system partition profile is part of a system profile, there can be no other partition profiles listed in that system profile. 1. Either take all other profiles except the full system partition profile out of the system profile, or remove the full system partition profile from the system profile. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09DD	The partition profile ID {0} does not correspond to a valid profile. Retry the command.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL09DE	The system profile cannot be created because no user-defined name was given. Ensure to enter a user-defined name, and try the operation again.	1. No user-defined system profile name was given during system profile creation. Retry the creation operation again, this time making sure to enter a user-defined name. 2. If the problem persists, contact your next level of support or your service provider.
HSCL09DF	The system profile cannot be created because there are no partition profiles currently included in the system profile. Specify	1. Partition profiles for the system profile must be specified during system profile creation. Retry the system profile creation operation,

	partition profiles for the system profile or click \"Cancel\" .	making sure to add at least one partition profile to the system profile. 2. If the problem persists, contact your next level of support or your service provider.
HSCL09E0	The profile {0} belongs to a partition that currently has a profile already included in the system profile. Select a profile from a different partition or first remove the conflicting partition's profile from the system profile, then add the desired profile again.	
HSCL09E1	There is currently a system profile with the name {0} created for this system. Enter a unique name.	1. If there is not a system profile with the specified name displayed in the console, refresh the console and try the command again. 2. If it fails again, rebuild the managed system. For details, see Updating managed system or frame information. 3. Restart the HMC and then try the task again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL09E2	Validation results for system profile {0}:{1}.	This message is for informational purposes only regarding the outcome of system profile validation. No recovery action should be taken.
HSCL09E3	Activation results for system profile {0}:{1}.	This message is for informational purposes only regarding the outcome of system profile validation. No recovery action should be taken.

Parent topic: HMC error codes

HSCL0B*xx* attention light messages

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL0B*xx* error codes	Message	Recovery action
HSCL0BBB	Can not get LED.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the operation. 3. Restart the HMC and then try the task again. 4. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL0D*xx* operating system reset error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL0D*xx* error codes	Message	Recovery action
HSCL0DB2	An operating system reset can be issued for a logical partition only if the partition is in the running or starting state.	1. Rebuild the managed system. For details see Updating managed system or frame information. 2. Try the task again.
HSCL0DB4	An Operating System shut down can not be performed because the operating system image running does not support remote execution of this task from the HMC.	1. Ensure the network connection between partition and HMC is working. 2. Rebuild the HMC. For details see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0DB5	An Operating System Shut down can be issued for a logical partition only if the partition is in the Running state.	A partition must be in the Running state in order for an operating system shutdown operation to be performed. 1. Ensure that the partition's state is Running, and try the task again. 2. If your partition is in a state other than Running, but you are sure that the partition is in fact running, rebuild the managed system. For details, see Updating managed system or frame information. 3. Retry the operation. 4. If the problem persists, contact your next level of support or your service provider.
HSCL0DB7	Fail to shut down partition through operation system command due to following reasons: {0}.	1. Ensure that the network between the HMC and the partition is working. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL0F*xx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL0F*xx* error codes	**Message**	**Recovery action**
HSCL0FA6	Connection has closed.	Connection was closed by you or another user. Close the window and open another terminal session.
HSCL0FA7	The open failed. 1) The session may already be open on another management console 2) The server may not be ready to accept connections.	1. Try the Close Terminal Connection task then retry to open the session again. **Note:** Closing the session will terminate the session of other users. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0FA8	Error in communication path to the partition.	The managed system is not accepting connections. 1. Check the network connection to the server. 2. Wait for few minutes and retry the connection. 3. If the connection still fails, restart the HMC. 4. If the problem persists, contact your next level of support or your service provider.
HSCL0FA9	Internal error encountered	1. Wait for few minutes and retry the connection. 2. Shut down and restart the HMC. 3. If the problem persists, contact your next level of support or your service provider.
HSCL0FAA	Lost connection to the Managed System. Attempting to reconnect	A network problem has been encountered, or the service processor has gone offline. The session is attempting to reconnect to the server. If the server state is in No Connection or Error state, then the connection attempt will fail.
HSCL0FAB	A terminal session is already open for this partition. Only one open session is allowed for a partition.	Another user is using the virtual terminal for this partition. Use the Close Terminal Connection task to disconnect the other session. **Note:** Closing the session will terminate the session of the other user.
HSCL0FAC	A terminal session is already open for this partition. Only one open session is allowed for a partition. Exiting	Another user is using the virtual terminal for this partition. Use the Close Terminal Connection task to disconnect the other session. **Note:** Closing the session will terminate the session of the other user.

HSCL0FAD	The connection to the server is not available. Exiting.	A network problem has been encountered, or the service processor has gone offline. 1. Wait for few minutes and retry the connection. 2. Ensure the network connection between the HMC and the managed system is good. 3. Shut down and restart the HMC. 4. If the problem persists, contact your next level of support or your service provider.
HSCL0FAE	The connection to the server is not available.	A network problem has been encountered, or the service processor has gone offline. 1. Wait for few minutes and retry the connection. 2. Ensure the network connection between the HMC and the managed system is good. 3. Shut down and restart the HMC. 4. If the problem persists, contact your next level of support or your service provider.
HSCL0FAF	Received invalid connection information. Operation cancelled.	1. Close the terminal window and open another window. 2. If the problem persists, contact your next level of support or your service provider.
HSCL0FB0	Received invalid connection information. Operation cancelled. Exiting.	1. Close the terminal window and open another window. 2. If the problem persists, contact your next level of support or your service provider.

Parent topic:

HSCL11*xx* backup and restore error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

HSCL11*xx* error codes	Message	Recovery action
HSCL1195	Unable to back up the profile data to the backup file. Try again.	1. Try the task again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1196	You do not have read access permission on the backup file {0}. Refresh the interface and check whether the operation was completed. If not, try the operation	1. Try the task again. 2. If the operation still fails, contact your next level of support or your service provider.

	again.	
HSCL1197	Unable to read the profile data's backup file {0}. Refresh the interface and check whether the operation was completed. If not, try the operation again.	1. Try the task again. 2. Shut down and restart the HMC, and then try the task again. 3. If the operation still fails, contact your next level of support or your service provider.
HSCL1198	Cannot find backup file {0} for profile data. Select a valid, existing backup file.	1. Try the task again. 2. If the operation still fails, contact your next level of support or your service provider.
HSCL1199	A full restore is not permitted when there are logical partitions in {0} state. A full restore can only be issued when the managed system was powered on and all partitions are in the Not Activated state.	1. Verify the managed system was powered-on to run in Partition Standby. 2. Try the task again. 3. If the operation still fails, contact your next level of support or your service provider.
HSCL119A	There was an I/O error while backing up the profile data. Try again.	1. Try the task again. 2. Shut down and restart the HMC, and then try the task again. 3. If the operation still fails, contact your next level of support or your service provider.
HSCL119B	The restore profile data operation failed. Try again.	1. Try the task again. 2. Shut down and restart the HMC, and then try the task again. 3. If the operation still fails, contact your next level of support or your service provider.
HSCL119C	Cannot initialize profile data when the managed system was not in the Standby or Operating state, or there is any partition not in the Not Activated state.	1. Verify that the managed system is in the Standby or Operating state, and that no logical partitions are running. 2. Try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL119D	Cannot restore the profile data if the managed system is in the {0} state.	1. Verify that the managed system is in the Standby or Ready state, and try the task again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL119E	Cannot initialize the profile data if the managed system is in the {0} state.	1. Verify that the managed system is in the Standby or Ready state, and try the task again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL119F	The backup file {0} used to restore the profile data is not valid. Its file size {1} is not correct. Select a valid backup file.	The backup file selected is not valid. The file might be corrupted. 1. Try the task again. 2. Select another backup file and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL11A0	Cannot restore the profile data if the managed system is in the {0} state. The managed system must be in the Operating or Standby state.	1. Verify that the managed system is in Operating or Standby state. 2. Try the task again.
HSCL11A1	Cannot initialize the profile data if the managed system is in the {0} state.	

	The managed system must be in the Operating or Standby state.	1. Verify that the managed system is in Operating or Standby state. 2. Try the task again.
HSCL11A2	Could not display the backup dialog for the managed system: {0}. Try the operation again.	1. Try the task again. 2. Log off the HMC, and then log back in. 3. Try the task again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL11A3	Could not back up the profile data for the managed system: {0} to file {1}.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Try the task again. 3. Shut down and restart the HMC, and then try the task again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL11A4	Cannot back up profile data to the default backup file name {0}.	Cannot back up the profile data to the default backup file. Choose a different backup file name. If the problem persists, contact your next level of support or your service provider.
HSCL11A5	Could not display the remove backup dialog for the managed system {0}. Try again.	1. Try the task again. 2. Log off the HMC, and log back in. 3. Try the task again. 4. contact your next level of support or your service provider.
HSCL11A6	Could not remove the backup file {0} from the managed system {1}.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Try the task again. 3. Shut down and restart the HMC, and then try the task again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL11A7	No backup file has been selected for the operation. Select a backup file.	If the problem persists, contact your next level of support or your service provider.
HSCL11A8	Could not display the restore profile data dialog for the managed system: {0}. Try the operation again.	1. Try the task again. 2. Log off the HMC, and then log back in. 3. Try the task again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL11A9	Could not initialize the profile data task on the managed system {0}. Refresh the interface and check whether the operation was performed. If not, try the operation again.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Ensure the operation has been performed and displays on the graphical user interface. 3. If not, repeat the operation. 4. If the problem persists, contact your next level of support or your service provider.
HSCL11AA	Could not restore the profile data task on the managed system {0} with backup file {1} of {2} option. Refresh the interface and check whether the operation was performed. If not, try the operation again.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Try the task again. 3. Rebuild the managed system. For details, see Updating managed system or frame information. Then try the task again.

		4. If the problem persists, contact your next level of support or your service provider.
HSCL11AB	Could not display the recover partition data dialog for the managed system {0}.	1. Try the task again. 2. Log off the HMC, and then log back in. 3. Try the task again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL11AC	Could not perform the recover logical partition data task on the managed system {0}.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Try the task again. 3. Rebuild the managed system. For details, see Updating managed system or frame information. 4. If the problem persists, contact your next level of support or your service provider.
HSCL11AD	Could not display the Rebuild Computer System dialog for managed system {0}.	1. Refresh the graphical user interface and retry the operation. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL13*xx* utility class error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL13*xx* error codes	Message	Recovery action
HSCL138F	Could not get the Hardware Management Console host name. Check the network settings within the system configuration.	1. Check the network setting under system configuration, and then try the task again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1393	Could not load the list of PC product names.	1. Shut down and restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1395	Could not launch the Confirmation dialog. Try again.	1. Refresh the graphical user interface. See Updating managed system or frame information for details. 2. Try the task again. 3. Log off and then log back in to the HMC and try the operation again.

		4. If the problem persists, contact your next level of support or your service provider.
HSCL1397	Could not determine the version of the firmware that is loaded on the service processor.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1398	Could not determine what version of service processor firmware is compatible with this version of the Hardware Management Console.	Check the version of your managed system and the HMC version first with Administration staff. Then determine the compatibility from the document, if they do match.
HSCL1399	The managed system does not have Virtual IO Server capability.	There is no recovery action necessary.

Parent topic: HMC error codes

HSCL14*xx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL14*xx* error codes	Message	Recovery action
HSCL1400	The firmware operation failed.	Try the task again. If the problem persists, contact your next level of support or your service provider.
HSCL1401	An error was detected using the current HMC's network configuration. A duplicate IP address and system hostname may be the cause of this problem. Verify this system's network settings via the 'Customize Network Settings' task. This HMC's network interface has been temporarily disabled and the hostname set to 'localhost.localdomain'.	1. Ensure that the network setting is correct. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1402	This operation failed due to following reasons: {0}.	
HSCL1403	Could not display the {0} dialog. Try the operation again.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If it still fails, log off and then log back in to the HMC and try the operation again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL1450	There is an insufficient number of unallocated processors to perform the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information.

		2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1451	Attempted to allocate a number of processors below the minimum processor setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1452	Attempted to allocate a number of processors above the maximum processor setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1453	There is an insufficient amount of unallocated processing units to perform the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1454	Attempted to allocate an amount of processing units below the minimum processing unit setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1455	Attempted to allocate an amount of processing units above the maximum processing setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1456	The processor setting exceeds the maximum system configuration.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1457	There is an insufficient amount of unallocated memory to perform the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1458	Attempted to allocate an amount of memory below the minimum memory setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1459	Attempted to allocate an amount of memory above the maximum memory setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL145A		

	The minimum memory amount is below the required amount of memory with the maximum specified.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL145B	There is an insufficient amount of unallocated 5250 CPW to perform the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL145C	Attempted to allocate an amount of 5250 CPW below the minimum setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL145D	Attempted to allocate an amount of 5250 CPW above the maximum setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL145E	Attempted to allocate processing units greater than the maximum capacity allowed with the specified virtual processor setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL145F	Attempted to allocate processing units less than the minimum capacity allowed with the specified virtual processor setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1460	Attempted to set maximum processing units greater than the maximum capacity allowed with the specified virtual processor setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1461	Attempted to set maximum processing units less than the minimum capacity allowed with the specified virtual processor setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1462	Attempted to set minimum processing units greater than the maximum capacity allowed with the specified virtual processor setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1463	Attempted to set minimum processing units less than the minimum capacity allowed with the specified virtual processor setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1464	The partition is not currently configured for shared processing.	

		1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1465	The partition is not currently configured for dedicated processing.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1466	The partition specified is not valid. Rebuild the managed system and try again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1467	The type of partition specified is not compatible with the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1468	The I/O pool ID specified is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1469	The shared processor pool ID specified is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL146A	The I/O adapter: {0} is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL146B	The partition name specified has already been used by another partition. Specify a different name.	
HSCL146C	The partition name specified is not acceptable. Check the name and try again.	
HSCL146D	The partition is currently in a state where this configuration change is not allowed. Rebuild the managed system and try again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.

HSCL146E	The number of power controlling partitions for this partition is not valid. Check the setting and try again.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL146F	Changing from shared to dedicated processing is not allowed with the current processing setting.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1472	The SNI adapter: {0} specified is not valid. Check the entry and try again.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1473	Cannot perform atomic operation. Atomic operations are not enabled.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1474	The processing weight specified is not valid. Check the entry and try again.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1475	Unable to switch out or into manufacturing default configuration at this point.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1477	Unable to perform atomic operation(s) at this point since one is already in progress.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1478	The virtual I/O adapter type specified is not valid. Check the entry and try again.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1479	The atomic operation failed.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL147A	The RIO bus number: {0} is not valid. Check the entry and try again.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL147B	The hardware page table ratio specified is not valid. Check the entry and try again.	1. For details, see Updating managed system or frame information. 2. Retry the task 3. If the problem persists, contact your next level of support or your service provider.

HSCL147C	The I/O adapter: {0} cannot be assigned to the pool specified.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL147D	Cannot change the processing setting to uncapped.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL147E	The OptiConnect pool specified is not acceptable by the managed system. Check the entry and try again.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL147F	The HSL OptiConnect pool specified is not acceptable by the managed system. Check the entry and try again.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1481	Cannot perform this operation because the partition belongs to a workload management group joined by other partitions.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL15*xx* CIMOM error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL15*xx* error codes	Message	Recovery action
HSCL150B	Cannot change the I/O pools of the partition since the partition is still using an I/O adapter participating in one of the pool IDs.	
HSCL150C	Cannot use the I/O adapter: {0} since the partition is not part of the pool this adapter belongs to.	
HSCL150D	Cannot use the I/O adapter: {0} because it is not available.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.

HSCL150E	Cannot use the I/O adapter: {0} since it is configured under an I/O unit marked as switchable.	
HSCL150F	Cannot vary off the I/O adapter: {0} because it is still in use by the partition.	
HSCL1510	This I/O adapter is marked as multi-hub reserving for shark partition.	
HSCL1511	Cannot use the I/O adapter: {0} because it is either used by another partition or an allocation is already in progress.	
HSCL1512	Cannot vary off the I/O adapter: {0} because the partition is not ready to release the adapter	
HSCL1513	Cannot change the OptiConnect setting since the communication with the partition is still active.	
HSCL1514	The virtual I/O slot number specified is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1515	Cannot use a virtual slot number greater or equal to the maximum number of virtual slots allowed with this partition.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1516	Cannot specify additional virtual LAN IDs since this virtual Ethernet adapter is not IEEE compatible.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1517	The virtual slot number specified to query or set virtual slot information is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1518	The virtual slot state specified is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1519	The number of virtual slots specified is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL151A	A virtual Ethernet trunk adapter with the same MAC address already exists.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL151B	Unable to delete the partition when	

	there is a virtual terminal connection opened.	1. Close the terminal session for the partition you want to delete. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL151C	Server adapter setting of the virtual slot: {0} is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL151D	The virtual adapter: {0} cannot be set up for HMC connection.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL151E	Cannot have multicast MAC address for the virtual Ethernet trunk adapter.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1523	Shared pool ID specified is not valid.	1. Ensure that the setting is valid. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL152A	Cannot change the managed system from the manufacturing default configuration because a partition is running with a device that does not support extended error handling (EEH).	
HSCL152D	The managed system is not ready for the Hardware Management Console to extract partition and resource information.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1537	The partition is not responsive for dynamic resource configuration changes.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1538	There is an insufficient amount of memory for maintaining system firmware.	
HSCL1539	Memory configuration for the partition cannot be satisfied due to system memory usage limitation.	
HSCL1550	Firmware command: {0} failed due to the following {1} errors: {2}	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1551	The firmware extended error code is {0}.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.

HSCL1552	The firmware operation failed with extended error.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1553	Not applicable.	
HSCL1554	Not applicable.	
HSCL1555	The virtual I/O adapter configuration is not valid. If the remote partition and the remote partition virtual slot number are configured, make sure they are not the same number as the partition number and slot number of the virtual I/O adapter.	
HSCL1556	Not applicable.	
HSCL157D	Unable to query the association within the managed system. Log in as the proper user and use the correct association method.	
HSCL157E	Unable to edit instance of {0}. Check user permissions, then log in as the proper user and try editing again.	1. Check your user role's permissions. 2. If your user role does not permit the desired action, log out and log back in as the correct user, and retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL157F	Cannot find an instance of the object specified. Either there is no instance and it must be created or a path to the object was incorrect.	1. Ensure that the inputs are correct. 2. Rebuild the managed system. For details, see Updating managed system or frame information. Then try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1580	Improper number of arguments passed in: passed in = {0}, expected = {1}. Check the parameters of the invoked method.	1. Verify that the command is being called correctly, and try the task again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1581	The method name {0} passed in the invoke method does not match the name of the method you are trying to invoke. Check the method name and the required parameters.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1582	The wrong path is being used for the object manager - {0}. Check the code for build CIMObjectPath and its contents.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1583	The wrong object manager method is being invoked.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1584	You do not have the proper authorization or permission to perform this task. Log in as the proper user and try again.	Log in with appropriate permissions to perform the task. If the problem persists, contact your next level of support or your service provider.

HSCL1585	There was an unknown error while querying the object manager database.	1. Try the task again. 2. Shut down and restart the HMC. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1586	Cannot find an instance with object manager of {0}.	1. Check the input. 2. Rebuild the managed system. For details, see Updating managed system or frame information. Then try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1588	An exception was encountered while calling the method named {0}.	1. Retry the operation. 2. If the problem persists, rebuild the managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL159B	The group number is invalid. Group numbers cannot contain any letters or characters other than the numbers 0 through 9.	Enter the new group number again without alphabetic characters.
HSCL159C	The Workload Management group number has to be between {0} and {1}.	Enter a number inside the valid range for workload management group numbers.
HSCL15E7	The profile you tried to activate does not belong to the partition {0} you specified. Select the correct partition profile.	Verify that you selected the correct logical partition profile to activate. If the operation still fails, contact your next level of support or your service provider.

Parent topic: HSCL error codes

HSCL17*xx* HMC console error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL17*xx* error codes	Message	Recovery action
HSCL1771	Could not create console information and set it with the managed system. Perform the rebuild managed system operation.	Rebuild the managed system. For details, see Updating managed system or frame information.
HSCL1772	Could not set Hardware Management Console information. Perform the rebuild managed system operation.	Rebuild the managed system. For details, see Updating managed system or frame information.
HSCL1773		

	Invocation of the Hardware Management Console information method failed. Perform the rebuild managed system operation.	Rebuild the managed system. For details, see Updating managed system or frame information.
HSCL1774	Unable to get the defined slot number for Hardware Management Console information slots. Perform the rebuild managed system operation.	Rebuild the managed system. For details, see Updating managed system or frame information.
HSCL1776	Could not get the Hardware Management Console information. Perform the rebuild managed system operation.	Rebuild the managed system. For details, see Updating managed system or frame information.
HSCL1777	Failed to construct the Hardware Management Console information string. Perform the rebuild managed system operation.	Rebuild the managed system. For details, see Updating managed system or frame information.
HSCL1778	Could not create the Hardware Management Console instance in the object manager. Restart the Hardware Management Console.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1779	Could not create the Hardware Management Console motherboard instance in the object manager. Restart the Hardware Management Console.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL177A	Could not create the Hardware Management Console chassis instance in the object manager. Restart the Hardware Management Console.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL177B	Could not create the Hardware Management Console network setting instance in the object manager. Restart the Hardware Management Console.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL177C	Could not create the Hardware Management Console partition management instance in the object manager. Restart the Hardware Management Console.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL177D	Could not create the Hardware Management Console operating system instance in the object manager. Restart the Hardware Management Console.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL177E	Could not create the Hardware Management Console memory instance in the object manager. Restart the Hardware Management Console.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL177F	Could not delete the Hardware Management Console instance.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Shut down and restart the HMC and then try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1780	Could not delete Hardware Management Console and its related	1. Restart the HMC.

	instances.	2. If the problem persists, contact your next level of support or your service provider.
HSCL1781	Could not obtain Hardware Management Console's VPD information. Restart the Hardware Management Console.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1782	Could not delete the Hardware Management Console Motherboard instance and its associations.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1783	Could not delete the Hardware Management Console chassis instance and its associations.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1784	Could not delete the Hardware Management Console network setting instance and its associations.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1785	Could not delete the Hardware Management Console partition management instance and its associations.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1786	Could not delete the Hardware Management Console operating systems instance and its associations.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1787	Could not delete the Hardware Management Console memory instance and its associations.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1788	HMC information data has exceeded the 256 characters limit. Reduce the length of your host name.	

Parent topic: HMC error codes

HSCL19*xx* WEBSM/AUIML error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL19*xx* error codes	Message	Recovery action

HSCL1965	Unable to determine the Hardware Management Console (HMC) server's host name. Check the HMC network settings under System Configuration and verify that they are correct.	1. Check the HMC Network Settings under System Configuration to verify that the settings are correct and that you have a valid host name for the HMC. 2. Contact your system or network administrator for network settings help.
HSCL1967	You must select one system profile to power on with or select Cancel.	Select a system profile from the window or select Cancel to close the window.
HSCL1969	Could not retrieve information from the GUI server. Check your network configuration and connection.	Check the HMC network settings under System Configuration and verify that the settings are correct. If the problem persists, contact your next level of support or your service provider.
HSCL196A	Choose a new default profile from the list or select Cancel.	1. Choose only one new default profile. 2. Either choose a new default profile, or select Cancel. 3. If the problem persists, contact your next level of support or your service provider.
HSCL196B	The object is not found in the data area. Refresh the interface.	1. Perform the refresh task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL196C	Problem obtaining object information. Refresh the interface.	1. Perform the refresh task. 2. If the same error occurs, perform the rebuild managed system operation. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL196E	Could not display the Operating System Shut down dialog. Try the operation again.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Retry the operation. 3. If it still fails, log off and then log back in to the HMC and try the operation again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL1970	Parent {0} name space not set.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1971	There was an error retrieving necessary information from the Hardware Management Console. Refresh the console and try the operation again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.

HSCL1975	The HMC Access Password has been set from another HMC or ASM screen before this Update Password task completed. You must cancel out of the Update Password - Authentication Pending dialog and reselect this managed object to proceed.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the managed system state remains in *Pending Authentication*, restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1976	The ASM General Password has been set from another HMC or ASM screen before this Update Password task completed. You must cancel out of the Update Password - Authentication Pending dialog and reselect this managed object to proceed.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1977	The ASM Administrator Password has been set from another HMC or ASM screen before this Update Password task completed. You must cancel out of the Update Password - Authentication Pending dialog and reselect this managed object to proceed.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1978	An error occurred while attempting to update the HMC Access Password. Try to update the password again by either entering it again here or by cancelling out of this dialog and reselecting this managed system and its Update Managed System Password task.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL1979	An error occurred while attempting to update the ASM General Password. Try to update the password again by either entering it again here or by cancelling out of this dialog and reselecting this managed system and its Update Managed System Password task.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL197A	An error occurred while attempting to update the ASM Administrator Password. Try to update the password again by either entering it again here or by cancelling out of this dialog and reselecting this managed system and its Update Managed System Password task.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL197B	Failed to backup the profile data {0} to file: {1}.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Retry the task. 3. Restart the HMC, then try the task again. 4. If the problem persists, contact your next level of support or your service provider.
HSCL197C	Failed to remove backup file {0} from Managed System: {1}.	1. Refresh the graphical user interface. For details, see Updating managed

		system or frame information.
		2. Retry the task.
		3. Restart the HMC, then try the task again.
		4. If the problem persists, contact your next level of support or your service provider.
HSCL197D	Failed to initialize profile data at Managed System: {0}.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information.
		2. Ensure that the operation was performed and that it displays on the graphical user interface.
		3. If not, repeat the operation.
		4. If the problem persists, contact your next level of support or your service provider.
HSCL197E	Failed to restore Managed System {0} from backup file {1} with {2}.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information.
		2. Retry the task.
		3. Rebuild the managed system. For details, see Updating managed system or frame information.
		4. Retry the task.
		5. If the problem persists, contact your next level of support or your service provider.
HSCL1980	Failed to copy profile: {0}.	1. Try the task again.
		2. Rebuild the managed system. For details, see Updating managed system or frame information.
		3. Retry the operation.
		4. If the problem still persists, contact your next level of support or your service provider.
HSCL1982	Profile Property Display failed. Exception: {0}.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information.
		2. Retry the task.
		3. Rebuild the managed system. For details, see Updating managed system or frame information.
		4. Retry the task.
		5. If the problem persists, contact your next level of support or your service provider.
HSCL1985	The following error(s) occurred during the operating system shut down of partition {0}: {1}.	1. Retry the operation.
		2. If the problem persists, contact your next level of support or your service provider.
HSCL1986	There was an unknown error while changing the default profile.	1. Try the task again.
		2. Rebuild the managed system. For details, see Updating managed system or frame information.
		3. Retry the operation.
		4. If the problem still persists, contact your next level of support or your

		service provider.
HSCL198A	No objects were found in the database. Possible problems and solutions are: 1. The database is currently being populated. The object(s) should appear automatically when the database is fully populated, or you can retry later by clicking on Reload. 2. There is a problem with the connection between the Console and the Managed System. Ensure the network is correctly configured between the Console and the Managed System.	1. Ensure the network is correctly configured. 2. Restart the HMC 3. If the problem persists, contact your next level of support or your service provider.
HSCL198B	Failed to delete the selected profile(s).	1. Try the task again. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. Retry the operation. 4. If the problem still persists, contact your next level of support or your service provider.
HSCL198C	Failed to refresh the GUI for the deletion of the profile.	1. Refresh the graphical user interface. For details, see Updating managed system or frame information. 2. Verify that the profile is deleted. 3. If the problem still persists, contact your next level of support or your service provider.
HSCL198D	The New HMC Access Password and Verify HMC Access Password do not match. Enter matching passwords to proceed.	Enter matching passwords.
HSCL198E	The New ASM General Password and Verify ASM General Password do not match. Enter matching passwords to proceed.	Enter matching passwords.
HSCL198F	The New ASM Administrator Password and Verify ASM Administrator Password do not match. Enter matching passwords to proceed.	Enter matching passwords.
HSCL1990	You have entered an incorrect password. Either the current HMC Access password specified is incorrect, or the HMC Access password has been changed already at another HMC and the New HMC Access password you specified here is wrong. Correct the password(s), then select OK once again from this dialog to retry the operation.	Enter the correct HMC Access password.
HSCL1991	The HMC Access Password you specified is incorrect. Enter the correct HMC Access Password to login.	Enter the correct HMC Access password.
HSCL1992	The HMC Access Password specified is invalid. The new password must be at least {0} and no greater than {1}	Re-enter a password that conforms to the password rules.

	characters in length. Enter the new password again to proceed.	
HSCL1993	The ASM General Password specified is invalid. The new password must be at least {0} and no greater than {1} characters in length. Enter the new password again to proceed.	Re-enter a password that conforms to the password rules.
HSCL1994	The ASM Administrator Password specified is invalid. The new password must be at least {0} and no greater than {1} characters in length. Enter the new password again to proceed.	Re-enter a password that conforms to the password rules.
HSCL1995	Your attempt to update the {0} password(s) has failed, because a successful attempt to update these passwords has taken place elsewhere during the time that has elapsed since this HMC last connected to the managed system. A reconnection to the managed system has been initiated to reset the password status, and the managed system state will be updated to reflect the true authentication state once this has completed. Note that none of the passwords stored on the managed system are what you attempted to set them to in this dialog.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the managed system state remains in *Pending Authentication*, restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1996	Your attempt to update the {0} password(s) has succeeded. However, your attempt to update the {1} password(s) has failed because an update on this (these) password(s) has already happened successfully elsewhere during the time that has elapsed since this HMC last connected to the managed system. A reconnection to the managed system has been initiated to reset the password status, and the managed system state will be updated to reflect the true authentication state once this has completed. Note that for the failure cases, the password(s) stored on the managed system are not what you attempted to set them to in this dialog.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the managed system state remains in *Pending Authentication*, restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1997	Your attempt to update the {0} password(s) has failed, because a successful attempt to update these passwords has taken place elsewhere during the time that has elapsed since this HMC last connected to the managed system. A subsequent attempt to reconnect to the managed system and reset the authentication state has also failed. 'Exit the Update Password - Pending Authentication dialog and retry the connection reset operation by selecting the 'Reset or Remove Connection' managed system task. If the problem persists, contact support.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the managed system state remains in *Pending Authentication*, restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.

HSCL1998	Your attempt to update the {0} password(s) has passed. However, your attempt to update the {1} password(s) has failed, because an update on this (these) passwords has already happened successfully elsewhere during the time that has elapsed since this HMC last connected to the managed system. A subsequent attempt to reconnect to the managed system and reset the authentication state has also failed. Exit the Update Password - Pending Authentication dialog and retry the connection reset operation by selecting the 'Reset or Remove Connection' managed system task. If the problem persists, contact support.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the managed system state remains in *Pending Authentication*, restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL1999	Your attempt to update the {0} password(s) has failed, because a successful attempt to update these passwords has taken place elsewhere during the time that has elapsed since this HMC last connected to the managed system. A reconnection to the managed system will be initiated to reset the password status once you exit this dialog, and the managed system state will be updated to reflect the true authentication state once this has completed. 'Note that none of the passwords stored on the managed system are what you attempted to set them to in this dialog.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the managed system state remains in *Pending Authentication*, restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL199A	Your attempt to update the {0} password or passwords has succeeded. However, your attempt to update the {1} password or passwords has failed, because an update has already happened successfully elsewhere during the time that has elapsed since this HMC last connected to the managed system. A reconnection to the managed system will be initiated to reset the password status once you exit this dialog, and the managed system state will be updated to reflect the true authentication state once this has completed. Note that for the failure cases, the password or passwords stored on the managed system are not what you attempted to set them to in this dialog.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the managed system state remains in *Pending Authentication*, restart the HMC and try the task again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL199B	The HMC Access Password specified is invalid. The password must be at least {0} and no greater than {1} characters in length. Re-enter a password of the correct length in this field to proceed.	Re-enter a password that conforms to the password rules.
HSCL199C	The ASM General Password specified is invalid. The password must be at least {0} and no greater than {1} characters in length. Re-enter a password of the correct length in this	Re-enter a password that conforms to the password rules.

	field to proceed.	
HSCL199D	The ASM Administrator Password specified is invalid. The password must be at least {0} and no greater than {1} characters in length. Re-enter a password of the correct length in this field to proceed.	Re-enter a password that conforms to the password rules.
HSCL199E	An error occurred while trying to open the 5250 console. The error code is {0}. Contact your service provider.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL199F	An error occurred while trying to open the 5250 console. The error code is {0}. The additional data is {1}. Contact your service provider.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL19A0	An error occurred while trying to open the 5250 console. The operation timed out. The time out value used was {0} seconds. Try the operation again. If the problem persists, contact your service provider.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL19A1	An error occurred while trying to open the 5250 console. Try the operation again. If the problem persists, contact your service provider.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL19A2	Failed to save profile: {0}.	The Save profile command has failed. This operation cannot be done when the partition is either not bootable or has not been booted for the first time. You might try to activate the partition with an appropriate profile, or rebuild the managed system. Rebuild the managed system. For details, see Updating managed system or frame information.

Parent topic: HMC error codes

HSCL25*xx* user management error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL25*xx* error codes	Message	Recovery action
HSCL251D	There was an unknown internal Hardware Management Console error.	1. Repeat the operation. 2. If it still fails, restart the HMC. 3. If the problem persists, contact your next level of support or your service provider.
HSCL251E		

	Failed to set the \'enable remote virtual terminal\' option.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL251F	The following error was encountered: {0}. Retry the operation.	1. Ensure the network connection between the HMC and the partition is working. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2520	The command entered is not supported.	1. Retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2521	There was a failure in the HMC Repository.	1. Restart the HMC, and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2522	The firmware command {0} failed. The return code from firmware is {1}.	1. Try the task again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2523	A critical property, {0}, stored in the repository is not set.	1. Rebuild the managed system, and try the task again. For details, see Updating managed system or frame information. 2. Restart the HMC, and retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2524	Invalid subscription ID {0}	1. Log off and then log back in to the HMC and try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2525	Authentication failed.	1. Log off and then log back in to the HMC and try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2526	The following errors occurred during the {0} operation {1}	

Parent topic: HMC error codes

HSCL29*xx* user management error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL29*xx* error codes	Message	Recovery action

HSCL2901	This logical partition is not capable of adding, removing, or moving processors dynamically.	Ensure your logical partitions are capable of performing dynamic logical partition operations.
HSCL2902	The destination logical partition is not capable of adding, removing, or moving processors dynamically.	Ensure your logical partitions are capable of performing dynamic logical partition operations.
HSCL2903	Your processor request goes below the profile's required processor limit. You can remove or move {0} or fewer processors. Retry the operation.	Retry the operation, entering a smaller number of processors.
HSCL2904	Your processor request exceeds the profile's maximum processor limit. You can add or move up to {0} processors. Retry the operation.	Retry the operation, entering a smaller number of processors.
HSCL2905	This logical partition is not capable of adding, removing, or moving memory dynamically.	Ensure your logical partitions are capable of performing dynamic logical partition operations.
HSCL2906	The destination logical partition is not capable of adding, removing, or moving memory dynamically.	Ensure your logical partitions are capable of performing dynamic logical partition operations.
HSCL2907	Your memory request exceeds the profile's maximum memory limit. You can add or move up to {0} MBs of memory. Retry the operation.	1. Retry the task and request a smaller memory amount. 2. Reset the logical partition, reactivate the logical partition, and then retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2908	Your memory request goes below the profile's minimum memory limit. You can remove or move up to {0} MB of memory. Retry the operation.	1. Retry the task and request a larger memory amount. 2. Reset the logical partition, reactivate the logical partition, and then retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2909	Your memory request exceeds the total available memory of the managed system. You can add up to {0} MB of memory. Retry the operation.	1. Check the available memory of the managed system, retry the task and request a smaller memory amount. 2. Reset the logical partition, reactivate the logical partition, and then retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL290B	This logical partition is not capable of adding, removing, or moving I/O slots dynamically.	Ensure your logical partitions are capable of performing dynamic logical partition operations.
HSCL290C	The destination logical partition is not capable of adding, removing, or moving I/O slots dynamically.	Ensure your logical partitions are capable of performing dynamic logical partition operations.
HSCL2912	The managed system is powered off. You must power on the managed system to perform a dynamic logical partition operation.	1. Ensure the managed system is powered on. 2. Rebuild managed system. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service

		provider.
HSCL2914	The quantity to be added exceeds the available resources.	1. Ensure that memory is available in the managed system. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2916	The partition could not be found in the database. Perform a rebuild managed system operation, and try again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2925	An unknown error occurred during the add Virtual adapter operation. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2926	An unknown error occurred during the remove Virtual adapter operation. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2927	Dynamic logical partition MOVE Processing resources failed: {0}.	1. Retry the task. 2. Rebuild the managed system. For details, see Updating managed system or frame information. 3. Retry the task. 4. If the problem persists, contact your next level of support or your service provider.
HSCL2928	Dynamic logical partition ADD I/O resources failed: {0}.	1. Ensure you have the resources available to perform the operation. 2. Retry the operation. 3. If operation still fails, rebuild the managed system and try the operation again. For details, see Updating managed system or frame information. 4. If the problem persists, contact your next level of support or your service provider.
HSCL2929	Dynamic logical partition REMOVE I/O resources failed: {0}.	1. Ensure you have the resources available to perform the operation. 2. Retry the operation. 3. If operation still fails, rebuild the managed system and try the operation again. For details, see Updating managed system or frame information. 4. If the problem persists, contact your next level of support or your service provider.
HSCL2930	Dynamic logical partition MOVE I/O resources failed: {0}.	1. Ensure you have the resources available to perform the operation. 2. Retry the operation.

		3. If operation still fails, rebuild the managed system and try the operation again. For details, see Updating managed system or frame information. 4. If the problem persists, contact your next level of support or your service provider.
HSCL2931	Dynamic logical partition ADD Memory resources failed: {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2932	Dynamic logical partition REMOVE Memory resources failed: {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2933	Dynamic logical partition MOVE Memory resources failed: {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2934	The operating system drmgr command failed. Consult the appropriate operating system log files for further information and retry the operation if desired.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2935	{0} operation for {1} resource did not finish completely in the timeout value specified. The requested number was {2}. The success number is {3}. Increase the timeout value if needed.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2936	{0} operation for {1} resource failed.	1. Ensure the network connection between the HMC and the logical partition is working. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2937	{0} operation for {1} has completed, but only {3} out of {2} were successful. The partition standard output/error is not available.	
HSCL2938	{0} operation for {1} resource failed. The RPA partition standard output/error is not available.	
HSCL2939	{0} operation for {1} has completed, but only {3} out of {2} were successful. The partition standard output is: {4}. The AIX standard error is: {5}.	
HSCL293A	{0} operation for {1} has completed, but only {3} out of {2} were successful. The partition command is: {4}. The partition standard output is: {5} The partition standard error is: {6}.	
HSCL293B	The return code is {0}. The partition return code is {1}.	
HSCL293D	Partition {0} is not in the correct state to perform dynamic logical partitioning operations.	Dynamic logical partitioning operations can only be performed on running partitions.

		1. Verify that the partition is in the Running state, and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2940	An unknown Dynamic logical partition error has occurred. Try the operation again.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2941	There are no processors available for dynamic logical partitioning on this partition.	1. Ensure that there are available processors in the managed system. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2942	There is no memory available for dynamic logical partitioning on this partition.	1. Ensure that there are available processors in the managed system. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2944	The I/O slot cannot be found. Ensure that the correct slot ID and unit ID were entered.	1. Ensure the inputs are correct. 2. Rebuild managed system. For details, see Updating managed system or frame information. 3. Retry the task. 4. If the problem persists, contact your next level of support or your service provider.
HSCL2945	The shut down operation on the logical partition failed. The return code is {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2946	The logical partition could not be shut down because the HMC's communication to the partition failed. The return code is {0}.	1. Ensure the network connection between the partition and the HMC is working. 2. Restart the HMC and retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2947	An error occurred while trying to restore stopped processors. There were {0} processors restored before the error occurred.	
HSCL2949	An error occurred while trying to restore stopped I/O devices. There were {0} devices restored before the error occurred.	
HSCL294A	The I/O slot cannot be found or it is required. Ensure that the valid slot ID and unit ID were entered.	1. Ensure the inputs are correct. 2. Ensure the adapter is not marked as required. 3. Rebuild the managed system. For details, see Updating managed system or frame information.

		4. If the problem persists, contact your next level of support or your service provider.
HSCL294C	Dynamic logical partition ADD Virtual I/O resources failed: {0}.	1. Correct the error and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL294D	Dynamic logical partition REMOVE Virtual I/O resources failed: {0}.	1. Correct the error and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL294E	Dynamic logical partition ADD Processing resources failed: {0}.	1. Retry the operation. 2. If operation still fails, perform a Rebuild Managed System operation, and try the operation again. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL294F	Dynamic logical partition REMOVE Processing resources failed: {0}.	1. Retry the operation. 2. If operation still fails, perform a Rebuild Managed System operation, and try the operation again. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2950	Dynamic logical partition operation on PCI Host Bridge failed.	1. Ensure you have the resources available to perform the operation. 2. Retry the operation. 3. If operation still fails, perform a Rebuild Managed System operation, and try the operation again. For details, see Updating managed system or frame information. 4. If the problem persists, contact your next level of support or your service provider.
HSCL2952	The dynamic logical partitioning requested could not be completed due to an unknown error(s) in the local system. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2957	There is currently no RMC connection between the HMC and the RPA partition {0}. This could be because the partition is inactive, a firewall, or an improper network setup causing RMC not to recognize the partition. Please check the system network setup.	1. Ensure that the network connection is working between HMC and the partition. For details, see Task 4. Ensure that your physical networking is set up correctly. 2. If the problem persists, contact your next level of support or your service provider.
HSCL2965	Not applicable.	
HSCL2966	Not applicable.	

HSCL2967	Not applicable.	
HSCL2968	Not applicable.	
HSCL2969	Not applicable.	
HSCL296A	Not applicable.	
HSCL296B	Not applicable.	
HSCL2970	The IOServer command has failed because of the following reason: {0}.	Retry the command. If the problem persists, contact your next level of support or your service provider.
HSCL2971	The IOServer command fails because the partition {0} is unknown to RMC/LparCmdRM. This could be because of a firewall or an improper network setup causing RMC not to recognize the partition. Check the system network setup.	This could be caused by a firewall or an incorrect network setup causing Resources Monitoring Control (RMC) not to recognize the partition. Check the system network setup.
HSCL2972	There is no active session between the HMC and the partition.	1. There could be a short interruption in the network causing Resources Monitoring Control (RMC) to not recognize the partition. 2. Retry the operation later or restart the HMC. 3. If the problem persists, contact your next level of support or your service provider.
HSCL2973	The IOServer command contained illegal characters such as ; or >.	Illegal characters are in the IOServer command. Check the IOServer command to make sure it does not include illegal characters, and try the task again.
HSCL2974	The active profile includes all resources. You are not allowed to add, remove, or move resources from this configuration	No recovery action.
HSCL2975	The IOClient command has failed because of the following reason: {0}	No recovery action.
HSCL2976	The IOClient command fails because the partition {0} is unknown to RMC/LparCmdRM. This could be because the partition is inactive, or because a firewall or an improper network setup causing RMC not to recognize the partition. Please check the system network setup.	Check the system network setup.
HSCL2977	The IOClient command contains illegal characters such as ; or >.	No recovery action.
HSCL2978	The partition {0} is not in the Running state. First activate the partition and try the operation again.	Activate the partition and try the operation again.
HSCL2979	There was an error retrieving the Virtual IO connection status for the managed system. Execute a rebuild managed system operation. If the error persists contact your service service representative.	1. Perform a rebuild of the managed system. For details, see Updating managed system or frame information. 2. Try the task again. 3. If the operation still fails, contact support.

Parent topic: HMC error codes

HSCL3*xxx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL3*xxx* error codes	Message	Recovery action
HSCL3006	The LED operation failed. Refer to the HMC Operations Guide for more details. {0}	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3060	The following managed frames failed to initialize: {0}. If the error persists, contact your software service representative.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3070	The Frame lock action failed. Try the operation again.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3071	The Frame Guided Maintenance operation failed. Try the operation again.	Try the operation again. If the problem persists, contact your hardware representative.
HSCL3072	The Frame FRU deactivation operation failed. Try the operation again.	Try the operation again. If the problem persists, contact your hardware representative.
HSCL3073	The Frame FRU activation operation failed. Try the operation again.	Try the operation again. If the problem persists, contact your hardware representative.
HSCL3074	The frame host information was not saved. Ensure the Hardware Management Console has enough disk space and the correct file permission and try the operation again.	Ensure that the /opt/hsc/data directory contains enough disk space so that the HMC can save the frame host information when needed.
HSCL3075	The frame host information that was found is not valid. Check the host information you provided and try the operation again.	Check the frame host information that was entered into the application program to ensure the host name, password, and frame bulk power controller (BPC) internal identification are valid.
HSCL3076	An error has occurred while attempting the bulk power assembly connection operation. Retry the operation. If the problem persists, contact your service representative.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3077	This operation is not allowed in the frame's current state. In order for this operation to be performed, at least one bulk power assembly (BPA) must be in the Standby state.	1. Make sure that at least one bulk power assembly is in the Standby state, and try the operation again. 2. If the problem persists, contact your hardware representative.
HSCL3078		

	The request to power on the drawer or planar for the frame failed. Try the request again.	Try the request again. If the problem persists, contact your service provider.
HSCL3079	The request to add a drawer to the frame failed. Try the request again.	Try the request again. If the problem persists, contact your service provider.
HSCL307A	This operation cannot be performed because the HMC is not connected to side {0} of the bulk power assembly (BPA). Check the connection and try the operation again.	1. Check the connection. 2. Try the operation again. 3. If the problem persists, contact your next level of support or your service provider.
HSCL3080	The request to remove a planar from the frame failed. Try the request again.	Try the request again. If the problem persists, contact your next level of support or your service provider.
HSCL3081	The request to remove a drawer from the frame failed. Try the request again.	Try the request again. If the problem persists, contact your next level of support or your service provider.
HSCL3082	The request to send the frame IP information to the managed system has failed.	Try the request again. If the problem persists, contact your next level of support or your service provider.
HSCL3083	This operation is not allowed when the cage is powered on. Before this operation can be performed, all the cages must be powered off.	
HSCL3084	This operation is not allowed when the BPA is in any of the following states: `Incomplete`, `No Connection`, or `Not Available`. After you have established a connection from the HMC to the BPA, and have entered a valid HMC access password, try the operation again.	
HSCL3200	Unknown lock error.	Contact your next level of support or your service provider.
HSCL3201	Lock type not valid.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3202	Failed to acquire lock because of timeout.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3203	Nested lock type requested not valid.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3204	Lock not held.	1. Restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3205	The managed system is busy, try the operation again later.	The managed system is busy doing another action. Wait and then retry the action.
HSCL3351	Code update process is not allowed by the HMC. Check the code update status to verify the code update owner.	1. Check the code update status to verify the code update owner. 2. Retry the operation if HMC is the code update owner.

		3. If the problem persists, contact your next level of support or your service provider.
HSCL3352	Code update is already in progress by another HMC or by the firmware. Verify that no other code update is in progress and retry the operation.	1. Verify that no other code update operation is in progress and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3353	Code update is not allowed to the specified side. Check the current flash side.	1. Rebuild the managed operation. For details, see Updating managed system or frame information. 2. Check the power-on side from the managed system property panel and ensure you are not performing code update to the power-on side and then retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL3354	Code update is already in progress from this HMC. Ensure that no code update operation is in progress on the HMC before retrying the operation.	1. Ensure that no code update operation is in progress on the HMC before retrying the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3355	The code update operation failed with return code {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3356	The code update is not in progress by this HMC. The start code update task should have been performed prior to code update complete by this HMC.	1. Ensure that the start code update task has been performed. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL3357	The operation failed since another commit or long running code update is in progress.	1. Ensure that no other code update operation is in progress. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL3358	The delete LID operation is not allowed when a write LID is in progress.	1. Ensure that no other code update operation is in progress. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL3359	The code update operation failed since an invalid LID ID was specified.	1. Check the LID file ID and retry the operation with a valid LID file ID. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3360	Error accessing the flash.	

		1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3361	An unknown error occurred during code update operation. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3362	An unknown error occurred during reboot service processor. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3363	The size of the LID number array is not the same as the Filename array. Ensure every LID number has a corresponding filename.	1. Ensure every LID number has a corresponding filename and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3364	The read LID operation failed: {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3365	Error: The following file(s) already exist(s): {0}.	1. Ensure the files to read in the LID files do not exists and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3367	The input parameter arrays should all be of the same length. Check the lengths and retry the operation.	1. Ensure the lengths of the input parameters are the same and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3368	The Max write block size for the start code update did not get set. Retry the operation.	1. Retry the operation for the LID files that failed. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3370	The deletion of the following LID(s) failed: {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3371	The write LID operation failed: {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3372	The following LID filenames are not files: {0}	1. Ensure the LID files exist and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.

HSCL3373	The following LID files are empty: {0}	1. Ensure that the LID files are valid and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3374	The following LID files do not exists: {0}	1. Ensure the LID files exist and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3376	Invalid value returned from the service processor to indicate whether service partition firmware code LID updates are enabled or disabled.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3377	The start code update operation failed since an invalid component to update was specified. Retry the operation with the a valid firmware component to update.	1. Retry the operation with a valid firmware component to update. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3378	The start code update operation failed since the managed system is not in the valid state. Check the state of the managed system and retry the operation.	1. Check the state of the managed system and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3379	There is a permanent error in flash, retry the operation and if the problem persists contact support.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3380	The Code Update operation failed since the managed system is not in the Power Off, Operating, or Standby state. Check the managed system's state and retry the operation.	1. Check the state of the managed system and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3381	The Complete Code Update operation failed since an invalid completion type was specified. Retry the operation with a valid completion type.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3382	The Code Update is not in progress. The start code update operation needs to be performed before the Complete Code Update operation.	1. Ensure the start code update operation is performed first. 2. Retry the operation. 3. If the problem persists, contact your next level of support or your service provider.
HSCL3383	One or more LIDs are invalid in the primary LID list.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3384	For the partial read, the specified length was not read since the end of file flag was reached.	1. Retry the operation with a valid length to be read. 2. If the problem persists, contact your next level of support or your service provider.

HSCL3385	Error: The following file(s) specified an invalid data for the Special LID Designator or the code update side: {0}	1. Retry the operation with valid special LID designator or the code update side. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3386	The read partial/special LID operation failed, since writing to the file on the HMC got an error. Check the log for the error and retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3387	An unknown error occurred during the open of firmware files. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3388	The following fileid-subid specified an invalid open type: {0}	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3389	The following fileid-subid specified an invalid Force Flag: {0}	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3390	Error: The following files got an exception while trying to open the firmware file: {0}	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3391	The open firmware file operation failed: {0}	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3392	An unknown error occurred during the write operation of firmware files. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3393	An unknown error occurred during the close of firmware files. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3394	An unknown error occurred during the get firmware status update operation. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3395	An unknown error occurred during the start firmware update operation. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3396	Failed to delete the partition with ID {0} since it is the service partition.	1. Ensure the partition is not the service partition. 2. Rebuild the managed system. For details, see Updating managed system or frame information.

		3. If the problem persists, contact your next level of support or your service provider.
HSCL3397	The secondary service processor is not available for the managed system.	1. Check the FSP configuration and make sure that the service processor is installed and available for failover. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3398	The code update service processor lock is already taken. Check that no other code update operation is running and retry the operation.	1. Check that no other code update operation is in progress and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3399	The code update service processor lock is not taken. Ensure the lock is taken before trying to release the code update service processor lock.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3400	The service processor target that was specified is not valid. Verify the service processor target name and try the request again.	1. Rebuild the managed frame. For details, see Updating managed system or frame information. 2. Try the task again. 3. If the problem persists, contact your service provider.
HSCL3401	The get power domain operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3402	The get power domain power state operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3403	The set service lock operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3404	The reset service lock operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3405	The FRU level activate operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation.

		2. If the problem persists, contact your next level of support or your service provider.
HSCL3406	The FRU level deactivate operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3407	The vary off power domain platform operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3408	The vary off power domain platform operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3409	The vary on power domain platform operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3410	The vary off power domain partition operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3411	The vary off power domain partition operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3412	The vary on power domain partition operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3413	No Partitions are defined for the managed system. Check the user interface to see if partitions are defined and then retry the operation.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL3414	The start I/O concurrent maintenance operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the

		operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3415	The I/O concurrent maintenance operation failed. Retry the operation.	1. The I/O concurrent maintenance command failed. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3416	The get configuration ID operation failed. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3417	The set configuration ID operation failed. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3418	The get IO unit configuration ID and MTMS operation failed. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3419	The set IO unit MTMS operation failed. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3420	The set IO unit configuration ID operation failed. Retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3421	This operation is not allowed in the managed system's current state. Check the state of the managed system and retry the operation.	1. Check the state of the managed system and retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3422	This operation cannot be completed because a conflicting concurrent maintenance operation is already in progress. Ensure that the other operation has completed and then retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3423	Invalid data {0} was specified for this operation. Check the data and retry the operation.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3424	The I/O concurrent maintenance operation failed with return code: {0}.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3431	The command display service effect failed {%0}. Please retry the operation again.	
HSCL3432	The system level deactivation failed {%0}. Please retry the operation.	

HSCL3433	The system level deactivation failed {%0}. Please retry the operation.	
HSCL3437	The managed system does not have Concurrent Maintenance capability. Please upgrade the firmware and retry the operation.	1. Upgrade the firmware that supports Platform Hardware Concurrent Maintenance and retry the operation. For details, see Getting server firmware and power subsystem firmware fixes and upgrades. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3438	The managed system does not have PHYP Concurrent Maintenance capability. Please upgrade the firmware and retry the operation.	1. Upgrade the firmware that supports Platform Hardware Concurrent Maintenance and retry the operation. For details, see Getting server firmware and power subsystem firmware fixes and upgrades. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3439	Query FSP CM Service Lock failed. Please retry the operation.	1. Please retry the operation 2. If the problem persists, contact your next level of support or your service provider.
HSCL3500	The function completed successfully.	
HSCL3501	The operation failed because of a non-trivial reason.	1. Restart the HMC and retry the task. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3503	Input error: The specified value is out of range or undefined.	Contact your next level of support or your service provider.
HSCL3504	An invalid input file or an error has occurred during an operation on the specified file.	1. Restart the system. 2. If the problem persists, contact your next level of support or your service provider.
HSCL3505	An error occurred while contacting the access control system. Retry the operation.	1. Restart the system. 2. If the problem persists, contact your next level of support or your service provider.
HSCL350A	Invalid input parameter(s).	1. Check the input and try the task again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL350B	The user does not have the appropriate authority.	1. Try the task again. 2. Restart the system. 3. If the problem persists, contact your next level of support or your service provider.
HSCL350C	Input error: An invalid operation has been specified.	

		1. Check the input and try the task again.
		2. Restart the system.
		3. If the problem persists, contact your next level of support or your service provider.
HSCL350D	Input error: An invalid user ID has been specified.	1. Check the input and try the task again.
		2. If the problem persists, contact your next level of support or your service provider.
HSCL350E	Input error: An invalid task has been specified.	1. Check the input and try the task again.
		2. Restart the system.
		3. If the problem persists, contact your next level of support or your service provider.
HSCL350F	Input error: The input resource is not valid or conflicts with the role in the operation. 1. Check the input and try the task again. 2. Reboot the system. 3. If the problem persists, contact your next level of support or your service provider.	1. Check the input and try the task again.
		2. Restart the system.
		3. If the problem persists, contact your next level of support or your service provider.
HSCL3510	Input error: An invalid role or parent role has been specified.	1. Check the input and try the task again.
		2. If the problem persists, contact your next level of support or your service
HSCL3511	Input error: An invalid subsystem has been specified.	1. Check the input and try the task again.
		2. If the problem persists, contact your next level of support or your service provider.
HSCL3512	Input error: An invalid option has been specified.	1. Check the input and try the task again.
		2. If the problem persists, contact your next level of support or your service provider.
HSCL3513	Input error: An invalid managed resource role name has been specified.	1. Check the input and try the task again.
		2. Restart the HMC.
		3. If the problem persists, contact your next level of support or your service provider.
HSCL3514	The role specified already exists.	A duplicate role name has been specified in the operation. Select a different name.
HSCL3532	An unknown error, such as an exception, has occurred during the operation.	1. Try the task again.
		2. Restart the HMC.
		3. If the problem persists, contact your next level of support or your service provider.
HSCL3533	Invalid operation. The input role is a system predefined role.	The operation is not allowed.

HSCL3534	An invalid assignment has been specified. The resource type of the assignment is invalid or conflicts with the user's role.	The resource type specified in the assignment is not valid or conflicts with the user role. Give the user a different assignment or role and retry the operation.
HSCL3563	The function specified is not available in the current release.	

Parent topic: HMC error codes

HSCL70*xx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL70*xx* error codes	Message	Recovery action
HSCL7001	The partition profile named {0} was not found.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task 3. If the problem persists, contact your next level of support or your service provider.
HSCL7002	The partition named {0} was not found.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task 3. If the problem persists, contact your next level of support or your service provider.
HSCL7003	The partition with ID {0} was not found.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task 3. If the problem persists, contact your next level of support or your service provider.
HSCL7005	The partition was not found.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. Retry the task 3. If the problem persists, contact your next level of support or your service provider.
HSCL7007	The connection information in the database is corrupted. Shut down and restart the Hardware Management Console.	1. Shut down and restart the HMC to rebuild the database. 2. Try the task again.

Parent topic: HMC error codes

HSCL80*xx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCL80*xx* error codes	Message	Recovery action
HSCL8002	The managed system entered was not found. Check your entry and retry the command.	1. Ensure the inputs are correct. 2. Retry the task. 3. If the problem persists, contact your next level of support or your service provider.
HSCL8005	{0} could not be deleted because it was not found in the search order. Retry the command.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL8008	An error occurred while trying to run corrective services. Check your entry and retry the command.	This is an unexpected error. Contact your next level of support or your service provider.
HSCL8009	An error occurred while attempting to remotely connect to the server. Retry the command.	1. An unexpected error occurred while trying to change the Web Server settings. 2. Retry the command. 3. If the problem persists, contact your next level of support or your service provider.
HSCL800A	An error occurred while attempting to change web server settings. Retry the command.	1. An unexpected error occurred while trying to change the Web Server settings. 2. Retry the command. 3. If the problem persists, contact your next level of support or your service provider.
HSCL800B	An error occurred while attempting to change user interface server settings. Retry the command.	1. An unexpected error occurred while trying to change the Web-based System Manager settings. 2. Retry the command. 3. If the problem persists, contact your next level of support or your service provider.
HSCL800C	An error occurred while attempting to change syslogd settings. Retry the command.	1. An unexpected error occurred while trying to change the syslog

		settings.
		2. Retry the command.
		3. If the problem persists, contact your next level of support or your service provider.
HSCL800D	Cannot specify both IP address and hostname.	A syntax error occurred. Retry the command with only one of the options (IP address or host name) specified.
HSCL800E	An I/O exception occurred reading the file named: {0}. Check the file and try again.	1. Check the file. 2. Retry the command. 3. If the problem persists, contact your next level of support or your service provider.
HSCL800F	The partition profile named {0} was not found. Check your entry and retry the command.	1. Check the profile name entered to ensure that it is correct and retry the command. 2. Rebuild the managed system and retry the operation. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL8010	The system profile named {0} was not found. Check your entry and retry the command.	1. Ensure that the system profile entered was correct, and retry the command. 2. If this does not work, the system profile might be corrupted. Restore the profile data. For details, see Restoring profile data. 3. If problem persists, delete and re-create a new system profile. 4. If the problem persists, contact your next level of support or your service provider.
HSCL8011	The partition with ID {0} was not found. Check your entry and retry the command.	1. Ensure the correct partition ID was entered and retry the command. 2. Rebuild the managed system and retry the operation. For details, see Updating managed system or frame information. 3. If the problem persists, contact your next level of support or your service provider.
HSCL8012	The partition named {0} was not found. Check your entry and retry the command.	1. Ensure you specified a valid partition. 2. Retry the command. 3. Rebuild the managed system. For details, see Updating managed system or frame information. 4. If the problem persists, contact your next level of support or your service provider.
HSCL8013	The partition specified for the {0} attribute was not found. Correct the configuration data and retry the command.	1. Ensure you specified a valid partition. 2. Retry the command. 3. Rebuild the managed system. For details, see Updating managed

		system or frame information. 4. If the problem persists, contact your next level of support or your service provider.
HSCL8016	An unknown error occurred while trying to perform this command. Retry the command. If the error persists, contact support.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.

Parent topic: HMC error codes

HSCL90*xx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

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HSCL90*xx* error codes	Message	Recovery action
HSCL9000	This operation is not allowed because Power On Demand is not supported on the managed system.	
HSCL9001	The operation has failed on the managed system.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL9003	The operation has failed on the managed system. Retry the operation. If the failure persists, contact your hardware service representative.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL9004	The information could not be retrieved from the managed system.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL9005	The information could not be retrieved from the managed system. contact your next level of support or your service provider.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL9006	The information could not be retrieved from the managed system. Retry the operation. If the problem persists, contact support.	1. Retry the operation. 2. If the problem persists, contact your next level of support or your service provider.
HSCL9007	This operation is not allowed because Power On Demand for processors is not supported on the managed system	
HSCL9008		

	This operation is not allowed because Power On Demand for memory is not supported on the managed system.	
HSCL9009	This operation is not allowed because Power On Demand for processors is not supported on the managed system.	
HSCL900A	This operation is not allowed because Power On Demand for memory is not supported on the managed system.	
HSCL900B	This operation is not allowed because On/Off Power On Demand for processors is not supported on the managed system.	
HSCL900C	This operation is not allowed because On/Off Power On Demand for memory is not supported on the managed system.	
HSCL900D	This operation is not allowed because Reserve Power On Demand is not supported on the managed system.	
HSCL900E	This operation is not allowed because Trial Power On Demand for processors is not supported on the managed system.	
HSCL900F	This operation is not allowed because Trial Power On Demand for memory is not supported on the managed system.	
HSCL9010	This operation is only allowed when the managed system is in the Standby or Operating state.	1. Ensure that the managed system is in the Operating or Standby state, and then try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCL9011	This operation is not allowed because unreturned On/Off POD processors are currently in use on the managed system. Remove the On/Off POD processors from partitions to make them available to be reclaimed by the system, then try the operation again.	Currently there are unreturned On/Off POD processors in use on the managed system. Before this operation is allowed they must be made available to be reclaimed by the system. 1. Check the number of unreturned On/Off POD processors, and then remove processors from partitions, if necessary, until the number of available processors is equal to or greater than the number of On/Off POD processors that were unreturned. 2. To remove them, either use dynamic partitioning to remove the On/Off POD processors from a running partition, or shut down and then delete the partition to release the processors. 3. Retry the operation.
HSCL9012	This operation is not allowed because unreturned On/Off POD memory is currently in use on the managed system. Remove the On/Off POD memory from partitions to make it available to be reclaimed by the system, then try the operation again.	Remove the On/Off POD memory from partitions to make it available to be reclaimed by the system, then try the operation again.
HSCL9013	This operation is not allowed because unreturned Trial POD processors are	Immediately remove the Trial POD processors from partitions to make them

	currently in use on the managed system. Immediately remove the Trial POD processors from partitions to make them available to be reclaimed by the system, or enter a POD processor activation code to permanently activate this capacity.	available to be reclaimed by the system, or enter a POD processor activation code to permanently activate this capacity.
HSCL9014	This operation is not allowed because unreturned Trial POD memory is currently in use on the managed system. Immediately remove the Trial memory from partitions to make it available to be reclaimed by the system, or enter a POD memory activation code to permanently activate this capacity.	Immediately remove the Trial memory from partitions to make it available to be reclaimed by the system, or enter a POD memory activation code to permanently activate this capacity.
HSCL9015	The managed system cannot currently process this operation. This condition is temporary. Retry the operation.	1. The managed system is busy, but the condition is temporary. Retry the operation after a period of time. 2. If the condition persists, contact your next level of support or your service provider.
HSCL9016	You did not enter the POD code correctly. Try again.	The POD code was entered incorrectly. Try the operation again by carefully re-entering the code exactly as it was given to you.
HSCL9017	{0} The sequence number of the POD code indicates that this code has been used before. Obtain a new POD code and try again.	The POD code that was entered has been used before and cannot be used more than once. Check to make sure you are entering a new POD code and try again.
HSCL9018	{0} The POD feature for which the POD code was generated is not supported on the managed system.	The POD feature for which this POD code was generated is not supported on the managed system. Verify that the POD code you are trying to enter was generated for the managed system on which you are trying to enter it.
HSCL9019	The POD code has been rejected by the managed system because too many invalid POD codes have been entered. The managed system must be rebooted before another POD code will be accepted.	1. Restart the HMC. 2. Try the task again with a valid POD code.
HSCL901A	{0} Not enough inactive processors are available to accept this POD code because On/Off POD processors are currently activated. Remove some On/Off POD processors from partitions, if necessary, to make them available to be reclaimed by the system. Then deactivate those On/Off POD processors to reduce the number of activated On/Off POD processors, and enter the POD processor activation code again.	Currently, there are not enough inactive processors available to accept this POD code for POD processors, because On/Off processors are currently activated. 1. Check the number of available processors, and then remove processors from logical partitions, if necessary, until the number of available processors is equal to or greater than the number of On/Off processors that have been activated. To do this, either use dynamic partitioning to remove the On/Off POD processors from a running partition, or shut down and then delete the partition to release the processors. 2. If the problem persists, contact your next level of support or your service provider.
HSCL901B		

	{0} Not enough inactive memory is available to accept this POD code because On/Off POD memory is currently activated. Remove some On/Off POD memory from partitions, if necessary, to make it available to be reclaimed by the system. Then deactivate that On/Off POD memory to reduce the amount of activated On/Off POD memory, and enter the POD memory activation code again.	There is not enough inactive memory currently available to accept this POD memory activation code, because On/Off POD memory is currently activated. 1. Check the amount of available system memory, and then remove memory from partitions, if necessary, until the amount of available system memory is equal to or greater than the amount of On/Off POD memory that has been activated. (Use dynamic partitioning to remove memory from one or more running partitions, or delete one or more shut down partitions to release memory.) 2. Deactivate the On/Off POD memory. 3. Retry the operation.
HSCL901C	{0} There are not enough inactive processors available to accept this POD code because Trial POD processors are currently activated. Either wait until the current Trial POD activation period expires, or stop the current trial. Then enter the POD processor activation code again.	1. Wait until the current Trial POD activation period expires, or stop the current trial. 2. Retry the operation.
HSCL901D	{0} There is not enough inactive memory available to accept this POD code because Trial POD memory is currently activated. Either wait until the current Trial POD activation period expires, or stop the current trial. Then enter the POD memory activation code again.	1. Wait until the current Trial POD activation period expires, or stop the current trial. 2. Retry the operation.
HSCL901E	{0} Not enough inactive processors are available to accept this POD code because On/Off POD processors and Trial POD processors are currently activated. Remove some On/Off POD processors or Trial POD processors from partitions, if necessary, to make them available to be reclaimed by the system. Then deactivate those On/Off POD and/or Trial POD processors to reduce the number of activated POD processors, and enter the POD processor activation code again.	
HSCL901F	{0} Not enough inactive memory is available to accept this POD code because On/Off POD memory and Trial POD memory are currently activated. Remove some On/Off POD memory or Trial POD memory from partitions, if necessary, to make it available to be reclaimed by the system. Then deactivate that On/Off POD and/or Trial POD memory to reduce the amount of activated POD memory, and enter the POD memory activation code again.	
HSCL9020	{0} The POD code cannot be accepted because Trial POD processors are already activated on the managed system.	A Trial processor code cannot be accepted when Trial POD processors are already activated.
HSCL9021		

	{0} The POD code cannot be accepted because Trial POD memory is already activated on the managed system.	A Trial memory code cannot be accepted when Trial POD memory is already activated. 1. Wait until the current Trial POD activation period expires, or stop the current Trial. 2. Retry the operation.
HSCL9022	{0} Not enough inactive processors are available to accept this POD code because On/Off POD processors are currently activated. Remove some On/Off POD processors from partitions, if necessary, to make them available to be reclaimed by the system. Then deactivate those On/Off POD processors to reduce the number of activated On/Off POD processors, and enter the Trial processor code again.	There are not enough inactive processors currently available to accept this Trial processor code, because On/Off POD processors are currently activated. 1. Check the number of available system processors, and then remove processors from partitions, if necessary, until the number of available system processors is equal to or greater than the number of On/Off POD processors that have been activated. (Use dynamic partitioning to remove processors from one or more running partitions, or delete one or more shut down partitions to release the processors.) 2. Deactivate the On/Off POD processors. 3. Retry the operation.
HSCL9023	{0} There is not enough inactive memory available to accept this POD code because On/Off POD memory is currently activated. If necessary, remove memory from partitions until the amount of On/Off POD memory that is activated has been made available to be reclaimed by the system. Then deactivate the On/Off POD memory, and reenter the Trial memory code.	There is not enough inactive memory currently available to accept this Trial memory code, because On/Off POD memory is currently activated. 1. Check the amount of available system memory, and then remove memory from partitions, if necessary, until the amount of available system memory is equal to or greater than the amount of On/Off POD memory that has been activated. (Use dynamic partitioning to remove memory from one or more running partitions, or delete one or more shut down partitions to release the memory.) 2. Deactivate the On/Off POD memory. 3. Retry the operation.
HSCL9024	{0} The POD code cannot be accepted because On/Off POD resources are currently activated. If necessary, remove resources from partitions until the amount of On/Off POD resources that are activated have been made available to be reclaimed by the system. Then deactivate the On/Off POD resources, and re-enter the On/Off capacity termination code.	The POD code to terminate On/Off POD cannot be accepted, because On/Off resources are currently activated. 1. Check the amount of available resources, and then remove resources from partitions, if necessary, until the amount of available resources is equal to or greater than the amount of resources that have been activated for POD. Do this by either using dynamic partitioning to remove the On/Off resources from a running partition, or shut down

		and delete the partition to release the resources. 2. Retry the operation.
HSCL9025	{0} The POD code cannot be accepted because there are insufficient resources available on the managed system.	1. If there are temporary POD resources activated on your system, deactivate them. 2. Retry the operation.
HSCL9026	The number of On/Off POD processors requested exceeds the number of inactive processors that are currently available on the managed system. Reduce the number of processors requested and try again.	1. Reduce the number of processors requested. 2. Retry the operation.
HSCL9027	The amount of On/Off POD memory requested exceeds the amount of inactive memory that is currently available on the managed system. Reduce the amount of memory requested and try again.	1. Reduce the amount of memory requested so that the amount requested is less than or equal to the amount of inactive memory available for On/Off POD. 2. Retry the operation.
HSCL9028	Not enough On/Off POD processor days remain to accept the On/Off POD processor activation request. Either reduce the number of processors and/or days requested or obtain and enter a new On/Off processor enablement code.	1. Reduce the number of processors or days requested so that the number of processor days requested (the number of processors multiplied by the number of days) is less than or equal to the number of processor days available for new On/Off POD requests. 2. Alternatively, obtain and enter a new On/Off processor enablement code.
HSCL9029	Not enough On/Off POD memory days remain to accept the On/Off POD memory activation request. Either reduce the amount of memory and/or number of days requested or obtain and enter a new On/Off memory enablement code.	1. Reduce the amount of memory or number of days requested so that the number of memory days requested (the GBs of memory multiplied by the number of days) is less than or equal to the number of memory days available for new On/Off POD requests. 2. Alternatively, obtain and enter a new On/Off memory enablement code.
HSCL902A	There are insufficient resources available to accept the On/Off POD activation request.	The number of processors multiplied by the number of days cannot exceed the number of processor days remaining in the current On/Off POD processor enablement period. 1. Reduce either the number of processors or the number of days by amounts such that the product of these two values is less than or equal to the number of processor days remaining in the current On/Off POD processor enablement period. 2. Alternatively, you might obtain another On/Off POD processor enablement code to extend your On/Off POD processor enablement period.

HSCL902B	The On/Off POD processor activation request cannot be accepted because On/Off POD processors are currently activated. The Current On/Off POD processors must be deactivated before a new On/Off POD processor activation request can be accepted.	On/Off POD processors are already activated. 1. Deactivate current On/Off POD processors. 2. Retry the operation.
HSCL902C	The On/Off POD memory activation request cannot be accepted because On/Off POD memory is currently activated. The current On/Off POD memory must be deactivated before a new On/Off POD memory activation request can be accepted.	On/Off POD memory is already activated. 1. Deactivate the current On/Off POD memory. 2. Retry the operation
HSCL902D	The On/Off POD processor activation request cannot be accepted because Trial POD processors are currently activated. Either wait until the current Trial POD activation period expires, or stop the current trial. Then retry the On/Off POD processor activation request.	1. Wait until the current Trial POD activation period expires, or stop the current trial. 2. Retry the operation.
HSCL902E	The On/Off POD memory activation request cannot be accepted because Trial POD memory is currently activated. Either wait until the current Trial POD activation period expires, or stop the current trial. Then retry the On/Off POD memory activation request.	1. Wait until the current Trial POD activation period expires, or stop the current trial. 2. Retry the operation.
HSCL902F	The number of processors to activate is not valid. The number must be a multiple of {0} processors. Correct your entry, and try again.	1. Enter a valid number of processors. 2. Retry the operation.
HSCL9030	The amount of memory to activate is not valid. The amount must be a multiple of {0} GB. Correct your entry, and try again.	1. Enter a valid amount of memory. 2. Retry the operation.
HSCL9031	On/Off POD processors are not currently enabled on the managed system. An On/Off processor enablement code must be obtained and entered before On/Off POD processors can be activated.	On/Off POD processors are not currently enabled on the system. Obtain an On/Off POD processor enablement code, and then try again to activate the processors after the enablement code has been entered.
HSCL9032	On/Off POD for memory is not currently enabled on the managed system. An On/Off memory enablement code must be obtained and entered before On/Off POD memory can be activated.	An On/Off memory enablement code must be obtained and entered before On/Off POD memory can be activated. 1. Obtain and enter an On/Off memory enablement code. 2. Retry the operation.
HSCL9033	The On/Off POD processor deactivation request cannot be accepted because there are no On/Off POD processors that are currently activated on the managed system.	An attempt was made to deactivate processors that have not been activated; therefore, there is no recovery action.
HSCL9034	The On/Off POD memory deactivation request cannot be accepted because there is no On/Off POD memory that is currently activated on the managed system.	
HSCL9035	The On/Off POD processors cannot be deactivated because they cannot be reclaimed by the managed system. Remove processors from partitions to make them available to be reclaimed by the system, then try again.	An attempt was made to deactivate On/Off POD processors when there are not enough available processors for the system to reclaim.

		1. Deallocate the processors by checking the number of available processors and removing processors from partitions, if necessary, until the number available is equal to or greater than the number of processors that have been activated for On/Off POD. Either use dynamic partitioning to remove the On/Off processors from a running partition, or shut down and delete the partition to release the processors. 2. Retry the operation.
HSCL9036	The On/Off POD memory cannot be deactivated because it cannot be reclaimed by the managed system. Remove memory from partitions to make it available to be reclaimed by the system, then try again.	An attempt was made to deactivate On/Off POD memory when there is not enough available memory for the system to reclaim. 1. Check the amount of available system memory, and then remove memory from partitions, if necessary, until the amount of available system memory is equal to or greater than the amount of On/Off POD memory that is activated. (Use dynamic partitioning to remove memory from one or more running partitions, or delete one or more shut down partitions to release the memory.) 2. Retry the operation.
HSCL9037	This request cannot be accepted because a POD processor trial is not currently running on the managed system.	
HSCL9038	This request cannot be accepted because a POD memory trial is not currently running on the managed system.	
HSCL9039	This request cannot be accepted because the activated Trial POD processors cannot be reclaimed by the managed system. Remove processors from partitions to make them available to be reclaimed by the system, then try again.	An attempt was made to stop a POD processor trial when there are not enough available processors for the system to reclaim. 1. Check the number of available system processors, and then remove processors from partitions, if necessary, until the number of available system processors is equal to or greater than the number of Trial POD processors that are activated. (Use dynamic partitioning to remove processors from one or more running partitions, or delete one or more shut down partitions to release the processors.) 2. Retry the operation.
HSCL903A	This request cannot be accepted because the activated Trial POD memory cannot be reclaimed by the managed system. Remove memory from partitions to make it available to be reclaimed by the system,	An attempt was made to stop a POD memory trial when there is not enough available memory for the system to reclaim.

	then try again.	1. Check the amount of available system memory, and then remove memory from partitions, if necessary, until the amount of available system memory is equal to or greater than the amount of Trial POD memory that is activated. (Use dynamic partitioning to remove memory from one or more running partitions, or delete one or more shut down partitions to release the memory.) 2. Retry the operation.
HSCL903B	An error occurred while trying to save the information to a diskette. Verify that the diskette is writeable and try the operation again. If the problem persists, contact your service representative.	Verify that the diskette is writeable and try the operation again. If the problem persists, contact your service representative.
HSCL903D	The Reserve POD processor activation request cannot be accepted because On/Off POD processors are currently activated. Either wait until the On/Off POD processor request expires, or cancel the current On/Off processor activation request. Then try the Reserve POD processor activation request again.	1. Either wait until the On/Off POD processor request expires, or cancel the current On/Off processor activation request. 2. Then retry the Reserve POD processor activation request.
HSCL903E	The On/Off POD processor activation request cannot be accepted because Reserve POD processors are currently activated. The Reserve POD processors must be deactivated before an On/Off POD processor activation request can be accepted.	The Reserve POD processors must be deactivated before an On/Off POD processor activation request can be accepted.
HSCL903F	The Reserve POD processor activation request cannot be accepted because Trial POD processors are currently activated. Either wait until the Trial POD activation period expires, or stop the current trial. Then try the Reserve POD processor activation request again.	Either wait until the Trial POD activation period expires, or stop the current trial. Then retry the Reserve POD processor activation request.
HSCL9040	The number of POD processors requested exceeds the number of inactive processors that are currently available on the managed system. Reduce the number of processors and try again.	Reduce the number of processors and try the operation again.
HSCL9041	Not enough processor days remain to accept the Reserve POD processor activation request. Either reduce the number of processors requested or obtain and enter an additional prepaid processors days code.	Either reduce the number of processors requested, or obtain and enter an additional Reserve POD processor enablement code.
HSCL9042	Reserve POD for processors is not currently enabled on the managed system. A prepaid processors days code must be obtained and entered before Reserve POD processors can be activated.	A Reserve processor enablement code must be obtained and entered before Reserve POD processors can be activated. Enter a Reserve processor enablement code, and then try the operation again.
HSCL9043	The Reserve POD deactivation request cannot be accepted because there are no Reserve POD processors currently activated on the managed system.	Reserve POD processors need to be activated before a deactivation request can be accepted.
HSCL9044		

	{0} There are not enough inactive processors available to accept this POD code because Reserve POD processors are currently activated. Reserve POD processors must be deactivated before this POD code can be accepted.	To make the processors available to be reclaimed by the system, deactivate Reserve POD processors. Then re-enter the POD processor activation code.
HSCL9045	{0} There are not enough inactive processors available to accept this POD code because Reserve POD processors are currently activated. Reserve POD processors must be deactivated before this POD code can be accepted.	To make the processors available to be reclaimed by the system, deactivate the Reserve POD processors. Then re-enter the Trial POD processor activation code.
HSCL9046	{0} The On/Off processor enablement code cannot be accepted because Reserve POD processors are currently activated. The Reserve POD processors must be deactivated before an On/Off POD processor enablement code can be accepted.	The Reserve POD processors must be deactivated before an On/Off POD processor enablement code can be accepted. Deactivate the Reserve POD processors, and try the operation again.
HSCL9047	{0} The prepaid processors days code cannot be accepted because On/Off POD processors are currently activated. The On/Off POD processors must be deactivated before a prepaid processors days code can be accepted.	The On/Off POD processors must be deactivated before a Reserve POD processor enablement code can be accepted. Deactivate the On/Off POD processors, and try the operation again.
HSCL9048	This operation is not allowed because unreturned POD processors are currently in use on the managed system.	1. Check the number of unreturned On/Off POD or Trial POD processors that are currently in use. Remove that number of processors from partitions. (Use dynamic partitioning to remove processors from one or more running partitions, or delete one or more shut down partitions to release the processors.) 2. Retry the operation.
HSCL9049	This operation is not allowed because unreturned POD memory is currently in use on the managed system.	1. Check the amount of unreturned On/Off POD or Trial POD memory that is currently in use. Remove that amount of memory from partitions. (Use dynamic partitioning to remove memory from one or more running partitions, or delete one or more shut down partitions to release the memory.) 2. Retry the operation.
HSCL904A	The activation code you entered has been rejected because it is not a Power On Demand code.	An attempt was made to enter an activation code that is not a Power On Demand code. The code might be a Virtualization Engine systems technologies activation code. If you intended to enter a Virtualization Engine systems technologies code, then select Manage On Demand Activations > Virtualization Engine Technologies > Enter Activation Code and try again. If you intended to enter a Power On Demand activation code, then obtain a Power On Demand activation code for this

		system and try again.
HSCL904B	This operation is not allowed because Mobile Power On Demand for processors is not supported on the managed system.	No recovery action.
HSCL904C	This operation is not allowed because Mobile Power On Demand for memory is not supported on the managed system.	No recovery action.
HSCL904D	The Power On Demand code type specified is not supported by the managed system.	No recovery action.
HSCL904E	{0} The POD code cannot be accepted because the number of processors to be removed exceeds the number of permanent processors than can be removed on the managed system.	If possible, obtain and enter a new Mobile POD processor remove code for removal of fewer processors.
HSCL904F	{0} The POD code cannot be accepted because the amount of memory to be removed exceeds the amount of permanent memory than can be removed on the managed system.	If possible, obtain and enter a new Mobile POD memory remove code for removal of less memory.
HSCL9050	{0} The POD code cannot be accepted because the number of processors to be removed exceeds the number of processors that are currently available on the managed system.	Either remove processors from logical partitions to make them available to be removed, or if possible, obtain and enter a new Mobile POD processor remove code for removal of fewer processors.
HSCL9051	{0}The POD code cannot be accepted because the amount of memory to be removed exceeds the amount of memory that is currently available on the managed system.	Either remove memory from logical partitions to make it available to be removed, or if possible, obtain and enter a new Mobile POD memory code for removal of less memory.
HSCL9052	The additional number of On/Off POD processors requested exceeds the number of inactive processors that are currently available on the managed system. Reduce the number of processors requested and try again.	Reduce the number of processors requested and try again.
HSCL9053	The additional amount of On/Off POD memory requested exceeds the amount of inactive memory that is currently available on the managed system. Reduce the amount of memory requested and try again.	Reduce the amount of memory requested and try again.
HSCL9054	The request to reduce the number of On/Off POD processors cannot be accepted. The On/Off POD processors to be deactivated cannot be deactivated because they cannot be reclaimed by the managed system. Remove processors from partitions to make them available to be reclaimed, then try again.	Remove processors from partitions to make them available to be reclaimed, then try again.
HSCL9055	The number of days specified is not valid.	No recovery action.
HSCL9056	The number of days specified is not valid.	No recovery action.

Parent topic: HMC error codes

HSCLA*xxx* error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

Back to HSCL error codes page

HSCLA*xxx* error codes	Message	Recovery action
HSCLA000	This operation is not allowed because activation of Virtualization Engine Technologies are not supported on the managed system.	Virtualization Engine Technologies activations are not supported on the managed system. If this is incorrect, contact your software representative.
HSCLA001	The Show Code Information operation failed. Try the operation again.	Try the operation again. If the problem persists, contact your software representative.
HSCLA002	The Enter Activation Code operation failed. Try the operation again.	Try the operation again. If the problem persists, contact your software representative.
HSCLA003	You did not enter the activation code correctly. Try again.	Enter the activation code again, ensuring that it is correct. If you are certain that you entered the correct activation code, contact your Virtualization Engine systems technologies administrator.
HSCLA004	{0} The sequence number of the activation code indicates that this code has been used before. Obtain a new activation code and try again.	Obtain a new activation code and try the operation again. If the problem persists, contact your Virtualization Engine systems technologies administrator.
HSCLA005	{0} The capability for which the activation code was generated is not supported on the managed system.	The activation code that was entered is for a capability that is not supported on the managed system. 1. Obtain a new activation code and try the operation again. 2. If the problem persists, contact your Virtualization Engine systems technologies administrator.
HSCLA006	0} The operation failed on the managed system. Try the operation again. If the failure persists, contact your hardware service representative.	Try the operation again. If the failure persists, contact your next level of support or your hardware service provider.
HSCLA007	{0} The activation code was rejected by the managed system because too many incorrect activation codes have been entered. The managed system must be restarted before another activation code will be accepted.	Restart the managed system, and retry the operation.
HSCLA008	The activation code entered is a POD activation code instead of a Virtualization Engine Technologies activation code. Try again.	1. Make sure to obtain a Virtualization Engine Technologies activation code for this system. 2. Try the operation again. 3. If the problem persists, contact your Virtualization Engine systems technologies administrator.
HSCLA009	The activation code was rejected by the managed system because it is not valid. Contact your Virtualization Engine	If the problem persists, contact your Virtualization Engine systems technologies administrator.

	Technologies administrator.	
HSCLA00A	The activation code is the wrong length. The code entered must be exactly {0} characters long. Try again.	1. Make sure that your activation code is correct, and is exactly 34 characters in length. 2. Try the operation again. 3. If the problem persists, contact your Virtualization Engine systems technologies administrator.
HSCLA00B	Unknown code information format. Try the operation again.	Try the operation again. You might need to upgrade to a newer HMC level to fix this problem. If the problem persists, contact your service provider.
HSCLA101	The bulk power assembly that was specified is not valid. Verify the bulk power assembly target name and try the request again.	1. Rebuild the managed frame. For details, see Updating managed system or frame information. 2. Try the task again. 3. If the problem persists, contact your service provider.
HSCLA110	The managed system does not support service processor failover.	No recovery action.

Parent topic: HMC error codes

HSCP*xxxx* platform management error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

HSCP*xxxx* error codes	Message	Recovery action
HSCP0001	The Backup Critical Data request completed successfully.	
HSCP0002	Ensure the media is inserted correctly into the drive and try the operation again.	Verify that the media is inserted correctly in the drive and try the operation again.
HSCP0003	The Backup Critical Data request failed.	An internal HMC error occurred. Contact your next level of support or your service provider.
HSCP0004	The media is write protected. Remove write protection and try the operation again.	Remove write protection and try the operation again.
HSCP0005	The Backup Critical Data request is in progress. Please wait.	
HSCP0010	The Format Removable Media request completed successfully.	
HSCP0011	Ensure the media is inserted correctly into the drive and try the operation again.	
HSCP0012	The media is write protected. Remove the write protection and try the operation again.	

HSCP0013	An unknown error occurred. Replace the media and try the operation again.	
HSCP0014	The Format Removable Media request failed.	
HSCP0015	Please wait while the media is being formatted.	
HSCP0020	The Save Upgrade Data request completed successfully.	
HSCP0021	The Save Upgrade Data request failed.	
HSCP0022	The Save Upgrade Data request failed. Ensure the removable media is inserted correctly into the drive.	
HSCP0023	The media is write protected. Remove the write protection and try the operation again.	
HSCP0024	An error occurred while copying the upgrade data. Ensure the removable media is inserted correctly into the drive and retry the operation.	
HSCP0025	An error occurred while saving the upgrade data. Try the operation again. If the problem continues, contact your service representative.	
HSCP0026	An error occurred while trying to mount the media. Ensure the removable media is inserted correctly and try the operation again.	
HSCP0027	An error occurred while trying to unmount the media. Ensure the media is not being shared.	
HSCP0028	An non-recoverable error occurred. Refer to the HMC console log for detailed information.	1. Refer to the HMC console log for more information. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0029	An error occurred while instantiating the save upgrade data target class.	
HSCP0030	An error occurred creating the file that processes the save upgrade data on the next reboot. Try the operation again.	1. Rebuild the managed system. For details, see Updating managed system or frame information. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0031	Generating archives of subsystem files. Please wait.	
HSCP0040	The corrective service file was successfully downloaded to this system console. Press OK to continue and install this update.	
HSCP0041	The corrective service file was successfully applied. Wait until all tasks complete and reboot the HMC for the changes to take place.	
HSCP0042	An unrecoverable error occurred during the corrective service file download. Try the operation again. If the problem continues, contact your service representative.	1. Try the task again. 2. If the problem persists, contact your next level of support or your service provider.

HSCP0043	An unrecoverable error occurred during the corrective service installation. Try the operation again. If the problem continues, contact your service representative.	1. Try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0044	The removable media cannot be mounted. Ensure the media is inserted correctly into the drive and try the operation again.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. If the error persists, contact your next level of support or your service provider.
HSCP0045	The corrective service data is corrupt. Ensure the media is inserted correctly into the drive and try the operation again.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. If the error persists, contact your next level of support or your service provider.
HSCP0046	An error occurred while attempting to remotely connect to the server. Try the operation again. If the problem continues, contact your service representative.	1. Try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0047	An unspecified error occurred while downloading the corrective service file. Try the operation again. If the problem continues, contact your service representative.	1. Try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0048	An unknown error occurred. Try the operation again. If the problem continues, contact your service representative.	1. Try the task again. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0049	The Install Corrective Service request is in progress. Please wait.	
HSCP0050	The download file is corrupt. Try the operation again.	
HSCP0051	The corrective service file download was unsuccessful.	Refer to the text on the error message window.
HSCP0052	Successfully downloaded file. Installing, please wait.	
HSCP0053	Corrective service installation was successful.	
HSCP0054	Corrective service installation has failed.	Refer to the text on the error message window.
HSCP0055	View the console log for details.	
HSCP0056	Halting service installation.	
HSCP0057	Corrective service file download in progress...	
HSCP0058	The corrective service file downloaded successfully, continuing...	
HSCP0060	The Customize Date/Time request completed successfully. Please reboot the HMC.	1. Shut down and restart the HMC. For details, see Shutting down, rebooting, and logging off the HMC.
HSCP0061	The Customize Date/Time request failed.	1. Verify that the removable media is correctly inserted in the drive and try the operation again.

		2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. If the problem persists, contact your next level of support or your service provider.
HSCP0070	Enter an integer value between 1 and 99.	
HSCP0071	You cannot schedule an event in the past. Set the date and time to schedule the event in the future.	Select a date and time that is after the present time.
HSCP0080	There are no system events.	
HSCP0081	Unable to display the log data.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. If the problem persists, contact your next level of support or your service provider.
HSCP0082	Unable to retrieve log data.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. If the problem persists, contact your next level of support or your service provider.
HSCP0083	An error occurred while processing the exit request.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. If the problem persists, contact your next level of support or your service provider.
HSCP0090	Cannot check both the 'Export default gateway' and 'Silent' options for 'routed'.	Select either Export default gateway or Silent for the Routed option.
HSCP0091	Your updates have been saved to the system configuration files. You may need to reboot for all Network Settings changes to take affect.	Restart the HMC.
HSCP0092	Unable to save your Network Settings updates to the system configuration files.	1. Try the operation again. 2. Shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCP0093	Ethernet driver {1} cannot be set to {0}.	

		1. Select a valid speed for the adapter. 2. Select Auto-negotiate speed. 3. Shut down and restart the HMC.
HSCP0100	No managed systems were detected that are attached to this system console.	1. If you have a managed system attached, shut down and restart the HMC. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0101	No logical partitions have been defined for this managed system.	1. Check to ensure that Service Focal Point is communicating correctly with the managed system. 2. Shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCP0102	A blank or incorrect entry was entered in the partition password field.	Re-enter a valid password in the entry field and try the operation again.
HSCP0103	A blank or incorrect entry was entered in the listening port field.	Re-enter a valid listening port and try the operation again.
HSCP0104	A blank or incorrect entry was entered in the IP address field.	Re-enter the IP address and try the operation again.
HSCP0110	The Inventory Scout Services command completed successfully.	
HSCP0111	The Inventory Scout Services command request failed.	1. Try the operation again. 2. Shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCP0112	The removable media cannot be mounted. Ensure the media is inserted correctly into the drive and try the operation again.	1. Insert a correctly formatted diskette into the drive. 2. Try using an alternate diskette. 3. If the error persists, contact your next level of support or your service provider.
HSCP0113	The media is write protected. Remove the write protection and try the operation again.	Remove write protection on the media and retry the operation.
HSCP0114	The Inventory Scout request failed. Ensure the removable media is inserted correctly into the drive.	1. Insert the correctly formatted diskette into the drive. 2. Try using an alternate diskette. 3. If the error persists, contact your next level of support or your service provider.
HSCP0115	An error occurred while copying the Inventory Scout data. Verify that a blank formatted diskette is inserted correctly in the drive and retry the operation.	1. Ensure that there is enough space on the media. 2. Try using an alternate diskette and retry the operation. 3. If the error persists, contact your next level of support or your service provider.
HSCP0116	An error occurred while compressing the Inventory Scout data. Try the operation again.	

HSCP0117	An error occurred while trying to unmount the media.	
HSCP0118	The Inventory Scout daemon was restarted successfully.	
HSCP0119	The Inventory Scout daemon cannot be restarted. Reboot the HMC and try the operation again.	1. Try the operation again. 2. Shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCP0120	The CEC name is malformed.	1. Shut down and restart the HMC. 2. If the error persists, contact your next level of support or your service provider.
HSCP0121	The Inventory Scout request failed. An error occurred while copying data to removable media.	1. Retry the operation. 2. Restart the invscout daemon. 3. If the error persists, contact your next level of support or your service provider.
HSCP0122	The system partition(s) did not respond to query attempts.	1. Check to ensure that Service Focal Point is communicating correctly with the managed system. 2. Shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCP0123	Unable to start the terminal session using available error data. Return to Service Management interface and attempt to start the TTY session from there.	1. Return to the Service Management interface and attempt to start the virtual terminal session. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0124	Unrecoverable error attempting to start a TTY session. Return to Service Management interface and attempt to start the TTY session from there.	1. Return to the Service Management interface and attempt to start the virtual terminal session. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0125	An incorrect user ID and password combination was entered. Specify a valid user ID and password and try the operation again.	1. Specify a valid user ID and password and retry the operation. 2. Ensure that the remote service (FTP) site is operational. 3. If the problem persists, contact your next level of support or your service provider.
HSCP0126	The corrective service file was not found on the server. Ensure the correct fully qualified path and filename has been specified for the 'Patch file' field and retry the operation.	1. Specify a valid user ID and password and retry the operation. 2. Ensure that the remote service (FTP) site is operational. 3. If the problem persists, contact your next level of support or your service provider.
HSCP0127		

	An error occurred while unpacking the corrective service file. The file may be corrupt, or the HMC may have run out of disk space. Try the operation again. If the problem continues, contact your service representative.	1. Shut down and restart the HMC. 2. If the error persists, contact your next level of support or your service provider.
HSCP0128	A required file is missing from the service package. Contact your service representative.	Contact your next level of support or your service provider.
HSCP0129	An attempt was made to apply incorrect service to this version of HMC software. Ensure the correct service filename has been specified and retry the operation.	1. Ensure that the correct service file name has been entered and try the operation again. 2. If the problem persists, contact your next level of support or your service provider.
HSCP0130	The target directory for service file extraction does not exist. Contact your service representative.	1. Shut down and restart the HMC. 2. If the error persists, contact your next level of support or your service provider.
HSCP0131	A fatal error occurred during service file installation. The system may be unstable. Contact your service representative.	1. Shut down and restart the HMC. 2. If the error persists, contact your next level of support or your service provider.
HSCP0135	Error {0} processing data on removable media.	1. Attempt to download and apply the service file again. 2. Save HMC upgrade data to preserve configuration data. For details, see Saving HMC upgrade data. 3. Reinstall the HMC from the recovery CD as if doing an upgrade. 4. If the problem persists, contact your next level of support or your service provider.
HSCP0136	The corrective service file was successfully copied to the HMC. Select the Frame 'Install Corrective Service' task to apply this update.	Select the frame Install Corrective Service task to apply this update.
HSCP0137	The corrective service file was successfully downloaded to the HMC. Select the Frame 'Install Corrective Service' task to apply this update.	Select the Frame Install Corrective Service task to apply this update.
HSCP0138	An internal error occurred during Save Upgrade Data processing. Refer to the HMC console log for detailed information and recovery actions.	Refer to the HMC console log for detailed information and recovery actions.
HSCP0139	The DVD device is currently in use. Wait until all current DVD operations have been completed and try the operation again.	
HSCP0140	The DVD media is write protected. Remove the write protection and try the operation again.	
HSCP0141	Ensure the DVD media is inserted correctly into the drive and try the operation again.	
HSCP0142		

	An invalid or missing file system exists on the DVD media. Reformat the DVD and try the operation again.	
HSCP0143	The DVD device is not functioning correctly. Contact your service representative.	
HSCP0144	An error was detected while mounting the remote server. Verify that the parameters have been entered correctly and try the operation again.	
HSCP0145	The userId and password combination to log in to the remote server is incorrect. Ensure the combination is valid and try the operation again.	
HSCP0146	The temporary space used to create the backup archive has been exhausted. You can attempt to free disk space by deleting any pending dump files, or contact your service representative.	
HSCP0147	An error occurred while writing the informative description for this dump file. The backup task will now continue without this information.	
HSCP0148	No dump files exist on the remote server.	
HSCP0149	No detailed dump information exists for this archive.	
HSCP0150	An error occurred while reading the backup archive detailed information. The remote server may be busy. Try the operation again.	
HSCP0151	An error occurred while downloading the archive to this HMC. View the console log to see the detailed error information. Try the operation again.	
HSCP0152	An error occurred while copying the archive to this HMC. View the console log to see the detailed error information. Try the operation again.	
HSCP0153	The Backup Critical Console Data task was completed successfully.	
HSCP0154	The critical console data archive file was successfully offloaded to this HMC. Reboot the HMC and this data will be restored.	
HSCP0155	The task is unavailable. Please try again later.	
HSCP0156	An error occurred attempting to contact the remote system. Ensure a valid hostname or IP address has been entered and try the operation again.	
HSCP0157	An unrecoverable error occurred while transferring the file to the remote server. Verify that the target environment on the remote server can accommodate the request and try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. This will require 'hscpe' authority.	
HSCP0158		

	VPD collection was not successful. Verify all partition profiles associated with the managed system are active and accessible. Error details:	
HSCP0159	VPD collection from the managed system was successful.	
HSCP0160	VPD collection has failed. Verify all partition profiles associated with the managed system are active and accessible. Try the operation again. Error details:	

Parent topic: HMC error codes

HSCS*xxxx* Service Focal Point error codes

These error codes can be displayed in a window that is displayed on the HMC screen during system configuration and operations.

HSCS*xxxx* error codes	Message	Recovery action
HSCS0001	Unable to obtain Serviceable Events from the Problem Manager.	1. The HMC could not retrieve the Serviceable Events. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If error persists, contact your next level of support or your service provider.
HSCS0002	Unable to process request.	1. The HMC could not process your request to make changes to the Serviceable Event. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0003	Unable to update the attribute on the Serviceable Event.	1. The HMC could not process your request to make changes to the Serviceable Event. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0004	At least one Serviceable Event you attempted to act on could not be located. It may have expired from the Problem Manager. Please do a new query to	1. The HMC could not locate the Serviceable Event you are trying to view or update. It might have

	refresh the list of Serviceable Events and try your action again.	expired or otherwise been closed. 2. Exit the Select Serviceable Event dialog and retry.
HSCS0005	Function Failed: Error occurred attempting to display a Serviceable Event panel.	The HMC was unable to locate or launch a panel you have requested. This is an internal HMC error. 1. Back up critical HMC data. For details, see Backing up critical HMC data. 2. If the problem persists, contact your next level of support or your service provider.
HSCS0006	This Serviceable Event might contain more information than this version of the HMC can display. You might want to upgrade your HMC to the latest version.	In order to see Serviceable Event data made available in more recent HMC versions, upgrade this HMC to the most recent version or switch to an HMC that has already been upgraded.
HSCS0008	Function Failed: An error occurred when retrieving machine names.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0020	Function Failed: An error occurred when launching the Service Focal Point Settings panel.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0021	Function Failed: Error occurred getting information to display the Service Focal Point settings.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0022	Function Failed: An error occurred when updating Service Focal Point settings.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0023	Function Failed: Error occurred processing button for the Service Focal Point Settings panel.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.

HSCS0025	Function Failed: Error occurred while processing Double Click for the Service Focal Point Settings panel.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0026	Service Focal Point settings have been saved successfully.	
HSCS0047	Function Failed: An error occurred when attempting to Close the Serviceable Event.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0060	Cannot change state from Unknown for machine	The requested machine state is not allowed at this time. Close and then restart the enable and disable windows for updated machine information.
HSCS0061	Insert scratch diskette number {0} of {1}.	Insert a scratch diskette and select the appropriate button.
HSCS0062	Insert DVD cartridge and press the {0} button.	Insert a formatted DVD cartridge and push the appropriate button.
HSCS0064	No extended error data available.	Select a serviceable event that has extended error data associated with it.
HSCS0065	Error writing to floppy diskette: {0}	Ensure there is a diskette in the diskette drive. Try the operation again.
HSCS0066	Error writing to DVD cartridge: {0}	Ensure there is a formatted DVD cartridge in the DVD drive. Try the operation again.
HSCS0067	Error reading extended error data: {0}	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0068	Error creating temporary file: {0}	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. If the problem persists, contact your next level of support or your service provider.
HSCS0069	Error writing to temporary file: {0}	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the

		hardware. 4. If the problem persists, contact your next level of support or your service provider.
HSCS0070	Error formatting floppy diskette: {0}	Ensure there is a diskette in the diskette drive. Try the operation again.
HSCS0071	Extended error data has been saved successfully.	
HSCS0072	The saving of extended error data has been cancelled.	No action is needed. The operation was cancelled as a result of your request.
HSCS0080	Error encountered while getting the partition information.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0081	Error encountered while reading the partition information.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0082	Error encountered while getting the extended error data.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0083	Unexpected error encountered while saving the extended error data.	1. Verify that the removable media is correctly inserted in the drive and try the operation again. 2. Try the operation with different media. 3. Run PC Doctor to determine if there is a problem with the hardware. 4. If the problem persists, contact your next level of support or your service provider.
HSCS0084	Error encountered while attempting to call home with the extended error information.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0085	Error encountered while attempting to call home with the extended error information. The callsa program returned a value of {0}.	1. Not all functions might be operating. Wait and try the previous function again.

		2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0086	Request to call home the extended error information has been successfully submitted.	The operation was successful.
HSCS0087	Error encountered while attempting to call home the Serviceable Event.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0088	Error encountered while attempting to call home the Serviceable Event. The callsa program returned a value of {0}.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0089	Request to call home the Serviceable Event has been successfully submitted.	The operation was successful.
HSCS0090	Unexpected return code encountered while creating a temporary packaging file: {0}	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0096	No items selected when button was pressed.	1. Not all functions might be operating. Wait and try the previous function again. 2. If the error continues, shut down and restart the HMC. 3. If the error persists, contact your next level of support or your service provider.
HSCS0100	Please wait while the extended error data is being saved.	The extended error data is being saved to the appropriate removable media.
HSCS0101	Error writing to DVD cartridge.	Ensure there is a formatted DVD cartridge in the DVD drive. Try the operation again.
HSCS0102	Error unmounting DVD cartridge after writing data successfully.	Ensure that there is a formatted DVD cartridge in the DVD drive. Try the operation again.
HSCS0103	DVD drive is already mounted.	
HSCS0104	The LED request did not complete successfully. Initiate the 'View Problems Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	**Note:** If you do not have 'hscpe' authority, you will not see the View Problem Logs selection in the Service Utilities menu.

		1. Retry the task. 2. Log out and then back in to the HMC interface. 3. Shut down and restart the HMC. 4. If the problem persists, contact your next level of support or your service provider.
HSCS0105	The LED request completed successfully.	
HSCS0107	Error establishing RMC session {0}.	
HSCS0108	I/O error while creating a connection monitoring type serviceable event.	
HSCS0109	Communications to the SFP component on partition {0} are unavailable.	
HSCS0110	Error adding managed object to connection monitoring type serviceable event.	
HSCS0111	Error getting managed objects in connection monitoring type serviceable event.	
HSCS0112	Error incrementing duplicate count in connection monitoring type serviceable event.	
HSCS0113	Error getting connection monitoring type serviceable events.	
HSCS0114	Communications to the SFP component on partition {0} are unavailable. This is probably due to authentication problems.	
HSCS0115	Communications to the SFP component on partition {0} are unavailable. This is probably due to the RMC daemon on the HMC being down.	
HSCS0116	Communications to the SFP component on partition {0} are unavailable. However a network path to the partition is available.	
HSCS0117	Communications to the SFP component on partition {0} are unavailable. This is probably due to the partition being down.	
HSCS0118	Communications to the SFP component on partition {0} are unavailable. This is probably due to no network path being available.	
HSCS0119	Communications to the SFP component on partition {0} are unavailable. The return code on the call to start an RMC session was {1}.	
HSCS0120	Communications to the SFP component on partition {0} are unavailable. The return code for the session interruption was {1}.	
HSCS0121	Communications to the SFP component on partition {0} are unavailable due to no network path being available.	
HSCS0125	I/O error while creating a customer upgrade on demand type serviceable event.	
HSCS0126	An error occurred while attempting to connect to the HMC information manager. The LED command has failed. Initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be	

	required.	
HSCS0127	An unexpected internal error has occurred. The LED command has failed. Initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0128	An error occurred when attempting to query the HMC's hostname. The LED processing cannot continue.	
HSCS0129	An internal LED command processing error has occurred. The LED command has failed. Initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0130	The dump requested was successfully initiated. The resulting dump will automatically be offloaded to the HMC. The amount of time required for the offload will vary based on the system configuration. To view this dump, refresh the main screen accordingly.	
HSCS0131	An error occurred while attempting to connect to the HMC information manager. The dump command has failed. Initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0132	An unexpected internal error has occurred. The dump command has failed. Initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required. Contact your service representative.	
HSCS0133	An error occurred when attempting to query the HMC's hostname. The specified dump task cannot continue.	
HSCS0134	An internal dump command processing error has occurred. The dump command has failed. Initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0135	The dump offload request was successful.	
HSCS0136	The DVD device could not be locked for writing. Try the operation again.	
HSCS0137	The DVD device is write protected. Remove the write protection and try the operation again.	
HSCS0138	No DVD media was found. Insert a properly formatted DVD and try the operation again.	
HSCS0139	The DVD device returned an error. Try the operation again.	
HSCS0140	An unknown error occurred while accessing the DVD device. Try the operation again.	
HSCS0141		

	An error occurred while copying the selected file to the DVD media. Ensure there is available space on the media and try the operation again.	
HSCS0142	A file system error has occurred on the DVD media. Try the operation again with a properly formatted DVD.	
HSCS0143	The selected file was successfully copied to the DVD media.	
HSCS0144	The selected dump file was successfully deleted from the HMC.	
HSCS0145	An error occurred while removing the dump file from the HMC. Refresh the Manage Dumps interface table to ensure the dump file still exists on the HMC and try the operation again.	
HSCS0146	An unexpected error occurred while removing the dump file from the HMC. Initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0149	Error retrieving connection monitoring settings: {0}.	
HSCS0150	Error applying connection monitoring settings: {0}.	
HSCS0151	Connection monitoring settings were saved.	
HSCS0164	Your request was processed successfully.	
HSCS0170	Request to call home has been successfully submitted.	
HSCS0171	Error encountered while attempting to call home.	
HSCS0180	The ASM menu was launched successfully.	
HSCS0181	An error occurred while attempting to launch the ASM menu. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required. Contact your service representative.	
HSCS0182	The Lamp Test command was successfully initiated.	
HSCS0183	An error occurred while attempting to initiate the LED Lamp Test. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required. Contact your service representative.	
HSCS0184	The I/O unit ownership was successfully removed.	
HSCS0185	An error occurred while removing the I/O unit ownership. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error	

	information. 'hscpe' authority will be required.	
HSCS0186	An error occurred when attempting to invoke the Repair/Verify subsystem. Contact your service representative.	
HSCS0187	An error occurred while retrieving the current list of problems for this system. Try the operation again.	
HSCS0200	The MTMS update was successful.	
HSCS0201	The following error occurred while editing the MTMS:	
HSCS0202	The format of the MTMS is not correct.	
HSCS0203	The format of the Config ID is not correct.	
HSCS0204	The Config ID update was successful.	
HSCS0205	The following error occurred while editing the Config ID:	
HSCS0206	View the system event log file for detailed error information.	
HSCS0210	The FRU was successfully replaced.	
HSCS0211	An error occurred while replacing the FRU. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0220	The enclosure was successfully replaced.	
HSCS0221	An error occurred while replacing the enclosure. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0222	The LED deactivation command completed successfully. **Note:** There still may be open problems within the system and the System Attention LED cannot be manually activated.	
HSCS0223	The LED deactivation command completed successfully. **Note:** There still may be open problems within the logical partition and the System Attention LED cannot be manually activated.	
HSCS0224	An error encountered while attempting to call home the selected dump. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be	

	required.	
HSCS0225	The request to call home the selected dump has been successfully submitted.	
HSCS0226	The selected dump file size is too large to be called home. Offload the dump to DVD media and contact your service representative.	
HSCS0227	The FRU was successfully removed.	
HSCS0228	An error occurred while removing the FRU. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0229	The enclosure was successfully removed.	
HSCS0230	An error occurred while removing the enclosure. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0231	An error occurred while attempting to launch the selected task. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0232	The FRU was successfully added.	
HSCS0233	An error occurred while adding the FRU. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0234	The enclosure was successfully added.	
HSCS0235	An error occurred while adding the enclosure. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0236	An error occurred while determining the list of enclosures associated with the system. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0237	An error occurred while determining the list of FRUs contained within the selected enclosure. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0238	An error occurred while determining the list of installed components within the system. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for	

	detailed error information. 'hscpe' authority will be required.	
HSCS0239	An unexpected error was return from the Repair/Verify subsystem. Contact your service representative.	
HSCS0240	An error occurred while attempting to launch the ESCALA Power5 Hardware Information task. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0241	An invalid hostname was detected on the HMC. Verify the HMC's network settings and try the operation again.	
HSCS0242	An unrecoverable error has occurred. Could not obtain a CIM client instance. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0243	An unrecoverable error has occurred. No CIM client instance was returned. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required.	
HSCS0244	An unrecoverable error has occurred. The Repair/Verify subsystem could not be invoked.	
HSCS0245	An unrecoverable HMC internal error has occurred. Try the operation again. If the failure persists, initiate the 'View Problem Logs' task from the Service Utilities menu for detailed error information. 'hscpe' authority will be required. Contact your service representative.	
HSCS0246	A required parameter is missing to access the remote server. Ensure all required fields are filled in and try the operation again.	
HSCS0247	The specified dump no longer resides on this HMC.	
HSCS0248	The user ID and password combination to log in to the remote server is incorrect. Ensure the combination is valid and try the operation again.	
HSCS0249	An error occurred attempting to change directories on the remote server. Ensure the directory entry is valid and try the operation again.	
HSCS0250	An unrecoverable error occurred while transferring the file to the remote server. Verify the target environment on the remote server can accommodate the request and try the operation again.	
HSCS0251	An error occurred attempting to contact the remote system. Ensure a valid hostname	

	or IP address has been entered and try the operation again.	
HSCS0252	The selected file was successfully copied to the remote server.	
HSCS0253	The managed system is not in the Operating state. Place the system in the correct state and try the operation again.	
HSCS0254	This operation is not allowed when the managed system is in the {0} state. After you have established a connection from the HMC to the managed system and have entered a valid HMC access password, try the operation again.	
HSCS0255	This operation is not allowed when a FRU LED within the selected enclosure is active.	

Parent topic: HMC error codes

Virtual terminal errors (Comm) error codes

When using a virtual terminal (VTERM), you might see an error code displayed in the bottom-left corner of the VTERM window. The following table lists the error codes and the recovery actions for each.

Virtual terminal (VTERM) error codes	Message	Recovery action
Comm 654	The virtual terminal server is unable to process this type of request. An unknown error occurred during virtual terminal device-type negotiations.	If the error persists, contact the system administrator for help.
Comm 655	The socket connection to the virtual terminal server has been established and the session is waiting for negotiation to finish.	If the error persists, contact the system administrator for help.
Comm 657	The session is in the process of establishing the TCP/IP connection to the virtual terminal server. When you close a session that displays COMM 657, there might be some delay before it closes.	The delay varies. You can close the browser.
Comm 658	The session is initializing the TCP/IP connection to the HMC.	If the error persists, contact the system administrator for help.
Comm 659	The virtual terminal TCP connection to the session has not succeeded or has failed.	One of the following might have occurred: • The TCP/IP connection to the virtual terminal server was not established. • Disconnect was selected on the Communication menu.

			• The virtual terminal server closed the TCP/IP connection either by application control or because it detected an error.

Parent topic: HMC error codes

Service request numbers (SRNs)

Service request numbers (SRNs) can appear when AIX online diagnostics or stand-alone diagnostics are run on your server.

If a problem occurs on your server or partition, SRNs might be displayed to indicate that a problem exists. Record any SRNs you receive, and provide them to your hardware service provider. The SRN can be used to help determine what needs to be done to correct the problem.

Parent topic: Reference codes list for customers

Supporting diagnostics

Learn more about procedures that can aid you in analyzing problems.

Occasionally your problem analysis will lead you to more extensive procedures that can help analyze a problem.

- **Running the online and stand-alone diagnostics**
  Use these tools to diagnose hardware problems on your AIX or Linux systems or partitions.
- **Performing a slow boot**
  Learn how to perform a slow boot using the HMC, control panel, or ASMI menus depending on your configuration.
- **Performing dumps**
  Learn more about the different types of dumps that can be performed and how to manage them, including copying, reporting, and deleting them.
- **Determining the primary or alternate console**
  Use this procedure to determine the primary or alternate console.
- **Correcting the managed system operating state**
  Use this procedure to correct the managed system state.
- **Resetting the service processor**
  Use this procedure to reset the service processor.
- **Resetting the managed system connection from the HMC**
  Use this procedure to reset the managed system connection from the HMC.
- **Checking for a duplicate IP address**
  Use this procedure to check for a duplicate IP address.

Parent topic: Customer service, support, and troubleshooting

Running the online and stand-alone diagnostics

Use these tools to diagnose hardware problems on your AIX or Linux systems or partitions.

Use these diagnostics only if you are directed to do so by your next level of support or your hardware service provider.

Diagnostics are available for AIX and Linux systems or logical partitions which can help you perform hardware analysis. Additionally, there are various service aids in AIX diagnostics that can help you with service tasks on the system or logical partition. If there is a problem, you will receive a Service Request Number (SRN) that can help you pinpoint the problem and determine a corrective action.

If you have AIX installed and it is running, you can perform online diagnostics. However, if the installed AIX cannot be started, or you have Linux installed, you will need to run the diagnostics from CD or from a NIM server.

- **Running the online diagnostics**
  If you have AIX installed and it can be started, use this procedure to perform diagnostic procedures when directed from another procedure or by your next level of support.
- **Running the stand-alone diagnostics from CD-ROM**
  If the system or logical partition where you would like to run diagnostics has AIX installed but it cannot be started, or you have Linux installed, use this procedure to perform diagnostic procedures from CD-ROM when directed from another procedure or by your next level of support.
- **Running the stand-alone diagnostics from a Network Installation Management server**
  If the system or logical partition where you would like to run diagnostics has AIX installed but it cannot be started, or you have Linux installed, use this procedure to perform diagnostic procedures from a Network Installation Management (NIM) server when directed from another procedure or by your next level of support.

Parent topic: Supporting diagnostics

Running the online diagnostics

If you have AIX installed and it can be started, use this procedure to perform diagnostic procedures when directed from another procedure or by your next level of support.

When you run online diagnostics, keep the following in mind:

- When AIX is installed, the support for some devices might not be automatically installed. If this happens, that device will not display in the test list when online diagnostics run.
- When running diagnostics in a logically partitioned system, you must run diagnostics in the logical partition containing the resource or resources that you want to test.

Three modes are available for running the online diagnostics:

- Service mode provides the most complete check of the system resources, but requires that no other programs are running on the system. When possible, run the diagnostics in service mode.
- Maintenance mode allows you to check most of the available resources, with the exception of SCSI adapters, memory, processor, and the disk drive used for paging.
- Concurrent mode allows you to run online diagnostics on some of the system resources while the system is running normal activity.

- **Running the online diagnostics in service mode**
  Use this procedure to run the online diagnostics in service mode.
- **Running the online diagnostics in maintenance mode**
  Use this procedure to run the online diagnostics in maintenance mode.
- **Running the online diagnostics in concurrent mode**
  Use this procedure to run the online diagnostics in concurrent mode.

Parent topic: Running the online and stand-alone diagnostics

Running the online diagnostics in service mode

Use this procedure to run the online diagnostics in service mode.

Using service mode will check everything except the SCSI adapter and the disk drives used for paging. However, memory and processor are only tested during POST. Running in service mode ensures that the error state of the system that has been captured in NVRAM is available for your use in analyzing the problem.

- **Running the online diagnostics in service mode with an HMC attached**
  Use this procedure to run the online diagnostics in service mode with an HMC attached.
- **Running the online diagnostics in service mode without an HMC attached**
  Use this procedure to run the online diagnostics in service mode *without* an HMC attached.

Parent topic: Running the online diagnostics

Running the online diagnostics in service mode with an HMC attached

Use this procedure to run the online diagnostics in service mode with an HMC attached.

Perform the following steps:

1. Stop all programs including the AIX operating system. For details, see Start or stop the system.
2. From the HMC, right-click Partition Manager and select Open Terminal Window.
3. From the Service Processor Menu on the VTERM, select option 2 (System Power Control).
4. Select option 6.
5. Verify that the state changes to `currently disabled`. Disabling fast system boot automatically enables slow boot.
6. Select option 98 to exit the system power control menu.
7. From the HMC, start the managed system in a full system partition by following these steps:
   a. In the Contents area, select the managed system.
   b. Right-click, and select Power On.
8. Select Power on Diagnostic Stored Boot list.
9. Make sure that there is no media in the devices in the media subsystem.
10. Enter any passwords, if requested.
11. When the Diagnostic Operating Instructions screen displays, follow the online instructions to check the desired resources.

   Note: If you do not receive the Diagnostic Operating Instructions display, try to run the standalone diagnostics. For details, see Running the stand-alone diagnostics from CD-ROM.

12. When finished, contact your next level of support or your hardware service provider with any information you received during the diagnostics, including service request numbers (SRNs). For details, see the Using the problem reporting forms. **This ends the procedure.**

Parent topic: Running the online diagnostics in service mode

Running the online diagnostics in service mode without an HMC attached

Use this procedure to run the online diagnostics in service mode *without* an HMC attached.

Perform the following steps:

1. Stop all programs including the AIX operating system. For details, see Start or stop the system.
2. Remove all tapes, diskettes, and CDs.
3. Turn off the system unit power.
4. Turn on the system unit power.
5. After the keyboard POST indicator displays on the firmware console, and before the last POST indicator (speaker) displays, press 6 on the keyboard or ASCII terminal to indicate that a service mode boot should be initiated using the customized service mode boot list.
6. Enter any passwords, if requested.
7. When the Diagnostic Operating Instructions screen displays, follow the online instructions to check the desired resources.

> **Note:** If you do not receive the Diagnostic Operating Instructions display, try to run the standalone diagnostics. For details, see Running the stand-alone diagnostics from CD-ROM.

8. When finished, contact your next level of support or your hardware service provider with any information you received during the diagnostics, including service request numbers (SRNs). For details, see the Using the problem reporting forms. **This ends the procedure.**

Parent topic: Running the online diagnostics in service mode

Running the online diagnostics in maintenance mode

Use this procedure to run the online diagnostics in maintenance mode.

Maintenance mode requires that all activity on the logical partition running the AIX operating system be stopped so that the online diagnostics have most of the resources available. All of the system resources, except the SCSI adapters, memory, processor, and the disk drive used for paging can be checked.

Perform the following steps to run the online diagnostics in maintenance mode:

1. Stop all programs running on the logical partition except the AIX operating system. For details, see Start or stop the system. If you need help, contact the system administrator.
2. Log in to the AIX operating system as root user or use CE login.
3. Type the `shutdown -m` command to stop all activity on the AIX operating system and put it into maintenance mode.
4. When a message indicates that the system is in maintenance mode, enter the `diag` command to invoke the diagnostic controller so you can run the diagnostics.

> **Note:** It might be necessary to set TERM type again.

5. Enter any passwords, if requested.
6. When the Diagnostic Operating Instructions screen displays, follow the online instructions to check the desired resources.

Note: If you do not receive the Diagnostic Operating Instructions display, try to run the standalone diagnostics. For details, see Running the stand-alone diagnostics from CD-ROM.

7. When finished, press Ctrl+D to log off from root user or CE login.
8. Contact your next level of support or your hardware service provider with any information you received during the diagnostics, including service request numbers (SRNs). For details, see the Using the problem reporting forms. **This ends the procedure.**

Parent topic: Running the online diagnostics

Running the online diagnostics in concurrent mode

Use this procedure to run the online diagnostics in concurrent mode.

Use concurrent mode to run online diagnostics on some of the system resources while the system is running normal activity.

Because the system is running in normal operation, the following resources cannot be tested in concurrent mode:

- SCSI adapters connected to paging devices
- Disk drive used for paging
- Some display adapters and graphics related devices

The following levels of testing exist in concurrent mode:

Share-test level
> This level tests a resource while the resource is being shared by programs running in the normal operation. This testing is mostly limited to normal commands that test for the presence of a device or adapter.

Sub-test level
> This level tests a portion of a resource while the remaining part of the resource is being used in normal operation. For example, you could test one port of a multiport device while the other ports are being used in normal operation.

Full-test level
> This level requires the device to not be assigned or used by any other operation. This level of testing on a disk drive might require the use of the vary off command. Use the diagnostics display menus to allow you to vary off the needed resource.

Perform the following steps to run online diagnostics in concurrent mode:

1. Log in to the AIX operating system as root user, or use CE login. If you need help, contact the system administrator.
2. Enter the `diag` command to load the diagnostic controller, and display the online diagnostic menus.
3. If requested, enter a password.
4. When the Diagnostic Operating Instructions screen displays, follow the online instructions to check the desired resources.

Note: If you do not receive the Diagnostic Operating Instructions display, try to run the standalone diagnostics. For details, see Running the stand-alone diagnostics from CD-ROM.

5. When testing is complete, press F3 to return to the Diagnostic Operating Instructions display.
6. Press F3 again to return to the AIX operating system prompt.
7. Vary on any resources that you varied off.
8. Press Ctrl+D to log off from root user or CE login.

9. When finished, contact your next level of support or your hardware service provider with any information you received during the diagnostics, including service request numbers (SRNs). For details, see the Using the problem reporting forms. **This ends the procedure.**

Parent topic: Running the online diagnostics

Running the stand-alone diagnostics from CD-ROM

If the system or logical partition where you would like to run diagnostics has AIX installed but it cannot be started, or you have Linux installed, use this procedure to perform diagnostic procedures from CD-ROM when directed from another procedure or by your next level of support.

Diagnostics, which are available for AIX and Linux systems and logical partitions, can help you perform hardware analysis. If a problem is found, you will receive a service request number (SRN) or a service reference code (SRC) that can help pinpoint the problem and determine a corrective action.

Additionally, there are various service aids in the diagnostics that can help you with service tasks on the system or logical partition.

- **Running the stand-alone diagnostics from CD on a server with an HMC attached**
  Learn how to run the stand-alone diagnostics on a system with an HMC attached.
- **Running the stand-alone diagnostics from CD on a server without an HMC attached**
  Learn how to run the stand-alone diagnostics on a system without an HMC attached.

Parent topic: Running the online and stand-alone diagnostics

Running the stand-alone diagnostics from CD on a server with an HMC attached

Learn how to run the stand-alone diagnostics on a system with an HMC attached.

If you have logical partitions, note the following considerations:

- When running diagnostics in a logically partitioned system, you must run diagnostics in the logical partition containing the resource or resources that you want to test.
- The device from which you are loading stand-alone diagnostics must be made available to the logical partition on which you want to run diagnostics. This might require moving the device (for example, the CD drive or network adapter connected to the Network Installation Management (NIM) server that has a stand-alone diagnostic image) from the logical partition that currently contains the device to the logical partition on which you want to run diagnostics.

Perform the following steps from the HMC to run stand-alone diagnostics:

Note: If you need help with any of these steps, contact your system operator.

1. Remove all tapes, diskettes, CDs, or DVDs, and insert the diagnostic CD into the CD drive on the managed system (not the CD drive on the HMC).
2. Shut down the operating system from the HMC by performing the following steps:
   a. In the navigation area, select Server and partition > Server Management.

       b. In the contents pane, expand the server that contains the partition you want to test.

       c. Right-click the partition and select Open Terminal Window.

       d. In the VTerm window, log in as root user and enter any requested passwords.

       e. Shut down the operating system using one of the following commands:

            ◊ If AIX is running, type the **shutdown -F** command.

            ◊ If Linux is running, type the **shutdown -h now** command

       f. Close the VTerm window.

3. From the HMC, right-click the partition and select Activate.
4. Ensure the Open a terminal window or console session box is selected and click OK.
5. When the keyboard POST indicator (the word *keyboard*) is shown on the firmware console, and before the last POST indicator (the word *speaker*) is shown, press the **5** key on either the attached keyboard or the ASCII keyboard to indicate that a service mode boot should be initiated using the default service mode boot list.
6. Continue with Selecting testing options.

Parent topic: Running the stand-alone diagnostics from CD-ROM

Selecting testing options

1. When the keyboard POST indicator (the word *keyboard*) is shown on the firmware console, and before the last POST indicator (the word *speaker*) is shown, press the **5** key on either the attached keyboard or the ASCII keyboard to indicate that a service mode boot should be initiated using the default service mode boot list.
2. When the Welcome screen is shown, define the following:
   - System console
   - Language to be used
   - Type of terminal

   Note: Depending on the terminal emulator selected, the function keys (Fn) might not function. In this case, use the ESC and the number in the screen menus. For example, F3 = ESC key and the #3.
3. When the Diagnostics Operating Instructions appear, press Enter.
   Note: If you are unable to load the diagnostics to the point where the "Diagnostic Operating Instructions" display is shown, contact your next level of support or your hardware service provider.

4. From the Function Select screen, select one of the following:
   - If you want to run diagnostics in Problem Determination mode, continue with the next step.
   - If you want to run diagnostics in Task Selection (Service Aids) mode, go to step 11.
5. Select Problem determination and press Enter.
6. Check the list of resources that is displayed. Does the list of resources match what you know to be installed in your system or partition?
   - **Yes**: Continue with the next step.
   - **No**: Record any information you have about the missing resource and check to ensure that the missing resource is installed correctly. If you cannot correct the problem with a missing resource, replace the missing resource (contact your service provider if necessary). To test the available resources, continue with the next step.
7. Select All Resources, or the specific resource or resources to be tested, and press the P7 (commit) key.
8. Record any error information you receive during the diagnostics, including service request numbers (SRNs) or SRCs, to report to your service provider. For details, see Using the problem reporting forms.
9. When testing is complete, press the F3 key to return to the Diagnostic Operating Instructions.
10. Choose from the following options:
    - To continue testing, return to step 7.
    - To exit stand-alone diagnostics, select the exit function key from the menu and press Enter. Continue with step 18.
11. Select Task Selection list and press Enter.
12. To perform one of these tasks, select the Task Selection option from the Function Selection menu. After a task is selected, a resource menu might be presented showing all resources supported by the task.
13. From the Task selection list, select the service aid task you want to perform. For example, Update and manage system Flash.
14. Follow the instructions for the task selected on each menu or panel.

15. Record any information you receive during the diagnostics, including service request numbers (SRNs), to report to your service provider. For details, see the Using the problem reporting forms.
16. When testing is complete, press the F3 key to return to the Diagnostic Operating Instructions.
17. Choose from the following options:
    ♦ To continue testing, return to step 13.
    ♦ To exit stand-alone diagnostics, select the exit function key from the menu and press Enter. Continue with the next step.
18. Remove the CD from the drive.
19. When finished, contact your next level of support or your hardware service provider with any information you received during the diagnostics, including service request numbers (SRNs) and any missing resources. For details, see the Using the problem reporting forms. **This ends the procedure.**

Running the stand-alone diagnostics from CD on a server without an HMC attached

Learn how to run the stand-alone diagnostics on a system without an HMC attached.

1. Choose from the following options:
    ♦ If the system is powered on, continue with step 2.
    ♦ If the system is powered off, continue with step 3.
2. If the system is powered on, perform these steps:
    a. Let the system administrator and system users know that the system unit will be shut down.
    b. Stop all programs including the operating system. For details, see Start or stop the system.
    c. Continue with step 4.
3. If the system is powered off, perform the following steps:
    a. Start the server so you will be able to insert the diagnostic CD into the CD drive during the next step.
    b. Continue with step 4.
4. Insert the diagnostic CD in the CD drive.
5. Re-start the server.
6. Continue with Selecting testing options.

Parent topic: Running the stand-alone diagnostics from CD-ROM

Selecting testing options

1. When the keyboard POST indicator (the word *keyboard*) is shown on the firmware console, and before the last POST indicator (the word *speaker*) is shown, press the **5** key on either the attached keyboard or the ASCII keyboard to indicate that a service mode boot should be initiated using the default service mode boot list.
2. When the Welcome screen is shown, define the following:
    ♦ System console
    ♦ Language to be used
    ♦ Type of terminal

    Note: Depending on the terminal emulator selected, the function keys (Fn) might not function. In this case, use the ESC and the number in the screen menus. For example, F3 = ESC key and the #3.
3. When the Diagnostics Operating Instructions appear, press Enter.
    Note: If you are unable to load the diagnostics to the point where the "Diagnostic Operating Instructions" display is shown, contact your next level of support or your hardware service provider.

4. From the Function Select screen, select one of the following:
    ♦ If you want to run diagnostics in Problem Determination mode, continue with the next step.
    ♦ If you want to run diagnostics in Task Selection (Service Aids) mode, go to step 11.
5. Select Problem determination and press Enter.
6. Check the list of resources that is displayed. Does the list of resources match what you know to be installed in your system or partition?
    ♦ **Yes**: Continue with the next step.
    ♦ **No**: Record any information you have about the missing resource and check to ensure that the missing resource is installed correctly. If you cannot correct the problem with a missing

resource, replace the missing resource (contact your service provider if necessary). To test the available resources, continue with the next step.

7. Select All Resources, or the specific resource or resources to be tested, and press the P7 (commit) key.
8. Record any error information you receive during the diagnostics, including service request numbers (SRNs) or SRCs, to report to your service provider. For details, see Using the problem reporting forms.
9. When testing is complete, press the F3 key to return to the Diagnostic Operating Instructions.
10. Choose from the following options:
    - To continue testing, return to step 7.
    - To exit stand-alone diagnostics, select the exit function key from the menu and press Enter. Continue with step 18.
11. Select Task Selection list and press Enter.
12. To perform one of these tasks, select the Task Selection option from the Function Selection menu. After a task is selected, a resource menu might be presented showing all resources supported by the task.
13. From the Task selection list, select the service aid task you want to perform. For example, Update and manage system Flash.
14. Follow the instructions for the task selected on each menu or panel.
15. Record any information you receive during the diagnostics, including service request numbers (SRNs), to report to your service provider. For details, see the Using the problem reporting forms.
16. When testing is complete, press the F3 key to return to the Diagnostic Operating Instructions.
17. Choose from the following options:
    - To continue testing, return to step 13.
    - To exit stand-alone diagnostics, select the exit function key from the menu and press Enter. Continue with the next step.
18. Remove the CD from the drive.
19. When finished, contact your next level of support or your hardware service provider with any information you received during the diagnostics, including service request numbers (SRNs) and any missing resources. For details, see the Using the problem reporting forms. **This ends the procedure.**

Running the stand-alone diagnostics from a Network Installation Management server

If the system or logical partition where you would like to run diagnostics has AIX installed but it cannot be started, or you have Linux installed, use this procedure to perform diagnostic procedures from a Network Installation Management (NIM) server when directed from another procedure or by your next level of support.

Diagnostics, which are available for AIX and Linux systems and logical partitions, can help you perform hardware analysis. If a problem is found, you will receive a service request number (SRN) that can help pinpoint the problem and determine a corrective action.

A client system connected to a network with a NIM server can boot stand-alone diagnostics from the NIM server if the client-specific settings on both the NIM server and client are correctly configured.

Note:

1. For NIM clients that have adapters that would normally require that supplemental media be installed when stand-alone diagnostics are run from CD, the support code for these adapters must be installed into the directory pointed to by the NIM SPOT from which you wish to boot that client. Before running stand-alone diagnostics on these clients from the NIM server, the NIM server system administrator must ensure that any needed support for these devices is installed on the server.
2. All operations to configure the NIM server require root user authority.
3. If you replace the network adapter in the client, the network adapter hardware address settings for the client must be updated on the NIM server.
4. The Cstate for each stand-alone diagnostics client on the NIM server should be kept in the *diagnostic boot has been enabled* state.
5. On the client system, the NIM server network adapter should be put in the bootlist after the boot disk drive. This allows the system to boot in stand-alone diagnostics from the NIM server if there is a problem booting from the disk drive. Refer to the Multiboot section under "SMS" in the client system's

service guide for information on setting the bootlist.

Configuring the NIM server

Refer to the "Advanced NIM configuration tasks" chapter of the AIX Installation Guide and Reference for information on performing the following tasks:

- Registering a client on the NIM server
- Enabling a client to run diagnostics from the NIM server

To verify that the client system is registered on the NIM server and the diagnostic boot is enabled, run the command from the command line on the NIM server: **lsnim -a Cstate -z ClientName**. Refer to the following table for system responses.

Note: The ClientName is the name of the system on which you want to run stand-alone diagnostics.

System response	Client status
#name:Cstate:ClientName:diagnostic boot has been enabled:	The client system is registered on the NIM server and enabled to run diagnostics from the NIM server.
#name:Cstate:ClientName:ready for a NIM operation:or #name:Cstate:ClientName:B0S installation has been enabled:	The client is registered on the NIM server but not enabled to run diagnostics from the NIM server. **Note:** If the client system is registered on the NIM server but Cstate has not been set, no data will be returned.
0042 053 lsnim: there is no NIM object named "ClientName"	The client is not registered on the NIM server.

Configuring the client and running the stand-alone diagnostics from a NIM server

Perform the following steps to run stand-alone diagnostics on a client from the NIM server:

1. Let the system administrator and system users know that the system unit might be shut down.
2. Stop all programs including the AIX or Linux operating system. For details, see Start or stop the system. If you need help, contact the system administrator.
3. Remove all tapes, diskettes, and CDs.
4. Choose from the following options:
   - If you are running stand-alone diagnostics in a full system partition profile, verify with the system administrator and system users that the system unit can shut down using the shutdown command. Then power down the system.
   - If you are running on a logically partitioned system, make sure the CD drive is available to the partition used to run stand-alone diagnostics. Verify with the system administrator and system users using that partition that all applications on that partition must be stopped, and that the partition will be restarted. Stop all programs on that partition, including the operating system.
5. Choose from the following options:
   - If you are in a full system partition, power on the system unit to run stand-alone diagnostics.
   - If you are in a logically partitioned system, restart the partition to run stand-alone diagnostics.

6. When the keyboard indicator is displayed (the word *keyboard* on an HMC virtual terminal window or the keyboard icon on a graphical display) press the number 1 key on the keyboard to display the SMS menu.
7. Enter any requested passwords.
8. Select Set Up Remote IPL (Initial Program Load).
9. Enter the client address, server address, gateway address, if applicable, and subnet mask. If there is no gateway between the NIM server and the client, set the gateway address to 0.0.0.0.

   To determine if there is a gateway, either ask the system network administrator or compare the first three octets of the NIM server address and the client address. If they are the same, (for example, if the NIM server address is 9.3.126.16 and the client address is 9.3.126.42, the first 3 octets (9.3.126) are the same), then set the gateway address in the RIPL field to 0.0.0.0.

   Note: The RIPL is located under the Utility menu in System Management Services (SMS). Refer to it for information on setting these parameters.

10. If the NIM server is set up to allow pinging from the client system, use the ping utility in the RIPL utility to verify that the client system can ping the NIM server.
11. Under the ping utility, choose the network adapter that provides the attachment to the NIM server to do the ping operation. If the ping returns with an OK prompt, the client is prepared to boot from the NIM server. If ping returns with a FAILED prompt, the client cannot proceed with the NIM boot.

   Note: If the ping fails, refer to the Boot problems and concerns information. Then follow the steps for network boot problems.

12. Exit the SMS Main screen.
13. Select Select Boot Options > Install or Boot a Device > Network.
14. Record the current bootlist settings. You will need to set the bootlist back to the original settings after running diagnostics from the NIM server.
15. Change the bootlist so the network adapter attached to the NIM is first in the bootlist.
16. Set the network parameters for the adapter from which you want to boot.
17. Exit completely from SMS. The system will start loading packets while doing a bootp from the network.
18. Follow the on-screen instructions.
    ◆ If Diagnostic Operating Instructions Version x.x.x displays, stand-alone diagnostics have installed successfully.
    ◆ If the AIX login prompt displays, stand-alone diagnostics did not load. Continue with step 19.
19. If the diagnostics did not load, check the following items:
    ◆ The bootlist on the client might be incorrect.
    ◆ Cstate on the NIM server might be incorrect.
    ◆ Network problems might be preventing you from connecting to the NIM server.
    ◆ Verify the settings and the status of the network. If you continue to have problems, refer to the Boot problems/concerns section for the system unit. Then follow the steps for network boot problems.
20. After running diagnostics, restart the system and use SMS to change the IP settings and bootlist sequence back to the original settings.

Parent topic: Running the online and stand-alone diagnostics

Performing a slow boot

Learn how to perform a slow boot using the HMC, control panel, or ASMI menus depending on your configuration.

In some cases, you need to perform a slow-mode boot in order to perform extended diagnostic testing.

Note: A slow-mode boot might yield a new reference code on the control panel, or new errors in the service processor error log. When the server reports a new error code, record it for use in subsequent steps.

- **Using the HMC to perform a slow boot**
  Learn how to perform a slow boot using the HMC.
- **Using the control panel to perform a slow boot**
  Learn how to use the control panel to perform a slow boot.
- **Using the ASMI menus to perform a slow boot**
  Learn how to use the ASMI menus to perform a slow boot.

Parent topic: Supporting diagnostics

Using the HMC to perform a slow boot

Learn how to perform a slow boot using the HMC.

In some cases, you need to perform a slow-mode boot in order to perform extended diagnostic testing.

Note: A slow-mode boot might yield a new reference code on the control panel, or new errors in the service processor error log. When the server reports a new error code, record it for use in subsequent steps.

1. Record any reference codes appearing on the control panel or HMC. See Collecting reference codes and system information for details.
2. Shut down all logical partitions and the server. For instructions, see Powering off the managed system.
3. In the navigation area, select Server and Partitions > Server Management.
4. Select the server you want to perform a slow boot on.
5. Select Selected > Properties.
6. Click the Power-On Parameters tab.
7. Under Advanced Options click show details.
8. Record the current boot setting in the Power-on speed override box.
9. Select slow in the Power-on speed override list.

   Note: These settings will apply to all future boots. After you complete the service action, change the settings back to what you recorded in step 8.

10. Click OK.
11. After you are done, return to the step in the procedure that caused you to perform a slow boot. **This ends the procedure.**

Parent topic: Performing a slow boot

Using the control panel to perform a slow boot

Learn how to use the control panel to perform a slow boot.

In some cases, you need to perform a slow-mode boot in order to perform extended diagnostic testing.

Note: A slow-mode boot might yield a new reference code on the control panel, or new errors in the service processor error log. When the server reports a new error code, record it for use in subsequent steps.

1. Record any reference codes appearing on the control panel. For details, see Collecting reference codes and system information.
2. Stop the operating system by performing the following steps:
    a. Log in to the system as a user with the authority to run the shutdown or pwrdwnsys (Power Down System) command.
    b. At the command line, enter one of the following commands:

    Note: These commands stop the operating system. The system power turns off, the power-on light begins to slowly blink, and the system goes into a standby state.

    ◊ If your system is running AIX, type `shutdown`
    ◊ If your system is running Linux, type `shutdown -h now`
3. On the control panel, use the increment or decrement buttons to scroll to function 02.
4. Press Enter to start function 02. The current IPL type (with pointer) and speed is displayed.
5. Use the increment or decrement buttons to scroll through the IPL types and speeds.
6. When manual is shown, press Enter to select the IPL type of manual. The current IPL type and speed (with pointer) is displayed.
7. Use the increment or decrement buttons to scroll through the IPL speeds.
8. When S is shown, press Enter to select the IPL speed of slow.
9. To exit function 02, press Enter multiple times until just 02 is displayed.
10. Power on the server by pressing the white power button. Then return to the procedure that caused you to perform a slow boot. **This ends the procedure.**

Parent topic: Performing a slow boot

Using the ASMI menus to perform a slow boot

Learn how to use the ASMI menus to perform a slow boot.

In some cases, you need to perform a slow-mode boot in order to perform extended diagnostic testing.

Note: A slow-mode boot might yield a new reference code on the control panel, or new errors in the service processor error log. When the server reports a new error code, record it for use in subsequent steps.

1. Record any reference codes appearing on the control panel or HMC. For details, see Collecting reference codes and system information.
2. Shut down all logical partitions and the server. For details, see the Powering off the managed system topic.
3. On the ASMI Welcome pane, specify your user ID and password, and click Log In.
4. Expand Power/Restart Control and select Power On/Off System.
5. Record the settings so that you can re-enter them after you complete the service actions.
6. On the Power on/off system menu, select the following:
   - ♦ Select Slow in the Set System Boot Speed field.
   - ♦ Select Running in the Boot to system server firmware field.
7. Select Save Settings.

Note: These settings will apply to all future boots. After you complete the service action, change the settings back to what you recorded in step 5.

8. After you are done, return to the step in the procedure that caused you to perform a slow boot. **This ends the procedure.**

Parent topic: Performing a slow boot

Performing dumps

Learn more about the different types of dumps that can be performed and how to manage them, including copying, reporting, and deleting them.

Dumps can occur automatically after a failure or external reset, or after a manual request. The dump information provides valuable information on system status and should be reported to your next level of support or your hardware service provider.

- **Platform system dump**: A platform system dump is a collection of data from server hardware and firmware, either after a system failure or a manual request.
- **Service processor dump**: A service processor dump is a collection of data from a service processor either after a failure, external reset, or manual request.

In addition, there are other dumps that generate automatically. These include:

- **Platform event log entry dumps** (which are generated by server firmware when a platform event log entry is truncated)
- **Resource dumps**
- **SMP dumps**

- **Performing a platform system or service processor dump**
  A platform system dump or service processor dump is performed when your next level of support or your service provider suspects a wait or loop in the server firmware.
- **Managing dumps**
  After you have performed a dump, or one occurs automatically, use this information to manage the dump, including copying, reporting, and deleting it.

Parent topic: Supporting diagnostics

Performing a platform system or service processor dump

A platform system dump or service processor dump is performed when your next level of support or your service provider suspects a wait or loop in the server firmware.

Only perform a platform system or service processor dump under the direction of your next level of support or your service provider, after first providing to your next level of support or service provider a dump of the operating system (for example, a main storage dump).

Note: Before performing a platform system dump, collect any reference code information from the control panel or the HMC. For details, see Collecting reference codes and system information.

- **Using the HMC to perform a platform system or service processor dump**
  A platform system dump or service processor dump is performed when your next level of support or your service provider suspects a wait or loop in the server firmware.
- **Using the control panel to perform a platform system or service processor dump**
  A platform system dump or service processor dump is performed when your next level of support or your service provider suspects a wait or loop in the server firmware.
- **Using the ASMI to perform a platform system or service processor dump**
  A platform system dump or service processor dump is performed when your next level of support or your service provider suspects a wait or loop in the server firmware.

Parent topic: Performing dumps

Using the HMC to perform a platform system or service processor dump

A platform system dump or service processor dump is performed when your next level of support or your service provider suspects a wait or loop in the server firmware.

Use this procedure only under the direction of your next level of support or your service provider, after first providing to your next level of support or service provider a dump of the operating system (for example, a main storage dump).

Follow these steps to initiate a platform system or service processor dump in Service Focal Point:

1. Choose from the following options:
   - If you are performing a platform system dump, perform a controlled shutdown of all partitions if possible. Then continue with the next step.
   - If you are performing an SP Dump, continue with the next step.
2. In the navigation area, open Service Applications.
3. Select Service Focal Point.
4. Select Service Utilities.
5. Select System Processor.
6. Select Selected > Manage dumps.
7. Select Action > Request Platform Dump or Action > Request SP Dump. The dump is automatically saved to the HMC.
8. For details on how to copy, report, or delete a dump after you have completed a dump, refer to Managing dumps.

Parent topic: Performing a platform system or service processor dump

Using the control panel to perform a platform system or service processor dump

A platform system dump or service processor dump is performed when your next level of support or your service provider suspects a wait or loop in the server firmware.

Use this procedure only under the direction of your next level of support or your service provider, after first providing to your next level of support or service provider a dump of the operating system (for example, a main storage dump).

If you do not have an HMC, follow these steps to perform a platform system or SP dump:

1. Choose from the following options:
   - If you are performing a platform system dump, perform a controlled shutdown of the operating system if possible. Then continue with the next step.
   - If you are performing a service processor dump, continue with the next step.
2. On the control panel, select Manual mode.
3. Use the increment or decrement buttons to select one of the following:
   - **function 42** (platform system dump)
   - **function 43** (service processor dump)
4. Press Enter on the control panel.
5. Is 00000000 or FF displayed on the control panel for more than 30 seconds?
   - Yes: The service processor or server firmware is not responding to a request from the control panel. Contact your next level of support or your hardware service provider. This ends the procedure.
   - No: One of the following is displayed:
     ◊ An attention SRC A1xx 3042 is displayed, which indicates that function 42 has been selected.
     ◊ An attention SRC A1xx 3043 is displayed, which indicates that function 43 has been selected.
6. Reselect function 42 or 43, press Enter on the control panel, switch back to Normal mode, and wait for the dump to complete. If function 42 (platform system dump) was selected, also wait for the system to IPL again.
7. For details on how to copy, report, or delete a dump after you have completed a dump, refer to Managing dumps.

Parent topic: Performing a platform system or service processor dump

Using the ASMI to perform a platform system or service processor dump

A platform system dump or service processor dump is performed when your next level of support or your service provider suspects a wait or loop in the server firmware.

Use this procedure only under the direction of your next level of support or your service provider, after first providing to your next level of support or service provider a dump of the operating system (for example, a main storage dump).

Choose from the following options:

- To perform a platform system dump, see: Initiating a platform system dump for details.
- To perform an SP dump, see: Initiating a service processor dump for details.

Parent topic: Performing a platform system or service processor dump

Managing dumps

After you have performed a dump, or one occurs automatically, use this information to manage the dump, including copying, reporting, and deleting it.

Dumps are deleted automatically when a new dump occurs, except for log dumps.

- **Copying a dump**
  Use this procedure to copy a current platform dump or current main storage dump when the Main Storage Dump auto copy option is disabled. Copying the current dump allows another dump of the same type to be created.
- **Reporting a dump**
  Find out how to report a dump using the HMC, AIX command line, or Linux command line.
- **Deleting a dump**
  Use this procedure to delete a dump when dump copies are no longer needed by your next level of support or your hardware service provider.

Parent topic: Performing dumps

Copying a dump

Use this procedure to copy a current platform dump or current main storage dump when the Main Storage Dump auto copy option is disabled. Copying the current dump allows another dump of the same type to be created.

Note: If you have an HMC, you must manage your platform dumps with the HMC.

- **Using an HMC to copy a dump**
  Learn how to copy a dump using an HMC.
- **Using the AIX command line to copy a dump**
  Learn how to use the AIX command line to copy a dump.
- **Using the Linux command line to copy a dump**
  Learn how to use the Linux command line to copy a dump.

Parent topic: Managing dumps

Using an HMC to copy a dump

Learn how to copy a dump using an HMC.

Note: If you have an HMC, you must manage your platform dumps with the HMC.

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Service Utilities.
4. Select System Processor.
5. Select Selected > Manage Dumps.
6. Select the dump to copy.
7. Verify the HMC containing dump is the HMC being used to copy the dump.
8. To copy the dump to DVD media, select Selected > Copy Dump File to DVD Media.
9. Load the media and follow the instructions on the display.
10. When the copy procedure is successfully completed, remove the media and process it according to the instructions of your next level of support or your hardware service provider.
11. If you encounter a problem with the copy procedure, contact your next level of support or your hardware service provider. **This ends the procedure.**

Parent topic: Copying a dump

Using the AIX command line to copy a dump

Learn how to use the AIX command line to copy a dump.

Copy the dump only if you are directed to do so by your next level of support or service provider.

Note: If you have an HMC, you must manage your platform dumps with the HMC. For details, see Using an HMC to copy a dump.

Platform dumps are saved in AIX under the following directory:

```
/var/adm/platform
```

Note: If the AIX partition becomes the service partition after it was installed, run the following command to create this directory:

```
platform_dump -f jfs2
```

or

```
platform_dump -f jfs
```

This command will create the `/var/adm/ras/platform` file system. This is done automatically during installation if the AIX partition was marked as the service partition before it was installed.

Parent topic: Copying a dump

Using the Linux command line to copy a dump

Learn how to use the Linux command line to copy a dump.

Copy the dump only if you are directed to do so by your next level of support or service provider.

Note: If you have an HMC, you must manage your platform dumps with the HMC. For details, see Using an HMC to copy a dump.

Platform dumps are saved in Linux under the following directory:

```
/var/log/dump/
```

Parent topic: Copying a dump

Reporting a dump

Find out how to report a dump using the HMC, AIX command line, or Linux command line.

- **Using an HMC to report a dump**
  Learn how to report a dump using an HMC.
- **Using the AIX command line to report a dump**
  Learn how to report a dump using the AIX command line.
- **Using the Linux command line to report a dump**
  Learn how to report a dump using the Linux command line.

Parent topic: Managing dumps

Using an HMC to report a dump

Learn how to report a dump using an HMC.

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Service Utilities.
4. Select System Processor.
5. Select Selected > Manage dumps.
6. Verify that HMC containing dump is the HMC being used to report the dump.
7. Select Selected > Call Home Dump. The dump summary display shows the date, time and size of the dump. Report the summary information to your next level of support or your hardware service provider.
8. Has your next level of support or your hardware service provider requested a copy of the dump?
   - Yes: Continue to the next step.
   - No: Contact your next level of support or your hardware service provider on the problem.
9. To copy a dump to removable media, perform the following steps:
   a. Select Copy Dump File to DVD Media.
   b. Load the media and follow the instructions on the display.
   c. When the copy procedure is successfully completed, remove the media and process it according to the instructions of your next level of support or your hardware service provider. If you encounter a problem with the copy procedure, contact your next level of support or your hardware service provider.
10. To copy a dump to another system, perform the following steps:
    a. Select Selected > Copy Dump File to Other System.

b. Follow the instructions on the display.
c. When the copy procedure is complete, contact your next level of support or your hardware service provider.

Parent topic: Reporting a dump

Using the AIX command line to report a dump

Learn how to report a dump using the AIX command line.

Report the dump only if you are directed to do so by your next level of support or service provider.

Platform dumps are saved in AIX under the following directory:

```
/var/adm/platform
```

Note: If the AIX partition becomes the service partition after it was installed, run the following command to create this directory:

```
platform_dump -f jfs2
```

or

```
platform_dump -f jfs
```

This command will create the `/var/adm/ras/platform` file system. This is done automatically during installation if the AIX partition was marked as the service partition before it was installed.

Parent topic: Reporting a dump

Using the Linux command line to report a dump

Learn how to report a dump using the Linux command line.

Platform dumps are saved in AIX under the following directory: `/var/log/dump/`

Report the dump only if you are directed to do so by your next level of support or service provider.

Parent topic: Reporting a dump

Deleting a dump

Use this procedure to delete a dump when dump copies are no longer needed by your next level of support or your hardware service provider.

- **Using an HMC to delete a dump**
  Learn how to use an HMC to delete a dump.

- **Using the AIX command line to delete a dump**
  Learn how to delete a dump using the AIX command line.
- **Using the Linux command line to delete a dump**
  Learn how to delete a dump using the Linux command line.

Parent topic: Managing dumps

Using an HMC to delete a dump

Learn how to use an HMC to delete a dump.

Dumps are stored in the HMC's Service Focal Point tool and are automatically deleted when room is required for new dumps. Use this procedure when you want to manually delete a dump.

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Service Utilities.
4. Select System Processor.
5. Select Selected > Manage Dumps.
6. Select the dump to delete.
7. Verify that HMC containing dump is the HMC being used to delete the dump.
8. Select Selected > Delete Dump.

Parent topic: Deleting a dump

Using the AIX command line to delete a dump

Learn how to delete a dump using the AIX command line.

Platform dumps are saved in AIX under the following directory:

```
/var/adm/platform
```

Only delete the dump if directed to do so by your next level of support or service provider.

Note: If the AIX partition becomes the service partition after it was installed, run the following command to create this directory:

```
platform_dump -f jfs2
```

or

```
platform_dump -f jfs
```

to create the /var/adm/ras/platform file system.

During an installation, this directory is created automatically if the AIX partition was marked as the service partition before it was installed.

Parent topic: Deleting a dump

Using the Linux command line to delete a dump

Learn how to delete a dump using the Linux command line.

Platform dumps are saved in AIX under the following directory: `/var/log/dump/`

Only delete the dump if directed to do so by your next level of support or service provider.

Parent topic: Deleting a dump

Determining the primary or alternate console

Use this procedure to determine the primary or alternate console.

If the HMC has been configured as the primary console, the system will start the HMC.

If the Operations Console has been configured as the primary console, the system will start the Operations Console. If the Operations Console has not been configured, the primary console is a workstation that is attached to the first input/output processor (IOP) that is capable of supporting workstations.

In addition to the primary console, the system can assign up to two alternative consoles. The first alternative console can only be a twinax workstation that is attached to the same IOP as the primary console. The second alternative console is a workstation that is attached to the next IOP or input/output adapter (IOA) that is capable of supporting workstations.

The IOP that supports the console must be on the first system bus (bus 1).

If a workstation is not correctly attached to the first IOP that is capable of attaching workstations, then the system will not assign a primary console. The system will display a reference code on the operator's panel. In addition, if the IPL (initial program load) mode is set to Manual, the system will stop.

- **Primary console workstation requirements**
  Learn about the primary console workstation requirements.
- **Find the primary console when the system is operational**
  Learn how to find the primary console when the system is operational.
- **Find the primary console when the system power is off**
  Learn how to find the primary console when the system power is off.

Parent topic: Supporting diagnostics

Primary console workstation requirements

Learn about the primary console workstation requirements.

In order to be the primary console, the workstation must be operational and have the correct port and address. If the workstation is a PC, it must also have an active emulation program on the workstation.

The workstation requirements are:

- HMC
- twinax workstation - Port 0 Address 0
- ASCII workstation - Port 0
- PC attached to ASCII IOP or IOA
    - Port 0

- ♦ PC software to emulate a 316x or 3151 terminal
- PC attached to twinax IOP
    - ♦ Port 0 Address 0
    - ♦ 5250 emulator software active on PC
- PC attached to a LocalTalk IOA (6054)
    - ♦ SNAps 5250 Version 1.2 (or above) application
    - ♦ Console capable selected on MacIntosh (IOA converts to Port 0 Address 0)
- PC attached to a 2609, 2612, 2699, or 2721 communications IOA
    - ♦ Client Access Console cable attached to the 2609 or 2612 P2 port (part number 46G0450 or 46G0479), 2699 (part number 21H3779), or 2721 (part number 44H7504)
    - ♦ Operations Console cable attached to the 2609 or 2612 (part number 97H7555), 2699 (part number 97H7556), or 2721 (part number 97H7557) - 5250 emulation or Rumba active on PC

Parent topic: Determining the primary or alternate console

Find the primary console when the system is operational

Learn how to find the primary console when the system is operational.

The following methods are available to find the primary console:

- Method 1: Look for a sign-on display with a DSP01 in the upper-right corner.
- Method 2: If the device name (DSP01) for the console has been changed, you can verify the device name for the primary console by doing the following:
    1. Enter DSPCTLD QCTL on any command line. The Display Controller Description display is displayed.
    2. Find the Resource name parameter (such as CTL01) and record it.
    3. Enter PRTDEVADR rrrrr on any command line, where rrrr is the resource name you recorded.

    Note: If the printer is active, the data will print.

- Method 3:
    1. Enter STRSST on any command line. The System Service Tools display is displayed.
    2. Select option 1 (Start a service tool).
    3. Select option 7 (Hardware service manager).
    4. Select option 2 (Logical hardware resources).
    5. Select option 1 (System bus resources). On the Logical Hardware Resources on System Bus display, the "<" symbol indicates the IOP that the console is attached to.
    6. Use option 9 (Resource associate with IOP and display detail) to find the location of the system bus, board, and card.

Parent topic: Determining the primary or alternate console

Find the primary console when the system power is off

Learn how to find the primary console when the system power is off.

Use one of the following:

- Turn on the system in Manual mode and look for the IPL and Install System display.
- Turn on the system in Normal mode and look for DSP01 on the sign on display.

Note that the name might have been changed. See Find the primary console when the system is operational to determine the display name.

Parent topic: Determining the primary or alternate console

Correcting the managed system operating state

Use this procedure to correct the managed system state.

Use these procedures to put the managed system back to a correct state. Select the state you are currently receiving:

- No Connection state
- Incomplete state
- Recovery state
- Error state

No Connection state

In the `No Connection` state, the HMC is not connected, or the handshake with the managed system failed. Perform the following steps:

1. Ensure the network setting is correctly set up on the HMC. You can verify this by pinging the HMC.
2. Ensure the network setting is correct on the managed system. Verify this by opening an ASMI session through the web browser and pointing at the managed system.
3. Perform the reset or remove connection task on the HMC:
    a. In the navigation area, select Server and Partition > Server Management.
    b. In the Content area, right-click the managed system and select the Reset or Remove Connection.
    c. Select Reset Connection, then click OK.
    d. Wait for 5 minutes for the HMC to re-establish contacts.
4. Check the control panel on the managed system to verify that the power is on.
    a. If the power light indicates that there is no power on the managed system control panel, see Beginning problem analysis for details.
    b. After the power is restored, wait 5 minutes for the service processor to re-IPL and the HMC to re-establish contact. If the HMC can access partitions using a virtual terminal (VTERM) but the state is still `No Connection`, contact your next level of support or your hardware service provider.
5. If the power indicator is on, wait 5 minutes for the HMC to attempt to reestablish contact. The service processor in the managed system might be in the process of turning power on. If partitions no longer respond, the system power is off.
6. From a telnet session from another system, attempt to ping or contact active partitions on this managed system.

    If the partitions are active, perform the following steps:

    a. Verify that the HMC and the flexible service processor are correctly connected to your Ethernet network, and that your Ethernet network is functioning correctly. For more information, see Cabling the HMC in the Installing hardware topic.
    b. Restart the HMC.
    c. Reset the service processor. See Resetting the service processor.
7. If the managed system is running, and restarting the HMC did not resolve the problem, contact your next level of support or your hardware service provider.

Incomplete state

In the *Incomplete* state, the HMC failed to get all of the necessary information from the managed system. Perform the following steps:

1. In the contents area, select the managed system.
2. From the menu, click Selected > Rebuild Managed System. If the state goes to *Recovery*, see Recovery state. If the state does not go to *Recovery*, continue with the next step.
3. Reset the connection from HMC. See Resetting the managed system connection from the HMC. If it still fails, continue with the next step.

> **Note:** Step 4 might take several minutes to complete.

4. Restart the HMC. Choose from the following options:
   - If the state goes to *Recovery*, see Recovery state.
   - If the state remains *Incomplete*, perform the following steps:
     a. Verify that there is a redundant HMC.
     b. Verify that no one is entering commands from the alternate HMC.
     c. Repeat step 1. If it still fails, continue with the next step.
5. Verify that the HMC and the flexible service processor are correctly connected to your Ethernet network, and that your Ethernet network is functioning correctly. For more information, see Cabling the HMC in the Installing hardware topic.
6. Reset the service processor. See Resetting the service processor.
7. If the problem persists, contact your next level of support or your hardware service provider.

Recovery state

In the *Recovery* state, the save area in service processor is not synchronized with the HMC Database. Perform the following steps:

1. Recover partition data. See Recovering partition data on a managed system for details. Then return here and continue with the next step.
2. After restoring profile data, choose the option that describes what happened:
   - If the state changed to *Incomplete*, refer to the Incomplete state procedure.
   - If the state changed to `No Connection`, refer to the No Connection state procedure.
   - If the restore failed, reset the service processor. See Resetting the service processor. Then continue with the next step.
3. If the problem persists, contact your next level of support or your hardware service provider.

Error state

The *Error* state automatically generates a call to the service support center if the function is enabled. If the function is not enabled, contact your next level of support or your hardware service provider.

Parent topic: Supporting diagnostics

Resetting the service processor

Use this procedure to reset the service processor.

Note: Use this procedure *only* under the direction of your next level of support or your hardware service provider. During this procedure you will be powering off the system and removing and reapplying AC power.

1. Inform anyone using the server that it will be shut down.
2. Stop all applications that are running on the server.
3. Stop the operating system and server by choosing from the following options:
    - If you have an HMC, shut down all logical partitions and the server. For instructions see Powering off the managed system. Then continue with step 6.
    - If you do *not* have an HMC, continue with the next step.
4. Log in to the system as a user with the authority to run the appropriate shutdown command.
5. At the command line, enter one of the following commands:
    - If your system is running AIX, type `shutdown`
    - If your system is running Linux, type `shutdown -h now`

    These commands stop the operating system. The system power turns off, the power-on light begins to slowly blink, and the system goes into a standby state.
6. Unplug the AC power cord and replug it back in.
7. Start the server. The service processor is reset. **This ends the procedure.**

Parent topic: Supporting diagnostics

Resetting the managed system connection from the HMC

Use this procedure to reset the managed system connection from the HMC.

Perform these steps to reset the managed system connection:

1. In the navigation area, open Server and Partition.
2. Select Server Management.
3. In the contents area, select the server on which you want to reset the connection.
4. Right-click the server and select Reset or Remove Connection.
5. Select Reset Connection.
6. Click OK.

Parent topic: Supporting diagnostics

Checking for a duplicate IP address

Use this procedure to check for a duplicate IP address.

Perform these steps to check for a duplicate IP address.

1. On the HMC, right-click the desktop and select terminal > rshterm.
2. At the terminal, issue this command: `lssyscfg -r sys -F "name,ipaddr"` A list of managed systems' names and their IP address (or host name) will be displayed.
3. Check to see if there are duplicates.

Parent topic: Supporting diagnostics

Viewing messages

Learn more about viewing messages to analyze a problem.

When your server detects an error, a message is sent to your console. Where you go to view the message is determined by the operating system that sent the message, and whether you have a Hardware Management

Console.

- **Viewing AIX messages**
  Learn more about viewing AIX messages.
- **Viewing HMC messages**
  Learn more about viewing HMC messages.
- **Viewing Linux messages**
  Learn more about viewing Linux messages.

Parent topic: Customer service, support, and troubleshooting

Viewing AIX messages

Learn more about viewing AIX messages.

For AIX messages, refer to the Reference codes list for customers.

Parent topic: Viewing messages

Viewing HMC messages

Learn more about viewing HMC messages.

For a list of HMC error codes and recovery actions, refer to HMC error codes.

To further troubleshoot a problem, perform maintenance, or install hardware on a Hardware Management Console, see the HMC isolation procedures in the Service provider information.

Parent topic: Viewing messages

Viewing Linux messages

Learn more about viewing Linux messages.

For Linux messages, refer to the Reference codes list for customers.

Parent topic: Viewing messages

Using Service Focal Point

Learn about using the Service Focal Point, an application on the HMC and the Integrated Virtualization Manager, to diagnose and repair problems on the system.

Traditional service strategies become more complicated in a partitioned environment. Each logical partition reports errors it detects, without determining whether other logical partitions also detect and report the errors. For example, if one logical partition reports an error for a shared resource, such as a managed system power supply, other active logical partitions might report the same error. The Service Focal Point application helps you to avoid long lists of repetitive call-home information by recognizing that these are repeated errors and correlating them into one error.

- **Using Service Focal Point for the HMC**
  Learn about using the Service Focal Point for the HMC to help you diagnose and repair problems on the system.
- **Using Service Focal Point for the Integrated Virtualization Manager**
  Learn about using the Service Focal Point for the Integrated Virtualization Manager to help you manage problems on your system.

Parent topic: Customer service, support, and troubleshooting

Using Service Focal Point for the HMC

Learn about using the Service Focal Point for the HMC to help you diagnose and repair problems on the system.

Service Focal Point is an application on the HMC that enables you to diagnose and repair problems on the system. In addition, you can use Service Focal Point to initiate service functions on systems and logical partitions that are not associated with a particular problem.

Errors that require service are reported to Service Focal Point as hardware *serviceable events*. The types of hardware serviceable events that are reported include:

- **Call home errors**: These types of errors are automatically reported to service and support.
- **Errors requiring customer intervention**: These types of errors are reported to you by e-mail message and often require you to perform an action to resolve the problem. They do not require assistance from service and support. For example, you might need to clean the tape drive.
- **Errors requiring customer verification**: These types of errors are potentially caused by other resources. These errors require you to verify whether you can solve the problem. If you are unable to solve the problem, you need to manually contact service and support for assistance.

  For example, if the HMC loses connectivity to the server, you first need to determine if your LAN is causing the problem. If your LAN is down, you need to solve the LAN problem and reconnect the HMC to your server. If the LAN is not causing the problem and you cannot find the source of the problem, contact your next level of support or your hardware service provider.

Note: Software errors are not reported to Service Focal Point.

- **Viewing serviceable events**
  Use this procedure to view a serviceable event, including details, comments, and service history.
- **Closing serviceable events**
  Use this procedure to manually close a serviceable event to remove it from the list of active problems.
- **Viewing serviceable event logical partition information**
  Use this procedure to view a serviceable event that is related to one of your logical partitions.
- **Repairing serviceable events**
  Use this procedure to learn how to use the repair process within Service Focal Point to help you exchange a part.
- **Activating and deactivating LEDs**
  Use this procedure to activate or deactivate LEDs using Service Focal Point for the HMC.
- **Setting up connection monitoring**
  Use this procedure to set up connection monitoring using Service Focal Point.
- **Collecting vital product data**
  Learn how to collect vital product data (VPD) with Service Focal Point for the HMC.

Parent topic: Using Service Focal Point

Viewing serviceable events

Use this procedure to view a serviceable event, including details, comments, and service history.

To view serviceable events and other information about the events, you must be a member of one of the following roles:

- Super administrator
- Service representative
- Operator
- Product engineer
- Viewer

To view serviceable events, follow these steps:

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Manage Serviceable Events.
4. Select the criteria for the serviceable events that you want to view, and click OK. The Serviceable Event Overview window opens. The list shows all serviceable events that match your selection criteria. You can use the menu options to perform actions on the serviceable events.
5. Select a line in the Serviceable Event Overview window, and select Selected > View Details The Serviceable Event Details window opens, showing detailed information about the serviceable event. The upper table shows information, such as problem number and reference code. The lower table shows the field replaceable units (FRUs) associated with this event.
6. Select the error for which you want to view comments and history, and follow these steps:
    a. Select Actions > View Comments.
    b. When you are finished viewing the comments, click Close.
    c. Select Actions > View Service History. The Service History window opens, showing service history associated with the selected error.
    d. When you are finished viewing the service history, click Close.
7. When you are finished, click Cancel twice to close the Serviceable Event Details window and the Serviceable Event Overview window.

Parent topic: Using Service Focal Point for the HMC

Closing serviceable events

Use this procedure to manually close a serviceable event to remove it from the list of active problems.

In many cases, a serviceable event is closed automatically as part of the repair process. However, if a serviceable event does not require service and no longer requires attention, you can manually close the serviceable event from this interface.

To close a serviceable event, follow these steps:

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Manage Serviceable Events.
4. Select the criteria for the serviceable events that you want to view, and click OK. The Serviceable Event Overview window is displayed.
5. Sselect one or more of the serviceable events that you want to close, and select Selected > Close Event. The Serviceable Event Comments window opens.

6. Enter comments if necessary, and click Close Events.
7. On the Close Serviceable Event dialog, click Yes to close the serviceable event.

Parent topic: Using Service Focal Point for the HMC

Viewing serviceable event logical partition information

Use this procedure to view a serviceable event that is related to one of your logical partitions.

When you have a serviceable event related to one of your logical partitions, it is sometimes useful to view information about that problem using Service Focal Point. For example, if you are unable to reproduce the problem because you changed the logical partition configuration after the problem occurred, you can view the logical partition information to see the system configuration at the time of the error and compare it to the current configuration to help you troubleshoot the problem.

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Manage Serviceable Events.
4. Select the criteria for the serviceable events that you want to view, and click OK.
5. Select one of the events, and select Selected > Manage Problem Data.
6. On the Manage Problem Data window, select Partition Map and click View to see the logical partition information associated with this serviceable event.

Note: The logical partition information pertains to the logical partition configuration at the time the error occurred. Even if you change your logical partition configuration after the error occurred, this information still pertains to the configuration at the time the error occurred.

Parent topic: Using Service Focal Point for the HMC

Repairing serviceable events

Use this procedure to learn how to use the repair process within Service Focal Point to help you exchange a part.

It is often necessary to exchange one or more field replaceable units (FRUs) to repair a serviceable event. For example, you might need to exchange an I/O adapter to solve the problem. You can use the repair process within Service Focal Point to help you exchange the FRU.

To repair a serviceable event, follow these steps:

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Repair Serviceable Events.
4. On the Select Failing System window, select the managed system that has the problem, and click OK.
5. Select the serviceable event you want to repair, and select **Selected > Repair**. This opens a series of windows that guide you through the steps to repair the serviceable event. The system guides you through one of the two following methods of repair, depending on the type of FRU you need to exchange:
     ♦ An interactive step-by-step process that provides illustrations and video presentations to help you exchange the FRU.

♦ A link to the appropriate ESCALA Power5 Hardware Information topic that provides instructions to help you exchange the FRU.

After you complete the repair procedure, the system automatically closes the serviceable event.

Parent topic: Using Service Focal Point for the HMC

Activating and deactivating LEDs

Use this procedure to activate or deactivate LEDs using Service Focal Point for the HMC.

Choose from the following:

- Deactivate a system attention LED or partition LED
- Activate or deactivate identify LED

Parent topic: Using Service Focal Point for the HMC

Deactivate a system attention LED or partition LED

You can deactivate a system attention LED or a logical partition LED. For example, you might determine that a problem is not a high priority and decide to repair the problem at a later time. However, you want to be alerted if another problem occurs, so you must deactivate the system attention LED so that it can be activated again if another problem occurs.

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Service Utilities. The Service Utilities window is displayed.
4. Select one of the managed systems, and select System Attention LED from the Selected menu. The system attention LED window opens. The selected system and its LED state are displayed in the upper part of the window. The logical partition and its LED state are displayed in the lower part of the window. From the system attention LED window, you can deactivate both the system attention LED and the logical partition LED.
5. Select Deactivate System Attention LED from the Action menu. A confirmation window is displayed that provides the following information:
   ♦ A verification that the system attention LED was deactivated.
   ♦ An indication that there still might be open problems within the system.
   ♦ An indication that you cannot activate the system attention LED.
6. Select one of the logical partitions in the lower table, and select Deactivate partition LED from the Partition Operations menu. A confirmation window is displayed that provides the following information:
   ♦ A verification that the logical partition LED was deactivated.
   ♦ An indication that there still might be open problems within the logical partition.
   ♦ An indication that you cannot activate the logical partition LED.

Activate or deactivate identify LED

The system provides several LEDs that help identify various components, such as enclosures or field replaceable units (FRUs), in the system. For this reason, they are called *Identify LEDs*.

You can activate or deactivate the following types of identify LEDs:

- Identify LED for an enclosureIf you want to add an adapter to a specific drawer (enclosure), you need to know the machine type, model, and serial number (MTMS) of the drawer. To determine whether you have the correct MTMS for the drawer that needs the new adapter, you can activate the LED for a drawer and verify that the MTMS corresponds to the drawer that requires the new adapter.
- Identify LED for a FRU associated with a specified enclosureIf you want to hook up a cable to a specific I/O adapter, you can activate the LED for the adapter which is a field replaceable unit (FRU), and then physically check to see where you should hook up the cable. This is especially useful when you have several adapters with open ports.

To activate or deactivate an identify LED for an enclosure or FRU, follow these steps:

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Service Utilities. The Service Utilities window is displayed.
4. Select one of the managed systems and select Selected > Identify LED Processing. The Identify LED, Select Enclosure window opens.
5. To activate or deactivate an identify LED for an enclosure, select an enclosure from the table, and click either Activate LED or Deactivate LED. The associated LED is either turned on or off.
6. To activate or deactivate an identify LED for a FRU, select an enclosure from the table, select Selected > List FRUs.
7. Select one or more FRUs from the table, and click either Activate LED or Deactivate LED. The associated LED is either turned on or off.

Setting up connection monitoring

Use this procedure to set up connection monitoring using Service Focal Point.

Connection monitoring enables you to track the communication paths between your HMC and your managed systems and to create serviceable events when communications problems occur. Use the Service Focal Point application to specify your preferences for connection monitoring. See Specifying options for connection monitoring for details on setting up connection monitoring.

Parent topic: Using Service Focal Point for the HMC

Collecting vital product data

Learn how to collect vital product data (VPD) with Service Focal Point for the HMC.

To collect vital product data (VPD), follow these steps:

1. In the navigation area, open Service Applications.
2. Select Service Focal Point.
3. Select Collect VPD information. The Inventory Scout Data Collection window is displayed.
4. Select the managed system that you want to collect data for and click Next.
5. Insert a blank, formatted diskette into the floppy drive and click Finish.
6. After you are finished, click Cancel.

Parent topic: Using Service Focal Point for the HMC

Using Service Focal Point for the Integrated Virtualization Manager

Learn about using the Service Focal Point for the Integrated Virtualization Manager to help you manage problems on your system.

Service Focal Point for the Integrated Virtualization Manager is an application that allows you to manage serviceable events, create serviceable events, manage dumps, and collect vital product data (VPD).

- **Managing serviceable events with Service Focal Point for the Integrated Virtualization Manager**
  Learn how to manage serviceable events, including viewing the events' properties, associated FRUs, how to close an event, and how to view additional details.
- **Working with the service utilities on Service Focal Point for the Integrated Virtualization Manager**
  Learn about the service utilities that are available with the Service Focal Point for the Integrated Virtualization Manager, including how to view or work with errors that are logged against your managed system. Also learn how to invoke service functions on systems and parts that are not associated with a particular problem.
- **Collecting vital product data with Service Focal Point for the Integrated Virtualization Manager**
  Learn how to collect vital product data (VPD) from the managed system with Service Focal Point for the Integrated Virtualization Manager.

Parent topic: Using Service Focal Point

Managing serviceable events with Service Focal Point for the Integrated Virtualization Manager

Learn how to manage serviceable events, including viewing the events' properties, associated FRUs, how to close an event, and how to view additional details.

The `padmin` user account is not able to run certain serviceable event functions. Users with either the `SRUser` or `DEUser` role can run all serviceable event functions.

To view and manage the serviceable events on your managed system, perform the following steps:

1. In the Integrated Virtualization Manager Navigation bar, select Manage Serviceable Events (under Service Management).
2. In the Serviceable Event Selection Criteria field, select the criteria for the serviceable events that you want to view, and click Apply. The Serviceable Events appear in the table below. The list shows all serviceable events that match your selection criteria. You can use the Tasks options to perform actions on the serviceable events.
3. Choose from the following options:
   ♦ To view properties, continue with step 4.
   ♦ To view associated FRUs, continue with step 5.
   ♦ To close a serviceable event, continue with step 6.
   ♦ If you have SRUser role or DEUser role, to view additional details for a serviceable event, continue with step 7.
4. To view properties for a serviceable event, select the serviceable event that you want to view properties for and select Properties. The Serviceable Event Comments window opens.
5. To view associated field replaceable units (FRUs), select the serviceable event that you want to view FRUs for, and select View associated FRUs. The Serviceable Event window opens.
6. To close a serviceable event, select one or more of the serviceable events that you want to close, and select Close event. The Serviceable Event Comments window opens.
   a. Enter comments if necessary, and click Close Events.
   b. On the Close Serviceable Event dialog, click Yes to close the serviceable event.
7. If you have SRUser role or DEUser role, you can view additional details for a serviceable event. Select the serviceable event that you want to view additional details for and select View additional details. The Serviceable Event Comments window opens listing additional service objects, each of which has a Properties task.

For more information about managing serviceable events, see the online help.

Parent topic: Using Service Focal Point for the Integrated Virtualization Manager

Working with the service utilities on Service Focal Point for the Integrated Virtualization Manager

Learn about the service utilities that are available with the Service Focal Point for the Integrated Virtualization Manager, including how to view or work with errors that are logged against your managed system. Also learn how to invoke service functions on systems and parts that are not associated with a particular problem.

- **Creating a serviceable event with Service Focal Point for the Integrated Virtualization Manager**
  Use this procedure to create a serviceable event on your managed system with the Service Focal Point for the Integrated Virtualization Manager.
- **Managing dumps with Service Focal Point for the Integrated Virtualization Manager**
  Use this procedure to manage dumps with Service Focal Point for the Integrated Virtualization Manager.

Parent topic: Using Service Focal Point for the Integrated Virtualization Manager

Creating a serviceable event with Service Focal Point for the Integrated Virtualization Manager

Use this procedure to create a serviceable event on your managed system with the Service Focal Point for the Integrated Virtualization Manager.

You can create a serviceable event to leave a note for yourself or for someone on a later shift to fix or maintain the system.

To create a serviceable event, follow these steps:

1. In the Navigation bar, select Service Focal Point.
2. Click Service Utilities.
3. In the Service Utilities Menu pane, select Create Serviceable Event. The problem description field is displayed.
4. Type the problem description and click Apply. A message is displayed stating that the operating completed successfully.

For more information about creating and viewing serviceable events, see the online help.

Parent topic: Working with the service utilities on Service Focal Point for the Integrated Virtualization Manager

Managing dumps with Service Focal Point for the Integrated Virtualization Manager

Use this procedure to manage dumps with Service Focal Point for the Integrated Virtualization Manager.

You can view a list of the system dump files and service processor dumps stored on your managed system. Operating system dump files for individual logical partitions are not included in this list. You also can download dump files to your PC to package and send to service and support for analysis, or you can delete dump files to release storage space on your managed system.

To manage dumps, follow these steps:

1. In the Navigation bar, select Service Focal Point.
2. Click Service Utilities.
3. In the Service Utilities Menu pane, select Manage Dumps. A list of available dumps to manage is displayed.
4. Select the dump you want to work with and click Delete or Download under the Tasks field.
5. Choose from the following options:
   ♦ If you selected Delete, a confirmation window is displayed. Click OK to delete the dump. It will be deleted.
   ♦ If you selected Download, you will be prompted to save the dump to your system. You can then copy it to a diskette or create a CD to send to service and support.

For more information about managing dump files, see the online help.

Parent topic: Working with the service utilities on Service Focal Point for the Integrated Virtualization Manager

Collecting vital product data with Service Focal Point for the Integrated Virtualization Manager

Learn how to collect vital product data (VPD) from the managed system with Service Focal Point for the Integrated Virtualization Manager.

The information in the VPD file can be used to complete the following types of orders for your managed system:

• Install or remove a sales feature
• Upgrade or downgrade a model
• Upgrade or downgrade a feature

To collect vital product data (VPD), follow these steps.

1. In the Service Utilities Menu pane, select Collect VPD Information. The Collect VPD Information page is displayed.
2. Click Collect VPD. The information is collected, and the VPD file information is displayed.
3. To download the VPD file to your PC, click the link in the VPD File column for the VPD file that you want to download, and follow the prompts to download the file. The VPD file includes the following information about your managed system:
   ♦ Host name
   ♦ Machine type/model

- ◆ Machine serial number
- ◆ Operating system level
- ◆ Feature information
  - ◊ Feature location
  - ◊ Field Replaceable Unit (FRU)/part number
  - ◊ Engineering Change (EC) level
  - ◊ Serial number

The VPD information is stored in the /var/adm/invscout directory on your hard drive. It is named *hostname*.xml where hostname is the name of your host system. For example, mysystem.xml.

For more information about collecting vital product data, see the online help.

Parent topic: Using Service Focal Point for the Integrated Virtualization Manager

Replacing and verifying parts

Learn where to find more information about replacing and verifying a customer replaceable unit.

If your troubleshooting leads you to replacing a part that is identified as a customer replaceable unit (CRU), you will need to install the unit and then verify that it is working. To do this, see the Installing features and replacing parts topic.

Parent topic: Customer service, support, and troubleshooting

Related information for Customer service, support, and troubleshooting

Use this resource to access information that supports the Service, support, and troubleshooting topic.

Listed below are sources of information that relate to the Customer troubleshooting and service topic collection.

Other information

- Managing your server and devices
- Cabling the HMC
- Start or stop the system
- Overview of passwords
- Installing features and replacing parts

- Managing your server using the Advanced System Management Interface:
  - ◆ Initiating a system dump
  - ◆ Initiating a service processor dump

- Managing your server using the Hardware Management Console:
  - ◆ Backing up critical HMC data
  - ◆ Accessing the control panel functions using the HMC
  - ◆ Disconnecting another HMC connection
  - ◆ Initializing profile data.
  - ◆ Resetting the operating system on a logical partition
  - ◆ Restoring profile data
  - ◆ Updating managed system or frame information
  - ◆ Viewing information about the managed system
  - ◆ Shutting down, rebooting, and logging off the HMC
  - ◆ Powering off the managed system
- Partitioning the server
  - ◆ Creating a system profile
  - ◆ Copy a system profile
  - ◆ Activating a partition profile

♦ Recovering partition data on a managed system
♦ Manufacturing default configuration
♦ Resetting the server to a nonpartitioned configuration
♦ Restarting and shutting down AIX in a logical partition
♦ Restarting and shutting down Linux in a logical partition

Service provider information

• HMC isolation procedures
• (A1xx) Service processor reference (attention) codes
• (A2xx, B2xx) Logical partition reference codes
• (AAxx) Partition firmware reference (attention) codes
• (B3xx) Connection monitoring reference codes
• (BAxx) Partition firmware reference (error) codes
• (CAxx) Partition firmware progress codes
• (C1xx) Service processor progress codes (checkpoints)
• (C2xx) Virtual service processor progress codes
• (D1xx) Service processor progress codes (service processor dump and platform dump)
• (D1xx) Service processor status progress codes
• General status progress codes (D6xx)
• General status progress codes (D9xx)
• (C700) Server firmware IPL status progress codes

Saving PDF files

To save a PDF on your workstation for viewing or printing:

1. Right-click the PDF in your browser (right-click the link above).
2. Click Save Target As... if you are using Internet Explorer. Click Save Link As... if you are using Netscape Communicator.
3. Navigate to the directory in which you would like to save the PDF.
4. Click Save.

Downloading Adobe Reader

You need Adobe Reader to view or print these PDFs. You can download a copy from the Adobe Web site (www.adobe.com/products/acrobat/readstep.html).

Parent topic: Customer service, support, and troubleshooting

Technical publication remarks form

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