

1

Removing/Replacing FRUs

Tools

Have the following tools available:

- A Phillips screwdriver
- An antistatic wrist strap connected to the chassis is required

Disconnect External Devices and Power

1. Turn off power to all external devices connected to server.
2. Turn server off.
3. Disconnect power from wall outlet.
4. Disconnect power cord and monitor cord from server.

Restoring the Module Serial Number

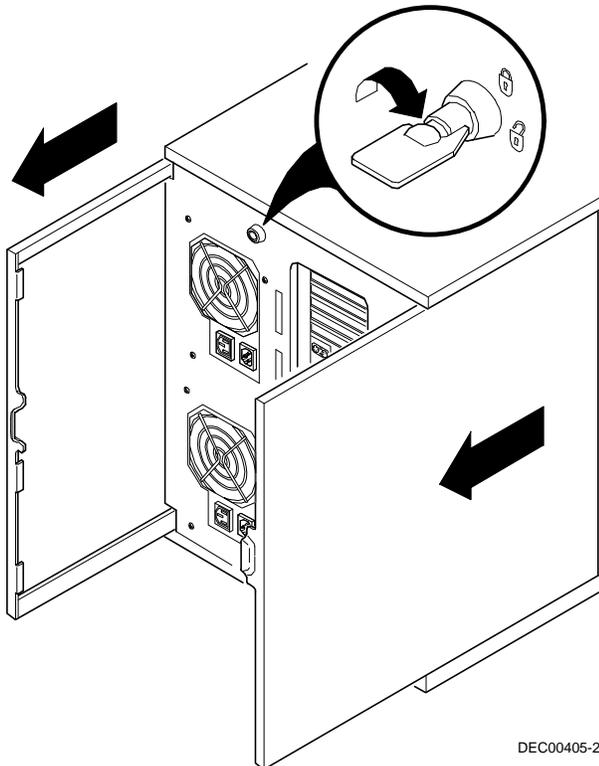
When a CPU module, memory module, or main logic board is replaced, the serial number stored on the CPU module, memory module, or main logic board must be updated using the SCU. After a change, the part number is displayed as invalid.

Removing/Replacing the Side Panels



WARNING: Removing the side panels activates the power interlock switches located at the top-left and top-right of your server. These switches turn off power to your server. You might injure yourself or damage your server if you attempt to bypass these switches.

1. Turn off server.
2. Unlock side panels.
3. Slide panels to rear of server.
4. Replace side panels by performing removal steps in reverse order.



DEC00405-2

Removing/Replacing a CPU Module

1. Turn off server.
2. Unlock and remove left side panel.
3. Remove CPU module retaining bracket.
4. Remove CPU module.
5. Replace CPU module by:
 - Verifying the switches on CPU module are properly set. Refer to the side panel label for the CPU module switch settings.



NOTE: All CPUs on the new CPU module must be the same CPU and cache size.

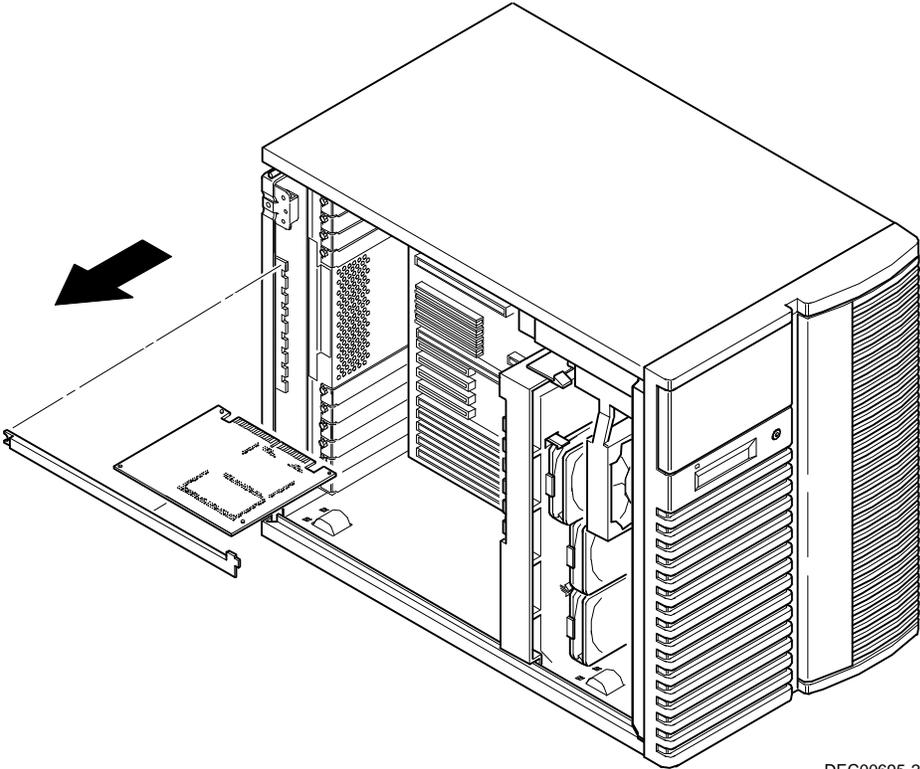
- Reverse steps 1-4.



NOTE: The CPU module has two sets of fingers. When replacing a CPU module, make sure that both sets of fingers are fully inserted into the slot.

6. Run the SCU to update system management information:
 - a. Select Configure Computer.
 - b. Mismatch between components stored information (server model number and/or serial numbers is detected).
 - c. Enter the proper server model and/or serial number
 - d. Select Save and exit SCU.

Removing/Replacing FRUs



DEC00695-2

Removing/Replacing a Memory Module

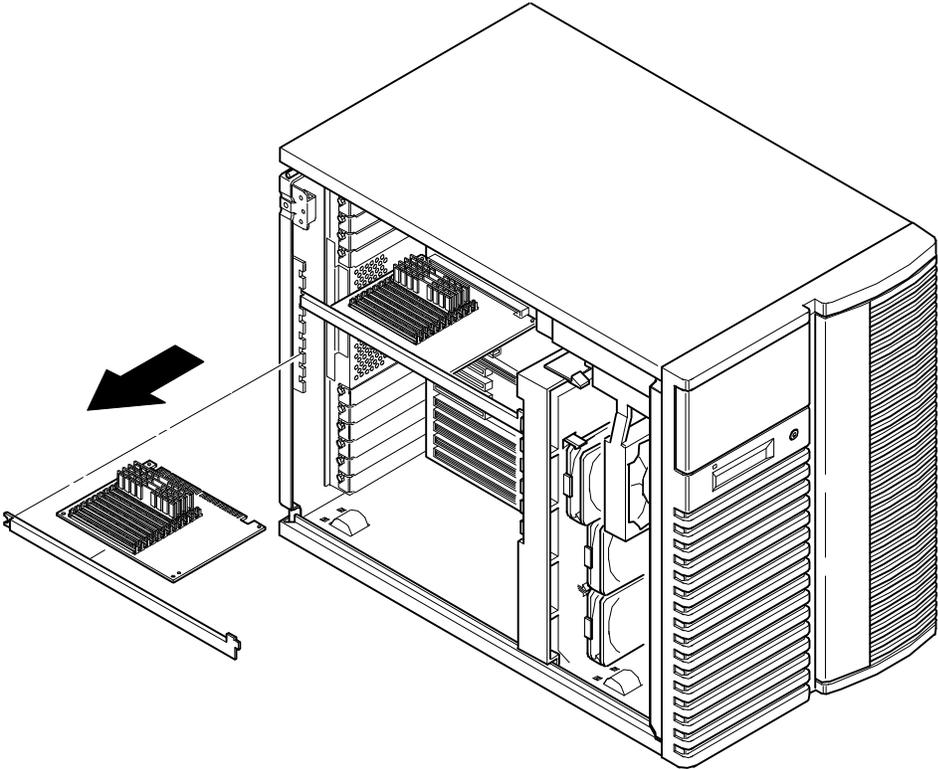
1. Turn off server.
2. Unlock and remove left side panel.
3. Remove memory module retaining bracket.
4. Remove memory module.
5. Note SIMM configuration then remove SIMM(s) from memory module.
6. Install SIMM(s) removed in step 5 to the new memory module.



NOTE: Memory must be configured according to the memory configuration rules located in the User's Guide.

7. Install memory module and retaining bracket.
8. Install and lock left side panel.
9. Run the SCU to configure server, verify configuration, and restore system management information.

Removing/Replacing FRUs

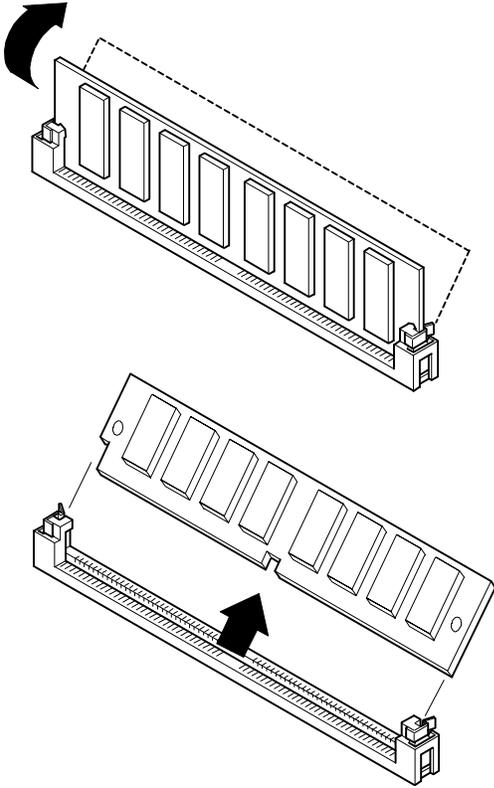


DEC00695-4

Removing/Replacing SIMMs

1. Turn off server.
2. Unlock and remove left side panel.
3. If SIMM(s) to be removed are on memory module, remove memory module.
4. Press SIMM retaining clips out.
5. Push SIMM down and pull out of socket.
6. Remove remaining SIMM, if necessary.
7. Replace SIMMs by performing removal steps in reverse order.
8. Run SCU to configure server and verify configuration.

Removing/Replacing FRUs



DEC00977

Removing/Replacing the Real-Time Clock (RTC)

1. Turn off server.
2. Unlock and remove left side panel.
3. Remove RTC from main logic board.
4. Replace RTC by carefully inserting it into socket as shown in the following illustration.
5. Install and lock left side panel.

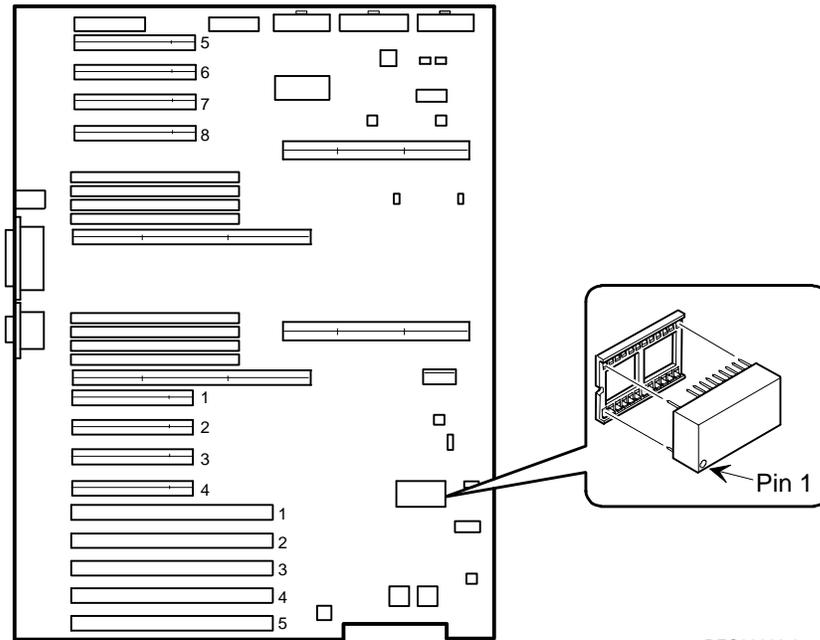


WARNING: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.



CAUTION: Depending on your locality, your server's RTC might be considered hazardous waste. Make sure you follow any state or local statute to properly dispose of the old RTC.

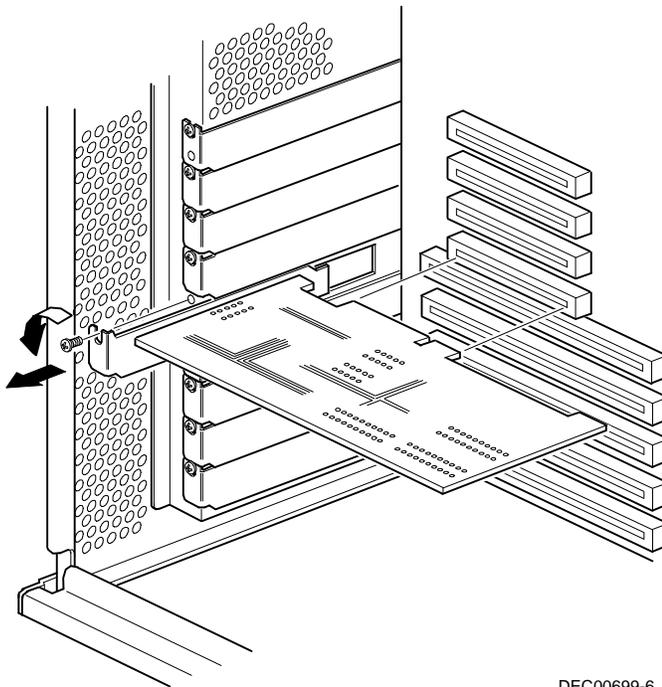
Removing/Replacing FRUs



DEC00692-3

Removing/Replacing Expansion Boards

1. Record configuration information for the expansion board being removed.
2. Turn off server.
3. Unlock and remove left side panel.
4. Remove internal and/or external cables.
5. Remove screw from bracket.
6. Gently pull expansion board from socket.
7. Replace expansion board by performing removal steps in reverse order.
8. Run SCU or appropriate utility to configure expansion board.

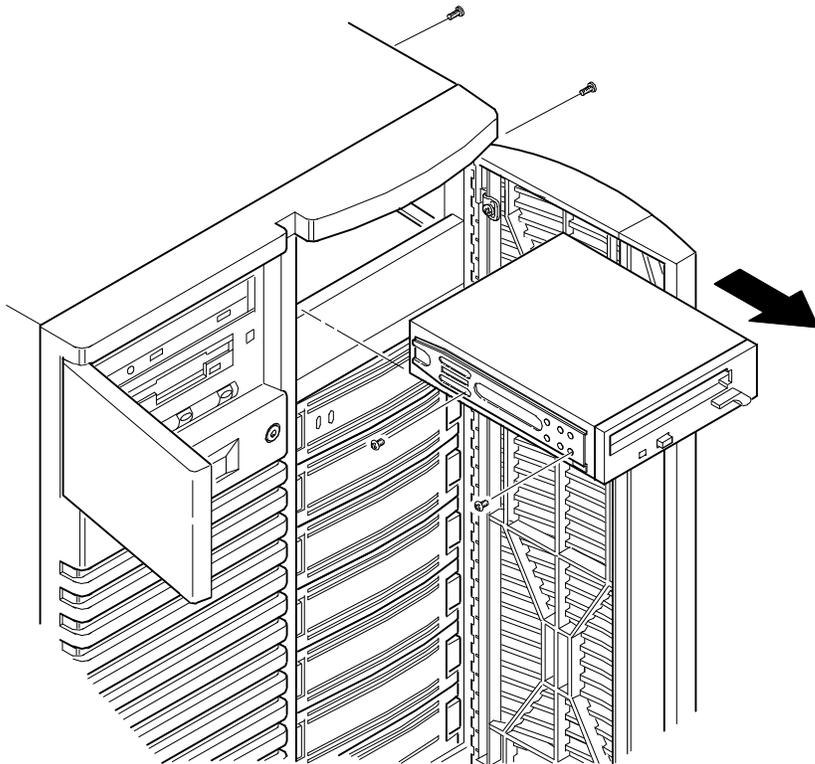


DEC00699-6

Removing/Replacing a 5¼-Inch Device from the Top-Right Drive Bay

1. Turn off server.
2. Unlock and remove right side panel.
3. Unlock and open right side door.
4. Disconnect power and data cables from drive.
5. Remove two screws from right side of drive bay.
6. Slide drive out front of drive bay.
7. Remove side bracket.
8. Replace 5¼-inch device by performing removal steps in reverse order.

Removing/Replacing FRUs

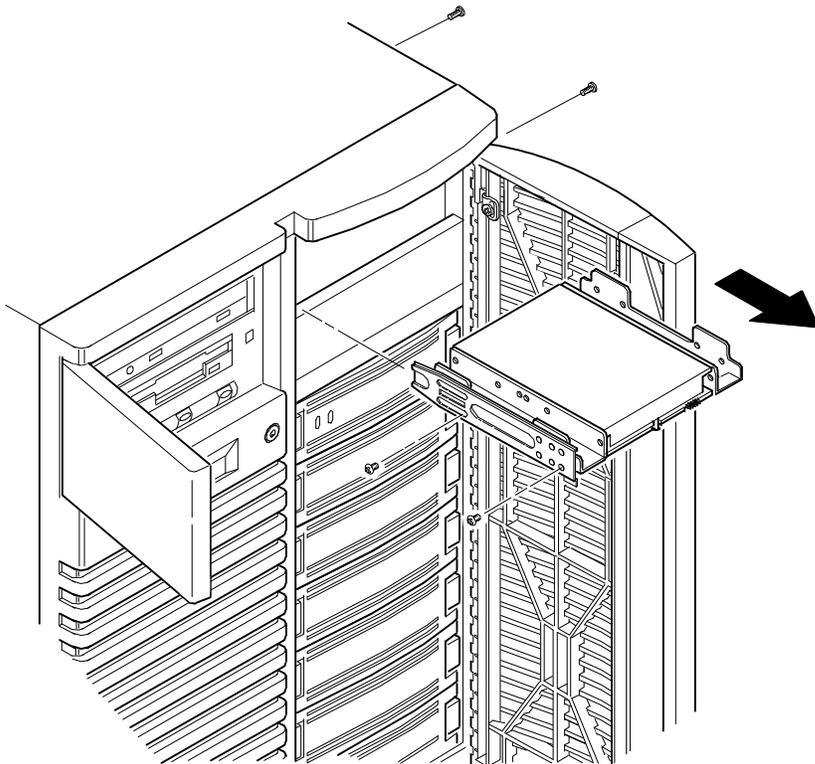


DEC00409-4

Removing/Replacing a 3½-Inch Device from the Top-Right Drive Bay

1. Turn off server.
2. Unlock and remove right side panel.
3. Unlock and open right side door.
4. Disconnect power and data cables from drive.
5. Remove two screws from right side of drive bay.
6. Slide drive out front of drive bay.
7. Remove side brackets.
8. Replace 3½-inch device by performing removal steps in reverse order.

Removing/Replacing FRUs



DEC00409-5

Removing/Replacing a Device from the Hot-Swap Drive Bay

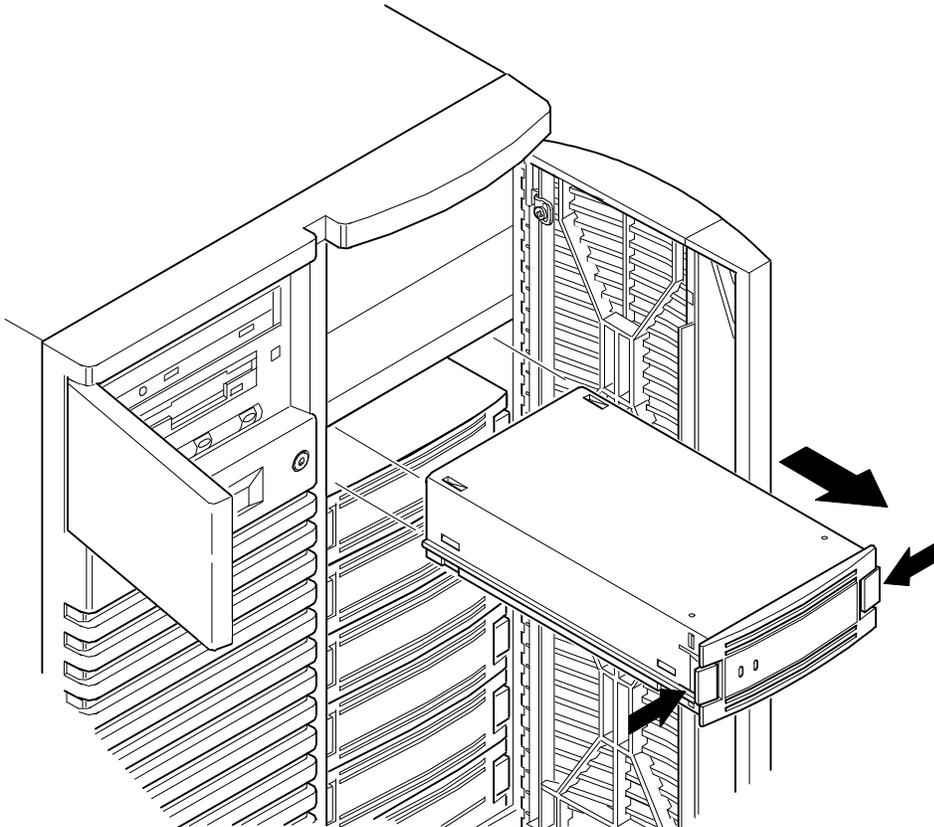
1. Unlock and open right side door.
2. Being careful not to scrape your fingers on the door edge, press two tabs together and remove SBB.



NOTE: There is an SBB extractor tool available.

3. Replace device by performing removal steps in reverse order.
4. Close and lock door.

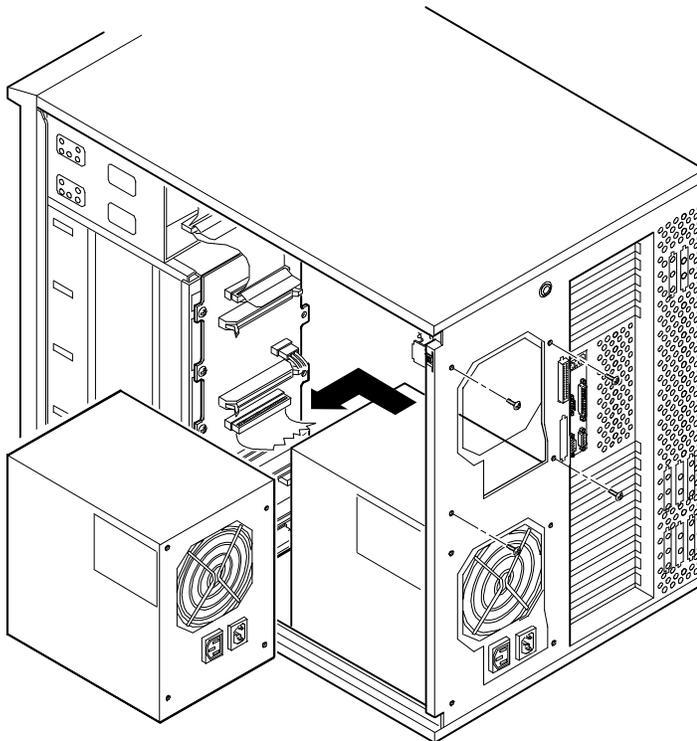
Removing/Replacing FRUs



DEC00409-6

Removing/Replacing a Power Supply

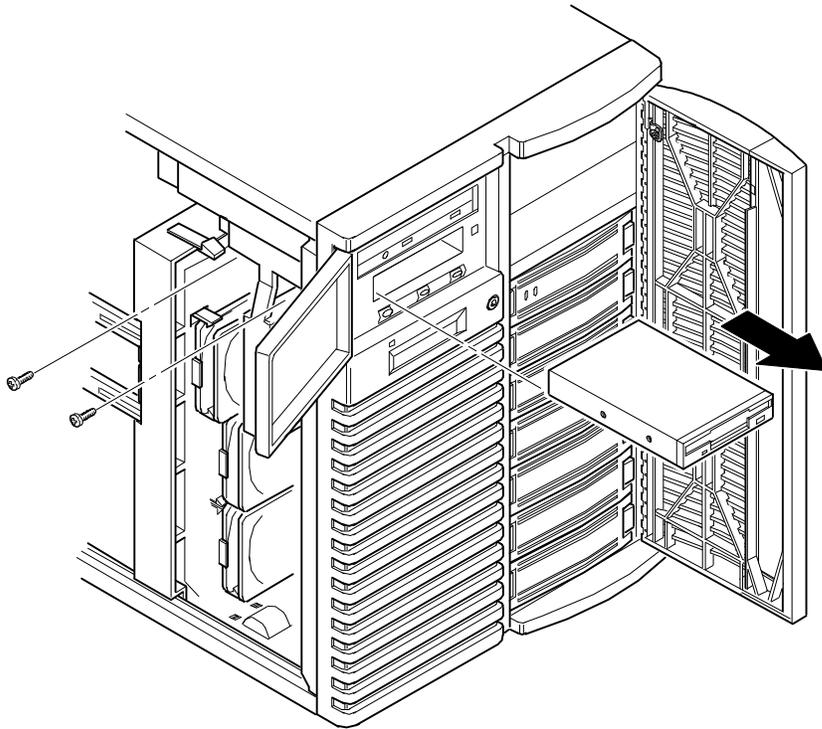
1. Turn off server.
2. Remove ac power cord and monitor cables.
3. Unlock and remove right side panel.
4. Disconnect wire harness connectors from power supply.
5. Remove four screws from rear of chassis.
6. Remove power supply.
7. Replace power supply by performing removal steps in reverse order.



DEC00978

Removing/Replacing the Diskette Drive

1. Turn off server.
2. Unlock and remove left side panel.
3. Open door.
4. Disconnect power and data cables from drive.
5. Remove two screws from drive bay.
6. Slide drive out front of drive bay.
7. Replace diskette drive by performing removal steps in reverse order.

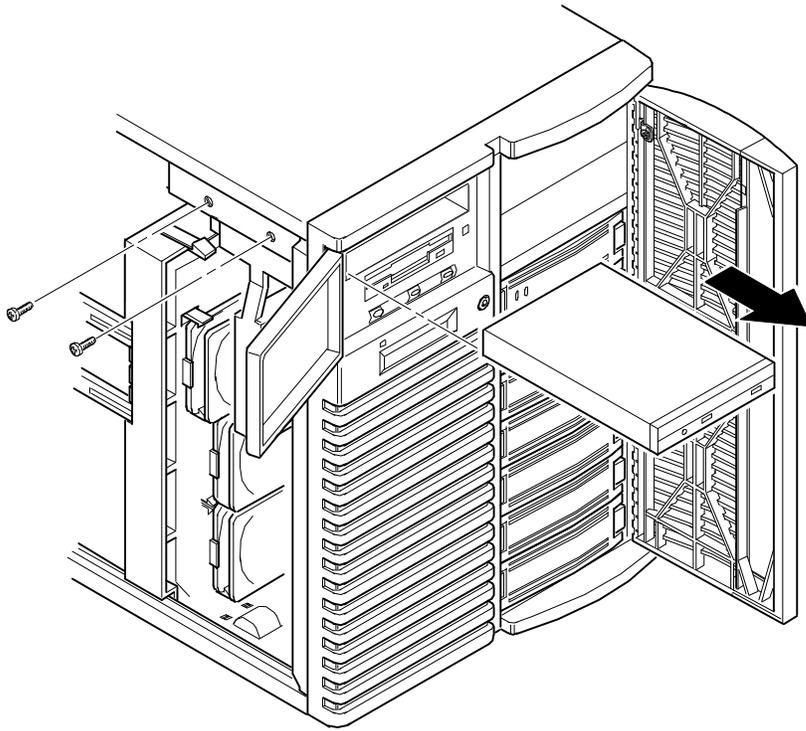


DEC00470-2

Removing/Replacing the CD-ROM Drive

1. Turn off server.
2. Unlock and remove left side panel.
3. Open door.
4. Disconnect power and data cables from drive.
5. Remove two screws from drive bay.
6. Slide drive out from drive bay by applying pressure at rear of CD-ROM drive.
7. Remove right side bracket from right side of CD-ROM drive.
8. Set jumpers on new CD-ROM drive identical to those on removed CD-ROM drive.
9. Replace CD-ROM drive by performing removal steps in reverse order.

Removing/Replacing FRUs

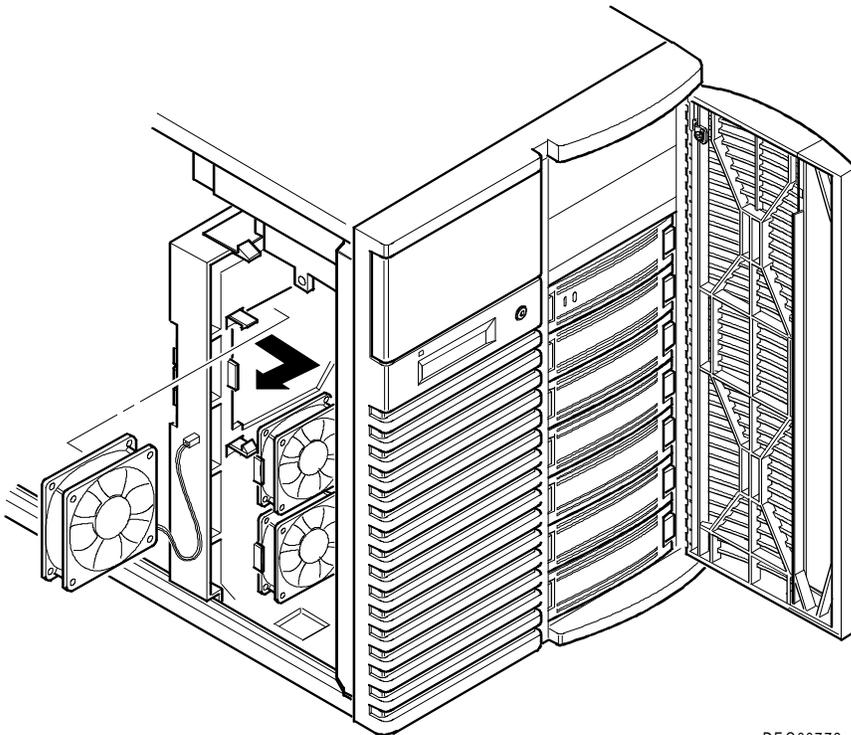


DEC00470-3

Removing/Replacing a Cooling Fan

The following procedure can be used to remove primary cooling fan 1, secondary cooling fan 4, and primary cooling fan 3.

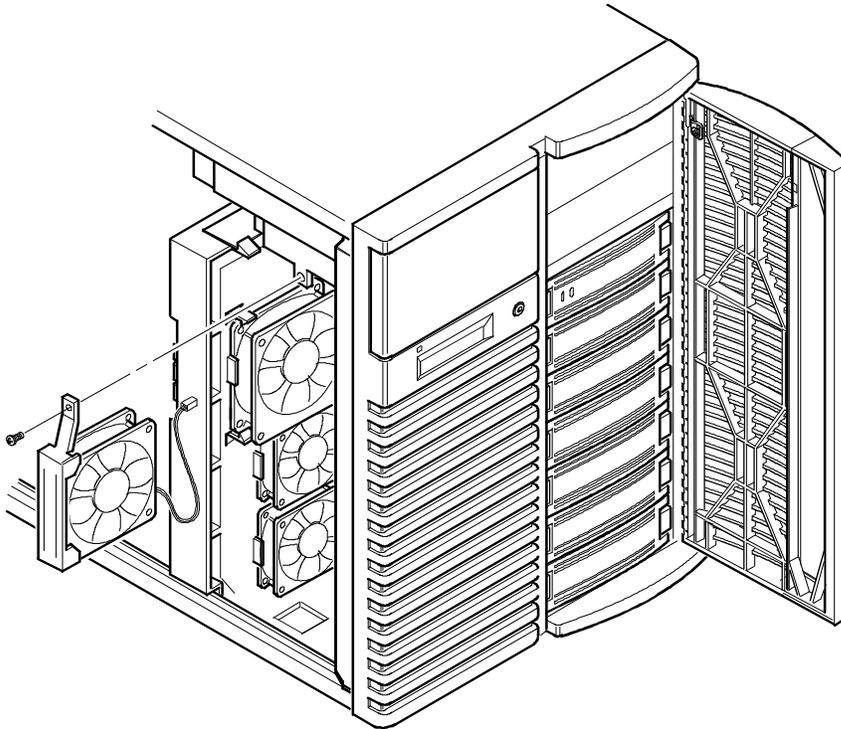
1. Turn off server.
2. Unlock and remove left side panel.
3. Disconnect fan cable from main logic board.
4. Release fan from plastic tabs.
5. Remove fan from chassis.
6. Replace fan by performing removal steps in reverse order.



DEC00776

Removing/Replacing the Secondary Cooling Fan 2

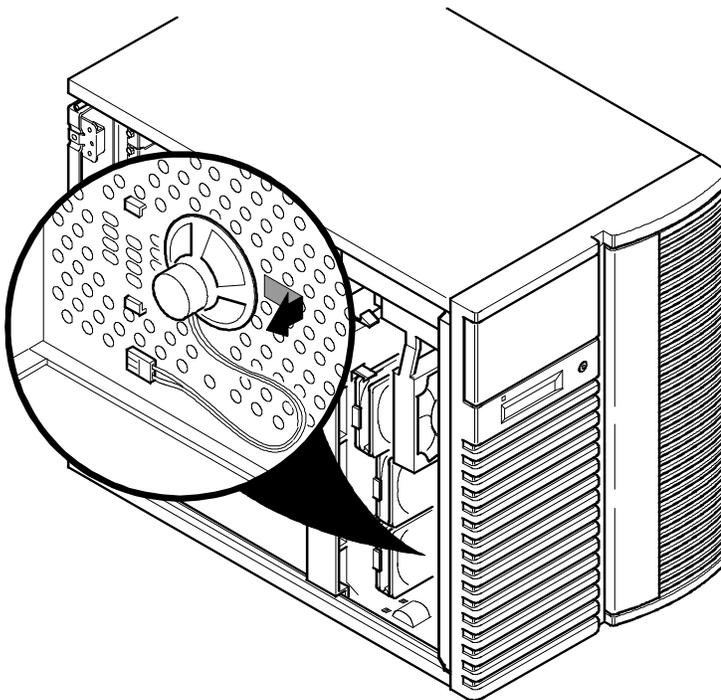
1. Turn off server.
2. Unlock and remove left side panel.
3. Disconnect fan cable from main logic board.
4. Remove screw.
5. Remove fan from chassis.
6. Remove fan from bracket.
7. Replace fan by performing removal steps in reverse order.



DEC00777

Removing/Replacing the Speaker

1. Turn off server.
2. Unlock and remove left side panel.
3. Disconnect speaker cable from main logic board.
4. Remove speaker from chassis.
5. Replace speaker by performing removal steps in reverse order.



DEC00778

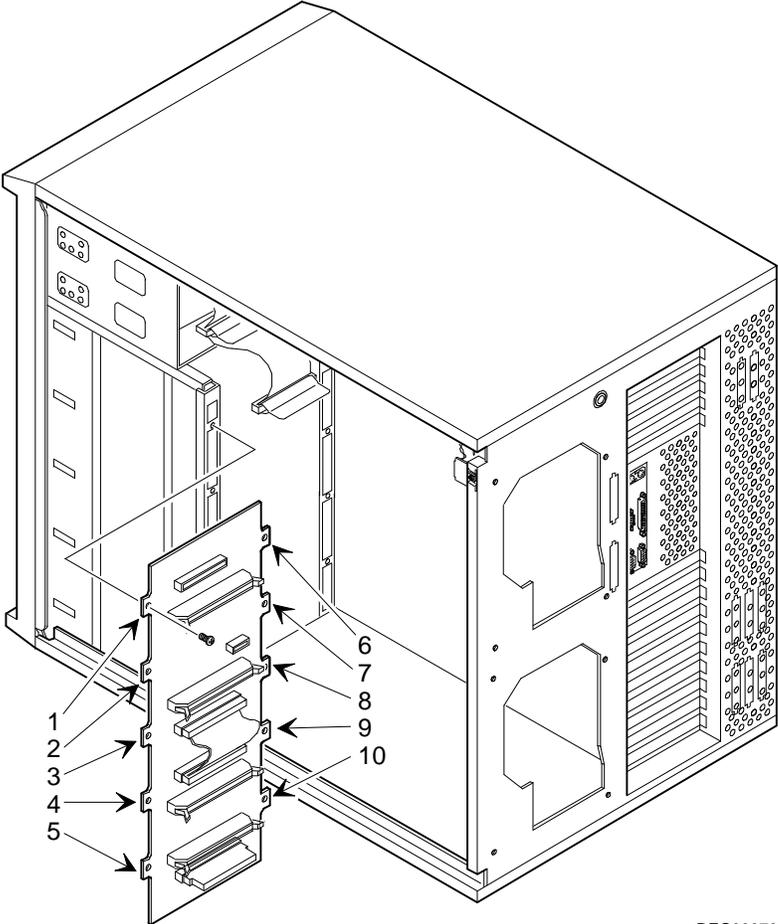
Removing/Replacing the Main Logic Board

1. Turn off server.
2. Disconnect external cables from I/O expansion modules located at rear of server.
3. Unlock and remove left side panel.
4. Disconnect all cables from main logic board.
5. Record EISA/PCI, CPU, and memory slot assignments before removing modules.
6. Remove all expansion boards.
7. Remove four screws (A, in following illustration).
8. Loosen six standoff screws (B, in following illustration).
9. Slide main logic board to right off standoffs.
10. Remove main logic board from chassis.
11. Configure switch J35 on new main logic board.
12. If new main logic board does not have an RTC, remove RTC from old main logic board and replace on new main logic board.
13. To reinstall main logic board, align board over six standoff screws, then slide main logic board to left.

Removing/Replacing the Storage Backplane

1. Turn off server.
2. Unlock and remove right side panel.
3. Record cable configuration information.
4. Disconnect all cables and terminators.
5. Before removing SBB devices, record how they are configured.
6. Remove all devices connected to storage backplane.
7. Remove ten screws.
8. Remove storage backplane from chassis.
9. Configure the J181 jumpers located on new storage backplane so they are identical to settings on storage backplane being replaced. Also configure jumper cables and terminators as they were previously configured on the storage backplane being replaced.
10. Install new storage backplane into chassis.
11. Reinstall and tighten ten screws securing storage backplane in chassis.
12. Using configuration information recorded in step 5, replace SBB devices.
13. Using cabling information recorded in step 3, reconnect cables and terminators.
14. Replace and lock right side panel.

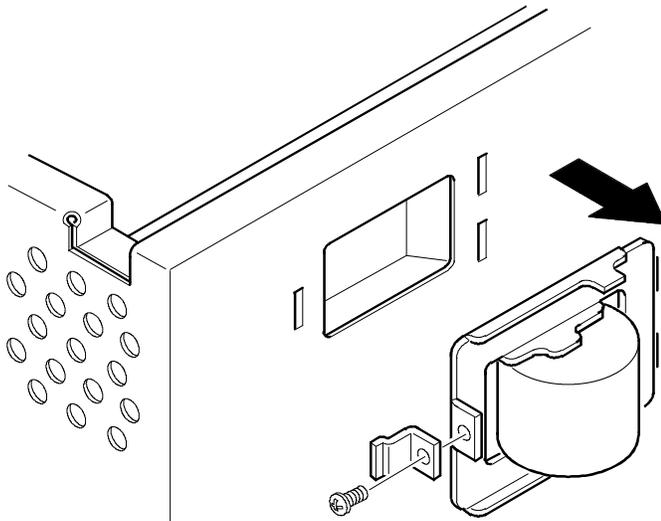
Removing/Replacing FRUs



DEC00979

Removing/Replacing a Caster

1. Turn off server.
2. Carefully lay server on its side.
Note that the right and left casters are different.
3. If removing left- or right-front caster, release server brake. Otherwise, skip to step 4.
4. Remove screw.
5. Release caster from metal tab.
6. Remove caster from chassis.
7. Replace caster by performing removal steps in reverse order.



DEC00779