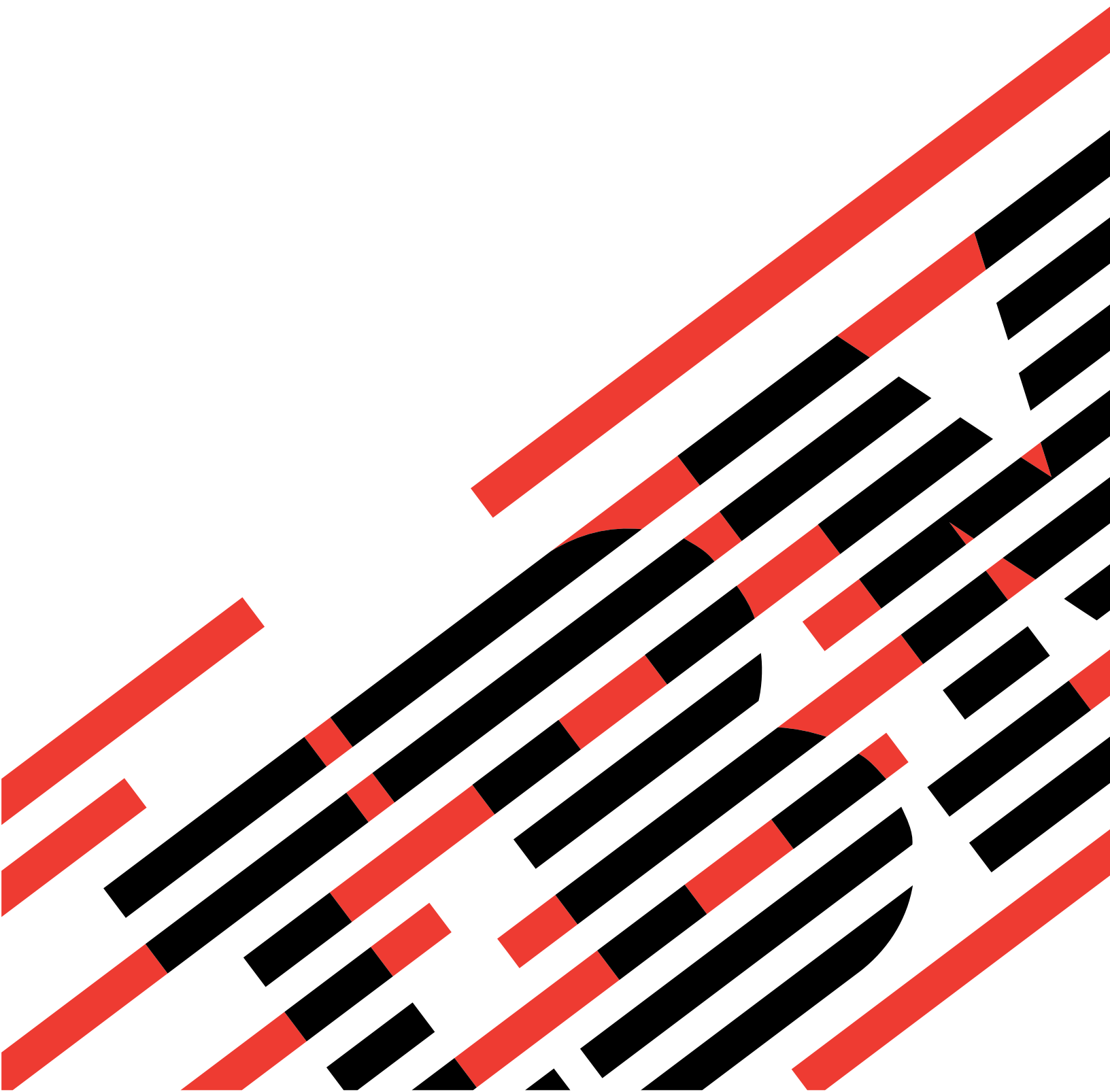


IBM

@server

Managing your server





@server

Managing your server

Note

Before using this information and the product it supports, read the information in "Notices," on page 31.

Sixth Edition (April 2005)

This edition applies to IBM AIX 5L Version 5.3 and to version 5, release 3, modification 0 of IBM i5/OS (product number 5722-SS1) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CISC models.

© Copyright International Business Machines Corporation 2004,2005. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Chapter 1. Managing your server 1

Chapter 2. Managing your server using the Hardware Management Console. . . 3

Printable PDFs.	3
HMC concepts.	4
Overview of HMC tasks	4
Managed system power-on modes.	17
Managed system power-on states	17
Working with managed systems and frames	18
Powering on and off the managed system	19
Accessing the managed system	20
Virtual operating system consoles	21
Finding data about the managed systems using the HMC	21

Managing the frame using the HMC	24
Managing operating systems	27
Adding managed systems to the HMC environment	27
Moving the managed system from an open network to a private network	28
Extending an existing network	28
Servicing the managed system	29
Related information	29

Appendix. Notices 31

Trademarks	33
Terms and conditions for downloading and printing information	33

Chapter 1. Managing your server

This topic contains information about managing your server using a console.

Use the following console information to assist you in managing your server:

Chapter 2, “Managing your server using the Hardware Management Console,” on page 3
Learn how to manage your server using the Hardware Management Console.

Managing your server using the Advanced System Management Interface
Learn how to manage your server using the Advanced System Management Interface (ASMI).

Chapter 2. Managing your server using the Hardware Management Console

The Hardware Management Console (HMC) uses its network connections to one or more systems (referred to as *managed systems*) to perform various management functions. This topic provides information about how to perform these functions, including how to administer the HMC and how to perform tasks with the HMC to manage the managed systems. For more information about setting up and installing an HMC, see [Setting up the Hardware Management Console](#).

"Printable PDFs"

If you prefer a hardcopy version of this information, go [here](#) to print the PDF.

"HMC concepts" on page 4

Learn about the concepts you need to know before you use the HMC to work with the managed system, including:

"Working with managed systems and frames" on page 18

Describes how to perform actions on the HMC that pertain to the managed system.

"Related information" on page 29

Contains IBM-related technical and "how-to" information.

Printable PDFs

To view or download the PDF version of this document, select [Managing your server using the Hardware Management Console](#) (about 749 KB).

You can view or download these related topics:


- [Managing the Hardware Management Console](#) (1,547 KB)
- [Partitioning the server](#):
 - [Partitioning for AIX](#) (959 KB)
 - [Partitioning for i5/OS](#) (957 KB)
 - [Partitioning for Linux](#) (674 KB)
 - [Partitioning using the Virtual I/O server](#)
- [Working with Capacity on Demand](#) (270 KB)
- [Service and support](#) (700 KB)

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 Acrobat Reader

You need Adobe Acrobat Reader to view or print these PDFs. You can download a copy from the Adobe Web site (www.adobe.com/products/acrobat/readstep.html) .

HMC concepts

The HMC allows you to perform a variety of tasks associated with managing your server. This information familiarizes you with the HMC concepts you should know before working with the managed system.

“Overview of HMC tasks”

Learn about the tasks you can perform using the HMC, the user role needed to perform each task, and the remote command associated with each task.

“Managed system power-on modes” on page 17

Learn about the differences between each managed system power-on option.

“Managed system power-on states” on page 17

Learn about the each managed system power-on state.

Overview of HMC tasks

The following tables list all of the tasks you can perform using the HMC, the user role needed to perform each task, and the remote command associated with each task. Click one of the following links to learn more about the associated task grouping:

“Managed system profile tasks”

Describes managed system profile tasks and the roles that can perform them

“Managed system tasks” on page 5

Describes the managed system tasks and the roles that can perform them

“Logical partition tasks” on page 8

Describes logical partition tasks and the roles that can perform them

“Capacity on Demand tasks” on page 11

Describes Capacity on Demand tasks and the roles that can perform them

“Virtualization Engine Technologies tasks” on page 12

Describes Virtualization Engine™ Technologies tasks and the roles that can perform them

“Service tasks” on page 13

Describes problem determination tasks and the roles that can perform them

“Frame tasks” on page 16

Describes frame tasks and the roles that can perform them

Managed system profile tasks

Use the following table for descriptions of the managed system profile tasks, the associated commands, and the user roles necessary to perform them.

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Activate a system profile	chsysstate	X	X	X	X	

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Create a system profile on a managed system	mksyscfg	X		X		
Modify the properties of a system profile	chsyscfg	X		X	X	
Power on a managed system using a system profile	chsysstate	X	X	X	X	
Remove a system profile	rmsyscfg	X		X		
Validate a system profile	chsysstate	X	X	X	X	
View a system profile	lssyscfg	X	X	X	X	X

For more information about system profiles, see [System profile](#). For more information on using commands, see [Using the remote command line](#).

Managed system tasks

Use the following table for descriptions of the managed system tasks, the associated commands, and the user roles necessary to perform them.

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Add a managed system	mksysconn	X		X	X	
Back up profile data	bkprofdata	X	X	X	X	
Create a network connection with a system	mksysconn	X		X	X	
Initialize profile data	rstprofdata	X		X		
Migrate logical partition configuration data to a managed system	migrctfg	X		X	X	

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Modify the keylock position of a managed system	chsysstate	X	X	X	X	
Modify the properties of a managed system	chsyscfg	X		X	X	
Modify virtual I/O attributes of a managed system	chhwres	X	X	X	X	
Power a managed system on and off	chsysstate	X	X	X	X	
Rebuild a managed system	chsysstate	X	X	X	X	
Recover partition data for a managed system	chsysstate	X	X	X	X	
Remove the network connection to a managed system	rmsysconn	X		X	X	
Reset the network connection to a managed system	rmsysconn	X		X	X	
Restart a managed system	chsysstate	X	X	X	X	
Restore the hardware resource configuration of a managed system following a DLPAR task failure	rsthwres	X	X	X	X	
Restore profile data	rstprofdata	X		X		

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Update a password for a managed system	chsyspwd	X				
Update the LIC on a managed system	updlic	X	X		X	
View HCA adapter resources of a managed system	lshwres	X	X	X	X	X
View hardware resources of a managed system	lshwres	X	X	X	X	X
View I/O resources of a managed system	lshwres	X	X	X	X	X
View LIC levels accepted on a managed system	lslic	X	X	X	X	X
View LIC levels activated on a managed system	lslic	X	X	X	X	X
View LIC levels that are available to be retrieved	lslic	X	X	X	X	X
View Licensed Internal Code (LIC) levels installed on a managed system	lslic	X	X	X	X	X
View managed systems	lssyscfg	X	X	X	X	X
View memory resources of a managed system	lshwres	X	X	X	X	X
View processing resources of a managed system	lshwres	X	X	X	X	X

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
View reference codes for a managed system	lsrefcode	X	X	X	X	X
View SNI adapter resources of a managed system	lshwres	X	X	X	X	X
View virtual I/O resources of a managed system	lshwres	X	X	X	X	X
View connections for a managed system	lssysconn	X	X	X	X	X

For more information about working with your managed system using your HMC, see “Working with managed systems and frames” on page 18. For more information on using commands, see Using the remote command line.

Logical partition tasks

Use the following table for descriptions of the logical partition tasks, the associated commands, and the user roles necessary to perform them.

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Activate a logical partition	chsysstate	X	X	X	X	
Change the default partition profile for a logical partition	chsyscfg	X		X	X	
Close a virtual terminal session for an AIX, Linux, or Virtual I/O Server partition	rmvterm	X	X	X	X	
Create a logical partition on a managed system	mksyscfg	X		X	X	

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Create a logical partition profile on a managed system	mksyscfg	X		X	X	
Create a Virtual I/O Server	mksyscfg	X		X	X	
Issue a command to a Virtual I/O Server	viosvr cmd	X	X	X	X	
Modify memory resources of a logical partition	chhwres	X	X	X	X	
Modify processing resources of a logical partition	chhwres	X	X	X	X	
Modify the properties of a logical partition profile	chsyscfg	X		X	X	
Modify the hardware resource configuration of a logical partition	chhwres	X	X	X	X	
Modify the I/O resources of a logical partition	chhwres	X	X	X	X	
Modify the keylock position on a logical partition	chsysstate	X	X	X	X	
Modify the properties of a logical partition	chsyscfg	X		X	X	
Modify virtual I/O resources of a logical partition	chhwres	X	X	X	X	

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Open a virtual terminal session for an AIX®, Linux, or Virtual I/O Server partition	mkvterm	X	X	X	X	
Perform a Dynamic Logical Partitioning task	chhwres	X	X	X	X	
Perform an operator panel function on a logical partition	chsysstate	X	X	X	X	
Remove a logical partition from the managed system	rmsyscfg	X		X	X	
Remove a logical partition profile	rmsyscfg	X		X	X	
Restart a logical partition	chsysstate	X	X	X	X	
Shut down a logical partition	chsysstate	X	X	X	X	
View HCA adapter resources of a logical partition	lshwres	X	X	X	X	X
View I/O resources of a logical partition	lshwres	X	X	X	X	X
View logical partition profiles	lssyscfg	X	X	X	X	X
View logical partitions	lssyscfg	X	X	X	X	X
View processing resources of a logical partition	lshwres	X	X	X	X	X

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
View memory resources of a logical partition	lshwres	X	X	X	X	X
View reference codes for a logical partition	lsrefcode	X	X	X	X	X
View SNI adapter resources of a logical partition	lshwres	X	X	X	X	X
View virtual I/O resources of a logical partition	lshwres	X	X	X	X	X

For more information about logical partitions, see Partitioning the server. For more information on using commands, see Using the remote command line.

Capacity on Demand tasks

Use the following table for descriptions of the Capacity on Demand tasks, the associated commands, and the user roles necessary to perform them.

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Activate CoD resources	chcod	X				
Deactivate CoD resources	chcod	X				
Enter a CoD code	chcod	X				
Manage On/Off CoD resources	chcod	X				
Manage Reserve CoD processors	chcod	X				
Stop Trial CoD	chcod	X				
View CoD capacity settings for a managed system	lscod	X	X	X	X	X

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
View CoD code generation information for a managed system	lscod	X	X	X	X	X
View On/Off CoD billing information for a managed system	lscod	X	X	X	X	X
View the CoD history log for a managed system	lscod	X	X	X	X	X
View shared processor pool utilization information for Reserve CoD	lscod	X	X	X	X	X

For more information about Capacity on Demand, see [Working with Capacity on Demand](#). For more information on using commands, see [Using the remote command line](#).

Virtualization Engine Technologies tasks

Use the following table for descriptions of the Virtualization Engine Technologies tasks, the associated commands, and the user roles necessary to perform them.

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
View the Virtualization Engine systems technologies activation history log	lsvet	X	X	X	X	X
Enter Virtualization Engine systems technologies activation code.	chvet	X				
View information used to generate a Virtualization Engine systems technologies activation code	lsvet	X	X	X	X	X

For more information about Virtualization Engine Technologies, see Using a virtual computing environment. For more information on using commands, see Using the remote command line.

Service tasks

Use the following table for descriptions of the service tasks, the associated commands, and the user roles necessary to perform them.

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Activate dedicated service tools (DST) on a logical partition	chsysstate	X	X	X	X	
Save and display an image of an HMC window	hmcwin	X	X	X	X	X
Clear all partition configuration data on a managed system	lpcfgop	X		X		
Copy a managed system or frame dump from the HMC to DVD or a remote FTP server	cpdump	X	X	X	X	
Disable a remote service session for a logical partition	chsysstate	X	X	X	X	
Dump all logical partition configuration data on a managed system	lpcfgop	X		X		
Dump IOP control storage	chsysstate	X	X	X	X	
Enable a remote service session for a logical partition	chsysstate	X	X	X	X	

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Modify the state of an LED on a managed system	chled	X		X	X	
Modify the state of a logical partition LED	chled	X		X	X	
Modify Service Agent customer email notification settings	chsacfg	X	X	X	X	
Modify Service Agent FTP firewall settings	chsacfg	X	X	X	X	
Modify Service Agent FTP offload server settings	chsacfg	X	X	X	X	
Perform an operator panel service function on a logical partition	chsysstate	X	X	X	X	
Reset or reload a disk unit IOP	chsysstate	X	X	X	X	
Retrieve a dump from a managed system or frame	getdump	X	X	X	X	
Start a dump on a managed system or frame	startdump	X	X	X	X	
Transfer a file from the HMC to a remote system using File Transfer Protocol	sendfile	X	X	X	X	X
Update a serviceable event on the HMC	chsvcevent	X	X	X	X	

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
View available dumps on a managed system or frame	lsdump	X	X	X	X	X
View LED resources of a logical partition	lsled	X	X	X	X	X
View LED resources of a managed system	lsled	X	X	X	X	X
View serviceable events for a managed system	lssvcevents	X	X	X	X	X
View reference codes for a logical partition	lsrefcode	X	X	X	X	X
View reference codes for a managed system	lsrefcode	X	X	X	X	X
View Service Agent customer email notification settings	lssacfg	X	X	X	X	X
View Service Agent FTP firewall settings	lssacfg	X	X	X	X	X
View Service Agent FTP offload server settings	lssacfg	X	X	X	X	X
View managed system or managed frame dumps residing on the HMC	lsdump	X	X	X	X	X

For more information about service and support, see [Customer service and support](#). For more information on using commands, see [Using the remote command line](#).

Frame tasks

The following table describes frame tasks, associated commands, and the roles that can perform each task:

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
Add a managed frame	mksysconn	X		X	X	
Create a network connection with a frame	mksysconn	X		X	X	
Force an HMC to release its lock on a managed frame	rmlock	X			X	
Modify the properties of a managed frame	chsyscfg	X		X	X	
Power off all unowned I/O units in a managed frame	chsysstate	X	X	X	X	
Rebuild a managed frame	chsysstate	X	X	X	X	
Reset the network connection to a managed frame	rmsysconn	X		X	X	
Remove the network connection to a managed frame	rmsysconn	X		X	X	
Update a password for a managed frame	chsyspwd	X				
View which HMC owns the lock on a managed frame	lslock	X	X	X	X	X
View managed frames	lssyscfg	X	X	X	X	X

Task	Associated command	Roles				
		super administrator	service representative	operator	product engineer	viewer
View environmental information for a managed frame	lshwinfo	X	X	X	X	X
View connections for a managed frame	lssysconn	X	X	X	X	X

For more information on using commands, see Using the remote command line.

Managed system power-on modes

This topic describes the options you have for powering on the managed system.

Power-on mode	Description
Partition standby	The Partition Standby power-on mode allows you to create and activate logical partitions. When the Partition Standby power-on is completed, the operator panel on the managed system displays Partition Standby, indicating the managed system is ready for you to use the HMC to partition its resources. Note: Autostart partitions will not start if you power on using this mode. For more information about logical partitions, see Partitioning the server.
System profile	The System Profile option powers on the system according to a predefined set of profiles. Note: The profiles are activated in the order in which they are shown in the system profile. For more information about system profiles, see System profile.
Partition autostart	This option activates logical partitions that have been previously designated as autostart. For more information about logical partitions, see Partitioning the server.

For more information about powering on the managed system, see “Powering on the managed system” on page 19.

Managed system power-on states

This state of the managed system is displayed in the Contents area of the HMC window under the State label.

State	Description
<i>Power off</i>	The managed system is powered off.
<i>Operating</i>	The managed system is powered on and functioning normally.
<i>Initializing</i>	The managed system is powering on.
<i>Error</i>	The managed system’s operating system or hardware is experiencing errors. See Correcting the managed system operating state.
<i>Error - Dump in Progress</i>	The managed system has started a system dump. When the dump is complete, see Managing dumps in the Troubleshooting topic.

State	Description
<i>Error - Terminated</i>	The power-on operation failed.
<i>Incomplete</i>	The HMC did not receive all of the necessary information from the managed system. See Correcting the managed system operating state.
<i>Recovery</i>	The partition data and profile data stored in the managed system is damaged. See Correcting the managed system operating state.
<i>No Connection</i>	The HMC cannot contact the managed system. See Correcting the managed system operating state.
<i>Standby</i>	The managed system has been powered on using the partition standby power-on option.
<i>On Demand Recovery</i>	The old capacity card has been replaced; enter the activation code.

Working with managed systems and frames

You can use the HMC to communicate with the managed systems and frames in your environment. Use the information in this topic to learn more about the tasks that you can perform using the HMC to work with the managed system and frames.

“Powering on and off the managed system” on page 19

Read more about how to use the HMC to power on and off the managed system. Also find information about scheduling managed-system power operations.

“Accessing the managed system” on page 20

Learn how to access the managed system from the HMC after the HMC has been connected.

“Finding data about the managed systems using the HMC” on page 21

Find and update managed system information displayed on the HMC interface. Also learn more about working with managed system profile data.

“Managing the frame using the HMC” on page 24

Learn how to use the HMC to manage your frame.

“Recovering partition data on a managed system” on page 23

Learn how to recover the partition data on your managed system if it becomes corrupt.

“Managing operating systems” on page 27

Understand how you can use the HMC to interact with operating systems running on the managed system.

“Adding managed systems to the HMC environment” on page 27

Understand how to add managed systems to the HMC, so that they can be managed using the HMC interface.

“Moving the managed system from an open network to a private network” on page 28

Learn how to move a managed system that is attached to an HMC on an open network to an HMC located on a private network.

“Extending an existing network” on page 28

Learn how to add a managed system to your existing network configuration.

“Servicing the managed system” on page 29

Understand how you can use the HMC to perform service actions.

Powering on and off the managed system

You can use the HMC to power on and off the managed system. For more information, click on one of these associated tasks:

“Powering on the managed system”

Explains how to power on the managed system using the HMC

“Powering off the managed system”

Explains how to use the HMC to power off the managed system

“Scheduling power-on and power-off operations for the managed system” on page 20

Explains how to use the HMC to schedule power on and off operations for the managed system

Powering on the managed system

You can use the HMC to power on the managed system.

To power on the managed system, you must be a member of one of the following roles:

- super administrator
- service representative
- operator
- product engineer

To power on the managed system, do the following:

1. In the Navigation area, expand the **Server and Partition** folder.
2. Click the **Server Management** icon.
3. In the Contents area, select the managed system.
4. From the menu, click **Selected > Power On**.
5. Select the desired power-on mode and click **OK**.

For more information about each power-on mode, see “Managed system power-on modes” on page 17.

Powering off the managed system

By default, the managed system is set to power off automatically when you shut down the last running logical partition on the managed system. If you set the managed system properties on the HMC so that the managed system does not power off automatically, you must use this procedure to power off your managed system.

Attention: If possible, shut down the running logical partitions on the managed system before powering off the managed system. Powering off the managed system without shutting down the logical partitions first causes the logical partitions to shut down abnormally and can cause data loss.

For more information about shutting down your logical partitions, see the following topics:

- Shutting down AIX
- Shutting down i5/OS
- Shutting down Linux

To power off the managed system, you must be a member of one of the following roles:

- super administrator
- service representative
- operator
- product engineer

To power off the managed system, do the following:

1. In the Navigation area, expand the **Server and Partition** folder.
2. Click the **Server Management** icon.
3. In the Contents area, select the managed system.
4. From the menu, click **Selected > Power Off**.
5. Select the desired power-off mode and click **OK**.

Scheduling power-on and power-off operations for the managed system

You can power your managed system on and off at regular intervals by scheduling an operation using the HMC.

To schedule a power on or off operation for the managed system using your HMC, do the following:

1. In the Navigation area, expand the **HMC Management** folder.
2. In the Navigation area, click the **HMC Configuration** icon.
3. In the Contents area, click **Schedule Operations**.
4. From the list, select the managed system for which you want to schedule an operation and click **OK**.
5. Select **Options > New**.
6. In the Add a Scheduled Operation window, select the managed system power operation that you want to perform and click **OK**.
7. In the appropriate fields, enter the time and date that you want this managed system power operation to occur.
8. If you want this scheduled operation to repeat, click the **Repeat** tab and select the intervals at which you want the power operation to repeat.
9. When you are finished, click **Save**.

Accessing the managed system

This topic describes how to access the managed system for the first time, after you have connected the HMC to the managed system and powered on the managed system.

For more information about accessing your managed system using the HMC, click on one of the associated tasks.

“Overview of passwords”

Describes the different passwords you need in order to access the managed system using your HMC

“Virtual operating system consoles” on page 21

Explains how to use virtual operating system consoles on your HMC

For more information about connecting the HMC, see Setting up the Hardware Management Console.

Overview of passwords

The first time you access the managed system using an HMC, the system prompts you to enter passwords for each of the following:

- Hardware Management Console: HMC access
- Advanced System Management Interface: General
- Advanced System Management Interface: Admin

If all required passwords are not set, the state of the managed system displays *Pending Authentication – Password Updates Required* until these passwords are set.

To change the managed system’s password, see “Changing the managed system’s password” on page 22.

If you are using an HMC to access the managed system before all required passwords have been set, enter the appropriate password for each password that is presented in the Update Password Pending Authentication window. If another HMC subsequently needs access to this managed system, upon attempting to access this HMC the user is presented with the Update Password Failed Authentication window, which will prompt for the HMC access password you entered.

In the scenario where the HMC access password changes while you are logged in to the managed system, your HMC will discover that it can no longer authenticate once it attempts to reconnect to that managed system. This will result in a state of *Failed Authentication* for that managed system. You will be required to enter the new password before any actions can be performed.

For more information about the Advanced System Management Interface (ASMI), see *Managing your server using the Advanced System Management Interface*.

Virtual operating system consoles

You can connect to logical partition operating systems by using your HMC interface to open a virtual console window. For more information about how to do this, click on one of these associated tasks:

“Verify that consoles are configured”

Explains how to verify an i5/OS console is already configured for an operating system.

Verify that consoles are configured

To verify that a console is configured for your i5/OS logical partition, check the logical partition’s properties.

To view a partition’s properties, do the following:

1. In the Contents area, right-click the logical partition and then select **Properties**. The Properties window lists which console is configured for this logical partition.
2. Click the **Settings** tab. The **Tagged I/O** field lists console information.

For more information about items displayed in this field, refer to the online help on the HMC interface.

Finding data about the managed systems using the HMC

This topic describes how to find information about each of the managed systems that are attached to the HMC.

“Viewing information about the managed system”

Describes how to view the managed system’s configuration and capabilities

“Changing the managed system’s password” on page 22

Describes how to update the managed system’s password

“Updating managed system or frame information” on page 22

Describes how to update the managed system

“Deleting the managed system” on page 23

Explains how to delete a managed system

“Disconnecting another HMC connection” on page 23

Explains how to manually unlock the HMC locked connection to the managed system

Viewing information about the managed system

You can view the managed system’s configuration and capabilities. To view information about the managed system, expand the **Server and Partition** folder in the Navigation area. Then, click the **Server**

Management icon. The Contents area expands to show each managed system, which you can then expand to show information about the managed system, including its name, its state, and the operator panel value.

Any user can view managed system properties.

To expand your view of the managed system's properties, click the plus sign (+) next to the managed system's name to view its contents.

To view the managed system's properties, do the following:

1. In the Contents area, select the managed system.
2. From the menu, click **Selected**.
3. Click **Properties**.

The HMC displays the system's name, logical partition capability, state, serial number, model and type, and policy information. A system that is powered on using the Partition Standby option displays this information, as well as available and assigned processors, memory, I/O drawers and slots, power-on parameters, reference codes, and policy information. The Processor tab displays information that is helpful when performing Dynamic Logical Partitioning processor tasks.

Use the Processor tab to view the processor status, the processor state, and whether a processor is assigned to a logical partition. The information in the Processor tab is also helpful when you need to know if processors are disabled and therefore cannot be used by any logical partition.

Changing the managed system's password

You can use the HMC interface to change the managed system's HMC access password. If you change this password, you must change the password for any other HMCs that connect to this managed system.

To change the managed system's password, do the following:

1. In the Navigation area, expand the **Server and Partition** folder.
2. In the Navigation area, click the **Server Management** application icon.
3. In the Contents area, right-click the managed system and then select **Update Managed System Password**.

For information about additional passwords that must be set before you can perform any tasks, see "Overview of passwords" on page 20.

Updating managed system or frame information

Updating, or *rebuilding* the managed system or frame acts much like a refresh of the managed system or frame information. Rebuilding the managed system or frame is useful when the system's state indicator in the contents area of the HMC GUI is shown as *Incomplete*. The Incomplete indicator signifies that the HMC cannot gather complete logical partition, profile, or resource information from the managed system.

This operation is different from performing a refresh of the local HMC panel. When the managed system is updated, the HMC reloads information stored on the managed system.

To update managed system or frame information, you must be a member of one of the following roles:

- super administrator
- service representative
- operator
- product engineer

To update the managed system or frame information, do the following:

1. In the contents area, select the managed system or frame.
2. From the menu, click **Selected**.

3. Choose from the following options:
 - To rebuild the managed system, click **Rebuild Managed System**. The current system information displays.
 - To rebuild the managed frame, click **Rebuild Managed Frame**. The current system information displays.
4. Click **Yes**.

After you select **Rebuild Managed System**, current system information displays.

Deleting the managed system

If you no longer want to manage a particular system, you can delete it from the contents area of the HMC GUI.

Note: You must delete the managed system from the Contents area before you disconnect the Ethernet or the network-attached cable from the hardware.

To delete the managed system from the Contents area, you must be a member of the super administrator role.

To delete the managed system from the Contents area, do the following:

1. In the Contents area, select the managed system.
2. From the menu, click **Selected**.
3. Select **Reset or Remove Connection** from the menu.
4. Click **remove**, then click **OK**.

After the managed system's logical connection is removed, you can remove the HMC from the network.

Disconnecting another HMC connection

If you have two HMCs connected to the managed system, one HMC temporarily locks the other out while it is performing operations. This action prevents the other HMC from operating on the managed system because simultaneous operations could cause conflicting results. If the interface is locked, most console operations automatically wait for the lock to release.

However, in the rare event that an HMC has a problem that prevents the lock from being properly released, you may need to manually disconnect the connection to the managed system. Typically, if one HMC has locked the connection, you must unlock it from the other HMC, which then allows other HMCs to communicate with the managed system and run further commands.

To release a lock on a managed system, you must be a member of one of the following roles:

- super administrator
- operator
- product engineer

To disconnect an HMC connection, do the following:

1. In the Contents area, select the managed system.
2. In the menu, click **Selected**.
3. Select **Disconnect another HMC**. The Disconnect Another HMC window opens.
4. From the list, select the HMC that you want to disconnect, and then click **OK**.

Recovering partition data on a managed system

You can recover partition data on your managed system if the data becomes damaged. This partition data includes information on logical partitions, partition profiles, and system profiles. If the partition data on your managed system becomes damaged, the managed system is in *Recovery* state. You can either restore

the partition data from a backup file that is saved automatically on your Hardware Management Console (HMC) by selecting **Restore profile data from the HMC backup data**, or clear all partition configuration with **Initialize the managed system** .

This procedure recovers the partition data in the service processor of your server if it becomes damaged. This procedure does not restore the partition data on your HMC. To recover the partition data on your managed system, see Restoring profile data.

To recover the partition data on your managed system, you must be a member of the super administrator role.

To recover the partition data on your managed system, do the following:

1. In the Navigation Area, open **Server and Partition**.
2. Select **Server Management**.
3. In the contents area, right-click the managed system whose partition data you want to recover and select **Recover Partition Data**.
4. Select one of the following:
 - **Restore profile data from HMC backup data**: This option restores the partition data using the backup file that is saved automatically on the HMC.
 - **Initialize the managed system**: This clears all partition configuration data, and can only be used if all partitions are in the Not Activated state.
5. Click **OK**.

Managing the frame using the HMC

This topic describes how to perform various tasks related to managing your frames that are attached to the HMC.

“Adding a frame”

Describes how to manually add a frame

“Initializing the frame” on page 25

Explains how to initialize a frame after a new frame has been added

“Modifying information about the frame” on page 25

Describes how to change the frame’s name and number

“Updating frame information” on page 26

Describes how to rebuild the frame

“Resetting or removing a frame connection” on page 26

Explains how to reset or remove the HMC locked connection to the managed system

Adding a frame

New frames are automatically detected, or discovered, by the HMC when the HMC is configured as a DHCP server. For information about configuring your HMC as a DHCP server, see [The HMC as a DHCP server](#). Upon detection of a new frame, the DHCP server assigns an IP address to the frame. This newly assigned IP address remains static as long as the MAC address remains unchanged. When a frame is replaced, the DHCP server assigns a new IP address and broadcasts an update to all HMCs on the network.

Note: It is recommended that you add a frame by configuring your HMC to automatically detect new frames using the link previously referenced.

In addition to adding a frame automatically, the HMC allows you to manually add frames to the managed frames of this HMC. You will need to provide the host name and IP address for each frame you want to add. You can also find a frame on the network within a specified IP address range. The discovery processing time may vary depending on the range of IP addresses entered and your network configuration.

To add a frame, you must be a member of one of the following roles:

- super administrator
- operator
- product engineer

To add a frame, do the following:

1. In the Navigation Area, expand the **Server and Partition** folder.
2. Select **Frame Management**.
3. Select **Add Managed Frame(s)**. Type the requested information. If you want to find a frame in the network, select **Find managed frames** and type the IP address range.
4. Click **Next**.
5. Click **Finish**.

Initializing the frame

After you add a frame, it must be initialized before it can be detected by the managed system. Initialization of the frame consists of powering on all the I/O drawers followed by powering on all the managed systems that belong to the managed frame. The initialization time may vary depending upon your setup.

To initialize a frame, you must be a member of one of the following roles:

- super administrator
- operator
- product engineer

To initialize a frame, do the following:

1. In the Navigation Area, expand the **Server and Partition** folder.
2. Select **Frame Management**.
3. From the menu, click **Frame Management**.
4. Select **Initialize Frame(s)**.
5. Click **Continue**.

Modifying information about the frame

You can view frame information and change the frame name and number.

Any user can view or modify frame properties.

To view and change the frame's properties, do the following:

1. In the Navigation Area, expand the **Server and Partition** folder.
2. Select **Frame Management**.
3. In the Contents area, select the frame.
4. From the menu, click **Selected**.
5. Click **Properties**. You can also access this option by right-clicking the frame and selecting **Properties** on the menu.

By default, you are viewing the General tab that includes the frame name, number, state, type and serial number. To view a list of all the managed systems contained in the frame, use the Managed Systems tab. The information in the I/O Units tab is helpful when you need to know all the I/O Units contained in the frame.

6. Change the frame name and number, if desired.
7. Click **OK**.

Updating frame information

Updating, or *rebuilding* the frame acts much like a refresh of the frame information. Rebuilding the frame is useful when the system's state indicator in the contents area of the HMC GUI is shown as *Incomplete*. The Incomplete indicator signifies that the HMC cannot gather complete resource information from the managed system within the frame.

This operation is different from performing a refresh of the local HMC panel. When the managed system is updated, the HMC reloads information stored on the managed frame.

To update frame information, you must be a member of one of the following roles:

- super administrator
- operator
- product engineer

To update the frame, do the following:

1. In the Navigation Area, expand the **Server and Partition** folder.
2. Select **Frame Management**.
3. In the Contents area, select the frame.
4. From the menu, click **Selected**.
5. Click **Rebuild Managed Frame**. The current frame information displays.
6. Click **Yes**.

Resetting or removing a frame connection

When you no longer want to manage the frame using the HMC, you can remove the connection. You must remove the connection before you physically disconnect the HMC from the managed frame (or from the network).

In the rare event that the frame is in the *No connection* state, you can recover by resetting the connection with the frame. Reset the connection with the managed frame after you have verified that the network settings are correct on both the HMC and the managed frame. Performing this action will break and reestablish the connection.

To reset or remove a frame connection, you must be a member of one of the following roles:

- super administrator
- service representative
- operator

To reset or remove a frame connection, do the following:

1. In the Navigation Area, expand the **Server and Partition** folder.
2. Select **Frame Management**.
3. In the Contents area, select the managed system.
4. In the menu, click **Selected**.
5. Select **Reset or Remove Connection** from the menu.
6. Click **Remove Connection** or **Reset Connection**.

7. Click **OK**.

After the frame's logical connection is removed, you can remove the HMC from the network.

Managing operating systems

You can force some operating systems to shut down or reset using the HMC interface. For more information about these tasks, click on the associated topic.

“Resetting the operating system on a partition”

Explains how to restart the operating system when an operating system in a logical partition stalls.

“Shutting down an operating system”

Explains how to shut down an operating system in a logical partition.

Resetting the operating system on a partition

The HMC enables the operating system on a logical partition to be reset when errors are encountered in the operating system. The system can undergo either a soft or hard reset, as follows:

To reset the operating system, you must be a member of one of the following roles:

- super administrator
- service representative

Note: For i5/OS logical partitions, use this task only if you cannot restart the i5/OS logical partition from the command line of the operating system. Using this window to restart an i5/OS logical partition will result in an abnormal IPL.

To reset the operating system on a logical partition, do the following:

1. In the Contents area, select the logical partition that is running the operating system you want to reset.
2. In the menu, click **Selected > Restart partition**.
3. Select the type of operating system restart you want.
4. Click **Yes**.

Shutting down an operating system

You can use the HMC interface to perform shutdown operations on a logical partition. You can perform this task only if the operating system that is running on the logical partition supports this function.

Note: If your logical partition is running i5/OS, shut down the operating system manually through the operating system, if possible. Using the HMC interface to power down the logical partition operating system will cause longer restart times. For more information about shutting down an i5/OS logical partition, see Shutting down i5/OS.

To shut down an operating system on a logical partition, do the following:

1. In the Contents area, select the logical partition running the operating system you want to reset.
2. In the menu, click **Selected > Shut Down Partition**.
3. Select the type of shutdown you want to perform.
4. Click **OK**.

Adding managed systems to the HMC environment

To add a managed system to the HMC, you must establish a network connection between the HMC and the service processor of the new system. Configuring the HMC to work with the new managed system depends on how you have set up and configured the existing network connections between the HMC and the already-installed managed systems, including connections to the logical partitions.

For more information about configuring network connections on the HMC, see HMC network connections.

For more information about adding managed systems to the HMC, see “Extending an existing network.”

Moving the managed system from an open network to a private network

You can move a managed system from an open network to a private network. It is recommended that you configure the HMC that is located on the private network as a DHCP server before you attach the new managed system. This configuration will allow the HMC to automatically detect the newly added managed system and assign it a unique IP address.

To perform this operation, you must be a member of one of the following roles:

- super administrator
- service representative
- product engineer

To move the managed system from an open network to a private network, do the following:

1. Configure the HMC that is located on the private network as a DHCP server. For more information, see *Configuring the HMC as a DHCP server*.
2. Remove the static IP address of the managed system that you want to move using the Advanced System Management Interface (ASMI). For more information about how to use ASMI to configure the HMC as a DHCP server, see *Configuring network interfaces*.
3. Disconnect the cable of the managed system that you want to move from the HMC that is located on the open network.
4. Connect the cable of the managed system to the HMC located on the private network. Because you previously configured the HMC that is located on the private network as a DHCP server, the newly attached managed system is automatically detected and assigned a new IP address.

Extending an existing network

You can keep an existing network set up but extend it to include another system. For more information about extending your network, click the associated topic:

“Using an existing private network with the HMC acting as a DHCP server”

Explains how to use a dedicated private network that you already have set up with the HMC acting as a DHCP server.

“Using an existing open network”

Explains how to use the HMC in a configured open network.

Using an existing private network with the HMC acting as a DHCP server

If your existing network is already set up as a “private” dedicated network with the HMC acting as a DHCP server, then you must physically connect to the new system. For more information about physically connecting to a new managed system, see *Setting up the Hardware Management Console*. If you have an Ethernet switch with available ports connected to the HMC, connect the Ethernet cable from the service processor of the new system to the Ethernet switch. When the connection is made, the HMC automatically detects the managed system and adds it to the Contents area of the HMC interface. Automatic detection does not occur if you removed the managed system prior to its availability.

Using an existing open network

If the HMC was connected to existing managed systems over an “open” (public) network, other types of devices and systems can exist on the network. More specifically, the HMC is not acting as a DHCP server. In this environment, you must do one of the following:

- Manually configure the new managed system's service processor with a static (fixed) set of IP parameters using the Advanced System Management Interface.
- Manually configure the IP address of the new system's service processor, if there is an existing DHCP server on the network.

When the connection is made, you can add the managed system by using the **Add managed systems** function or the `mksysconn` command.

Servicing the managed system

The Customer service and support topic provides an overview of the elements of the service and support environment. It also describes the different functions and features of the environment and the HMC applications that provide those functions.

Related information

You can view or download the following Information Center topics related to the Managing your server using the HMC topic:


- HMC Education module in IBM[®] Resource Link[™]
- Managing the Hardware Management Console
- Managing your server using the Advanced System Management Interface
- Partitioning the server
- Working with Capacity on Demand
- Customer service and support
- Setting up your HMC to connect to your service provider

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. If you are using Internet Explorer, click **Save Target As...** If you are using Netscape Communicator, click **Save Link As...**
3. Navigate to the directory in which you want to save the PDF.
4. Click **Save**.

Downloading Adobe Acrobat Reader

You need Adobe Acrobat Reader to view or print these PDFs. You can download a copy from the Adobe Web site (www.adobe.com/products/acrobat/readstep.html) .

Appendix. Notices

This information was developed for products and services offered in the U.S.A.

The manufacturer may not offer the products, services, or features discussed in this document in other countries. Consult the manufacturer's representative for information on the products and services currently available in your area. Any reference to the manufacturer's product, program, or service is not intended to state or imply that only that product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any intellectual property right of the manufacturer may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any product, program, or service.

The manufacturer may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the manufacturer.

For license inquiries regarding double-byte (DBCS) information, contact the Intellectual Property Department in your country or send inquiries, in writing, to the manufacturer.

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: THIS INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. The manufacturer may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to Web sites not owned by the manufacturer are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this product and use of those Web sites is at your own risk.

The manufacturer may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact the manufacturer.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this information and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, IBM License Agreement for Machine Code, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have

been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning products not produced by this manufacturer was obtained from the suppliers of those products, their published announcements or other publicly available sources. This manufacturer has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to products not produced by this manufacturer. Questions on the capabilities of products not produced by this manufacturer should be addressed to the suppliers of those products.

All statements regarding the manufacturer's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

The manufacturer's prices shown are the manufacturer's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to the manufacturer, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. The manufacturer, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

SUBJECT TO ANY STATUTORY WARRANTIES WHICH CANNOT BE EXCLUDED, THE MANUFACTURER, ITS PROGRAM DEVELOPERS AND SUPPLIERS MAKE NO WARRANTIES OR CONDITIONS EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT, REGARDING THE PROGRAM OR TECHNICAL SUPPORT, IF ANY.

UNDER NO CIRCUMSTANCES IS THE MANUFACTURER, ITS PROGRAM DEVELOPERS OR SUPPLIERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY:

1. LOSS OF, OR DAMAGE TO, DATA;
2. SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR
3. LOST PROFITS, BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.

SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO SOME OR ALL OF THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. _enter the year or years_. All rights reserved.

If you are viewing this information in softcopy, the photographs and color illustrations may not appear.

Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

AIX
e(logo)server
eServer
i5/OS
IBM

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

Other company, product or service names may be trademarks or service marks of others.

Terms and conditions for downloading and printing information

Permissions for the use of the information you have selected for download are granted subject to the following terms and conditions and your indication of acceptance thereof.

Personal Use: You may reproduce this information for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative works of this information, or any portion thereof, without the express consent of the manufacturer.

Commercial Use: You may reproduce, distribute and display this information solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of this information, or reproduce, distribute or display this information or any portion thereof outside your enterprise, without the express consent of the manufacturer.

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the information or any data, software or other intellectual property contained therein.

The manufacturer reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the information is detrimental to its interest or, as determined by the manufacturer, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations. THE MANUFACTURER MAKES NO GUARANTEE ABOUT THE CONTENT OF THIS INFORMATION. THE INFORMATION IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

All material copyrighted by IBM Corporation.

By downloading or printing information from this site, you have indicated your agreement with these terms and conditions.



Printed in USA