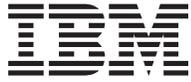


iSeries

Integrated xSeries Server Memory Installation Instruction

Version 5





@server

iSeries

Integrated xSeries Server
Memory Installation Instruction

Version 5

Install 289x server memory card

Take a minute to become familiar with these instructions. Note that you may not complete every step in this instruction.

These instructions contain steps on how to add:

- Feature 2895, 2896, or 2897 server memory individually to your 2890, 2891, or 2899 Integrated xSeries Server (IXS)
- Feature 0446 and 0447 server memory in pairs to your 1892 Integrated xSeries Server (IXS)

In these instructions, 289x refers to feature codes 2890, 2891, 2892, or 2899.

Before you begin:

- ___ 1. This feature is customer installed. An experienced user who understands industry terminology and who has some system experience should perform the installation of this feature. If you elect not to perform this feature installation yourself, contact IBM® or an authorized dealer. They can perform the feature installation for a fee.
- ___ 2. When you use these instructions, you will do the following:
 - Remove the system unit covers.
 - Install your new hardware.
 - Install covers.
 - Perform an initial program load (IPL) of your operating system if you are performing a nonconcurrent install.
 - Verify your new hardware configuration.

If you are doing a nonconcurrent installation, you need to allow additional time to do the following:

- Complete your jobs.
 - Back up your system.
 - Perform an IPL of your system.
 - Verify your hardware configuration.
- ___ 3. Some of the figures 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. 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 program temporary fixes (PTFs), that backup is acceptable.
 - ___ 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 PTF 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://www-912.ibm.com/supporthome.nsf/document/10000051>

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**.
- ___ 7. If you encounter difficulties during the installation, contact your authorized dealer or service provider.

Where is the Integrated xSeries Server?

- ___ 1. Are you installing the memory cards on the Integrated xSeries Server (IXS) in the 270 system unit?
 - ___ **Yes:** Continue with the next step.
 - ___ **No:** Go to “Install memory on the IXS in the 5075 expansion unit” on page 9
- ___ 2. Remove the iSeries back cover. For information on how to remove the back cover, see “Remove the back cover” on page 16.
- ___ 3. Remove the right side cover (from back view). For information on how to remove the side cover, see “Remove the side cover” on page 17.
- ___ 4. Look at your IXS card. The IXS is located in slot C04. For information on location of card slots, see “Card positions in the 270 system unit or 5075 expansion unit” on page 20. Is your IXS card secured by a latch or a screw?
 - ___ **Latch:** Continue with the next step.
 - ___ **Screw:** Go to “Install memory on the IXS nonconcurrently (270 system unit powered off)” on page 6.
- ___ 5. Are you installing the memory cards on the IXS concurrently (270 powered on)?
 - **Yes:** Continue with the next step.
 - **No:** Go to “Install memory on the IXS nonconcurrently (270 system unit powered off)” on page 6.

Install memory on the IXS concurrently (270 system unit powered on)

- ___ 1. Remove the iSeries back cover if you have not done so. For information on how to remove the back cover, see “Remove the back cover” on page 16.
- ___ 2. Remove the right side cover (from back view) if you have not done so. For information on how to remove the side cover, see “Remove the side cover” on page 17.
- ___ 3. Vary off the IXS:
 - ___ a. Go to the *Work with Configuration Status* display by entering: **WRKCFGSTS** at any command line. Press F4.
 - ___ b. At the *Work with Configuration Status* display, enter ***NWS** at the *Type* field and press Enter two times.

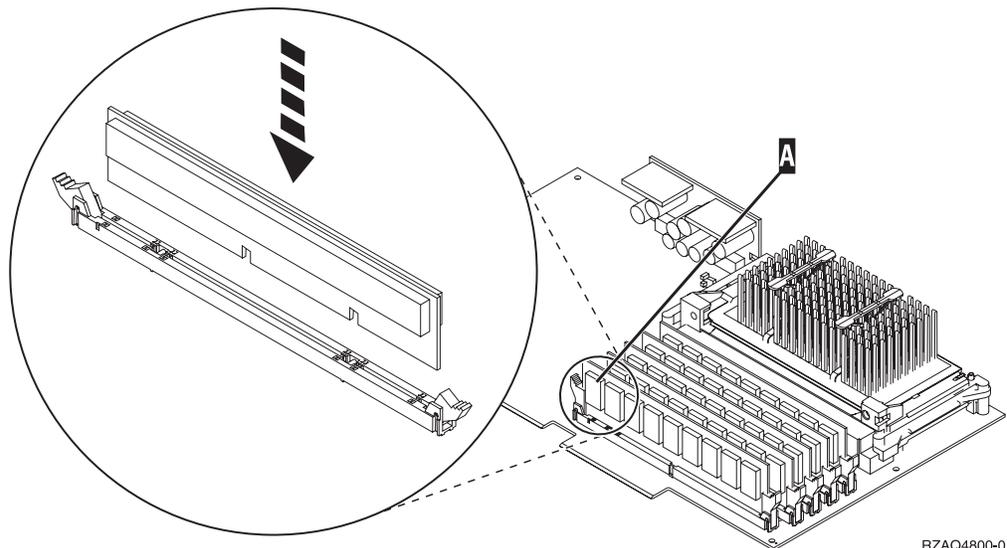
- ___ c. At the *Work with Configuration Status* display, select the **Vary off** option in the *Opt* column next to the IXS and press Enter.
- ___ d. Press F12 to return to the Main Menu.
- ___ 4. Verify current IXS memory.
 - ___ a. At a command line, type **strsst** and press Enter.
 - ___ b. Type **your service tools user ID and your service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
 - ___ c. Select **Start a service tool** and press Enter.
 - ___ d. Select **Hardware service manager** and press Enter.
 - ___ e. Select **Logical hardware resources (buses, IOPs, controllers,...)** and press Enter.
 - ___ f. Select **System Bus Resources** and press Enter.
 - ___ g. Use the cursor to select the 289x server card with which you are working.
 - ___ h. Select **Associated packaging resource(s)** in the *Opt* field in front of that 289x server card and press Enter.
 - ___ i. At the *Packaging Resources Associated with a Logical Resource* display, use the cursor to select **Communications IOP**.
 - ___ j. Select the **Associated logical resource(s)** option in the *Opt* field and press Enter.
 - ___ k. At the *Logical Resources Associated with a Packaging Resource* display, use the cursor to select **Communications IOA**.
 - ___ l. Select the **Display detail** option in the *Opt* field and press Enter.
 - ___ m. Look at *Memory installed on IOA (MB)* and verify that the current amount of memory that is installed on the 289x is correct.
 - ___ n. Press F12 twice to go back to the *Package Resources Associated with a Logical Resource* display.
 - ___ o. Use the cursor to select **Communications IOP**.
 - ___ p. Select the **Concurrent Maintenance** option and press Enter.

Note: If the message, The specified option is not allowed for the selected resource appears, your system unit is not capable of adding memory to the IXS concurrently. Go to "Install memory on the IXS nonconcurrently (270 system unit powered off)" on page 6.

- ___ q. Use the cursor to select **Communications IOP**.
- ___ r. Select the **Toggle LED blink off/on** option and press Enter.
The LED at the card slot you chose should flash.
- ___ s. Select the **Toggle LED blink off/on** option again, and press Enter.
The LED at the card slot you chose should stop flashing and remain solid.
- ___ t. With the cursor still at the **Communications IOP** line, press **F9** (Power off domain).
- ___ u. At the *Hardware Resource Concurrent Maintenance* display, press Enter.
Wait for the power off to complete. The following message should appear:
Power off complete. Check power indicator (LED) to confirm.

When the LED is in the off position it is safe to proceed. While you do the next steps, keep your console at the *Hardware Resources Concurrent Maintenance* display.

- ___ 5. The IXS is located in slot C04. For information on the location of card slots, see “Card positions in the 270 system unit or 5075 expansion unit” on page 20.
- ___ 6. Remove all cables that are connected to the IXS.
- ___ 7. Adapter cards are fragile. **Use the static strap when handling.** Handle only by the edges, and keep fingers off printed circuit area.
Remove the Integrated xSeries Server by turning the latch up and pulling the latch out toward you. Squeeze the metal lever while removing the IXS from the system unit.
- ___ 8. Lay the IXS on a static protective surface.
- ___ 9. Find the package that contains a 289x memory card. Carefully remove the memory card from the static-protective package.
- ___ 10. There are locations for one IOP memory card **A** and four server memory cards. Install the 289x server memory card on the IXS by doing the following:
 - ___ a. Align the memory card with the next available connector on the IXS card.
 - ___ b. Snap the card in place by moving it downward in the connector. The memory card has a distinct click as it snaps into the connector.



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Figure 1. Location of memory on IXS

- ___ c. Repeat this step if you have another 289x memory card to install.
- ___ 11. Install the IXS card into the system unit. Align the card with the card holders inside the system unit until it is fully connected. Swing the latches in and down to secure the card.
- ___ 12. Re-attach the cables that you removed from the card.
- ___ 13. Install covers and plug-in devices. For more information on installing covers, see “Install system unit covers” on page 21.
- ___ 14. Power on the IXS:

- ___ a. The cursor on your console should be where the Communications IOA was.
- ___ b. Press **F10** (Power on domain) and then press Enter to confirm power on.

Note: If the *Work with Controlling Resource* display appears, select the **Assign to** option for each resource on the display. Then press Enter and wait for the power on to complete.

- ___ c. At the *Hardware Resource Concurrent Maintenance* display, press **F8** to verify that the power status is on for all resources.
 - ___ d. Use the cursor to select the **Communications IOP**.
 - ___ e. Select the **Associated logical resource(s)** option and press Enter.
 - ___ f. Use the cursor to select the **Communications IOA**.
 - ___ g. Select the **Display detail** option and press Enter.
 - ___ h. Verify that the correct amount of memory is installed.
- ___ 15. IXS memory test:
- ___ a. Press **F12** once.
 - ___ b. Enter the **Verify** option next to the 289x IOA. Press Enter.
 - ___ c. Press Enter at the *Verification Test* display.
 - ___ d. Select the **Hardware memory test** option. Press Enter.

Note: This memory test will take about 2 minutes per 1GB of memory that is tested.

- ___ e. Press Enter at the *Number of Test Runs* display.
- ___ f. If the test fails, make sure that you have installed the memory properly. If the test continues to fail, contact your authorized dealer or service provider.

Complete the installation

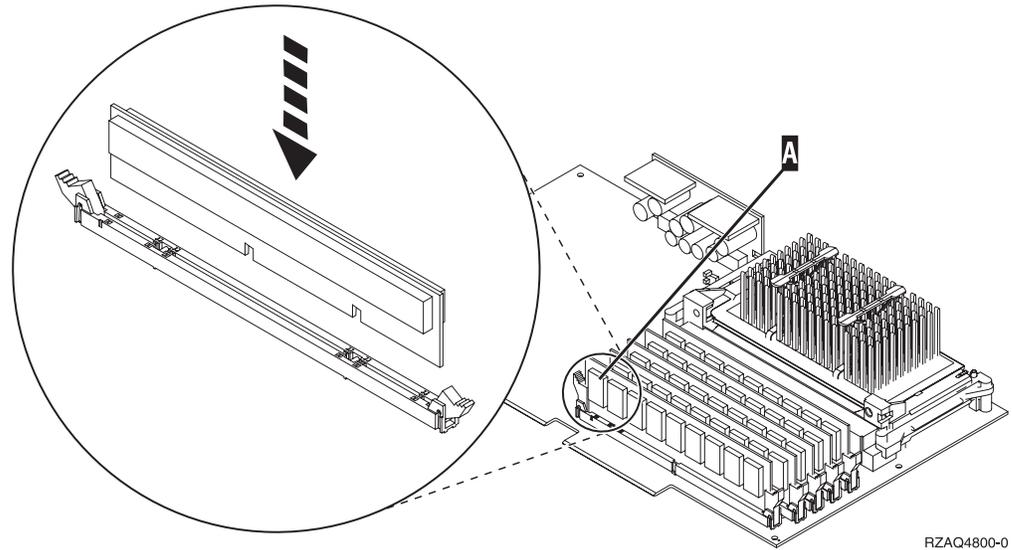
- ___ 1. When the memory test is complete, the *Verification Test Results* display indicates the following: This test is successful. Press Enter.
- ___ 2. Press Enter at the *Verification Test* display.
- ___ 3. Press F3 three times and then press Enter to return to the Main Menu.
- ___ 4. Vary on the IXS:
 - ___ a. Go to the *Work with Configuration Status* display by entering WRKCFGSTS at a command line. Press F4.
 - ___ b. At the *Work with Configuration Status* display enter ***NWS** at the *Type* field and press Enter two times.
 - ___ c. At the *Work with Configuration Status* display enter the **Vary on** option in the *Opt* column next to the **IXS** and press Enter.
 - ___ d. Press **F3** to exit.
- ___ 5. Your feature upgrade is complete.
- ___ 6. For information on how to make your card operational, go to the iSeries Information Center.
- ___ 7. **You have completed installing memory on your Integrated xSeries Server.**

Install memory on the IXS nonconcurrently (270 system unit powered off)

- ___ 1. Verify the current memory on your IXS by doing these steps:
 - ___ a. At a command line, type **strsst** and press Enter.
 - ___ b. Type **your service tools user ID and your service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
 - ___ c. Select **Start a service tool** and press Enter.
 - ___ d. Select **Hardware service manager** and press Enter.
 - ___ e. Select **Logical hardware resources (buses, IOPs, controllers,...)** and press Enter.
 - ___ f. Select **System bus resources** and press Enter.
 - ___ g. Use the cursor to select the 289x Communications IOP you are working on.
 - ___ h. Select the **Associated packaging resource(s)** option in the *Opt* field in front of that 289x IOP card and press Enter.
 - ___ i. At the *Packaging Resources Associated with a Logical Resource* display, use the cursor to select **Communications IOP**.
 - ___ j. Select the **Associated logical resource(s)** option in the *Opt* field and press Enter.
 - ___ k. At the *Logical Resources Associated with a Packaging Resource* display, use the cursor to select **Communications IOA**.
 - ___ l. Select the **Display detail** option in the *Opt* field and press Enter.
 - ___ m. Look at *Memory installed on IOA (MB)* and verify that the current amount of memory that is installed on the 289x is correct.
 - ___ n. Press F3 three times and press Enter to return to the Main Menu.
- ___ 2. Power off your iSeries system unit. For more information on powering off your system, see "Power off the system unit" on page 15.
- ___ 3. Remove the system unit back cover if you have not done so. For more information on the removing back cover, see "Remove the back cover" on page 16.
- ___ 4. Remove the system unit right side cover (from back view) if you have not done so. For more information on removing the side cover, see "Remove the side cover" on page 17.
- ___ 5. The IXS is located in slot C04. For information on the location of card slots, see "Card positions in the 270 system unit or 5075 expansion unit" on page 20.
- ___ 6. Remove all cables that are attached to the card.
- ___ 7. Adapter cards are fragile. **Use the static strap when handling.** Handle only by the edges, and keep fingers off printed circuit area.

Remove the Integrated xSeries Server by turning the latch up and pulling the latch out toward you. Squeeze the metal lever while removing the IXS from the system unit. On some cards it will be necessary to remove the screw that holds the adapter card in place.
- ___ 8. Lay the IXS on a static protective surface.
- ___ 9. Find the package that contains a 289x server memory card. Carefully remove the memory card from the static-protective package.

- ___ 10. There are locations for one IOP memory card **A** and four server memory cards. Install the 289x server memory card on the IXS by doing the following:
 - ___ a. Align the memory card with the next available connector on the IXS card.
 - ___ b. Snap the card in place by moving it downward in the connector. The memory card has a distinct click as it snaps into the connector.



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Figure 2. Location of memory on IXS

- ___ c. Repeat this step if you have another 289x memory card to install.
- ___ 11. Install the IXS card into the system unit. Align the card with the card holders inside the system unit until it is fully connected. Swing the latches in and down to secure the card.
- ___ 12. Re-attach the cables that you removed from the IXS.

Complete the installation

- ___ 1. Install covers and plug in the system unit and devices. For more information, see “Install system unit covers” on page 21.
- ___ 2. Look at the Function/Data display on the 270 system unit control panel. Does **01 B N V=S** appear in the Function/Data display?
 - ___ **Yes:** Continue with the next step.
 - ___ **No:** Do the following:
 - ___ a. Open the control panel door.
 - ___ b. Press the Increment/Decrement push button until **02** appears in the Function/Data display.
 - ___ c. Press the Enter push button on the control panel.
 - ___ d. Press the Increment/Decrement push button until **B** appears in the Function/Data display.
 - ___ e. Press the Enter push button on the control panel.
 - ___ f. Press the Increment/Decrement push button until **N** appears in the Function/Data display.
 - ___ g. Press the Enter push button on the control panel.

- ___ h. Press the Increment/Decrement push button until **S** appears in the Function/Data display.
 - ___ i. Press the Enter push button on the control panel.
 - ___ j. Press the Increment/Decrement push button until **01** appears in the Function/Data display.
 - ___ k. Press the Enter push button on the control panel.
01 B N S should appear in the Function/Data display.
 - ___ l. Go to step 3.
- ___ 3. Power on the workstation or PC that is your console.
 - ___ 4. Press the power-on button for the system unit. The power-on light will appear.

Note: There is an approximately 10-second delay before the system unit powers on.

- ___ 5. Sign on the system unit. Ensure that you have service tools authority.
- ___ 6. Do the following to verify your adapter card configuration:
 - ___ a. On the command line, type **strsst**. Press the Enter key.
 - ___ b. Type **your service tools user ID and your service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
 - ___ c. Select the **Start a service tool** option and press the Enter key.
 - ___ d. Select the **Hardware service manager** option and press the Enter key.
 - ___ e. Select the **Packaging hardware resources (system, frames, cards...)** option and press the Enter key.
 - ___ f. Type a **9** in front of the *System Unit* and press the Enter key.
If the 289x card is not listed, ensure that the card is properly installed.
 - ___ g. On the *Packaging Hardware Resources* menu, type an **8** in the *Opt* column next to *Communications IOP 289x*. This will be card Type-Model, for example, 2890-001. Press the Enter key.
 - ___ h. When the *Logical Resources Associated with a Packaging Resource* menu appears, type a **5** in the *Opt* column next to the *Communications IOA*. Press the Enter key.
 - ___ i. When the *Communications Hardware Resource Detail* menu appears, look at the line "Memory installed on IOA (MB)." The number should reflect the amount of memory you just installed on your 289x Integrated xSeries Server. If it does not, ensure that the memory cards are properly installed.
 - ___ j. IXS memory test:
 - ___ 1) Press **F12** once.
 - ___ 2) Enter the **Verify** option next to the 289x IOA. Press Enter.
 - ___ 3) Press Enter at the *Verification Test* display.
 - ___ 4) Select the **Hardware memory test** option. Press Enter.

Note: This memory test will take about 2 minutes per 1GB of memory to be tested.

- ___ 5) Press Enter at the *Number of Test Runs* display.

Note: If the test fails, make sure that you have installed the memory properly. If the test continues to fail, contact your authorized dealer or service provider.

- ___ 7. When the memory test is complete, the *Verification Test Results* display indicates the following: This test is successful. Press Enter.
- ___ 8. Press Enter at the *Verification Test* display.
- ___ 9. Press F3 three times and then press Enter to return to the Main Menu.
- ___ 10. Vary on the IXS:
 - ___ a. Go to the *Work with Configuration Status* display by entering WRKCFGSTS at a command line. Press F4.
 - ___ b. At the *Work with Configuration Status* display enter *NWS at the *Type* field and press Enter two times.
 - ___ c. At the *Work with Configuration Status* display enter the **Vary on** option in the *Opt* column next to the **IXS** and press Enter.
 - ___ d. Press F3 to exit.
- ___ 11. Your feature upgrade is complete.
- ___ 12. For information on how to make your card operational, go to the iSeries Information Center.
- ___ 13. You have completed installing memory on your Integrated xSeries Server.

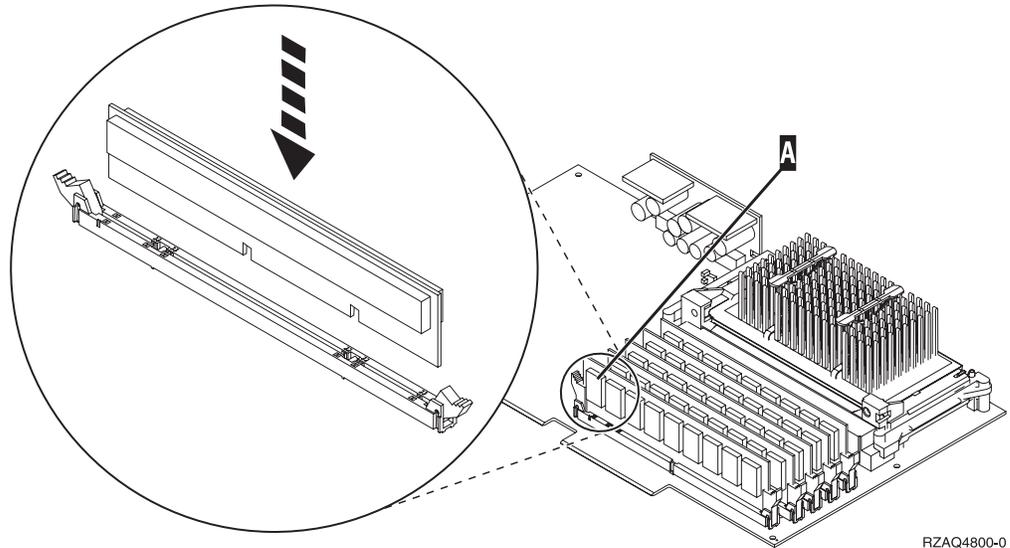
Install memory on the IXS in the 5075 expansion unit

- ___ 1. Are you installing the memory cards on the IXS concurrently (270 and 5075 powered on)?
 - ___ **Yes:** Continue with the instructions.
 - ___ **No:** Go to "Install memory on the IXS nonconcurrently (system unit and expansion unit powered off)" on page 12.

Install memory on the IXS concurrently (system unit and expansion unit powered on)

- ___ 1. Remove the left side cover for the 5075 expansion unit. For more information on removing the covers, see "Remove the 5075 back and side covers" on page 19.
- ___ 2. Vary off the IXS:
 - ___ a. Go to the *Work with Configuration Status* display by entering: **WRKCFGSTS** at a command line. Press F4.
 - ___ b. At the *Work with Configuration Status* display enter *NWS at the *Type* field and press Enter two times.
 - ___ c. At the *Work with Configuration Status* display enter the **Vary off** option in the *Opt* column next to the IXS and press Enter.
 - ___ d. Press F12 to exit.
- ___ 3. Verify current IXS memory.
 - ___ a. At a command line, type **strsst** and press Enter.
 - ___ b. Type **your service tools user ID and your service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
 - ___ c. Select the **Start a service tool** option and press Enter.
 - ___ d. Select the **Hardware service manager** and press Enter.
 - ___ e. Select the **Packaging hardware resources (systems, frames, cards,...)** option. Press Enter.

- ___ f. Select the **Hardware contained within package** option in the *Opt* field in front of the System Expansion Unit containing the 289x you are adding memory to. Press Enter.
 - ___ g. Use the cursor to select the 289x communications IOP card you are working with.
 - ___ h. Select the **Associated logical resource(s)** option in the *Opt* field in front of that 289x IOP card and press Enter.
 - ___ i. At the *Logical Resources Associated with a Packaging Resource* display, use the cursor to select Communications IOA.
 - ___ j. Select the **Display detail** option in the *Opt* field and press Enter.
 - ___ k. Look at *Memory installed on IOA (MB)* and verify that the current amount of memory that is installed on the 289x is correct.
 - ___ l. Press F12 twice to go back to the *Packaging Hardware Resources* display.
- ___ 4. Verify location of the IXS:
- ___ a. Use the cursor to select the **289x Communications IOP**.
 - ___ b. Select the **Concurrent Maintenance** option and press Enter.
 - ___ c. Use the cursor to select **Communications IOP**.
 - ___ d. Select the **Toggle LED blink off/on** option and press Enter.
The LED at the card slot you chose should blink.
 - ___ e. Select the **Toggle LED blink off/on** option again, and press Enter.
The LED at the card slot you chose should stop blinking and remain on.
- ___ 5. With the cursor still at the Communications IOP line, press **F9** (Power off domain).
- ___ 6. At the confirmation display press Enter. Wait for the power off to complete. The following message should appear:
Power off complete. Check power indicator (LED) to confirm.
- When the LED at the card slot you chose is off, it is safe to proceed. While you do the next steps, keep your console at the *Hardware Resources Concurrent Maintenance* display.
- ___ 7. Adapter cards are fragile. **Use static strap when handling.** Handle only by the edges, and keep fingers off the printed circuit area.
Remove all cables that are attached the Integrated xSeries Server (IXS).
Remove the IXS by turning the latch up and pulling the latch out toward you. Squeeze the latch on the left end of the IXS while pulling the card toward you.
- ___ 8. Lay the IXS on a static protective surface.
- ___ 9. Find the package that contains a 289x memory card. Carefully remove the memory card from the static-protective package.
- ___ 10. There are locations for one IOP memory card **A** and four server memory cards. Install the 289x server memory card on the IXS by doing the following:
- ___ a. Align the memory card with the next available connector on the IXS card.
 - ___ b. Snap the card in place by moving it downward in the connector. The memory card has a distinct click as it snaps into the connector.



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Figure 3. Location of memory on IXS

- ___ c. Repeat this step if you have another 289x memory card to install.
- ___ 11. Install the IXS card into the system unit.
- ___ 12. Re-attach the cables you removed from the IXS card.
- ___ 13. Install covers. For more information, see “Install system unit covers” on page 21.
- ___ 14. Power on the IXS.
 - ___ a. The cursor on your console should be where the Communications IOA was.
 - ___ b. Press **F10** (Power on domain) and enter to confirm power on.

Note: If the *Work with Controlling Resource* display appears, select the **Assign to** option for each resource on the display. Then press Enter and wait for the power on to complete.

- ___ c. At the *Hardware Resource Concurrent Maintenance* display, press **F8** to verify that the power status is on for all resources.
- ___ d. Use the cursor to select the **Communications IOP**.
- ___ e. Enter the **Associated logical resource(s)** option and press Enter.
- ___ f. Use the cursor to select the **Communications IOA**.
- ___ g. Enter the **Display detail** option and press Enter.
- ___ h. Verify that the correct amount of memory is installed.
- ___ i. IXS memory test:
 - ___ 1) Press **F12** once.
 - ___ 2) Enter the **Verify** option next to the 289x IOA. Press Enter.
 - ___ 3) Press Enter at the *Verification Test* display.
 - ___ 4) Select the **Hardware memory test** option. Press Enter.

Note: This memory test will take about 2 minutes per 1GB of memory to be tested.

- ___ 5) Press Enter at the *Number of Test Runs* display.

Note: If the test fails, make sure that you have installed the memory properly. If the test continues to fail, contact your authorized dealer or service provider.

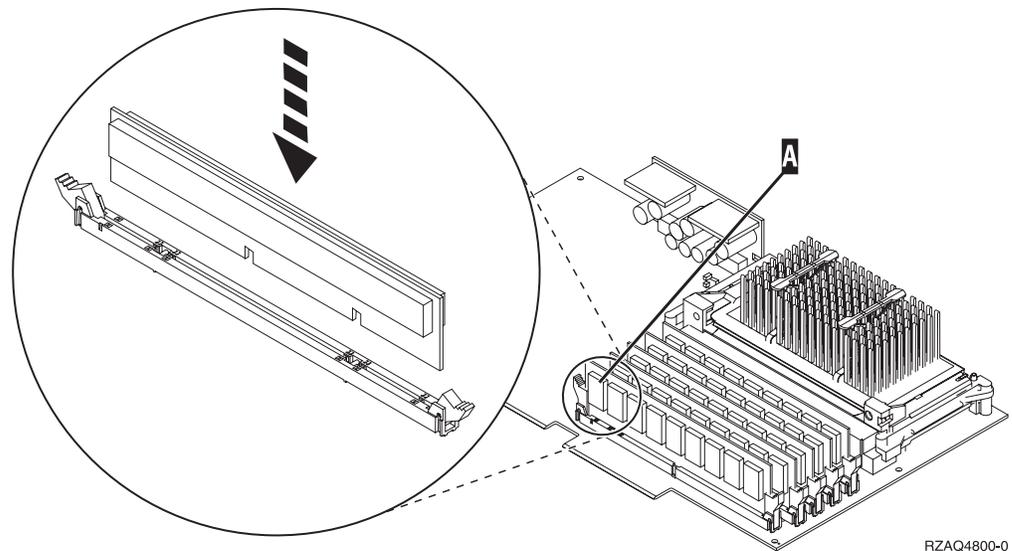
Complete the Installation

- ___ 1. When the memory test is complete, the *Verification Test Results* display indicates the following: This test is successful. Press Enter.
- ___ 2. Press Enter at the *Verification Test* display.
- ___ 3. Press F3 three times and then press Enter to return to the Main Menu.
- ___ 4. Vary on the IXS:
 - ___ a. Go to the *Work with Configuration Status* display, by entering WRKCFGSTS at a command line. Press F4.
 - ___ b. At the *Work with Configuration Status* display enter *NWS at the *Type* field and press Enter two times.
 - ___ c. At the *Work with Configuration Status* display enter the **Vary on** option in the *Opt* column next to the **IXS** and press Enter.
 - ___ d. Press **F3** to exit.
- ___ 5. Your feature upgrade is complete.
- ___ 6. For information on how to make your card operational, go to the iSeries Information Center.
- ___ 7. You have completed installing memory on your Integrated xSeries Server.

Install memory on the IXS nonconcurrently (system unit and expansion unit powered off)

- ___ 1. Verify the current memory on your IXS by doing these steps:
 - ___ a. At a command line, type **strsst** and press Enter.
 - ___ b. Type **your service tools user ID and your service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
 - ___ c. Select the **Start a service tool** option and press Enter.
 - ___ d. Select the **Hardware service manager** and press Enter.
 - ___ e. Select the **Packaging hardware resources (systems, frames, cards,...)** option. Press Enter.
 - ___ f. Select the **Hardware contained within package** option in the *Opt* field in front of the System Expansion Unit containing the 289x you are adding memory to. Press Enter.
 - ___ g. Use the cursor to select the 289x communications IOP card you are working with.
 - ___ h. Select the **Associated logical resource(s)** option in the *Opt* field in front of that 289x IOP card and press Enter.
 - ___ i. At the *Logical Resources Associated with a Packaging Resource* display, use the cursor to select Communications IOA.
 - ___ j. Select the **Display detail** option in the *Opt* field and press Enter.
 - ___ k. Look at *Memory installed on IOA (MB)* and verify that the current amount of memory that is installed on the 289x is correct.
 - ___ l. Press F3 three times then press Enter to exit.
- ___ 2. Power off your system unit. For more information on powering off your system, see "Power off the system unit" on page 15.

- ___ 3. Remove the left side cover for the 5075 expansion unit. For more information on removing the covers, see “Remove the 5075 back and side covers” on page 19.
- ___ 4. The 289x IXS uses two slot positions. You may have two IXS cards installed in the 5075 expansion unit. The IXS is installed in either C02 (with C03 empty) or C05 (with C06 empty). For information on location of card slots, see “Card positions in the 270 system unit or 5075 expansion unit” on page 20.
- ___ 5. Remove the cables from the IXS card receiving memory.
- ___ 6. Adapter cards are fragile. **Use the static strap when handling.** Handle only by the edges, and keep fingers off printed circuit area.
Remove the Integrated xSeries Server by turning the latch up and pulling the latch out toward you. Squeeze the metal lever while removing the IXS from the system unit.
- ___ 7. Lay the IXS on a static protective surface.
- ___ 8. Find the package that contains a 289x memory card. Carefully remove the memory card from the static-protective package.
- ___ 9. There are locations for one IOP memory card **A** and four server memory cards. Install the 289x server memory card on the IXS by doing the following:
 - ___ a. Align the memory card with the next available connector on the IXS card.
 - ___ b. Snap the card in place by moving it downward in the connector. The memory card has a distinct click as it snaps into the connector.



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Figure 4. Location of memory on IXS

- ___ c. Repeat this step if you have another 289x memory card to install.
- ___ 10. Install the IXS card into the system unit.
- ___ 11. Re-attach the cables that you removed from the IXS.

Complete the installation

- ___ 1. Install covers and plug in the system unit and devices. For more information, see “Install system unit covers” on page 21.

- ___ 2. Look at the Function/Data display on the 270 system unit control panel. Does **01 B N V=S** appear in the Function/Data display?
 - ___ **Yes:** Continue with the next step.
 - ___ **No:** Do the following:
 - ___ a. Press the Increment/Decrement push button until **02** appears in the Function/Data display.
 - ___ b. Press the Enter push button on the control panel.
 - ___ c. Press the Increment/Decrement push button until **B** appears in the Function/Data display.
 - ___ d. Press the Enter push button on the control panel.
 - ___ e. Press the Increment/Decrement push button until **N** appears in the Function/Data display.
 - ___ f. Press the Enter push button on the control panel.
 - ___ g. Press the Increment/Decrement push button until **S** appears in the Function/Data display.
 - ___ h. Press the Enter push button on the control panel.
 - ___ i. Press the Increment/Decrement push button until **01** appears in the Function/Data display.
 - ___ j. Press the Enter push button on the control panel.
01 B N S should appear in the Function/Data display.
 - ___ k. Go to step 3.
- ___ 3. Power on the workstation or PC that is your console.
- ___ 4. Press the power-on button for the system unit. The power-on light will appear.

Note: There is an approximately 10-second delay before the system unit powers on. The system takes approximately 5 to 20 minutes to power on and complete an IPL.

- ___ 5. Sign on the system unit. Ensure that you have service tools authority.
- ___ 6. Do the following to verify your adapter card configuration:
 - ___ a. On a command line, type **strsst**. Press the Enter key.
 - ___ b. Type **your service tools user ID and your service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
 - ___ c. Select the **Start a service tool** option and press the Enter key.
 - ___ d. Select the **Hardware service manager** option and press the Enter key.
 - ___ e. Select the **Packaging hardware resources (system, frames, cards...)** option and press the Enter key.
 - ___ f. Type a **9** in front of the *System Unit* or *System Expansion Unit* and press the Enter key.
If the adapter card is not listed, ensure that the card is properly installed.
 - ___ g. On the *Packaging Hardware Resources* menu, type an **8** in the *Opt* column next to *Communications IOP 289x*. This will be card Type-Model, for example 2890-001. Press the Enter key.
 - ___ h. When the *Logical Resources Associated with a Packaging Resource* menu appears, type a **5** in the *Opt* column next to the *Communications IOA*. Press the Enter key.

- ___ i. When the *Communications Hardware Resource Detail* menu appears, look at the line "Memory installed on IOA (MB)." The number should reflect the amount of memory you just installed on your 289x Integrated xSeries Server. If it does not, ensure that the memory cards are properly installed.
- ___ j. IXS memory test:
 - ___ 1) Press **F12** once.
 - ___ 2) Enter the **Verify** option next to the 289x IOA. Press Enter.
 - ___ 3) Press Enter at the *Verification Test* display.
 - ___ 4) Select the **Hardware memory test** option. Press Enter.

Note: This memory test will take about 2 minutes per 1GB of memory to be tested.

- ___ 5) Press Enter at the *Number of Test Runs* display.

Note: If the test fails, make sure that you have installed the memory properly. If the test continues to fail, contact your authorized dealer or service provider.

- ___ 7. When the memory test is complete, the *Verification Test Results* display indicates the following: This test is successful. Press Enter.
- ___ 8. Press Enter at the *Verification Test* display.
- ___ 9. Press F3 three times and then press Enter to return to the Main Menu.
- ___ 10. Vary on the IXS:
 - ___ a. Go to the *Work with Configuration Status* display by entering WRKCFGSTS at a command line. Press F4.
 - ___ b. At the *Work with Configuration Status* display, enter ***NWS** at the *Type* field and press Enter two times.
 - ___ c. At the *Work with Configuration Status* display, enter the **Vary on** option in the *Opt* column next to the **IXS** and press Enter.
 - ___ d. Press **F3** to exit.
- ___ 11. Your feature upgrade is complete.
- ___ 12. For information on how to make your card operational, go to the iSeries Information Center.
- ___ 13. You have completed installing memory on your Integrated xSeries Server.

How to power off the iSeries, remove covers, and locate card positions

This section describes how to power off your iSeries and remove covers.

Power off the system unit

- ___ 1. Ensure that all jobs are complete.
- ___ 2. When all jobs are complete, type **pwrdownsys *immed** on a command line and press Enter.

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

- ___ 3. When the unit is completely powered down, disconnect all PCs from the system unit. Power off all devices, such as printers and displays, that are connected to the system unit.

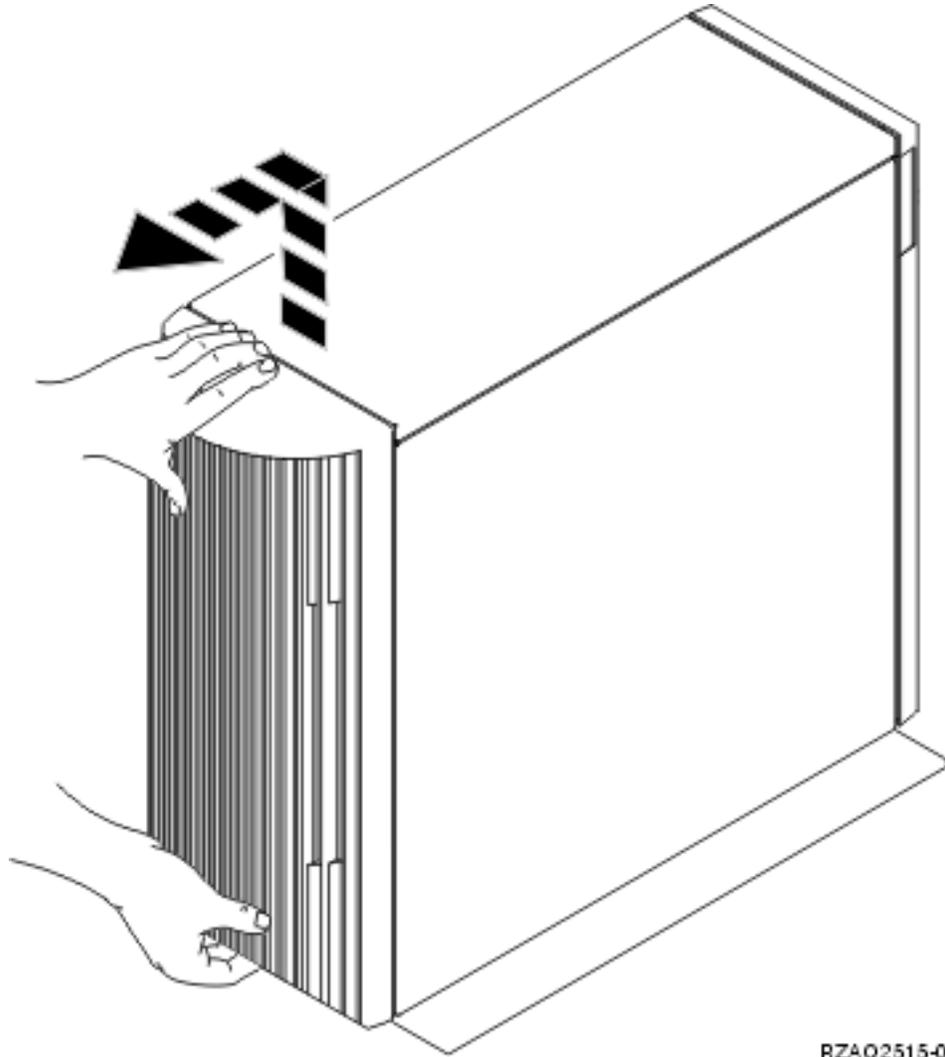
- ___ 4. Unplug any power cords, such as printers and displays, from electrical outlets.
- ___ 5. Unplug the system-unit power cord and any attached expansion-unit power cords from the electrical outlet.
- ___ 6. Refer to **“Remove the back cover”** to remove the system unit covers.
- ___ 7. **Attach the disposable wrist strap to prevent electrostatic discharge from damaging a device.** Attach the adhesive part of the foil to an unpainted surface on the frame of the unit.

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 or decrease your risk of receiving electric shock when using or working on electrical equipment.
- b. Remove the liner from the copper foil at the end, when you unroll the strap.
- c. Attach the copper foil to an **exposed, unpainted** metal surface on the frame of the unit (electrical ground).

Remove the back cover

- ___ 1. Remove the system unit back cover by placing your hand near the bottom of the cover and lifting up and out.



RZAQ2515-0

Figure 5. Remove system unit back cover

Remove the side cover

- ___ 1. Is your unit in a rack?
No: Go to step 2 on page 17.
Yes: Go to step 3 on page 19.
- ___ 2. Remove the right side cover (view from back) by loosening the screws and sliding the cover from front to back until it stops. Pull the cover out.

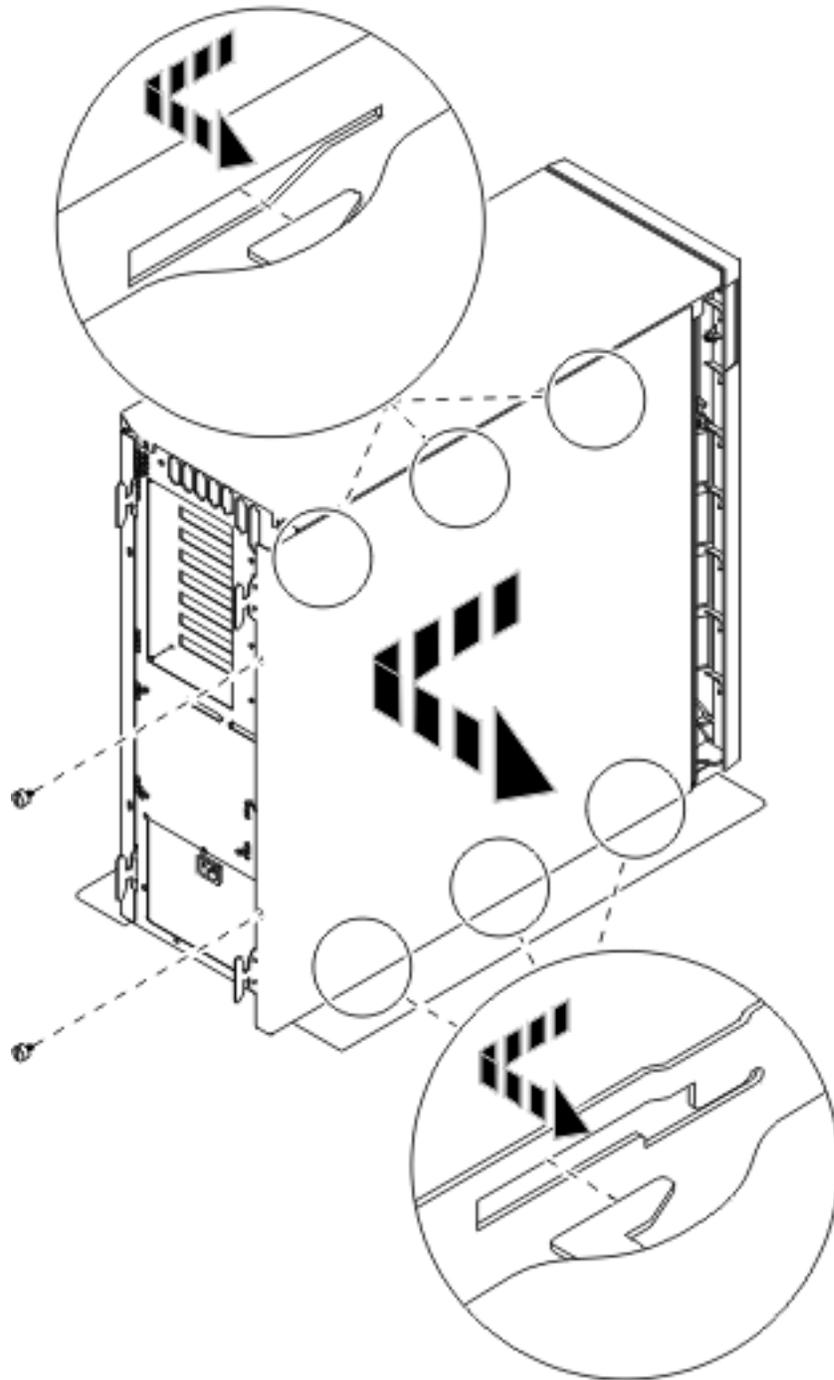
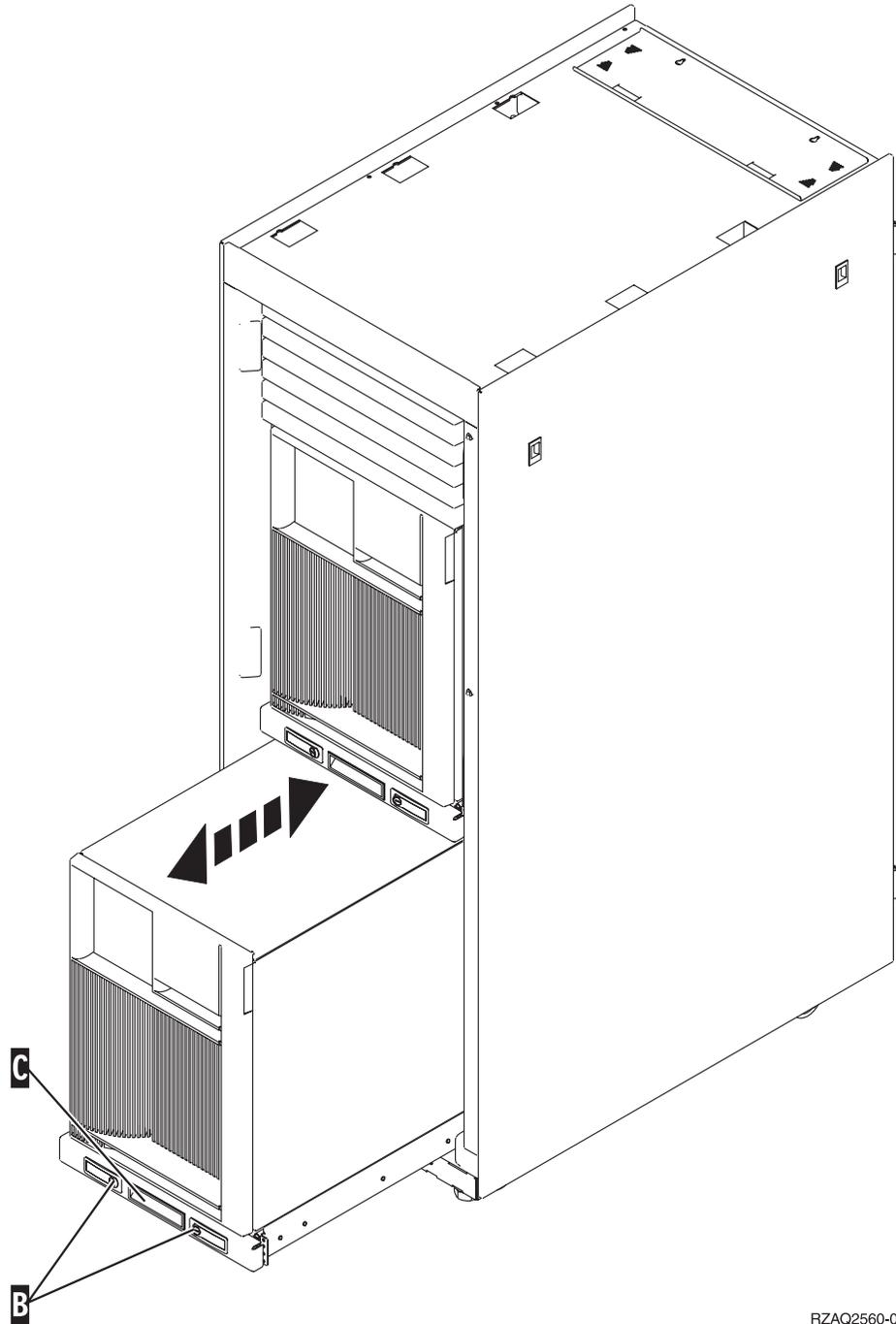


Figure 6. Remove system unit side cover

- ___ 3. Press the latches **B** and pull the server out using the handle **C**.

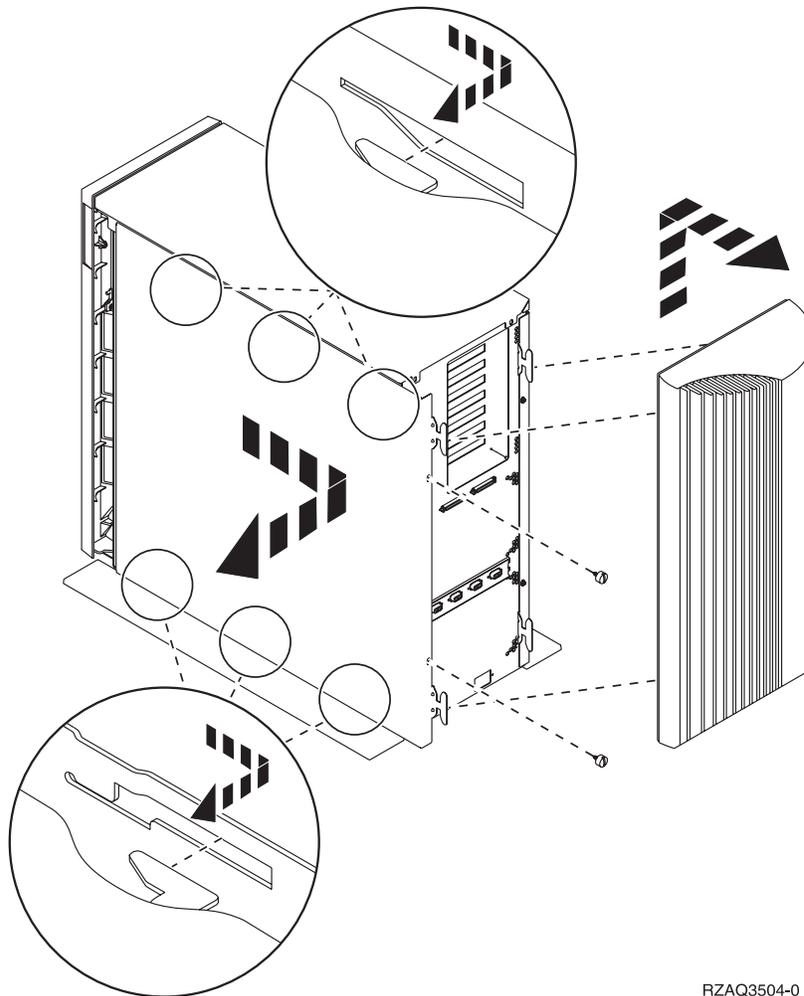


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Refer to Figure 6 on page 18 to remove the side cover.

Remove the 5075 back and side covers

- ___ 1. Figure 7 on page 20 shows removing the back cover by lifting up and out.
- ___ 2. Figure 7 on page 20 shows removing the side cover by loosening the screws and sliding the cover from front to back until it stops. Pull the cover out.



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Figure 7. Remove 5075 back cover and side cover

Card positions in the 270 system unit or 5075 expansion unit

1. Figure 8 on page 21 shows the card positions (back view) on a 270 system unit.

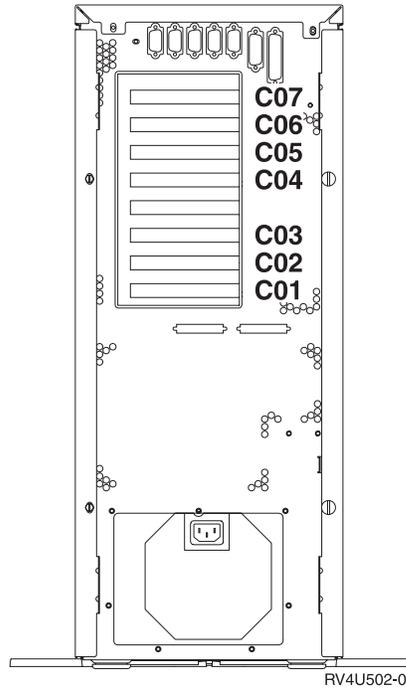


Figure 8. Card positions on the 270 system unit

2. **Figure 9** shows the card positions (side and back view) on a 5075 expansion unit.

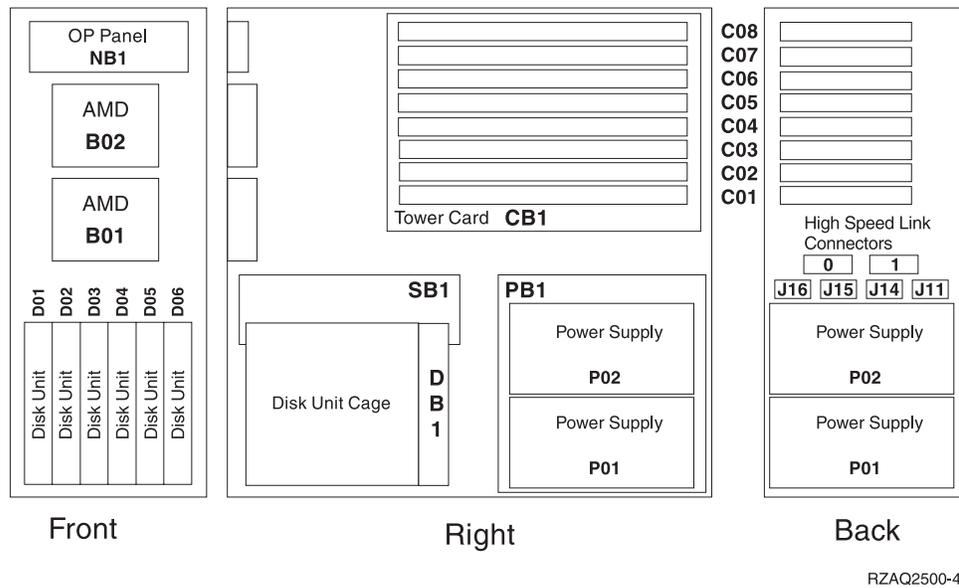


Figure 9. Card positions on the 5075 expansion unit

Install system unit covers

- ___ 1. Remove the wrist strap.
- ___ 2. **Figure 10 on page 22** shows how to install the system unit side cover by aligning the tabs on the top and bottom edge. Press forward to make sure

that all tabs enter the slots. Slide the cover toward the front of the system unit until it stops and install the screws.

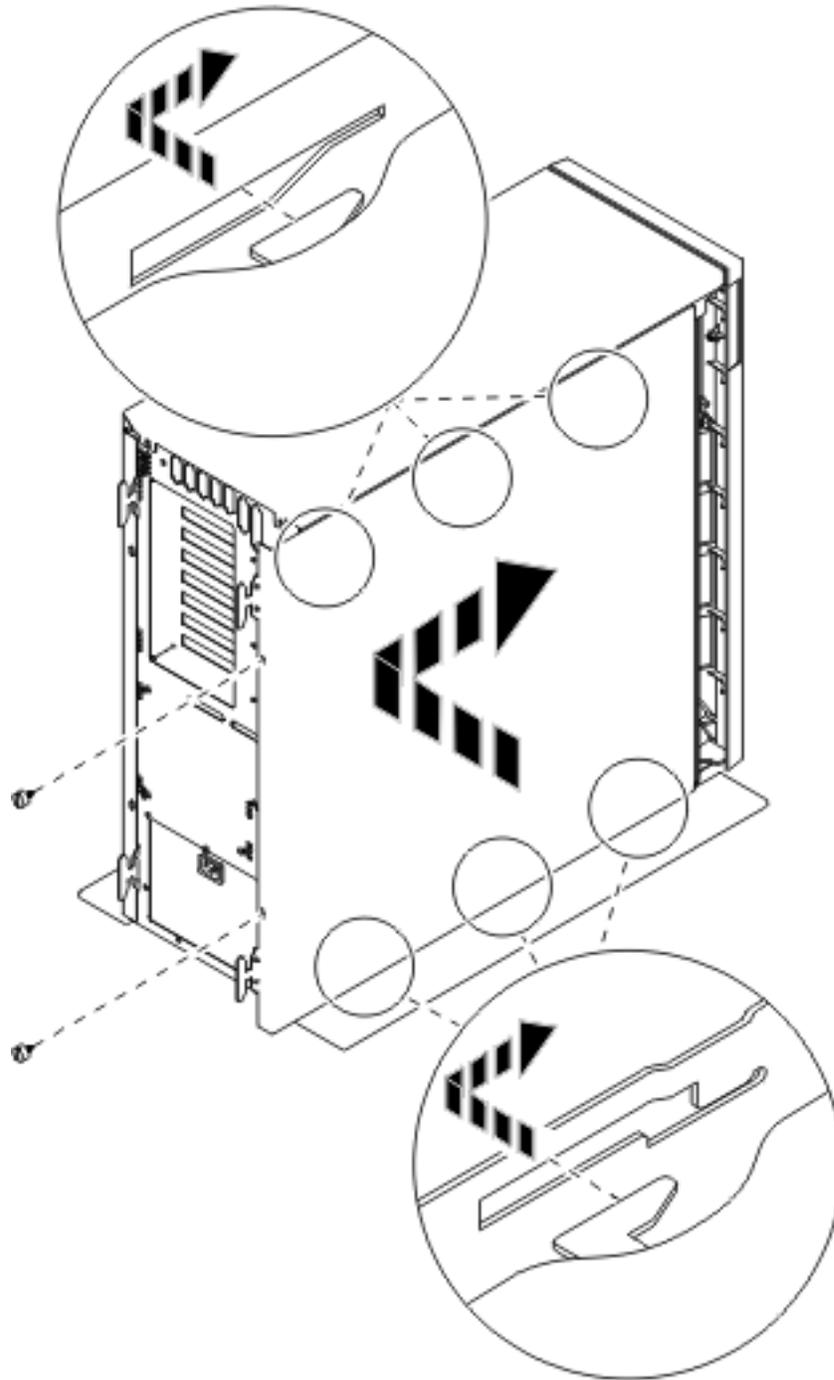


Figure 10. Install system unit side cover

___ 3. Install the system unit back cover if you have one.

___ 4. 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

Note: Do **not** power on your system unit at this time.

___ 5. Plug in and power on all attached devices, such as printers and displays.



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