

AS/400e 170 or 250



48xx PCI Cryptographic Coprocessor Card Instruction

Version 4

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Note

Before using this information and the product it supports, be sure to read the "Safety and Environmental Notices" on page iii and the "Notices" on page 13.

Fifth Edition (July 2000)

This edition applies only to reduced instructions set computer (RISC) systems.

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Safety and Environmental Notices

Danger Notices

A danger notice calls attention to a situation that is potentially lethal or extremely hazardous to people.

DANGER

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)

DANGER

To prevent a possible electrical shock when installing the system, ensure that the power cords for all devices are unplugged before installing signal cables. (RSFTD202)

DANGER

To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. (RSFTD203)

DANGER

To prevent a possible electrical shock during an electrical storm, do not connect or disconnect cables or station protectors for communications lines, display stations, printers, or telephones. (RSFTD003)

DANGER

To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)

Caution Notices

A caution notice calls attention to a situation that is potentially hazardous to people because of some existing condition.

CAUTION:

Telecommunications Statement: This unit contains over-voltage circuits between the ac power outlet and the unit. These circuits meet the standard limits described in International Electrical Commission (IEC) 664, installation category II. It is the customer's responsibility to ensure that the power outlet meets the standards of IEC 664, installation category II. (RSFTC214)

Laser Safety Information

CAUTION:

This product may contain a CD-ROM which is a class 1 laser product.
(RSFTC240)

Product Recycling and Disposal

Components of the system, such as structural parts and circuit cards, can be recycled where recycling facilities exist. IBM does not currently collect and recycle used IBM products from customers in the United States other than those products that are involved in trade-in programs. Companies are available to disassemble, reutilize, recycle, or dispose of electronic products. Contact an IBM account representative for more information.

The system unit contains batteries and circuit boards with lead solder. Before you dispose of this unit, these batteries and circuit boards must be removed and discarded according to local regulations or recycled where facilities exist. This book contains specific information on each battery type where applicable.

Battery Return Program

In the United States, IBM has established a collection process for reuse, recycling, or proper disposal of used IBM batteries and battery packs. For information on proper disposal of the batteries in this unit, please contact IBM at 1-800-426-4333. Please have the IBM part number that is listed on the battery available when you make your call. For information on battery disposal outside the United States, contact your local waste disposal facility.

Environmental Design

The environmental efforts that have gone into the design of the system signify IBM's commitment to improve the quality of its products and processes. Some of these accomplishments include the elimination of the use of Class I ozone-depleting chemicals in the manufacturing process, reductions in manufacturing wastes, and increased product energy efficiency. For more information, contact an IBM account representative.

Installation Instructions

Are you installing the 4800 or 4801 PCI Cryptographic Coprocessor feature (adapter card number 4758) into a new AS/400 system unit that has not been powered up?

No **Yes**

↓ Go to step "Installing the 4758 Cryptographic Coprocessor Card" on page 3.

Ensure that your AS/400 Operating System is at V4R4M0 or later.

Note: To verify, enter DSPPTF on the AS/400 Main menu. Look at the line *Release of base option*.

This feature is customer installed. It will take approximately 1 hour to install the hardware. However, you may elect not to perform this feature installation yourself. You may contact IBM or an Authorized Dealer to make arrangements for them to perform the feature installation for a fee.

You need to allow additional time to complete your jobs, back up your system, IPL your system, and verify your hardware configuration.

- ___ 1. When you use these instructions, you will do the following:
 - Remove the system unit covers.
 - Install your new hardware.
 - Install covers.
 - IPL your operating system.
 - Verify your new hardware configuration.
- ___ 2. Some of the steps in these instructions may require a tool to remove the screws. Use a medium-sized standard screwdriver or a 5.5 mm socket wrench.
- ___ 3. Some of the pictures in these instructions may not look exactly like the system unit that you have. However, the steps to perform the task are the same.
- ___ 4. Before you begin:
 - a. Ensure that you have a current backup of your operating system and licensed programs. If you have backed up the operating system and licensed programs since the last time you applied PTFs, that backup is acceptable.
 - b. Ensure that you take a few minutes to become familiar with these instructions.
- ___ 5. If there are incorrect, missing or visibly damaged parts, contact one of the following:
 - Your authorized dealer
 - Point of purchase (For example, IBM Direct)
 - IBM Rochester Manufacturing Automated Information Line (R-MAIL)
 - 1-800-300-8751 (United States)
 - 1-507-253-5242 (worldwide)

- ___ 6. Determine if there are any existing prerequisites before you install your new feature. Go to this Web site and locate your feature number and OS/400 release and check the prerequisites.

http://as400service.ibm.com/s_dir/slkbases.NSF/

Then do the following to get to the Customer Install Features Prerequisites:

- a. Select **All Documents**
- b. Select **Collapse**
- c. Select **General Information**
- d. Select **Offerings**
- e. Select **Feature Prerequisites**
- f. Select **Customer Install Features Prerequisites**

When you have the following cards, install them in the sequence listed below.

- The 2809 or 2824 LAN/WAN workstation card
- The 285x or 2866 Integrated NetFinity cards
- All other adapter cards

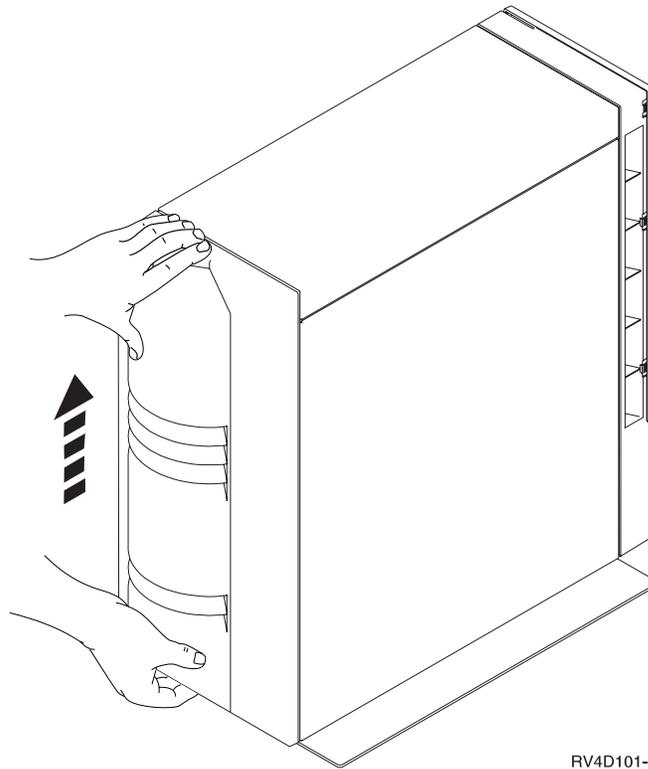
Getting Ready

- ___ 1. Ensure that all jobs are complete.
- ___ 2. When all jobs are complete, type
`pwrdownsys *immed`

on an AS/400 command line and press the Enter key.

Note: Should you encounter difficulties during the installation, contact your authorized dealer or service provider.

- ___ 3. When the AS/400 is completely powered down, power off all PCs and devices, such as printers and displays, that are connected to the system unit.
- ___ 4. Unplug any power cords, such as printers and displays, from electrical outlets.
- ___ 5. Unplug the system unit power cord from the electrical outlet.
- ___ 6. Remove the system unit back cover by placing your hand near the bottom of the cover and lifting up and out (Figure 1 on page 3).



RV4D101-0

Figure 1. Remove System Unit Back Cover

Installing the 4758 Cryptographic Coprocessor Card

1. The adapter card slots are labeled E02 through E14 in the expansion unit (Figure 2 on page 4). The 4758 adapter card can be installed in slots E03 or E08, whichever is available.

Note: A 2824 card has to be installed in slot E07, before you can install the 4758 card in E03.

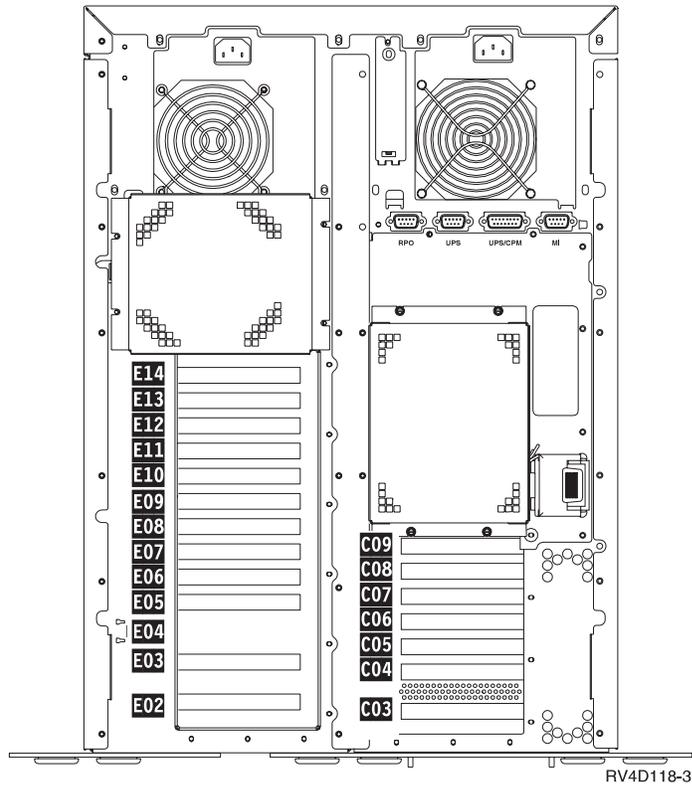


Figure 2. Adapter Card Positions

- 2. Remove the left side cover by removing the screws and sliding the cover from front to back until it stops. Pull the cover out (Figure 3 on page 5)

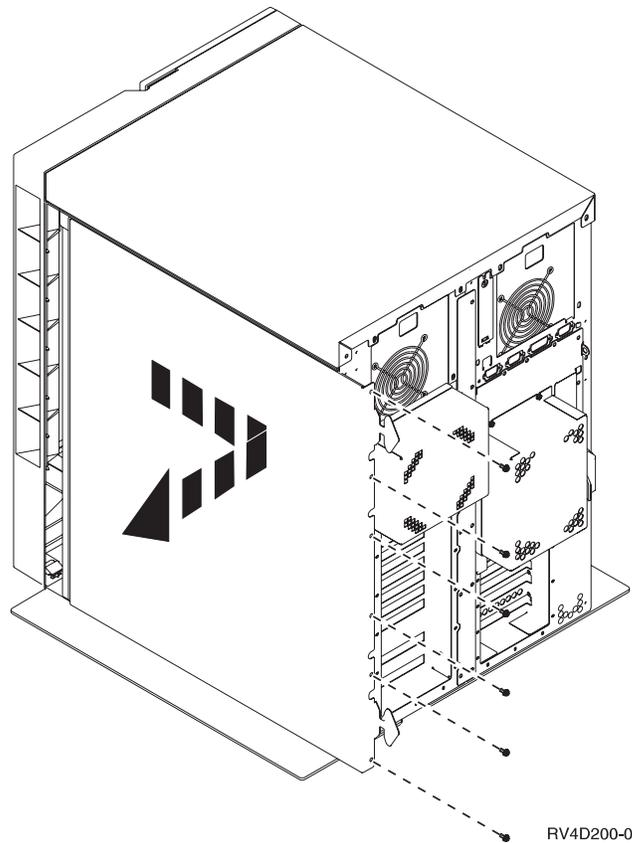


Figure 3. Remove System Unit Side Cover

Your system unit contains a battery that only trained personnel can replace.

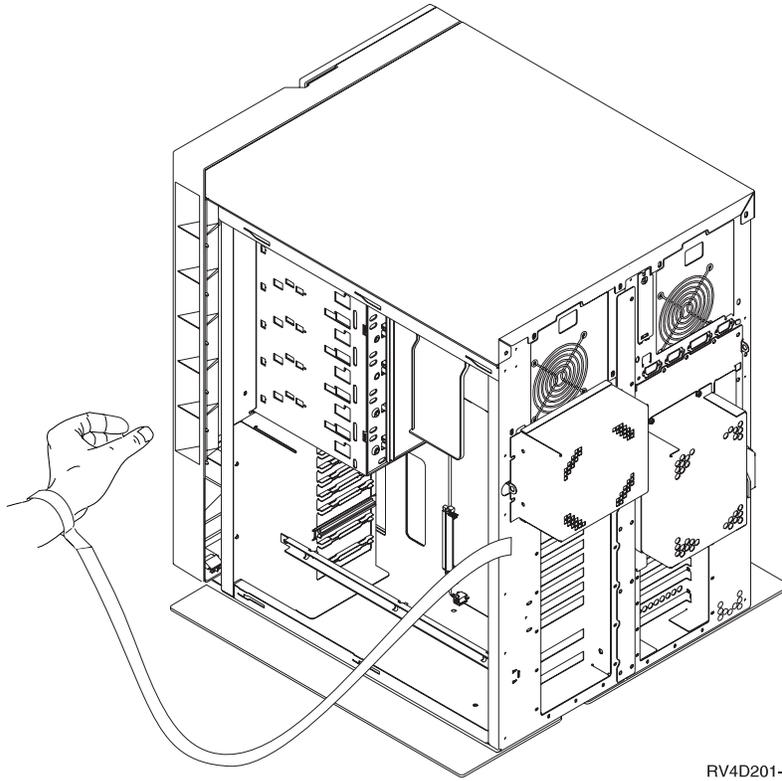
___ 3. **CAUTION:**

The battery is a lithium battery. Only trained service personnel may replace this battery using the instructions in the Problem Analysis, Repair, and Parts service manual. To avoid possible explosion, do not burn or charge the battery. Exchange only with the IBM-approved part. Discard the battery as instructed by local regulations. (RSFTC241)

- ___ 4. Attach the disposable wrist strap to prevent electrostatic discharge from damaging a device. Figure 4 on page 6 shows an example of where to attach the adhesive part of the foil to an unpainted surface.

Notes:

- a. Follow the same precautions you would use without the wrist strap. The 2209 Disposable Wrist Strap is for static control. It will not increase nor decrease your risk of receiving electric shock when using or working on electrical equipment.
- b. Discard the wrist strap immediately and contact your dealer for a replacement, if the disposable wrist strap appears damaged or cut off. Do not continue until new wrist strap is available.
- c. Remove the liner from the copper foil at the end, when you unroll the wrist strap.
- d. Attach the copper foil to an **exposed, unpainted** metal surface on the frame of the system unit (electrical ground).

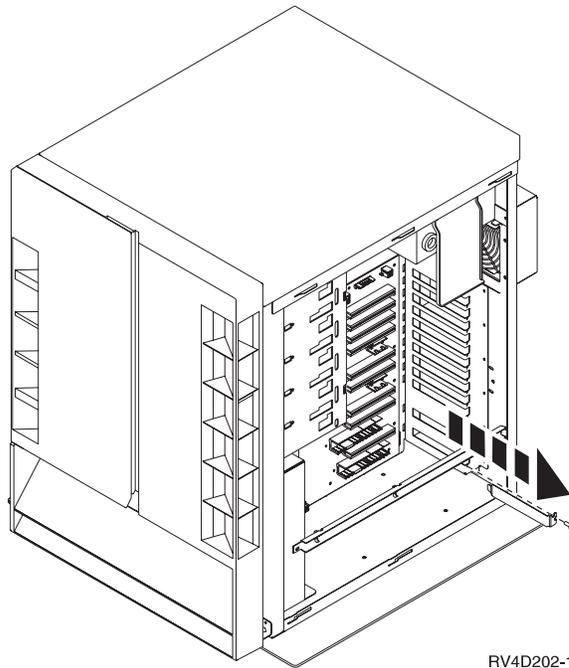


RV4D201-0

Figure 4. Attach Wrist Strap

- ___ 5. **Attention:** Adapter cards are fragile:
- Handle only by the edges
 - Keep fingers off printed circuit area
 - Use static strap when handling
 - Leave in protective packaging until ready to install
- ___ 6. Install the 4758 adapter card by doing the following:

Note: Remove the adapter card slot cover inside the expansion unit by removing the screw and sliding the slot cover out (Figure 5 on page 7).



RV4D202-1

Figure 5. Remove Slot Cover

Find the package that contains the 4758 adapter card and remove it from the electrostatic package.

- a. Align the adapter card with the card slot.
- b. Slide the card into the expansion unit and push on both sides of the card until the card is all the way into the slot and the connector.

Note: The screw tab on the adapter card should be even with the frame on the expansion unit and aligned with the screw hole when completely installed.

- c. Install the screw **A** that holds the adapter card in place (Figure 6 on page 8).

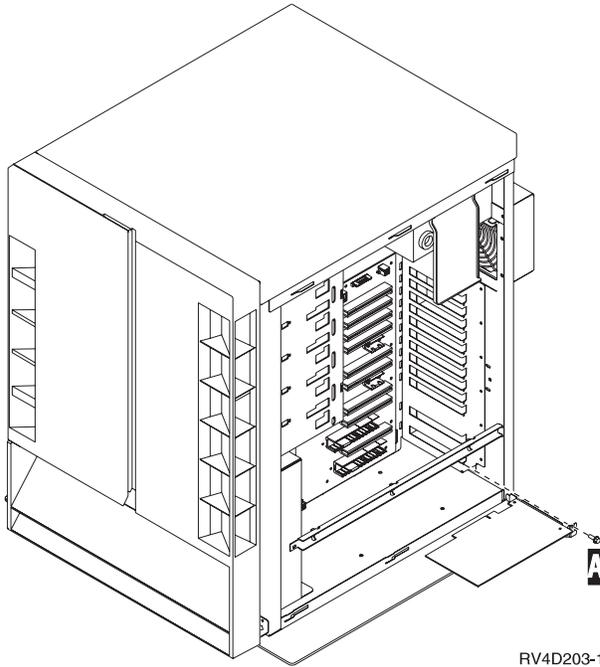


Figure 6. Install Adapter Card

___ 7. Did you install the PCI Cryptographic Coprocessor card into a new AS/400 system unit?

No **Yes**

↓ Install the expansion unit side cover by aligning the tabs on the top and bottom edge and press forward to make sure that all tabs enter the slots. Slide the cover toward the front of the expansion unit until it stops and install the screws (Figure 7 on page 9).

Return to the documentation that sent you to these instructions.

___ 8. Do you have any other adapter cards or devices to install?

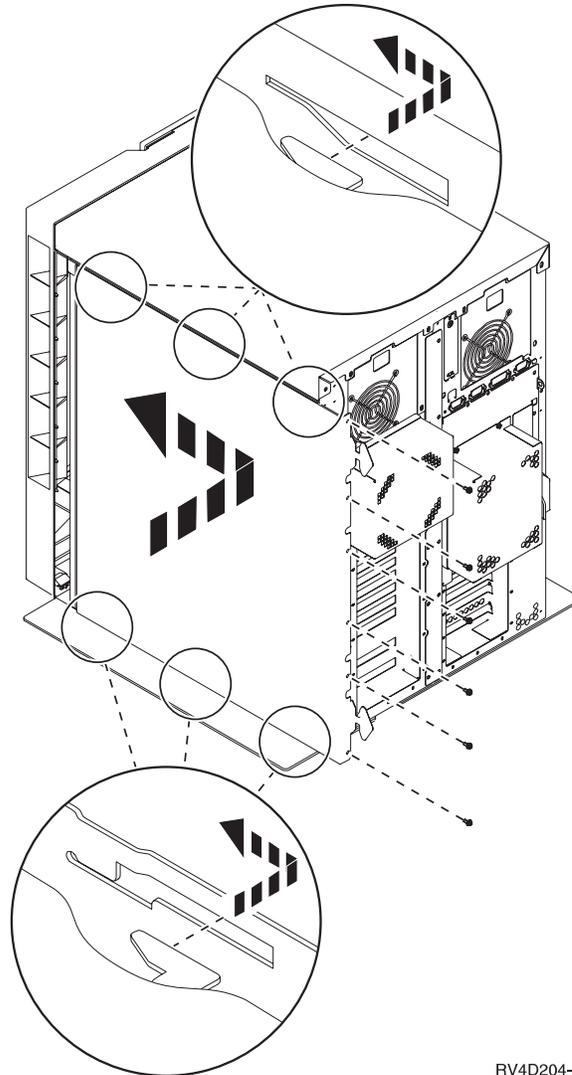
No **Yes**

↓ If you know where to install the adapter card, follow the steps you just performed to install the card.

If you do not know where to install the adapter card, go to the instructions that came with the adapter card. Look for the tables or steps that tell you where to install the adapter card, and complete the installation.

If you have another device such as a disk unit, a tape unit, or a memory card to install, go to the instructions that came with that device.

___ 9. Install the expansion unit side cover by aligning the tabs on the top and bottom edge and press forward to make sure that all tabs enter the slots. Slide the cover toward the front of the expansion unit until it stops and install the screws (Figure 7 on page 9).



RV4D204-1

Figure 7. Install Side Cover

Completing the Installation

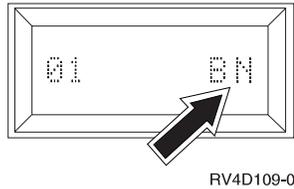
- 1. Install the system unit back cover.
- 2. **DANGER**

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)

Plug the following power cords into an electrical outlet.

- System unit
 - System unit console
- 3. Plug in and power on all attached devices, such as printers and displays.

- ___ 4. Look at the Function/Data display on the control panel. Does a **B N** appear in the Function/Data display?



Yes **No**

- ↓ Do the following:
- Press the Up or Down select push button until **02** appears in the Function/Data display.
 - Press the Enter push button on the control panel.
 - Press the Up or Down select push button until **B N** appears in the Function/Data display.
 - Press the Enter push button on the control panel.
 - Press the Up or Down select push button until **01** appears in the Function/Data display.
 - Press the Enter push button on the control panel.
 - Go to step 5.

- ___ 5. Power on the workstation or PC that is your console.
___ 6. Press the system unit power-on button. The power-on light will appear.

Note: The system takes approximately 6 to 10 minutes to power on and complete an IPL.

- ___ 7. Sign on the system unit. Ensure that you have service tools authority.
___ 8. Do the following to verify your adapter card configuration:
- On an AS/400 command line, type:
STRSST

Press the Enter key.
 - When the Start a Service Tools menu appears, select the *Start a service tool* option.
Press the Enter key.
 - When the Start a Service Tool menu appears, select the *Hardware service manager* option.
Press the Enter key.
 - When the Hardware Service Manger menu appears, select the *Packaging hardware resources (system, frames, cards...)* option.
Press the Enter key.
 - When the Packaging Hardware Resources menu appears, type a **9** in front of the *System Unit*.
Press the Enter key.
Verify the adapter card you just installed appears in the card position it was installed.
If the adapter card is not listed, ensure that the card is properly installed.
 - Did you move an adapter card?

No Yes

↓ Verify that the card you moved is listed on the *Packaging Hardware Resources* menu.

If a resource is missing (look for a ?) because an adapter card was moved, do the following:

- 1) On the line that has the question mark, type a **4** in the *Opt* column to remove the resource from the configuration.
- 2) Press the Enter key.
- 3) When Confirm Remove of Packaging Hardware Resources(s) appears, press the Enter key.
- 4) If you move an adapter card, or replace an adapter card with another adapter card, you need to change the *Resource Name*. For information on changing resource names, go to AS/400 online information, or the *Basic System Operation, Administration, and Problem Handling*, SC41-5206-04.
- 5) Go to step 9.

___ 9. Print the configuration list, if you have a printer.

Note: To print the configuration list, press **F6** on the Packaging Hardware Resources menu.

Place the configuration list in the *Basic System Operation, Administration, and Problem Handling*, SC41-5206-04 book.

___ 10. To return to the AS/400 Main menu, press **F3** three times and then press the Enter key.

___ 11. For information on how to make your card operational, go to the *AS/400 Information Center*. You can access the Information Center from the *AS/400 Information Center*, SK3T-2027-03 or from the following Web site:

<http://www.as400.ibm.com/infocenter>

___ 12. Your feature upgrade is complete. Keep all miscellaneous parts, such as wrap connectors, in a safe place.

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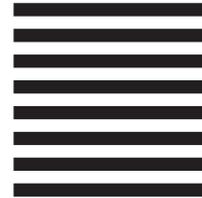
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