AVAYA

AVAYA Intuity AUDIX LX
Release 2.0
Installation Guide

Release 2.0
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Installing an S3210R server

INTUITY AUDIX LX Release 2.0 supports the S3210R server. This server replaces the S3210 server for RoHS compliance reasons. The S3210R chassis is designed to be installed in a rack-mount configuration, or in a stackable desktop configuration.

This section includes the following topics:

General installation considerations

This section includes the following topics:

Site requirements

This section describes physical requirements for the installation site, which include:

Environmental considerations

Place the system in an area where the environmental conditions shown in the following table are maintained.

Operating State	Temperature	Humidity (noncondensing)
Operating	+10 to +35ºC (+50 to +95ºF)	20 to 80% RH
Non-operating (in storage or being shipped)	-20 to +50ºC (-4 to+122ºF)	20 to 90% RH

Customer-provided cabinet requirements

If you are installing an S3210R in a rack-mounted configuration, the customer-provided cabinet must meet the following requirements:

l   The cabinet must contain a 4-post rack to support the server's weight.

l   The cabinet must be secured to the floor before attempting to mount any units.

l   The cabinet must accommodate the sliding rails and extender brackets provided with each server. These sliding Rails and extender brackets are designed for mounting in cabinets 22.5 to 32 inches in depth.

l   The cabinet height must accommodate the number of units to be mounted. See Weight and space considerations on page 9 for server dimensions.

Installation area considerations

Observe the following when determining where to place the S3210R server:

l   Use only the power cord assembly provided to connect the system to an AC outlet.

l   Install the system within 6 feet (2m) of a grounded AC outlet.

l   Do not use extension cords with the system.

l   Ensure that the AC outlet to be used to power the system (via the power cord) is a grounded outlet. If you are unsure of the ground integrity of the outlet, have a trained and certified electrician check the outlet.

l   Consider the server connection to a branch circuit with regard to overload or overcurrent protection. Verify the system ratings to ensure that, together with other equipment connected to the same branch circuit, an overcurrent or overload condition does not exist.

l   Maintain an air-distribution system that provides adequately cooled, filtered and humidity-controlled air.

l   Do not install the system such that the ventilation or fan openings will be blocked.

l   S3210R system installations in Sweden, Finland, Norway, and Australia must be installed in a restricted-access location. The system relies on a ground connection through the main plug with an earth contact. Because of unreliable earthing concerns in Sweden, Finland, Norway, and Australia, the system must be installed by Service Personnel in a restricted access location. A restricted access location is defined as access that can be gained only by Service Personnel or Customers who have been instructed about the reasons for the restricted access and any safety precautions that must be taken. In these cases, access to the system is gained by the use of a tool (such as a lock and key) or other means of security.

Weight and space considerations

The following table lists the approximate weight, height, width, and depth of the S3210R server.

Weight	Height	Width	Depth
41.5 lb. (18.3 kg)	7 in. (17 cm)	17 in. (43.3 cm)	20.5 in. (52 cm)

The following table lists the approximate weight, height, width, and depth for the monitor and keyboard.

Peripheral	Weight	Height	Width	Depth
Monitor (including pedestal)	7.1 LB (3.2 kg)	14 in. (35 cm)	13.5 in. (34 cm)	6 in. (15 cm)
Keyboard	5 LB (2.3 kg)	2.5 in. (6.4 cm)	19 in. (48 cm)	8 in. (20.5 cm)

Note:
A monitor is not necessarily ordered and shipped for each system. The weight and space considerations listed are for those shipments that include a 15-inch monitor.

Power requirements for the S3210R

The following table lists the power requirements for the S3210R server.

Attribute	Requirement
Volts AC (VAC)	90–264 (auto-sensing)
Hertz (Hz)	47-63 (+/- 3 Hz)
Phase	Single

Attribute	Requirement
Amps (115V/230V)	6/3
Heat Dissipation	1123 BTU

Grounding requirements

An S3210R server relies on the ground connection through the main socket-outlet for continued safe operation. Ensure that the AC outlet to be used to power the system (via the UPS or power cord for separate components) is a grounded outlet. If you are unsure of the ground integrity of the outlet, have a trained and certified electrician check the outlet.

In addition, observe the following grounding requirements when determining where to place the server:

- Use only the power cord provided with each unit to connect it to the universal power supply (UPS) or to an AC outlet.

- Install the server within 6 feet (2 m) of a grounded AC outlet.

- Do not use extension cords with the system.

- Use only shielded cables and equipment in conjunction with the system to maintain safe levels of electromagnetic compatibility.

⚠ **WARNING:**
The servers must be connected to an earthed mains socket-outlet. Failure to do so will result in allowing a hazard to be present that could cause severe personal injury or death.

⚠ **CAUTION:**
System grounding must comply with the general rules for grounding provided in article 250 of the National Electrical Code (NEC), National Fire Protection Agency (NFPA), or the applicable electrical code in the country of installation.

Unpacking the system

This section describes the hardware you receive with an S3210R server and how to handle the packing materials.

This section includes the following topics:

Hardware

You should receive boxes containing the computer, keyboard, and monitor (if ordered).

Be sure that the following items are packed in the box or boxes:

- The system chassis.
- One 6-foot to 8-foot (2-meter to 3-meter) power cord (depending on country in which you are doing the installation)
- One keyboard with on-board mouse and split connector cord
- One 4-pin RJ11 cable for each voice port purchased
- One LAN cable
- One monitor and power cord, if ordered
- One Maintenance Modem, and required cables

Packing materials

Save the shipping carton and all packing materials to use in case you have to return the system to the manufacturer. If you ordered multiple systems, saving one carton and one set of packing materials should be sufficient.

Packing materials include:

- Antistatic bags
- Cardboard and foam inlays

> **Note:**
> The packing materials also may include a plastic bag designed to protect the system from moisture during shipment. Discard this bag. It is not reusable.

Also save the shipping cartons for the keyboard and monitor.

Installing the hardware

This section provides instructions for installing your hardware, which includes the S3210R server and an optional uninterruptible power system (UPS). A UPS is strongly recommended for the S3210R. The UPS protects the system from most common power problems including power failures, power sags, and power surges.

This section includes these topics:

Installing the hardware in a rack-mount configuration

To install your hardware in a rack-mount configuration perform the procedures in the following sections:

Installing the UPS

Note:
The UPS must be positioned in the rack below the server.

To install the UPS in a rack:

1. Gather the necessary rack-mount hardware, including the mounting handles, brackets, and screws.

2. Place the UPS on a flat, stable surface with the front of the UPS facing toward you.

3. Attach the mounting handle (item 1 in the figure below) to each bracket (Item 2) using the supplied screws.

4. Align the mounting brackets with the screw holes on the side of the UPS and secure using the supplied screws.

brvyupsm LAO 110202
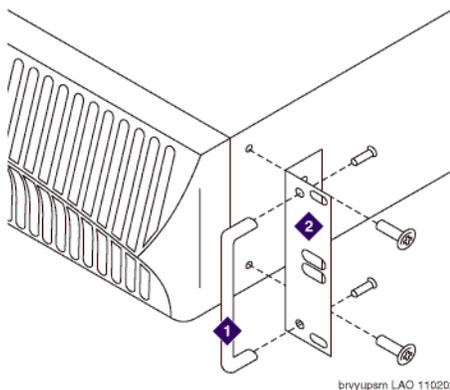
5. Secure the UPS in the rack.

Installing the S3210R

Note:
Install the S3210R directly above the UPS.

Refer to the following illustration as you perform the steps in this section.
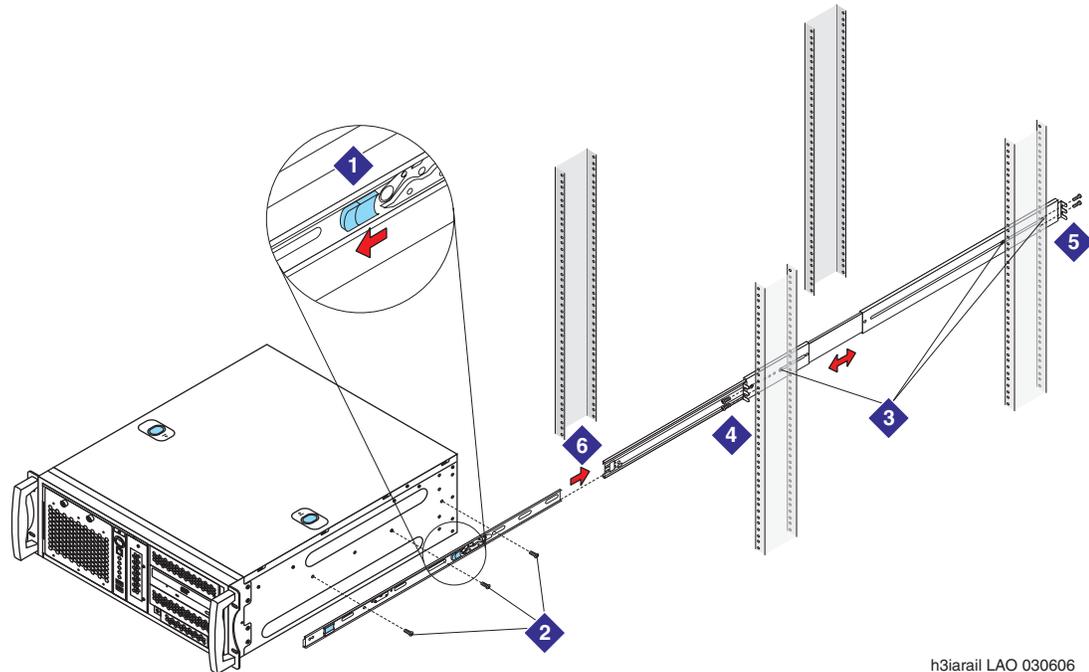
h3iarail LAO 030606

To install an S3210R server into a rack:

1. Remove the rail assembly and screws from their packaging.

   Note:
   If more than one set of screws is provided, identify the set of 12 screws that fits the S3210R server hardware. Only one set of thick Phillips round head screws fits tightly to the rails. Any other screws are not needed.

2. Release and detach the inner rail from the slide:

   a. Fully extend the rail.

   b. Pull the release lock out, the arrow tab, forward. See Item 1 in the illustration.

   c. Separate the inner rail from the slide.

3. Attach the inner rail to the server:

   a. Place the S3210R server on a flat, stable surface.

   b. Align the inner rail against the side of the server. Only three holes in the rail line up with the corresponding holes in the server chassis.

    c.   Starting with the hole nearest the front of the server, insert a screw into the holes indicated in Item 2 in the illustration.

4. Attach the slide to the frame of the customer-provided cabinet:

    a.   Loosen the two Phillips screws inside the front bracket. Extend the bracket to fit the frame. See Item 3 in the illustration.

    b.   Secure the bracket to the front and rear posts in the customer-provided cabinet. Tighten all three screws. See Items 4 and 5 in the illustration.

    c.   After the bracket is in place, tighten the two screws inside each rear bracket. See Item 5 in Attaching a rack-mount rail assembly on an S3210R server.

> ⚠ **CAUTION:**
> You need two people for the next step.

5. Mount the server in the cabinet:

    a.   Fully extend the slide out the front of the cabinet. See Item 6 in the illustration.

    b.   Have one person hold up the front of the server. Have a second person help support the server, and guide the server onto the slide.

6. Continue with <u>Connecting the power cables</u> on page 15.

Installing the hardware in a stackable desktop configuration

To install your hardware in a stackable desktop configuration perform the procedures in the following sections:

1. <u>Installing the UPS</u> on page 14
2. <u>Installing the S3210R</u> on page 14

Installing the UPS

> **Note:**
> The UPS must be positioned below the server.

To install the UPS in a stackable desktop configuration:

1. Secure four rubber spacers to the bottom of the UPS, one at each corner.

2. Set the UPS on a stable surface. The UPS forms the base of the server configuration.

Installing the S3210R

To install the S3210R in a stackable desktop configuration:

1. Gather the rubber spacers shipped with each S3210R.

2. Attach the rubber spacers to the bottom of the S3210R.

   Note:
   The S3210R is about two inches deeper than the UPS. Be certain to position the rubber spacers on the S3210R such that all four spacers will rest on the top of the UPS.

3. Place the S3210R on top of the UPS.

4. Continue with

Connecting the power cables

Refer to the following illustration while performing this task.
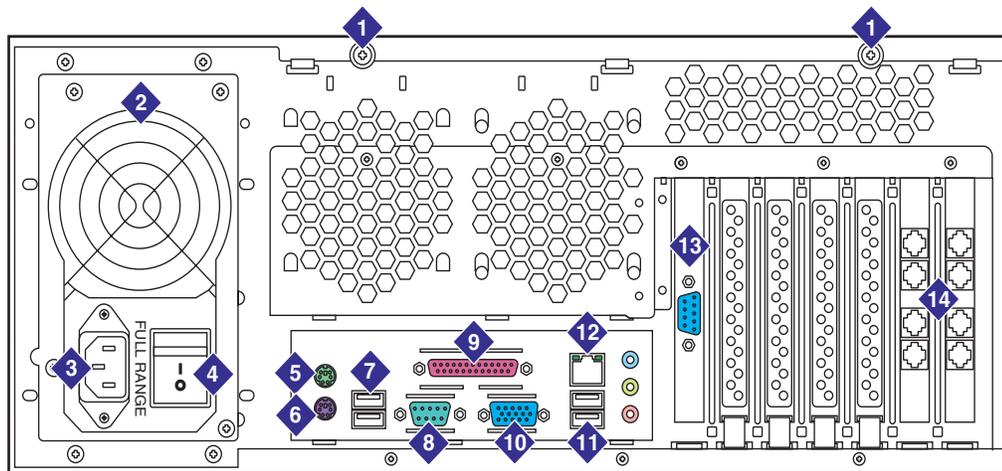
h2ialxbk LAO 030606

1	Screws for top cover
2	Power supply
3	AC power receptacle
4	On/off switch
5	Mouse connector
6	Keyboard connector
7	USB ports
8	Serial port (COM1)
9	Parallel port (not used)

10	Video connector
11	USB ports
12	LAN interface
13	Serial port (COM2)
14	Analog voice cards

To connect the power cables:

1. Connect the female end of the server power cable to the male power connector (item 3 in the illustration in this section) located on the back of the server.

2. Connect the male end of the power cable to an AC receptacle located on the back of the UPS.

3. Connect the UPS power cable into an appropriate AC power outlet.

4. Continue with Connecting the analog-line interface cards on page 16.

Connecting the analog-line interface cards

This section provides steps for connecting the analog-line interface cards installed in the S3210R (item 14 in the illustration in Connecting the power cables on page 15) to the switch.

To connect the interface cards:

1. Plug a phone cable into each RJ-11 jack on the first analog-line interface card.

2. Plug the other end of each phone cable into the switch.

3. Repeat steps 1 and 2 for each installed analog-line interface card.

4. Continue with Connecting the monitor, keyboard, and mouse on page 16.

Connecting the monitor, keyboard, and mouse

This section includes the following topics:

l Connecting the monitor on page 16

l Connecting the keyboard and mouse on page 17

Connecting the monitor

A monitor is available for purchase for use with the S3210R server or you can supply a monitor. Most standard monitors will work with the S3210R.

Two cables connect the monitor to the system:

ι   Video cable connector: The video cable connector has a video input connector at one end. The other end of the cable is permanently attached to the monitor.

ι   Power cable: The power cable for the monitor connects to an AC outlet on the UPS.

To connect the monitor cables:

1. Plug the video cable connector from the monitor directly into the video connector located on the back of the chassis. The video connector is item 10 in the illustration in Connecting the power cables on page 15.

2. Tighten the thumbscrews on the video cable connector with your fingers or with a small flat blade screwdriver.

3. Plug the female end of the power cable into the monitor.

4. Plug the male end of the power cable into an AC outlet on the UPS.

Connecting the keyboard and mouse

Connect the PS/2 cables for the mouse and keyboard to their corresponding connectors on the back of the server. The mouse connector is color-coded green, and the keyboard connector is color-coded purple.

If you choose, you can provide a standard PS2 mouse and plug the mouse cable into the mouse receptacle.

Continue with Connecting the S3210R to the LAN on page 17.

Connecting the S3210R to the LAN

To connect an S3210R server to the corporate LAN:

1. Connect one end of the standard Ethernet cable to the RJ45 connector on the back of the server. This connector is item 12 in the illustration in Connecting the power cables on page 15.

2. Connect the other end of this cable to an Ethernet interface on the corporate LAN.

    Note:
    The entity that is responsible for maintaining the corporate LAN should make this connection (see the customer contract or the statement of work).

3. Continue with Connecting the modem on page 18.

Connecting the modem

In North America only, a serial modem is provided for remote maintenance on systems running on the S3210R server. Complete the following procedure to connect the serial modem to the server.

> **Note:**
> If you are using a customer-supplied serial modem, follow the manufacturer's instructions to connect the modem to the system. Then use the Install Modem/Software page to configure the modem to work on IALX.

To connect the supplied serial modem:

1. Verify that dip switches 3 and 8 are in the down position (this should be the default). If you want the ability to dial in to the modem, set dip switch 5 to the up position. If you do not want to allow dialing in to the modem, leave dip switch 5 in the down position.

2. Connect the 25-pin end of the provided 25-pin to 9-pin cable to the modem. A 25-pin extension cable is also provided for use if needed.

3. Connect the 9-pin end of the 25-pin to 9-pin cable to COM2 on the back of the server. This connector is item 13 in the illustration in Connecting the power cables on page 15.

4. Plug one end of an analog telephone cord into the TELCO jack on the modem.

5. Plug the other end of the analog telephone cord into an analog telephone jack.

6. Plug the modem's power supply into the modem's power jack and into an electrical outlet.

7. Turn on the modem's power and then verify that the light on the front panel of the modem is lit.

> **Note:**
> Once the modem is connected, you must administer its connection in the INTUITY AUDIX LX system software. Instructions for administering the modem connection is located in the *Activate the Modem* section of the INTUITY AUDIX LX online help system, or the Installation Printable Guide for INTUITY AUDIX LX.

8. Continue with Powering up the system on page 18.

Powering up the system

This section provides the steps required to power up the S3210R. This task assumes that you have already assembled and correctly connected all required hardware components.

Refer to the following illustration while performing this task.
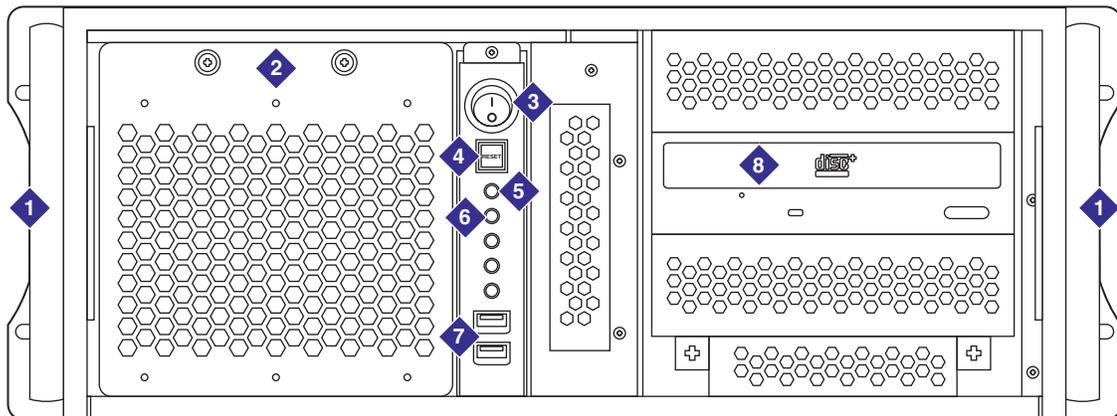
h2ialxfr LAO 040406

1	Handles
2	Front fan
3	On/off switch
4	System reset switch
5	Power LED indicator
6	Hard disk drive LED indicator
7	USB ports
8	DVD+RW

To power up the S3210R system:

1. Verify that the power cables for the server and all peripheral devices are connected to the UPS or to an appropriate AC power outlet. See the illustration in Connecting the power cables on page 15 for reference. Connections include:

   – UPS: connected to an appropriate AC power outlet.

   – Server: connected to the UPS.

   – External modem: if present, connected to the UPS or to an appropriate AC power outlet.

2. Press the On/Off switch located on the front of the UPS.

   The appropriate lamps should light (see your UPS documentation). Always power up the UPS first.

3. Press the On/Off switch on the monitor.

   The power lamp on the monitor should light.

4. If an external modem is present, press the On/Off switch (if present) and verify that the appropriate lamps light (see the modem documentation for details).

5. Toggle the On/Off switch at the rear of the unit to on (| is on, 0 is off). This switch is item 4 in the illustration in Connecting the power cables on page 15.

6. Press the On/Off switch on the front of the unit. This switch is item 3 in the illustration in this section.

    The LEDs on the front of the unit flash once. Then the LEDs light to indicate system power and drive activity.

7. Wait up to 1 minute for the display to appear on the monitor.

Checking the Voice System, Modem, and Network Addressing

This section assumes that the system just arrived from the factory and you have cabled the components together, or that you have successfully installed or updated the system software.

This section includes the following topics:

Accessing the system

Once the software is installed, you can access the system administration in either of two ways:

- From the console with the Firefox browser
- From any computer that has LAN access and a browser

Log in to the system from the console

To log in to the system from the console:

1. At the console, log in as craft (or sa if you are the system administrator) with the default password.

2. As soon as you log in, the system displays the Firefox browser with the Messaging Administration main menu.

   If you have logged in as sroot, rather than craft or sa, type **webadmin** to display the web-based administration pages. If you choose to administer the system from the command line, the system populates the web-based administration pages for you.

Access the web-based administration pages

To access the web-based administration pages:

1. From a separate system, use your favorite browser and enter the address: http://hostname.dr.avaya.com where hostname is the name of the machine.

2. Use the craft login (or sa if you are the system administrator) with the default password.

3. Click **OK** when the following popups appear: Website certified by Unknown Authority, Security Error: Domain Name mismatch and Security Warning: you have requested an encrypted page.

4. If you do not see the Avaya login page that asks for Login and Password, then make sure you have properly typed in the machine name.

   As soon as you log in, the system displays the Messaging Menu in the left frame of your browser and Messaging Administration in the main frame.

Check the Voice System Status

The voice system automatically starts, but make sure that it is running. You can view the System Status, which includes information on the state of the voice system. To view System Status:

1. From the Messaging Administration main menu, select:

   ```
   Server Information
       Server Status
   ```

   After a short wait, the system displays the Server Status page.

2. Scroll down the Server Status page to verify that the voice system (Messaging Software) is running. Look for the entry "Voice System is Up." If the voice system is not up, Start the Messaging Software by selecting Utilities from the Messaging Menu.

Activate the Modem

To activate the modem:

1. Log in to the system with the craft login and password.

2. From the Messaging Administration main menu, select:

   ```
   Server Administration

       Modem/Terminal Configuration
   ```

3. Complete the fields for the modem you are administering. See the online Help for additional information about each field.

4. Click **Save** at the bottom of the page.

Establishing System LAN Settings

To establish system LAN settings:

1. Log in to the system as craft or sa.

2. From the Messaging Administration main menu, select:

   ```
   Server Administration

       TCP/IP Network Configuration
   ```

3. Complete the Network Addressing page using information from the configuration notes or the system administrator. See the online help for additional information about each field.

4. Click Save at the bottom of the Network Addressing page.

The installation is complete. Continue with Add Switch Integration Software and Language Packages.

Add Switch Integration Software and Language Packages

You need configuration notes or a switch integration worksheet to perform the steps in this section. This section includes steps for the following processes:

Install Additional Language Software

The language packages, also called announcement sets, allow system users to hear voice prompts and system announcements in other languages. The system is shipped from the factory with the following language packages installed:

- US English
- English TDD (for teletype (TTY) machines)

To install additional language packages:

1. Log on as craft (for a new installation) or sa (if restoring a system). The sa default password is **sapasswd**.

2. From the Messaging Administration main menu, select:

   ```
   Software Management

      Software Installation
   ```

3. Follow the on-screen instructions to insert the DVD.

4. Click **DVD** (or another installation media if applicable).

5. The system warns you that system data should be backed up. If necessary perform a system backup. If the system is new, no data needs to be backed up.

6. Click **Continue Operation**.

   The system displays a list of packages available on the DVD, either software packages or additional language sets depending on which DVD you have inserted. Packages that have already been installed are marked with "=".

7. Select the language packages you want to install.

8. Press PageDown to see the bottom of the page, then click **Install selected packages**.

    The system displays a list of packages to be installed.

9. Review the list, then click **Proceed with installation**.

    The system begins the installation and displays installation status messages. The installation is complete when the pointer changes from a wristwatch to an X.

10. After the software is installed, press PageDown to see the bottom of the status page.

11. If all software was installed successfully, remove the DVD from the DVD drive.

12. Click **Restart the System**.

13. After the system restarts, press Enter to return to the prompt, and log in.

14. From the Messaging Administration main menu, select:

    ```
    Utilities
        Start Messaging
    ```

15. If the system is to be shipped, stop the voice system and power off the system. If the system is to be administered now, go to Install Switch Integration Software.

Install Switch Integration Software

Note:
Before continuing, confirm that the switch integration you plan is generally available (GA). For more information about the GA integrations or to submit your integration for Controlled Introduction testing, see Switch Integration

Install one of the two switch integration packages. The system default is that no switch integration package is installed. The two choices are:

l LANset

l SWINset

You can only have one switch integration software package installed on the system at one time. If one package is already installed and you want another, you must remove the first package before installing the second package.

1. Log on as craft (for a new installation) or sa (if restoring a system). The sa default password is **sapasswd**.

2. From the Messaging Administration main menu, select:

    ```
    Software Management
        Software Installation
    ```

3. Switch Integration software is included on the main INTUITY AUDIX LX software DVD. Obtain the DVD, then follow the on-screen instructions to insert the DVD.

4. Click **DVD** (or another installation media if applicable).

5. The system warns you that system data should be backed up. If necessary, perform a system backup. If the system is new, no data needs to be backed up.

   The system displays a list of packages available on the DVD, including the two switch integration packages: LANset and SWINset.

6. Select the switch integration package you want to install. If you know which type of switch integration you plan to do, based on configuration notes, select the corresponding software package. You can only have one switch integration software package installed on the system at one time.

7. Press **PageDown** to see the bottom of the page, and click **Install selected packages**.

   The system displays a list of packages to be installed.

8. Review the list, then click **Proceed with installation**.

   The system begins the installation and displays installation status messages. The installation is complete when the pointer changes from a wristwatch to an X.

9. After the software is installed, press PageDown to see the bottom of the status page.

10. If the software was installed successfully, remove the DVD from the DVD drive.

11. Click **Restart the System**.

    After the system restarts, it displays the message:

    Press Enter to return to prompt...

12. Press Enter, then log in.

13. If the system is to be moved or shipped, stop the voice system and power off the system. If system data is to be restored, go to Performing a Restore. If the system is to be administered now, go to the next section.

Select the Switch Integration

When the appropriate switch integration software package is installed, select the switch integration type:

1. From the Messaging Administration main menu, select:

   ```
   Switch Administration
      Switch Selection
   ```

   The system displays the Switch Selection page with a drop-down list of switch configurations. The list varies depending on which switch software package you installed.

2. Click on the drop-down list and select the switch and country that matches the customer site.

3. Click **Save**.

   The system displays a confirmation message and also a message that says you need to stop and start the Voice System.

4. Stop and start the Voice System.

Administering Switch Integration

Specific procedural steps for switch integrations have been removed from the INTUITY AUDIX LX documentation. Configuration notes are now provided to support each switch integration. The configuration notes are stored on a public website and are updated as needed.

Before continuing, confirm that the switch integration you plan is generally available (GA). For more information about the GA integrations or to submit your integration for Controlled Introduction testing, see Switch Integration.

Initial System Administration

This section assumes that you have successfully completed the software installation or upgrade process.

This section includes the following topics:

Accessing the system

Once the software is installed, you can access the system administration in either of two ways:

- From the console with the Firefox browser, see Log in to the system from the console on page 31
- From any computer that has LAN access and a browser, see Access the administration pages from a remote machine on page 32

Log in to the system from the console

To log in to the system from the console:

1. At the console, log in as craft (or sa if you are the system administrator) with the default password.

2. As soon as you log in, the system displays the Firefox browser with the Messaging Administration main menu.

   If you have logged in as TSC or sroot, rather than craft or sa, type **webadmin** and press Enter to display the web-based administration pages.

Access the administration pages from a remote machine

To access the web-based administration pages from a remote machine:

1. From a separate system, use your favorite browser and enter the address: http://hostname.dr.avaya.com where hostname is the name of the INTUITY machine.

2. Use the craft login (or sa if you are the system administrator) with the default password.

3. If you do not see the login page that asks for Login and Password, then make sure you have properly typed in the machine name.

   As soon as you log in, the system displays the Messaging Administration main menu in your browser.

Administering Basic Channel and Number Settings

Many of the settings in this system come from switch integration configuration notes or from the switch integration worksheet. Start at the web-based administration login page and log in as craft.

Call Transfer Administration

To administer call transfer:

1. From the Messaging Administration main menu, select:

   ```
   Call Transfer Administration

      Allowed Number Addition
   ```

2. Make the From and To settings, as specified by the customer and as described in the system online help.

3. Click Save.

   The system displays a confirmation message.

Voice Equipment Administration with Switch Integration

To administer voice equipment:

1. From the Messaging Administration main menu, select:

   ```
   Voice System Admin

       Assign PBX Ext/Chans
   ```

2. Make the following field settings, as specified by the customer and as shown on the example screen.

Field	Setting
Starting PBX Extension	enter the phone number for the first channel
Starting Channel Number	0 - start at channel 0
Ending Channel Number	3 - enter the last channel number (on a 4-port system the number is 3, on an 8-port system the number is 7, on a 12-port system the number is 11)

3. Click Save.

   The system displays a confirmation message.

4. From the Messaging Administration main menu, select:

   ```
   Voice System Admin

       Assign Services/Chans
   ```

5. Make the following field settings, as shown on the example screen.

Field	Setting
Channel Numbers	all
Service Name	*DNIS_SVC

6. Click Save.

   The system displays a confirmation message.

7. From the Messaging Administration main menu, select:

   ```
   Voice System Admin

       Assign Number Services
   ```

8. Make the following field settings.

Field	Setting
Called Numbers	any to - the field after the "to" is blank
Calling Numbers	any to - the field after the "to" is blank
Service Name	AUDIX

9. Click Save.

    The system displays a confirmation message.

10. From the Messaging Administration main menu, select:

    ```
    Voice Equipment Diagnostics

        Change State
    ```

11. Make the following field settings.

Field	Setting
New State	inserv
Equipment	card
Equipment Number	all
Change Immediately?	Yes

12. Click Save.

    The system displays a confirmation message.

13. From the Messaging Administration main menu, select:

    ```
    Voice Equipment Diagnostics

        Display
    ```

14. Verify that you have all of the information that you entered and that the state of the voice card is Inserv.

15. If the state of the voice card is FOOS rather than Inserv, perform the following steps:

    a. From the Messaging Administration main menu, select Voice Equipment Diagnostics, Display.

    b. Look for any channels in the state of FOOS. If there are none, continue onto the next section.

    c. If there are channels in the state of FOOS, go to Voice Equipment Diagnostics, Diagnose.

d.   Complete the Diagnostics page:

Field	Setting
Equipment to Diagnose	card
Equipment Number	all
Immediate Diagnosis?	yes

e.   Click Diagnose.

f.   Wait a few minutes while the system fixes any of the FOOS channels.

g.   Click Back, then click Display. All channels should now be Inserv. If one or more channels remain as FOOS, there is a phone line problem.

Administering Message Core

Installation worksheets or customer input may be required for many of the Message Core settings.

Overview

To access the Messaging Administration screens:

1.   From the Messaging Administration main menu, select:

```
Messaging Administration

    Messaging
```

The system displays the Command Prompt screen and the SSH dialog box. The SSH dialog box provides security protection for the Command Prompt screen.

2.   Type your login and password, then click **OK**. If you are prompted for a terminal type, type **vt100**.

Note that from the terminal the functions keys do not always work. Here are the key sequences for the function keys in that case.

Key Sequences

Function	Key Sequence	Function Key
Cancel	Ctrl+X	F1
Refresh	Ctrl+L	F2
Enter	Ctrl+E	F3
ClrFld	Ctrl+K	F4
Help	Ctrl+W	F5
Choices	Ctrl+C	F6
NextPg	Ctrl+N	F7
PrevPg	Ctrl+P	F8

Other Helpful Key Sequences

Function	Key Sequence
Back space	Ctrl+H
Next Field	Ctrl+M
Break out of the webadmin interface and return to the Linux prompt	Ctrl+Alt+Backspace

Basic Administration

Set the Machine Profile for the local INTUITY AUDIX LX machine:

1. At the AUDIX command prompt, type **change machine** and press Enter.

2. Make the following field settings and then press F3 (Enter).

Field	Setting
Machine Name	change from "local" to the hostname of your machine
Start Ext	00000 This assumes you have a five-digit dial plan. If you have a 4 digit dial plan enter 0000 and 9999.
End Ext	99999

The system displays the Machine Profile, page 2.

3. Type a Password to be used for networking, but do not change other fields on this screen. Leave Updates In and Out set to N.

4. Press F3 (Enter).

5. At the AUDIX command prompt, type **change system-parameters outcalling** and press ENTER.

6. Make the following field settings and then press F3 (Enter).

Field	Setting
Outcalling Active?	y (or as specified by the customer)

7. At the AUDIX command prompt, type **change system-parameters fax-options**.

8. Make the following field settings and then press F3 (Enter).

Field	Setting
Fax Deliveries To All The Specified Dial Strings Are Allowed/Denied	denied This is customer preference. See FAX Messaging and the following table to understand how fax dialing is allowed or denied. Setting this field as "denied" does allow fax to work. If you select "allowed" instead, then you must use the **add fax-dial-string** command. The fax dial string is a list of the leading digits of the phone number that users can send a fax to.

Subscribers Can Send or Print Faxes To:	**On the System-Parameters Fax-Options Screen, choose:**	**On Fax-Dial-String Screen:**
Any telephone number	Denied	Do not specify any dial strings.
Any telephone numbers except for ones you want to deny access	Denied	Specify dial strings that begin telephone numbers that subscribers *cannot* use.
Only specific telephone numbers	Allowed	Specify only the dial strings that begin telephone numbers that subscribers *can* use for sending or printing faxes.

9. If you are using OverLAN switch integration, change the System Parameters Features form. If you are not using OverLAN, skip 3 steps to the next command.

10. At the AUDIX command prompt, enter **change system-parameters features**. Press F7 (NextPage) twice to view page 3 of the form.

11. Make the following field settings, as shown on the example screen, and then press F3 (Enter).

Field	Setting
Transfer Type	enhanced_cover_0 (or as specified by the customer) Note: Transfers do not work using the InBand Integration, so do not enable it.
Transfer Restriction	digits Note: You can only make this setting with a tsc login. Contact the support center for assistance.

The system displays the message:
System Covering Extension Not Assigned. Press [ENTER] to Confirm.

12. Press F3 (Enter).

13. At the AUDIX command prompt, enter **change cos 0**.

14. Make the following field settings, as shown on the example screen, and then press F3 (Enter).

Field	Setting
Outcalling?	y (or as specified by the customer)

15. Repeat the steps for COS 1.

16. If the system is using digital networking, do the following:

   l At the AUDIX command prompt, enter **change system-parameters limits**.

   l Change the Administered Remote Users setting to 10000.

   l Press F3 (Enter) to save.

17. Create a test subscriber by starting at the AUDIX command prompt, and entering **add subscriber**.

18. Make the following field settings and then press F3 (Enter).

Field	Setting
Password	1
COS	class00

19. Repeat for additional test subscribers. Create at least one or two subscribers for initial acceptance testing.

   You can add subscriber information from an existing system in the following ways:

   - One-by-one, as described in the previous steps
   - Avaya Site Administration (ASA) tool
   - [Administration and Data Aquistion Package (ADAP)](#) software
   - ProVision software

20. At the AUDIX command prompt, exit AUDIX Administration by typing **exit** and pressing Enter.

   The screen displays the message "Connection closed."

Digital Networking

To allow digital networking, you make settings for the local and remote machine on the INTUITY AUDIX LX and on the target machine. You already completed the local machine settings with the change machine command.

To set information for the remote machine (the one you want to network to):

1. Enter **add machine** *machine-name* if you have not yet added a remote machine or enter **change machine** *machine-name* at the command prompt, where machine-name is the name of the remote system.

   The system displays the Add Machine or Change Machine screen for the remote system.

2. Set the Machine Name, Machine Type, Extension Length, Start Extension, and End Extension.

3. Press F7 (NextPage).

4. On Machine Profile, page 2, set the IP Address of the remote machine.

5. In the Password field, set the networking password for the remote machine.

6. For now, do not allow Updates In or Out. Both fields should be set to N.

7. Press F3 (Enter).

8. Perform required set-up steps on the remote system.

9. For additional information about networking, check the documentation for the other system and the Networking procedures on the INTUITY AUDIX LX documentation CD.

Administer Internet Messaging

Plan to make these changes to activate Internet Messaging before load is running or when usage is low.

1. From the Messaging Administration main menu, select:

   ```
   Messaging Administration
        Messaging
   ```

   The system displays the Command Prompt screen and the SSH dialog box. The SSH dialog box provides security protection for the Command Prompt screen.

2. Type your login and password, then click **OK**.

3. Type **add subscriber** and press Enter.

4. Press F3 (Enter) to save the subscriber information.

5. From the Messaging Administration main menu, select:

   ```
   IMAP/SMTP Administration
        General Options
   ```

6. Make selections from the dropdown boxes to complete the fields.

7. Click **Save** to save the changes.

8. From the Messaging Administration main menu, select:

   ```
   IMAP/SMTP Administration
        Mail Options
   ```

9. Again, make selections from the drop down boxes to complete the fields.

10. Click **Save** to save the changes.

11. Inform system users that Internet Messaging is available and tell them how to use it:

    l To send a message from a user on the INTUITY AUDIX, use Message Manager. Address the message by using the email address. For example: jeff@avaya.com.

    l To send a message to a user on the INTUITY AUDIX from any email program and server, use extension@hostname.domain. For example: 41102@lxsystem.yourcompany.com is the address created by extension@systemname.domain.

    Additional information and a sample announcement are included on the INTUITY AUDIX LX Documentation CD.

Administering LDAP on a Browser

Customers using a browser's address book to do LDAP Directory lookups should do the following:

1. Start the browser

2. Click **Address Book**.

3. In Address Book select **File** then **New Directory**.

4. Add INTUITY Server as a new Directory.

5. Change *system* to your system name.

6. Make the following field settings:

   - Description: system

   - LDAP Server: system.dr.avaya.com

   - Search Root: dc=messaging

   - All other fields default values

Additional information is included on the INTUITY AUDIX LX Documentation CD.

System Acceptance Test

Perform the following feature tests before leaving the customer site:

Feature to be tested:	Use these admin screens or commands:	For more information, search the CD for:	Completed / comments
Verify voice ports	Messaging Administration>Server Information> Voice Channel Monitor		
Set SA and VM passwords.	Messaging Administration>Security>ASG Login Administration	password	
Verify COSs	Messaging Administration>Messaging>list cos		
Verify language packages installed	Messaging Administration>Messaging>list announcements		
Add test subscribers.	Messaging Administration>Messaging>add subscriber change subscriber	subscribers	
Record name and greetings Change default password	Log into mailbox via the telephone user interface (TUI)		
Add broadcast mailbox	Messaging Administration>Messaging>add subscriber		
Call answer	Leave message, verify lamp is on, delete message, verify lamp is off		
Voice mail	Create and send message, verify lamp on, forward message, delete message, verify lamp is off		

Feature to be tested:	Use these admin screens or commands:	For more information, search the CD for:	Completed / comments
Administer Message Manager	Load Message Manager on a client, send messages.	(use Message Manager software CD for installation)	
Add an account	Add an account to a subscriber's Outlook, Outlook Express, or Thunderbird Client.		
Outcalling	Set outcalling via the TUI or Message Manager. Verify that it works for both a regular message and a priority message	Outcalling	
Test FAX Messaging	Receive and send a fax. Create a fax in Message Manager.	FAX Messaging	
Test Internet Messaging	Create a message in Message Manager, send it to an Outlook client. Note the address. Send a message to the mailbox from Outlook.	Internet Messaging	

Performing Backups

After completing an installation, perform a backup. You can complete a backup to DVD+RW or to a remote storage location.

This section includes the following topics:

About the attended backup

The attended backup allows you to complete a full system backup at any time. It is recommended that you perform a full attended backup if your system is unable to complete a full unattended backup, which could happen if your system contains a large amount of subscriber data. You should also perform an attended backup whenever you make extensive changes to subscriber profiles or after additional subscriber names have been recorded.

There are three data types that can be backed up during an attended backup:

- **System data:** This data type consists of enabled features, installed software, networking connectivity and communication information, mailing lists, subscriber profiles, voiced subscriber name recordings and so on. See •About the unattended backup for a list of items included in system data type. This data type is backed up first during the unattended backup.

- **Names:** The names data type contains voiced subscriber names. After additional subscriber names have been recorded, you should conduct an attended backup of this data type.

- **Greetings and messages:** This data type includes each subscriber's primary voice greeting, multiple personal greetings, automated attendant menus and messages, bulletin board messages, and all of the call answer and voice mail messages that subscribers send and receive every day. During the unattended backup, this data type is backed up after the system data and names data type is backed up.

Before you begin

Important: Avaya has tested and strongly recommends using Verbatim DVD+RW single-sided 1X-4X 4.7 GB media to back up system data. Using DVD+RW media from other manufacturers may cause problems backing up or restoring system data. An average of 70,000 subscribers with voiced names can be stored per DVD during an attended backup.

Before you proceed with an attended backup, make sure that you complete the following:

l   For backups to DVD+RW, ensure that you insert the required backup media in the drive. Make sure that you change the existing backup media if you do not want to overwrite the information on the existing media. Also, make sure the media is right side up in the media drive. If the media is upside down, the backup will fail.

l   For backups to a location on the customer-supplied LAN, you must administer a remote storage location.

Performing an attended backup

You can use one of two methods to perform the attended backup:

l   Performing an attended backup to DVD+RW on page 46

l   Performing an attended backup to a remote storage location on page 48

Performing an attended backup to DVD+RW

To perform an attended backup to the DVD+RW installed on the IALX:

1. Stop the messaging software.

   Note:
         You can perform an attended backup with or without stopping the messaging software. However, the backup will complete in substantially less time if you stop the messaging software. For example, backing up 4.7 GB of data (the capacity of one DVD+RW backup medium) will take approximately 1 hour if the messaging software is stopped and will take approximately 2 hours to complete if the messaging software is not stopped. If you choose to stop the messaging software, calls will cover and callers will be able to leave messages, but local subscribers will not be able to access their messages until the messaging system is restarted.

2. Go to the Backup page.

Note:
> If you did not stop the messaging software in Step 1, the system displays a warning message stating that continuing with the backup can impact the performance of the system. Click **Start Backup** to continue without stopping the messaging software, or click **Stop Voice System** to exit the Backup page and stop the messaging software.

3. The Media Type field displays the current backup method (DVD+RW, LAN with FTP, or LAN with SFTP). This field must be **DVD+RW** to perform the backup to the DVD+RW media in the local IALX.

4. Select the data types that you want to include in the backup:

   l For each data type that you want to back up, select **Yes** from the drop-down list for that data type. Yes is the default setting for all data types. If you want to make a full-system backup, select **Yes** for all data types.

   l For each data type that you do not want to back up, select **No** from the drop-down list for that data type. The **System data** type is required for all backups. You cannot select **No** for that data type.

5. Click **Start Backup**.

   The system displays an estimate of the amount of backup media needed to complete a full-system backup.

6. Verify that you have the appropriate number of backup media to complete the backup and then click **Continue**.

7. Insert a DVD+RW backup medium into the DVD+RW drive.

8. Click **Continue**.

   Note:
   > If the backup medium has been previously used to back up data, the system displays a warning message that states that there is existing data on the medium. Press **Enter** to continue with the backup.

   The system then formats the DVD+RW. After the formatting is complete, the system starts the backup and displays backup information and displays each file name that is backed up.

   Note:
   > A new DVD that has not previously been formatted can take between 20 - 40 minutes to format.

9. If additional media is needed, do the following:

   a. Click **Eject** to remove the full medium from the drive and label it with the current date, data type, and medium number, for example, "Dec. 10, 2007 System data, Names, and Greetings and messages DVD #1". Also, consider changing the write protection of the medium.

   b. Insert the new medium in to the drive.

    c. Click **Continue**.

    d. Repeat Step a through Step d if additional media are needed.

10. Verify that the system displays the following message after it has finished backing up the data:

    FULL/PARTIAL-MANUAL BACKUP completed successfully - *day date time year*

11. Click **Eject** to remove the medium from the drive and label it with the current date, data type, and medium number.

    Note:
    > If more than one media was used to complete the attended backup, make sure each medium is labeled with a number according to the order in which it was used. For example, if you used two media to perform a full attended backup, the first medium used should be labeled "DVD #1" and the second medium labeled "DVD #2." This is important because when restoring data from the backup media, the system will prompt you to "insert DVD number 1."

12. Insert a different medium in to the DVD+RW drive for the next unattended backup.

13. Start the messaging software (optional).

    Note:
    > Only start the messaging software if you stopped the messaging software prior to performing the backup.

Performing an attended backup to a remote storage location

To perform an attended backup to a remote location on the customer-provided LAN:

1. Stop the messaging software.

    Note:
    > You can perform an attended backup with or without stopping the messaging software. However, the backup will complete in less time if you stop the messaging software. If you choose to stop the messaging software, calls will cover and callers will be able to leave messages, but local subscribers will not be able to access their messages until the messaging system is restarted.

2. Go to the Backup page.

    Note:
    > If you did not stop the messaging software in Step 1, the system displays a warning message stating that continuing with the backup can impact the performance of the system. Click **Start Backup** to continue without stopping the messaging software, or click **Stop Voice System** to exit the Backup page and stop the messaging software.

3. The Media Type field displays the current backup method (DVD+RW, LAN with FTP, or LAN with SFTP). If you have not already administered a remote storage location, this field defaults to DVD+RW. You must administer a remote storage location before proceeding.

4. Select the data types that you want to include in the backup:

   l For each data type that you want to back up, select **Yes** from the drop-down list for that data type. Yes is the default setting for all data types. If you want to make a full-system backup, select **Yes** for all data types.

   l For each data type that you do not want to back up, select **No** from the drop-down list for that data type.The **System data** type is required for all backups. You cannot select **No** for that data type.

5. Click **Start Backup**.

   The system displays information about the backup to be performed, including the amount of space required.

   Note:
   > You can use this information to determine whether the remote storage location has enough storage space.

6. Click **Continue**.

   The system displays the progress of the backup.

7. Verify that the system displays the following message after it has finished backing up the data:

   FULL/PARTIAL-MANUAL BACKUP completed successfully - *day date time year*

8. Start the messaging software if you stopped it in Step 1.

Administering the remote storage server for FTP/SFTP backups

Backing up data to a remote storage location requires a customer-provided FTP/SFTP server on the customer LAN. See the Concepts and Planning Guide for more detailed information on the requirements of the customer-provided LAN and the server required to support backups via FTP or SFTP.

> **Note:**
> It is the responsibility of the customer to configure the FTP/SFTP server to support remote storage of data. This configuration must be complete before you attempt to administer the Intuity AUDIX LX to support remote storage of backup data.

This section includes the following topics:

Administer a server to support backups to a remote location

Complete the following basic steps to administer a customer-provided FTP or SFTP server to support backups to a remote location on the customer-provided LAN:

1. Create the directory on the remote server that you want to serve as the remote storage location for backups.

2. Administer a user with read and write permissions for the directory you created in Step 1.

3. Test that the user can access the directory on the server.

4. Record the IP address or host name, directory name, user name, and password (not required for SFTP) for the remote server. This information is required when administering the Intuity AUDIX LX backups to a remote storage location.

Administering the remote storage location

Complete the following procedure to administer the remote storage location.

To administer the remote storage location:

1. On the <u>Configure Remote Storage</u> page, in the Backup Mode field, select FTP or SFTP to specify the mode to use for the file backup to the remote location.

   The system displays the fields required for the backup mode you selected.

2. Complete the fields on the page. For more information about this page, click the field names or **Help**.

3. If you selected FTP in the Backup Mode field, proceed to step 5. If you selected SFTP in the Backup Mode field, you must generate the public cryptographic key to be used for authentication between the IALX and the remote SFTP server:

   a. Click **Regenerate RSA public key**. The system displays the generated key in the RSA public cryptographic key window.

   b. Transfer the public key to the customer's SFTP server. One way to do this is to copy the text from the cryptographic key window to a file, paste the key into a file, transfer the file to the remote SFTP server, and then paste the key into the appropriate file on the remote SFTP server. The file to which you must copy the public key information depends on the SFTP version being used on the remote server. For example, for SSH1 use the $HOME/.ssh/authorized_keys or $HOME/.ssh/authorized_key2 file.

   Note:
   After you generate the initial public key, you should not need to regenerate the public key unless it is a customer security requirement.

4. Click **Save**.

   The system displays a message that the parameters have been saved.

5. Click **OK**.

6. Click **Test Connection** to validate the connection to the FTP server based on the page settings.

Viewing backup contents

This section includes the following topics:

- [Viewing the contents of a DVD+RW backup medium](#) on page 53
- [Viewing the contents of a remote backup](#) on page 53

Viewing the contents of a DVD+RW backup medium

The [View Attributes of Backup Media](#) page shows the following information for a DVD+RW medium:

- The backup medium number
- The name of the machine (server)
- The date and time of the backup
- A list of the data types that were backed up
- A list of the packages installed on the system at the time of backup

Viewing the contents of a remote backup

To view the contents of a backup to a remote storage location:

1. Go to the [View Contents of FTP/SFTP Server](#) page, which lists all of the backups found in the directory on the remote storage server.

2. Click the button next to the backup you want to view.

3. Click **View**.

   The system requests the information from the remote storage server. Depending on the speed of the network, this might take a few minutes. The system then displays the following information about the selected backup:

   - The name of the remote storage machine
   - The date and time of the backup
   - A list of the data types that were backed up

l   A list of the packages installed on the system at the time of backup

Administering remote storage

This section includes the following topics:

-
-

Administering the remote storage server for FTP/SFTP backups

Backing up data to a remote storage location requires a customer-provided FTP/SFTP server on the customer LAN. See the [Concepts and Planning Guide](#) for more detailed information on the requirements of the customer-provided LAN and the server required to support backups via FTP or SFTP.

> **Note:**
> It is the responsibility of the customer to configure the FTP/SFTP server to support remote storage of data. This configuration must be complete before you attempt to administer the Intuity AUDIX LX to support remote storage of backup data.

Complete the following basic steps to administer a customer-provided FTP or SFTP server to support backups to a remote location on the customer-provided LAN:

1. Create the directory on the remote server that you want to serve as the remote storage location for backups.
2. Administer a user with read and write permissions for the directory you created in Step 1.
3. Test that the user can access the directory on the server.
4. Record the IP address or host name, directory name, user name, and password (not required for SFTP) for the remote server. This information is required when administering the Intuity AUDIX LX backups to a remote storage location.

Administering the remote storage location

Complete the following procedure to administer the remote storage location.

To administer the remote storage location:

1. On the Configure Remote Storage page, in the Backup Mode field, select FTP or SFTP to specify the mode to use for the file backup to the remote location.

   The system displays the fields required for the backup mode you selected.

2. Complete the fields on the page. For more information about this page, click the field names or **Help**.

3. If you selected FTP in the Backup Mode field, proceed to step 5. If you selected SFTP in the Backup Mode field, you must generate the public cryptographic key to be used for authentication between the IALX and the remote SFTP server:

   a. Click on the **CryptoKeys** button to go to the **View/Generate Cryptographic Keys** web form.

   b. Click **Regenerate RSA public key**. The system displays the generated key in the RSA public cryptographic key window.

   c. Transfer the public key to the customer's SFTP server. One way to do this is to copy the text from the cryptographic key window to a file, paste the key into a file, transfer the file to the remote SFTP server, and then paste the key into the appropriate file on the remote SFTP server. The file to which you must copy the public key information depends on the SFTP version being used on the remote server. For example, for SSH1 use the $HOME/.ssh/authorized_keys or $HOME/.ssh/authorized_key2 file.

   Note:
   After you generate the initial public key, you should not need to regenerate the public key unless it is a customer security requirement.

4. Click **Save**.

   The system displays a message that the parameters have been saved.

5. Click **OK**.

6. Click **Test Connection** to validate the connection to the FTP server based on the page settings.

Restore

This section includes the following topics:

- Performing a restore from a remote storage location on page 57
- Verifying the restore on page 58

Performing a restore from a remote storage location

Depending on the amount of data on the system, it usually takes between 15 and 60 minutes to restore data from a remote storage location.

Note:
Customers are responsible for managing the data storage on the remote backup machine.

To restore system data from a LAN backup:

1. Stop the messaging software.

2. Go to the Restore Location page.

   The system displays the following message:

   Proceeding with the restore will overwrite existing data.

   Press the "Proceed with Restore" button to continue.

3. To continue with the restore, click **Proceed with Restore**.

   The system displays the View/Restore Contents of FTP/SFTP Server page.

   Note:
   The system might notify you that you need to reinstall system software before continuing with data restoration. If so, note which software packages you must reinstall and see Adding software packages for these procedures.

4. Select the backup from which you want to restore data.

5. Place a check in the box next to the data types that you want to restore.

6. Click **Start Restore** to restore the data from the selected backup.

7. The system begins to restore data from the backup.

   When the restore is complete, the system displays the following message:

   Restore completed successfully - *Day, Date, and Time*

8. If the restore completed successfully, continue with Step 9. If the process was *not* successful, the log contains an explanation of why the restore process failed. See Verifying the restore. If the restore process was unsuccessful, do the following:

   a. Return to Step 2 and attempt the restore again.

   b. If the process fails a second time, access the Alarm log and determine if there are any active alarms in the log. See Intuity AUDIX LX alarms and follow the associated repair actions for any active alarms.

9. Click **Reboot System** at the bottom of the page.

10. If you do *not* have any remote networked machines, continue with Step 10. If you have remote networked machines, run a manual update to and from all remote networked machines to correct any database inconsistencies. See Performing remote subscriber updates manually.

11. Restore data, if necessary. See Restoring backed-up data.

Verifying the restore

To verify the restore:

1. On the Restore Logs page, which contains a drop-down list with the available restore logs, select the restore log that you want to view and click **View**.

2. Scroll to the end of the restore log and verify that there is an entry with the following text:

   Restore completed successfully - *Day, Date, and Time*

   If the restore was not successful, the log contains an explanation of why the restore process failed.

Replacing S3210R components

The INTUITY AUDIX LX S3210R server contains several RoHS-compliant components you can replace as necessary. The replaceable components are:

Description	Part Number
Rack-mount sliding rails	700395882
Front chassis fan (120 MM)	700395908
Rear chassis fan (80 MM)	700395924
Power supply	700395932
40 GB, 7200 RPM, hard disk drive	700395940
DVD-RW drive	700395957
256 MB memory module	700407083

This section contains the following topics:

S3210R components

This section identifies the components of the S3210R server. You can refer to the illustrations in this section as you perform component replacement tasks.

This section includes the following topics:

S3210R front panel components

The following illustration identifies the front panel components of the S3210R server.
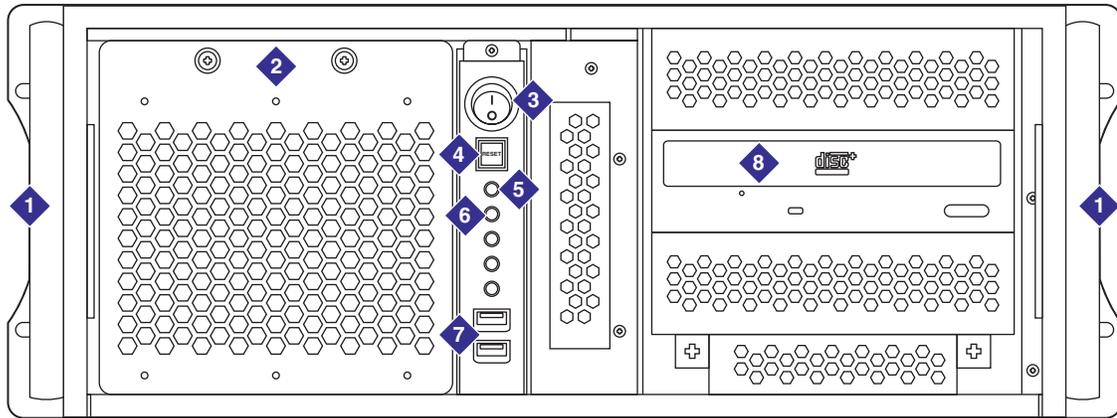
h2ialxfr LAO 040406

1	Handles
2	Front fan
3	On/off switch
4	System reset switch
5	Power LED indicator
6	Hard disk drive LED indicator
7	USB ports
8	DVD-RW

S3210R rear panel components

The following illustration identifies the rear panel components of the S3210R server.
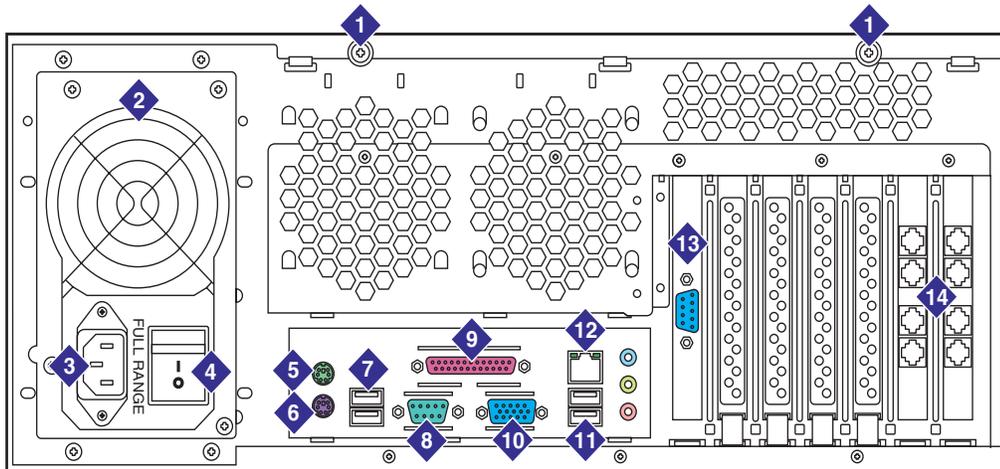
h2ialxbk LAO 030606

1	Screws for top cover
2	Power supply
3	AC power receptacle
4	On/off switch
5	Mouse connector
6	Keyboard connector
7	USB ports
8	Serial port (COM1)
9	Parallel port (not used)
10	Video connector
11	USB ports
12	LAN interface
13	Serial port (COM2)
14	Analog voice cards

S3210R internal components

The following illustration identifies the internal components of the S3210R server.
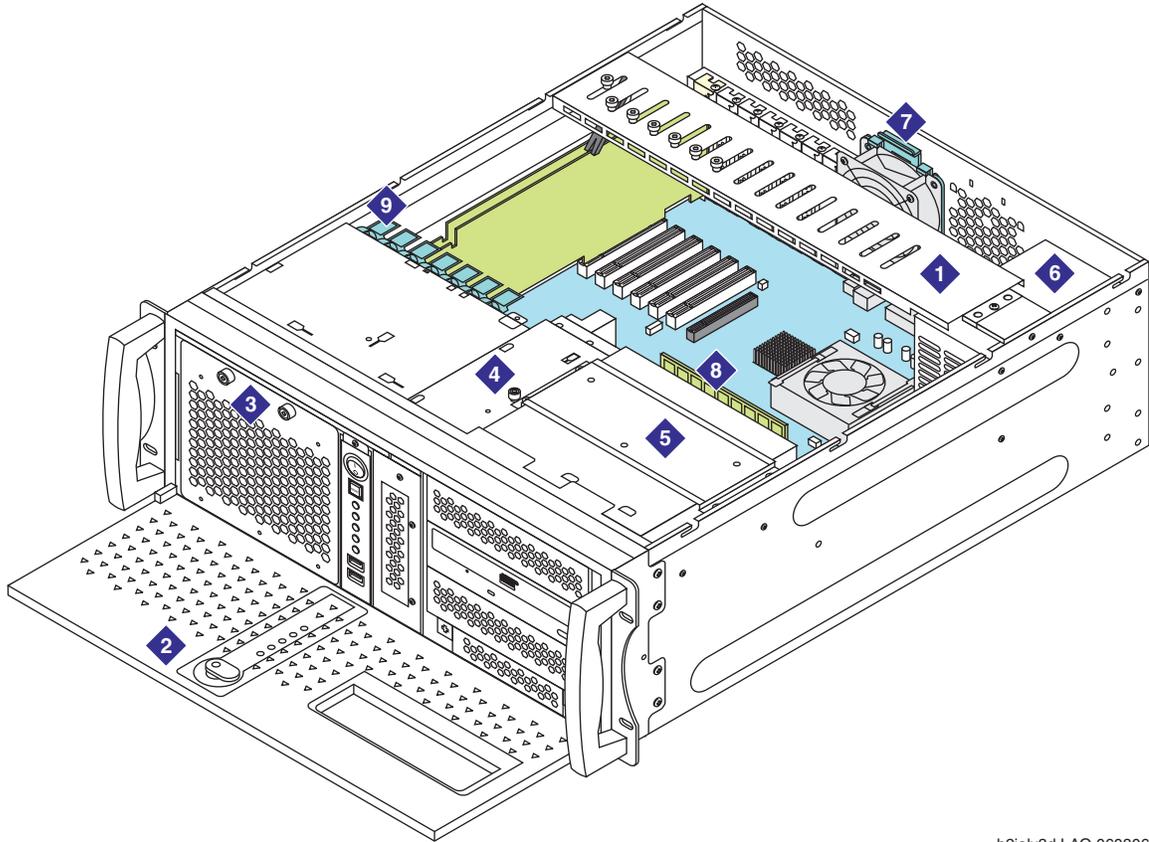
h2ialx3d LAO 060806

1	Circuit card hold-down bracket
2	Front bezel
3	Front fan
4	Hard disk drive
5	DVD-RW drive
6	Power supply
7	Rear fan
8	Memory module
9	Analog port board fastener

Protecting against ESD damage

Any system component that contains transistors or integrated circuits should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the system unit, the part, the work mat, and the person handling the part are all at the same charge.

Packaging materials that contain ESD sensitive components are usually marked with a yellow and black warning symbol.

> ⚠ **CAUTION:**
> You must observe proper grounding techniques to prevent the discharge of static electricity from your body into ESD sensitive components.

To avoid damaging ESD sensitive components:

- Keep the parts in protective packages until they are ready to be inserted into the product.
- Handle the components only after attaching a wrist strap to your bare wrist. Attach the other end of the wrist strap to a ground that terminates at the system ground, such as any unpainted metallic chassis surface.
- Handle a circuit card by the faceplate or side edges only. Hold devices such as a hard disk drives in the same manner. The ESD sensitive area of these components is located on the bottom surface.
- Keep components away from plastics and other synthetic materials such as polyester clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Do not hand components to another person unless that person is grounded at the same potential level. In general, avoid contact with other people.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

> **Note:**
> Use product-specific ESD procedures when they exceed the requirements noted here.

Replacing components

This section presents detailed instructions for replacing the RoHS-compliant components in the S3210R server.

This section includes the following topics:

Component replacement process checklist

The checklist below represents the general component replacement process, with references to other sections of this chapter where the specific replacement steps for each component are presented.

Procedure	✓
Review electrostatic discharge prevention techniques. See Protecting against ESD damage on page 63.	
Shut down the system and unplug the AC power cord. See Shutting down the system on page 65.	
For a rack-mount system, remove the server from the cabinet. see Removing the server from the cabinet on page 66.	
Remove the top cover if necessary. See Removing the top cover on page 67.	
Remove the circuit card hold-down bracket if required for sufficient access. See Removing the circuit card hold-down bracket on page 68.	
Replace the component: l Front chassis fan. See Replacing the front chassis fan on page 72. l Rear chassis fan. See Replacing the rear chassis fan on page 74. l Power supply. See Replacing the power supply on page 75. l Hard disk drive. See Replacing the hard disk drive on page 77. l DVD-RW drive. See Replacing the DVD-RW drive on page 79. l Memory module. See Replacing the memory module on page 80. l Rack-mount sliding rails. See Replacing the rack-mount sliding rails on page 82.	
Reinstalling the circuit card hold-down bracket if required. See Reinstalling the circuit card hold-down bracket on page 69.	
Reinstalling the top cover if necessary. See Reinstalling the top cover on page 70.	
For a rack-mount system, return the server to the cabinet. See Returning the server to the cabinet on page 71.	
Restore power to the system. See Restoring power to the system on page 71	

Shutting down the system

Before you open the S3210R chassis, you must remove system power as follows:

1. Shut down the system:

   a. At the Administration menu, and select **Utilities > Shutdown Server**.

   b. The system displays the **Shutdown Server** page.

      c. Enter a number between 0 and 600 in the **Wait Time** field.

         This time designates how many seconds the system is to wait for calls in progress to finish before stopping the voice system. New calls are prevented immediately regardless of the wait time selected. If any calls are still in progress after this time, they are dropped, and the system proceeds with stopping the voice system. A wait time of zero indicates an indefinite wait time until all current calls are completed.

      d. Click Shutdown.

         The system displays the following message:

         "This will bring down your system and you will lose access to this system. Are you sure you want to do this?"

      e. Click OK.

         Some messages might appear as the system shuts down.

      f. The system is completely shut down when you see the following message:

         Stopping voice system...Shutting down system.

2. Remove any disk from the DVD drive.

3. Turn off the power by pressing the On/Off switch on the front of the S3210R. See Item 3 in <u>S3210R front panel components</u> on page 60.

   Verify that the green power lamp on the front of the Server is dark. See Item 4 in <u>S3210R front panel components</u> on page 60.

   Note:
   Users in the United Kingdom who have a modem attached to the system must disconnect the telephone line from the system unit before unplugging any power cords.

4. Press the On/Off switch located on the back of the server to turn off power, and then unplug the AC cord. See Items 3 and 4 in <u>S3210R rear panel components</u> on page 61.

Removing the server from the cabinet

For a rack-mount setup, remove the server from the cabinet to access the server components:

⚠️ **CAUTION:**
For safety purposes, get another person to assist you with moving the server.

1. Prepare a clear area as a work surface for the server.

2. Unplug all cables at the back of the server. Label all cables so you can easily reconnect them.

3. Press the release clips on the rails to fully extend the rail.

4. Lift the server off the rails and set the server on the work surface.

Removing the top cover

Refer to the following illustration while performing this task.
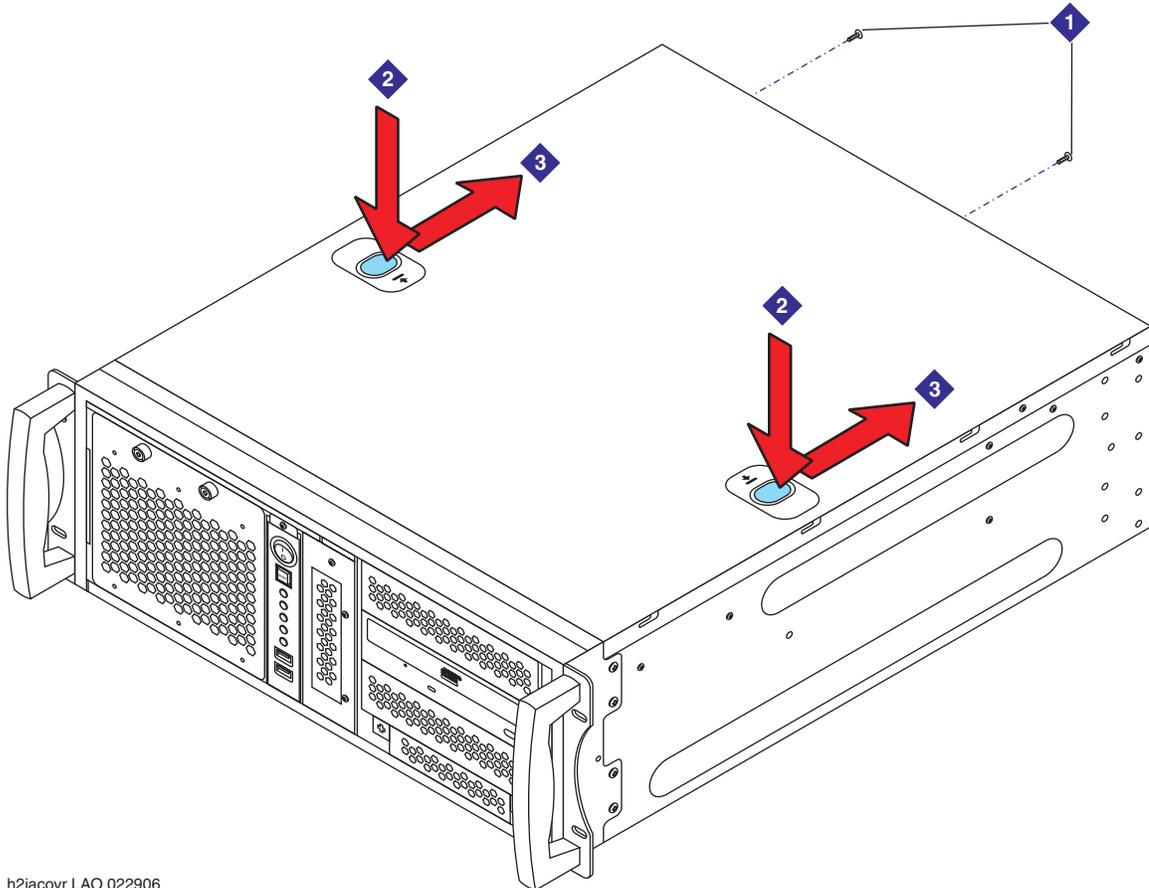
h2iacovr LAO 022906

To remove the chassis cover on an S3210R server:

1. Remove the two screws located on the back of the chassis. See item 1 in the illustration.

2. With your thumbs, push down on the cover release buttons. While holding down the buttons, slide the cover towards the back of the server. See items 2 and 3 in the illustration.

3. Slide the cover off the back of the chassis.

The internal components are now accessible for replacement.

Removing the circuit card hold-down bracket

Refer to the following illustration while performing this task.
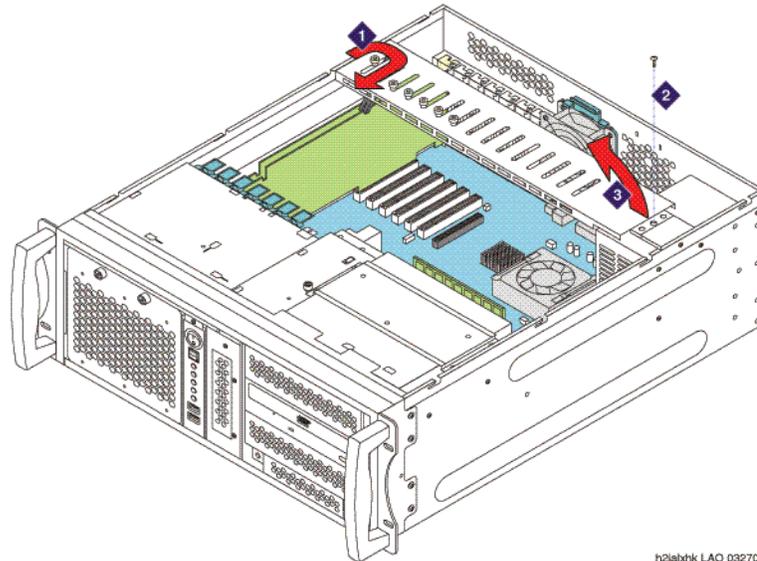
h2iaixhk LAO 032706

To remove the circuit card hold-down bracket:

1. For each occupied slot, loosen the retaining screw and slide it toward the front of the chassis to release the arm. See Item 1 in the illustration.

2. Unfasten the screw securing the circuit card hold-down bracket to the chassis. See Item 2 in the illustration.

3. Lift the circuit card hold-down bracket and set it aside. See Item 3 in the illustration.

Reinstalling the circuit card hold-down bracket

Refer to the following illustration while performing this task.

h2iaixhk LAO 032706
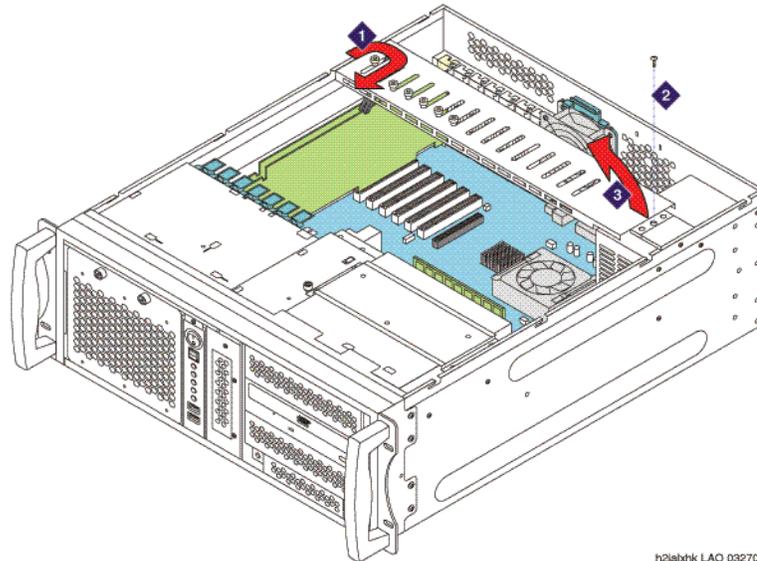
To reinstall the circuit card hold-down bracket:

1. Make sure that all of the securing arms on the circuit card hold-down bracket are up.

2. Position the circuit card hold-down bracket on the chassis so that the holes in the bracket line up with the holes on the chassis. See Item 3 in the illustration.

3. Fasten the screws that secure the circuit card hold-down bracket to the chassis. See Item 2 in the illustration.

4. For each occupied slot, loosen the screw if necessary, slide the screw toward the back of the chassis until the securing arm meets the board, and then tighten the screw. See Item 1 in the illustration.

Reinstalling the top cover

Refer to the following illustration while performing this task.

h2iacovr LAO 022906
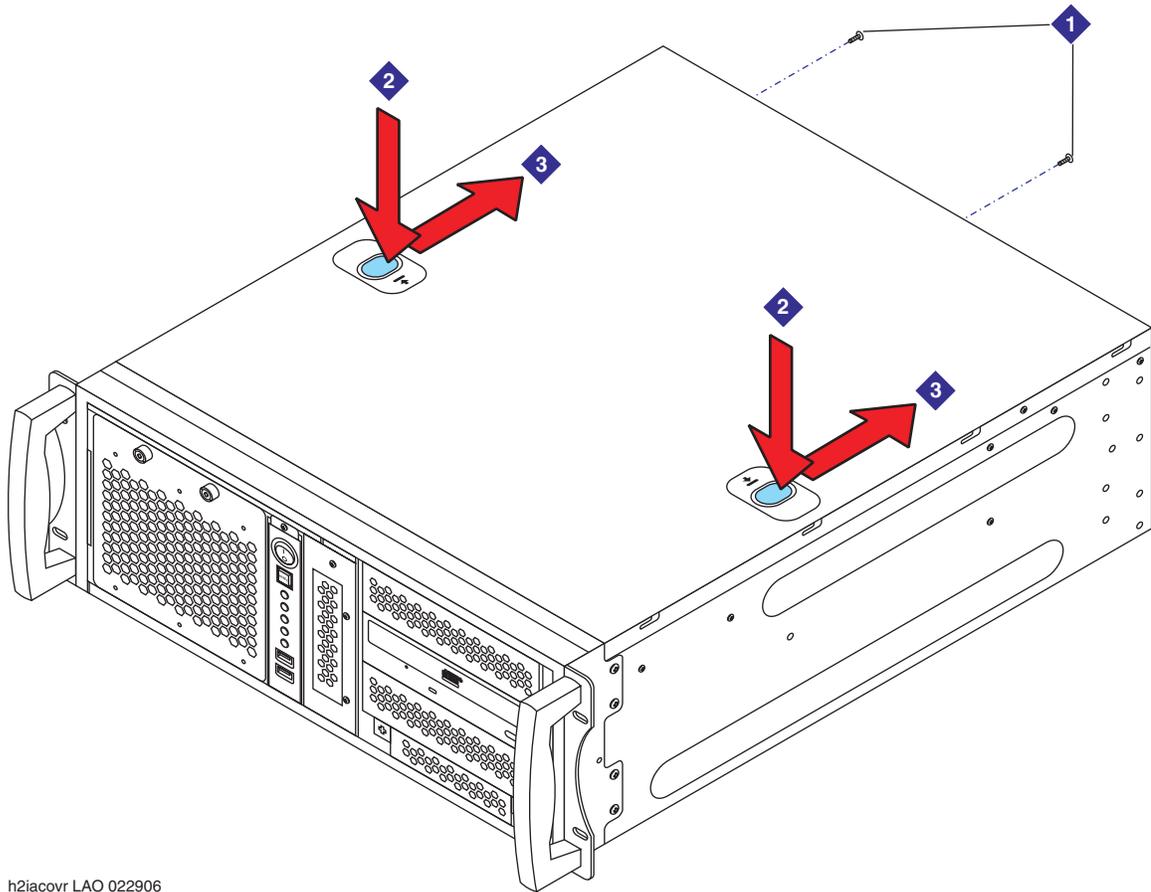
To reinstall the top cover on an S3210R server:

1. Position the top cover so the straight edge is in front.

2. Set the cover on the chassis so the cover is aligned with the sides and slightly overhangs the back of the server.

3. Slide the cover toward the front of the machine until the cover snaps into place.

4. On the back of the server, reinstall and tighten the two screws to secure the top cover to the chassis. See Item 1 in the illustration.

Returning the server to the cabinet

For a rack-mount setup, return the server to the cabinet if you removed it:

⚠ **CAUTION:**
For safety purposes, get another person to assist you with moving the server.

1. Push in the release lock, the front latch, to slide the server into the cabinet.

2. Plug in all of the cables at the back of the server.

Restoring power to the system

To restore power to the system:

1. For a rack-mounted unit, reattach any cables you might have unplugged from the back of the machine.

2. Plug the AC power cord back into the power outlet and then push the On/Off switch to turn on the power. See Items 3 and 4 in S3210R rear panel components on page 61.

3. Press the On/Off switch on the front of the S3210R. See Item 3 in S3210R front panel components on page 60.

   The green power lamp on the front of the machine should be lit. See Item 5 in S3210R front panel components on page 60

4. Continue with any verification procedures needed to return the system to service.

Replacing the front chassis fan

Refer to the following illustration while performing this task.
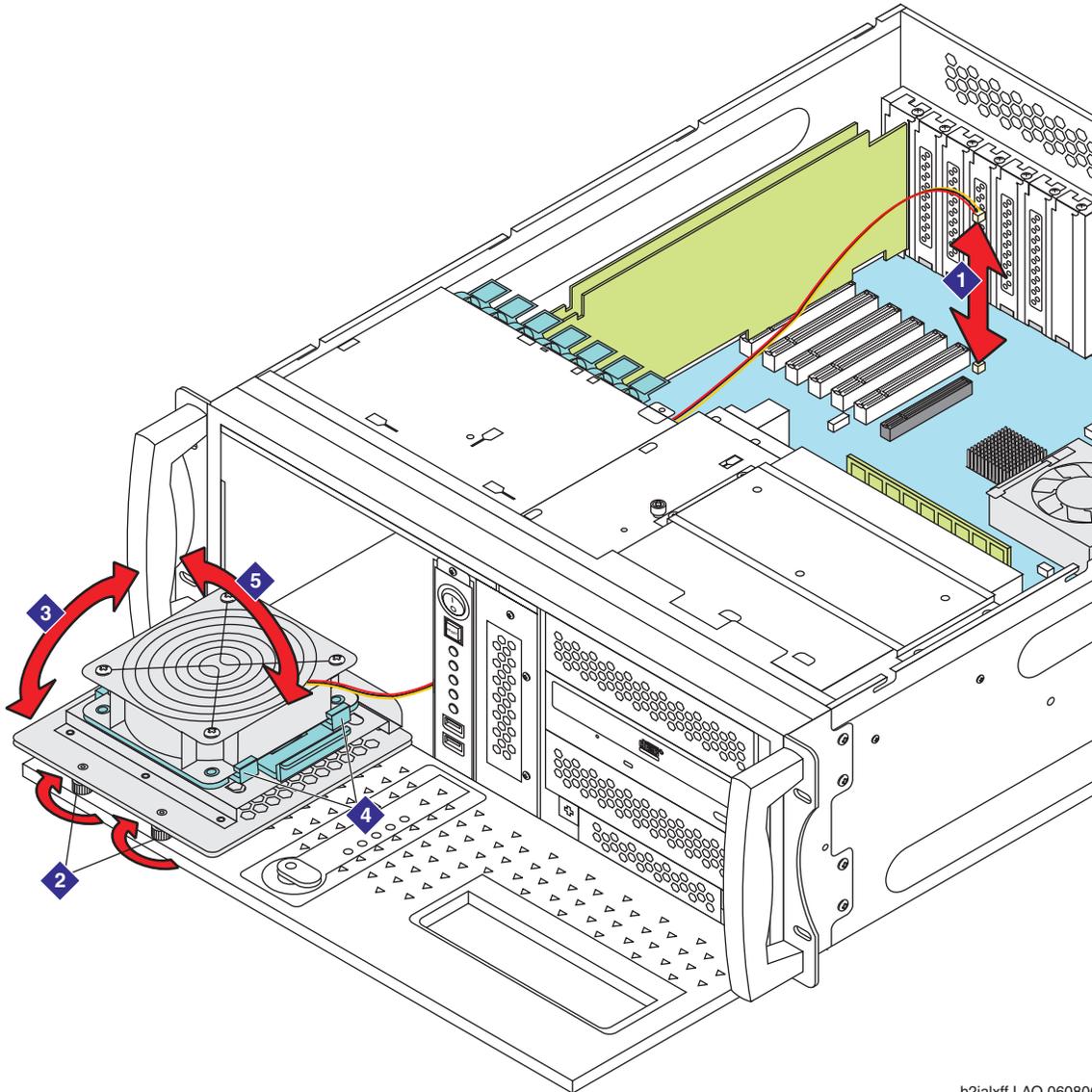
h2ialxff LAO 060806

To replace the S3210R front chassis fan:

1. Remove the old fan:

   a. Disconnect the fan cable from the motherboard. See Item 1 in the illustration.

   b. Unscrew the two thumbscrews in the front of the chassis that hold the front panel in place. See Item 2 in the illustration.

   c. Lower the fan assembly. See Item 3 in the illustration.

   d. Push back the two clips that hold the fan in place. See Item 4 in the illustration.

   e. Remove the fan from the faceplate. See Item 5 in the illustration.

   f. Set the old fan aside.

2. Insert the replacement fan:

   a. Slip the new fan under the clips that hold the fan in place and snap the new fan into the faceplate. See Items 5 and 4 in the illustration.

   b. Lift the assembly into place. See Item 3 in the illustration.

   c. Tighten the thumbscrews in the front of the chassis that hold the front panel in place. See Item 2 in the illustration.

   d. Connect the fan cable to the motherboard. See Item 1 in the illustration.

Replacing the rear chassis fan

Refer to the following illustration while performing this task.
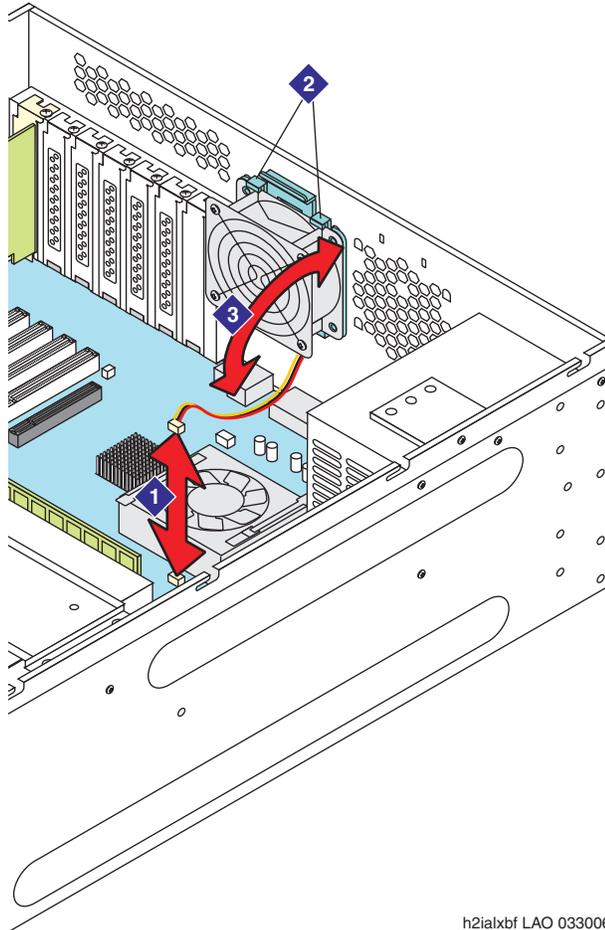
h2ialxbf LAO 033006

To replace the S3210R rear chassis fan:

1. Remove the old fan:

    a. Disconnect the fan cable from the motherboard. See Item 1 in the illustration.

    b. Push back the two clips that hold the fan in place. See Item 2 in the illustration.

    c. Rotate the fan down and release it from the chassis. See Item 3 in the illustration.

    d. Set the old fan aside.

2. Insert the replacement fan:

    a. Slide the replacement fan into the chassis and snap it into place. See Items 3 and 2 in the illustration.

b. Connect the fan cable to the motherboard. See Item 1 in the illustration.

Replacing the power supply

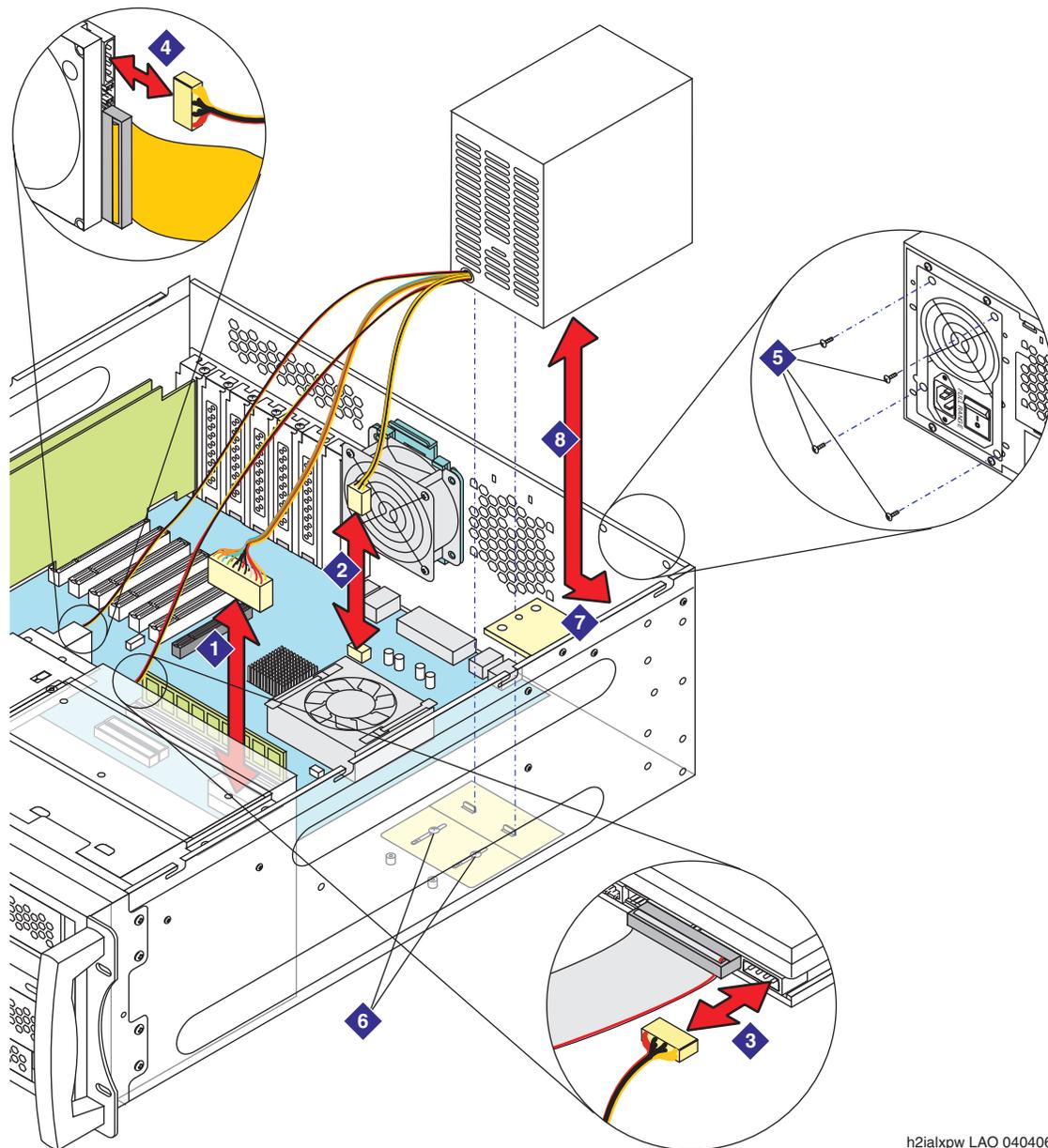Refer to the following illustration while performing this task.

h2ialxpw LAO 040406

To replace the S3210R power supply:
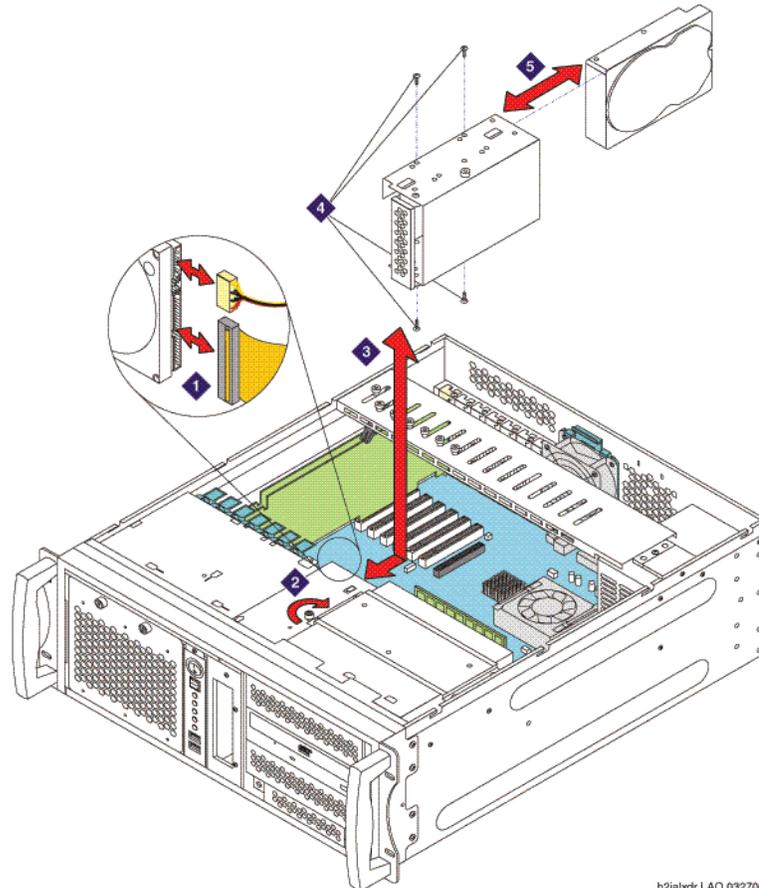
1. Remove the old power supply:

    a. Unplug the power cables from the power supply to the motherboard. See Items 1 and 2 in the illustration.

    b. Unplug the power cable from the power supply to the DVD drive. See Item 3 in the illustration.

    c. Unplug the power cable from the power supply to the hard disk drive. See Item 4 in the illustration.

    d. Remove the screws holding the power supply mounting plate to the bottom of the chassis. See Item 6 in the illustration.

    e. Remove the four screws holding the power supply to the rear panel of the chassis. See Item 5 in the illustration. Make sure that you remove the screws holding the power supply to the chassis, not the screws outside of the power supply.

    f. Slide the power supply mounting plate toward the front of the chassis until it clears the power supply.

    g. Lower the power supply to the bottom of the chassis, and then lift the power supply out of the chassis (see Item 8 in the illustration), avoiding the circuit card hold-down bracket (see Item 7 in the illustration).

    h. Set the old power supply aside.

2. Install the new power supply:

    a. Place the power supply in the chassis (see Item 8 in the illustration), avoiding the circuit card hold-down bracket (see Item 7 in the illustration).

    b. Install at least one screw through the rear chassis panel to the power supply to support the power supply. See Item 5 in the illustration.

    c. Slide the power supply mounting plate toward the rear of the chassis until the tabs on the mounting plate rest against the front of the power supply. See Item 6 in the illustration.

    d. Adjust the placement of the power supply mounting plate so that the screws align with the captive nuts in the chassis.

    e. Install the two screws holding the power supply mounting plate to the bottom of the chassis. See Item 6 in the illustration.

    f. Install the remaining screws through the rear chassis panel to the power supply. See Item 5 in the illustration.

    g. Plug in the wires from the power supply to the motherboard. See Items 1 and 2 in the illustration.

    h. Plug in the wires from the power supply to the DVD drive. See Item 3 in the illustration.

    i. Plug in the wires from the power supply to the hard disk drive. See Item 4 in the illustration.

Replacing the hard disk drive

Refer to the following illustration while performing this task.

h2ialxdr LAO 032706

To replace the S3210R hard disk drive:

1. Remove the old hard disk drive:

    a. Unplug the IDE and power cables from the rear of the hard disk drive. See Item 1 in the illustration.

    b. Loosen the thumbscrew on the top of the hard disk drive tray. See Item 2 in the illustration.

    c. Slide the hard disk drive tray toward the rear of the cabinet, avoiding the cable connectors, and lift the hard disk drive tray out of the chassis. See Item 3 in the illustration.

    d. Remove the two screws holding the hard disk drive on each side of the hard disk drive tray. See Item 4 in the illustration.

    e. Remove the hard disk drive from the hard disk drive tray. See Item 5 in the illustration.

    f. Set the old hard disk drive aside.

2. Install the new hard disk drive, power connector up:

    a. Slide the hard disk drive into the hard disk drive tray. See Item 5 in the illustration.

    b. Secure the hard disk drive to the hard disk drive tray with two screws on each side. See Item 4 in the illustration.

    c. Place the hard disk drive tray into the chassis and slide the hard disk drive tray toward the front of the chassis, avoiding the cable connectors. See Item 3 in the illustration.

    d. Tighten the thumbscrew on the top of the hard disk drive tray. See Item 2 in the illustration.

    e. Plug in the IDE and power cables to the rear of the hard disk drive. See Item 1 in the illustration.

Replacing the DVD-RW drive

Refer to the following illustration while performing this task.

h2iabxvr LAO 032706
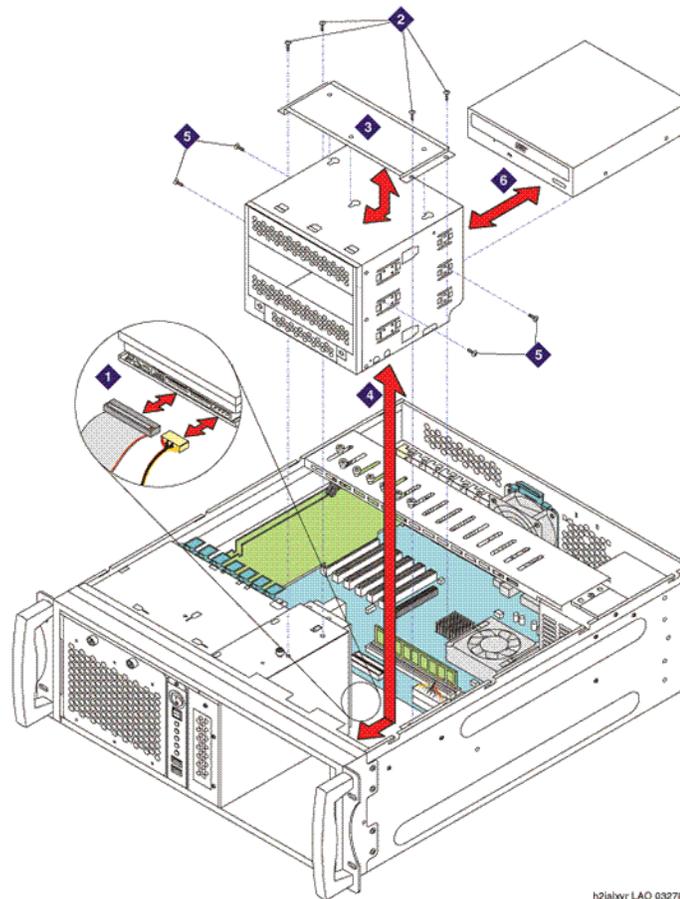
To replace the S3210R DVD-RW drive:

1. Remove the old DVD-RW drive:

   a. Unplug the IDE and power cables from the rear of the DVD-RW drive. See Item 1 in the illustration.

   b. Remove four screws from the 5.25" media bay support bracket. See Item 2 in the illustration. You may want to use a magnetic screwdriver for this step to avoid dropping the screws into the chassis.

   c. Slide the 5.25" media bay support bracket toward the rear of the chassis to clear the keyhole tabs and then remove the support bracket. See Item 3 in the illustration.

    d. Slide the 5.25" media bay toward the rear of the chassis and then remove the media bay. See Item 4 in the illustration.

    e. Remove the two retaining screws from each side of the 5.25" media bay. See Item 5 in the illustration.

    f. Remove the old DVD-R/W drive from the media bay and set it aside. See Item 6 in the illustration.

2. Install the new DVD-RW drive:

    a. Mount the new drive into the middle rack in the 5.25" media bay, flush with the front of the 5.25" media bay. See Item 6 in the illustration.

    b. Secure the DVD-RW drive to the 5.25" media bay with two screws on each side. See Item 5 in the illustration.

    c. Place the 5.25" media bay into the chassis and then slide it toward the front of the chassis. See Item 4 in the illustration.

    d. Reinstall the 5.25" media bay support bracket, engaging the keyhole tabs. See Item 3 in the illustration.

    e. Reinstall the four screws to the 5.25" media bay support bracket. See Item 2 in the illustration. You may want to use a magnetic screwdriver for this step to avoid dropping the screws into the chassis.

    f. Plug in the IDE and power cables to the rear of the DVD-RW drive. See Item 1 in the illustration.

Replacing the memory module

To replace the memory module:

1. Press the holding clips on both sides of the socket outward to release the currently installed memory module. See the following illustration.


dimmout LAO 122705
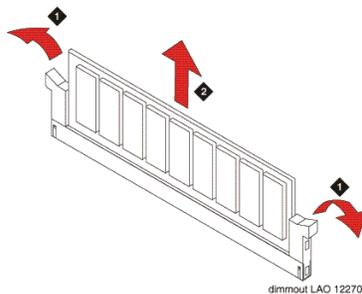
2. Gently pull the memory module out of the socket.

⚠️ **CAUTION:**
The memory module can be damaged by electrostatic discharge. See Protecting against ESD damage on page 63 for more information.

3. Hold the memory module card by the edges, and remove the card from its antistatic package.

4. Position the replacement memory module in the correct orientation. See the following illustration.
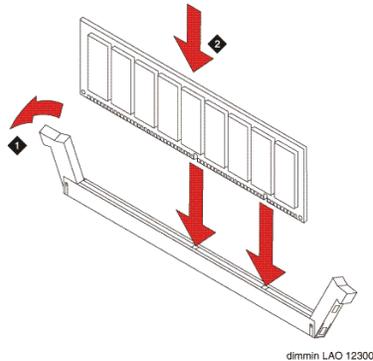
dimmin LAO 123005

5. Gently push the replacement memory module into the appropriate socket. See Item 2 in the illustration.

6. When the memory module card is seated firmly, the holding clips spring shut to lock it into position. Verify that the clips are firmly in place.
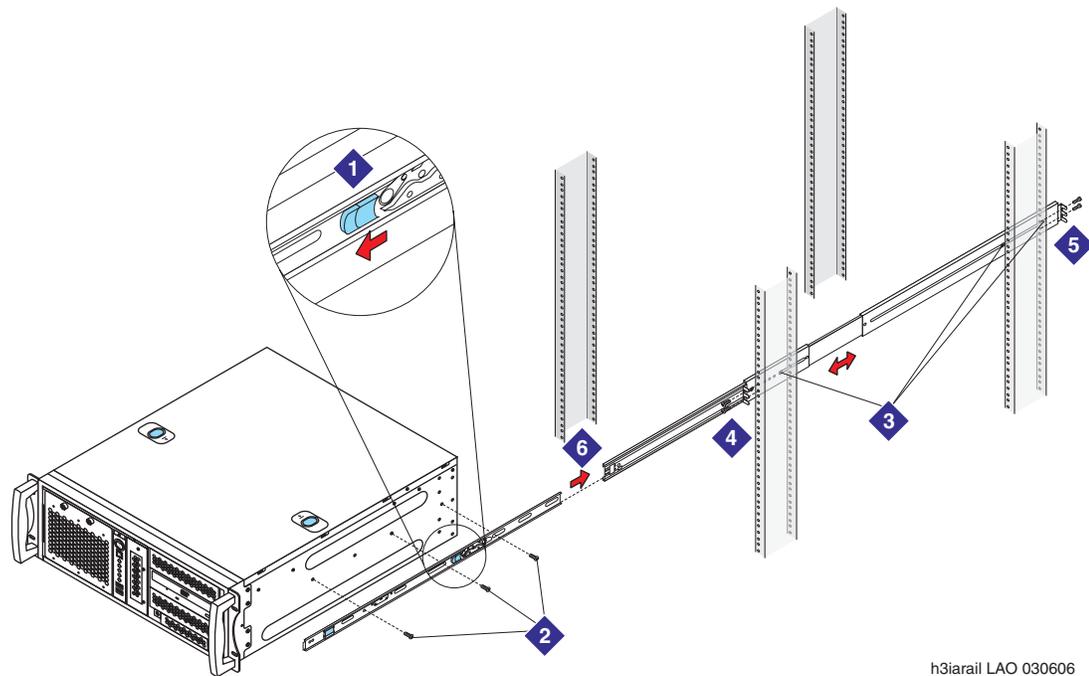
> ⚠️ **CAUTION:**
> Do not force the memory module into or out of the socket. This can damage the socket, the memory module, or both.

Replacing the rack-mount sliding rails

Refer to the following illustration while performing this task.

h3iarail LAO 030606

To replace the rack-mount sliding rails:

1. Remove the server from the cabinet:

   a. Unplug all cables at the back of the server.

   b. Press the release clips on the rails to fully extend the rail.

   c. Lift the server off the rails and set the server aside.

2. Remove the old rack-mount sliding rail assembly and set aside.

3. Remove the new rail assembly and screws from their packaging.

   Note:
   If more than one set of screws is provided, identify the set of 12 screws that fits the S3210R server hardware. Only one set of thick Phillips round head screws fits tightly to the rails. Any other screws are not needed.

4. Release and detach the inner rail from the slide:

    a. Fully extend the rail.

    b. Pull the release lock out, the arrow tab, forward. See Item 1 in the illustration.

    c. Separate the inner rail from the slide.

5. Attach the inner rail to the server:

    a. Place the S3210R server on a flat, stable surface.

    b. Align the inner rail against the side of the server. Only three holes in the rail line up with the corresponding holes in the server chassis.

    c. Starting with the hole nearest the front of the server, insert a screw into the holes indicated in Item 2 in the illustration.

6. Attach the slide to the frame of the customer-provided cabinet:

    a. Loosen the two Phillips screws inside the front bracket. Extend the bracket to fit the frame. See Item 3 in the illustration.

    b. Secure the bracket to the front and rear posts in the customer-provided cabinet. Tighten all three screws. See Items 4 and 5 in the illustration.

    c. After the bracket is in place, tighten the two screws inside each rear bracket. See Item 5 in Attaching a rack-mount rail assembly on an S3210R server.

> ⚠ **CAUTION:**
> You need two people for the next step.

7. Mount the server in the cabinet:

    a. Fully extend the slide out the front of the cabinet. See Item 6 in the illustration.

    b. Have one person hold up the front of the server. Have a second person help support the server, and guide the server onto the slide.

    c. Plug in all cables at the back of the server.