Quick Start for Hardware Installation:

Avaya G450 Media Gateway

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Chapter 1: Before you start

Before you install your Avaya G450 Media Gateway, prepare all the information, resources, and tools that you need during the installation process.

Preparing the Pre-Installation Worksheet

The Electronic Pre-installation Worksheet (EPW) is a customized Excel spreadsheet that you can use to collect configuration information. The EPW verifies that you have a complete set of installation information. Once filled out by the customer and project manager, the EPW can be loaded directly into the Avaya Installation Wizard (IW) or Gateway Installation Wizard (GIW) for configuration. The EPW should be completed before the installation. Download the latest version of the EPW spreadsheet from the Avaya Web site at http://support.avaya.com/avayaiw.

Preparing contacts you might need

Ensure that you have the names and phone numbers of any people you might need to contact at the installation site. This list might include the people responsible for network architecture, system administration, site security, site deliveries, etc.

Preparing installation files

Ensure that you load the latest versions of all firmware files for the G450, S8300, and media modules onto your laptop before configuration. If you install a G450 without an S8300 Server, the configuration process prompts you for the filenames of all firmware files needed. You can download the firmware files needed for your installation from the Avaya Support Web site, at http://support.avaya.com.

Preparing the G450 serial number

In order to register the gateway to CM, you need the serial number of the G450. The serial number is printed on a sticker on the back of the G450 chassis.

Obtaining RFA access

You need to obtain a personal Single Sign-On (SSO) for Remote Feature Activation (RFA) web site authentication login before going to the site for installation. You must complete the authentication process before you can be assigned an SSO authentication login.

As a first-time user:

- Business Partners should point their browsers to the Business Partner portal option sales_market, services-voice, training tools and procedures to select RFA.
- Associates should point their browsers to the Avaya Associate portal.
- Contractors should point their browsers to Avaya.com.
- Alternatively go directly to http://rfa.avaya.com.

From that point, log into SSO and complete the process to obtain your personal login.

Downloading CM license and authentication files to your laptop

If you are installing a G450 with an S8300 Server as a primary controller, you need license and authentication files for the Communication Manager.

1. Create a directory on your laptop for storing license and authentication files.
2. Access the Internet from your laptop and go to rfa.avaya.com.
3. Login using your SSO login and password. The AFS and RFA information home page appears.
4. Start the RFA application from the RFA information page. To create and download the license file and authentication file, follow the instructions outlined in the *Avaya Remote Feature Activation (RFA) User Guide*, 03-300149.
5. Use the download or e-mail capabilities of the RFA web site to download the license and authentication files to your laptop.

Preparing the INADS IP address

The INADS IP address is required in order to configure the S8300's modem for alarming. Use the Automatic Registration Tool (ART) to obtain an IP address for an INADS alarming modem.

1. Access the ART Web site on your laptop.
2. Select **Administer S8x00 Server products for installation script**, and then log in.
3. Enter the customer information, select **Installation Script**, and click **Start Installation script & IP Addr Admin**. A script file is created and downloaded or e-mailed to you.

Preparing needed hardware

- Laptop – to configure the Avaya G450 Media Gateway, you need to prepare a laptop with a serial port. The laptop must have Internet Explorer installed. If you install a G450 without an S8300, you must prepare the laptop with a Windows 2000 or Windows XP operating system and a TFTP server.
- Modem – in order to set up a remote configuration of the G450, you must prepare a USB modem. Currently, the G450 supports the MultiTech USB modem, model MT5634ZBA-USB-V92, and the

USRobotics USB modem, model 5637. If a USB modem is not available, you can also use a serial modem, the Multitech MultiModem ZBA, MT5634ZBA-V92.

Preparing tools needed for mounting

To mount on a rack or wall, prepare a Phillips head screwdriver.

To mount on a wall prepare also:

- A 48 in. x 48 in. (1.2 m x 1.2 m) plywood board (US: 3/4 inch plywood), 0.75 in (20 mm) thick.
- Minimum of four wood screws
- Minimum of four screws (pan head at least ½ in, # 10-12 screw) to fasten the G450 to the wall

You might also need wire cutters to attach the grounding conductors, if your site uses a ground block.

Choosing the installation site

Ensure that the location where you install your G450 fulfills the following requirements:

- Cables are away from sources of electrical noise such as radio transmitters, broadcast amplifiers, power lines, fluorescent light fixtures
- Water or moisture cannot enter the case of the chassis.
- Air can flow freely around all sides of the chassis.
- The vents on the sides of the case are not blocked.
- The installation is no more than 25 feet (7.6 m) from an approved ground or close enough for use with the supplied secondary grounding conductor.

  Note:

  If the installation location is greater than the length of the supplied secondary grounding conductor from an approved ground, you must contact a licensed electrician to install a supplementary ground conductor.
- The environmental conditions match the following requirements:
  - Ambient temperature – 32^{o} to 104^{o}F (0^{o} to 40^{o}C)
  - Relative humidity – 10-90% relative humidity
  - Minimum clearance for ventilation – 18 in. (45 cm)
  - Weight support – 22.5-35 lbs (10-16 kg)

Chapter 2: Unpack the device

CAUTION:
Wear an anti-static wrist ground strap whenever you handle components of a G450 Media Gateway. Connect the strap to an approved ground, such as an unpainted metal surface.

Equipment

Open the box that contains the G450, and ensure that it contains the following components and accessories:

- One G450 chassis. The required media modules that may be installed.
- An Accessory Kit (see Table 1).

Removing the Power Supply Units

For ease of installation, it is recommended to remove the power supply unit(s) before unpacking the G450.

1. Open the package. Note that the G450 is lying flat. Turn it so that the rear panel is facing up.
2. Remove the power supply unit (PSU). If you ordered two power supplies, remove them both.
   a. Loosen the two PSU captive screws, one on each side of the PSU.
   b. Grasp the two side handles and pull the PSU up and out.
   c. Place the PSU carefully on the table.

Other components

The Avaya Partner Contact Closure adjunct box, if ordered, is packaged separately.

Table 1: G450 Accessory Kit

 Fifteen 3/8 in. Flat Head Screws	 One Grounding Cable Assembly	 Four Rubber Standoffs
 Two 19 in. Rack mount brackets	 One Cable Management Assembly	 One Ground Screw
 Two 5/16 in. Round Head Screw	 Two Serrated Lock Washers	 One Jumper for Bridging NVRAM init Pins

Chapter 3: Mount the device

You can position the G450 on a suitable table, or mount it in a rack or on the wall. Once the G450 is mounted, re-insert the Power Supply Units.

Positioning on a table

To install the Avaya G450 Media Gateway as a tabletop unit:

1. Remove the four rubber standoffs from their package.
2. Turn the device upside down.
3. Position each standoff into one of the mounting sites, near each corner of the chassis.

Mounting in a rack

You can fasten the G450 to a standard 19-inch rack either at the front of the G450 or at its middle. Before you mount the G450, attach the mounting brackets to the device.

Front mounting bracket placement

Attach a regular mounting bracket to one side of the G450, near the front, as shown in Figure 1. Attach a mounting bracket with cable guides to the other side of the G450, as shown in to Figure 3.

Middle mounting bracket placement

Attach regular mounting brackets to both sides of the G450, as shown in Figure 2. You can also attach a mounting bracket with cable guides on one side of the G450, as shown in Figure 3.

Figure 1: Front mounting bracket placement

Figure 2: Middle mounting bracket placement

Figure 3: Attaching a mounting bracket with cable guides

Attaching mounting brackets

Follow these steps to attach the mounting brackets:

1. Position a bracket over the holes in the chassis in the desired mounting position.
2. Affix the bracket to the chassis with five flat head 3/8 in. screws.
3. Tighten the screws with the screwdriver.

Rack mounting the G450

1. Insert two mounting screws, one on either side of the rack. These will be the bottom screws of the mounting brackets. Turn the screws only 3-4 times, so that a part of them is protruding.
2. Position the G450 in the rack so that the bottoms of the brackets are resting on the protruding screws.
3. Position the G450 in the rack. Ensure that there is adequate ventilation.
4. Insert five mounting screws on each side.
5. Verify that the G450 is level and horizontal.
6. Tighten the mounting screws. Avoid overtightening.

7. Either tighten the two bottom-most screws inserted in step 1, or remove them completely.
8. Verify that ventilation vents are not obstructed.

Mounting on the wall

To mount the G450 on a wall, use the two mounting brackets without cable guides. You can also add a mounting bracket with cable guides if desired (refer to Figure 3).

Note:

a 48 in. x 48 in. (1.2 m x 1.2 m) plywood board (US: 3/4 inch plywood), 0.75 in (20 mm) thickThe plywood and the hardware to mount the plywood are customer-provided.

1. If the wall does not have a portion of plywood available, mount , horizontally onto the wall. Make sure the plywood is sufficiently anchored in the wall. Use a minimum of four wood screws and ensure the screws are driven into wall studs, or use four wall anchors rated not less than 50 pounds (22.5 kg) shear strength each.
2. Mark the plywood with the location of the G450 bracket screw holes before fastening the plywood to the wall.
3. Position the G450 so that its front panel is facing up, and secure it to the plywood using a minimum of four screws (pan head at least ¾ in, #10-12 screw).

Figure 4: Wall mounting bracket placement

Installing the power supply units

When the G450 chassis is installed, first insert the power supply unit(s) if you removed them before installation (refer to Removing the Power Supply Units on page 7).

1. Position the power supply unit before the opening at the rear of the G450 and engage both sides of the PSU in the interior guides.
2. Slide the PSU slowly into the chassis, maintaining an even pressure to assure that the PSU does not become twisted or disengaged from the guides.
3. Close and tighten the two PSU captive screws, one on each side of the PSU.

Figure 5: Inserting the power supply unit

Chapter 4: Install media modules

The required media modules may be pre-installed in the G450 chassis. If this is the case, skip this chapter.

If the media modules are not pre-installed, or if you want to replace modules or add new media modules, install the necessary media modules and related components to support the configuration required for your site. If this Media Gateway needs to function as an ICC or as an LSP, install an S8300 Server module.

Figure 6: The G450 front panel ports and slots

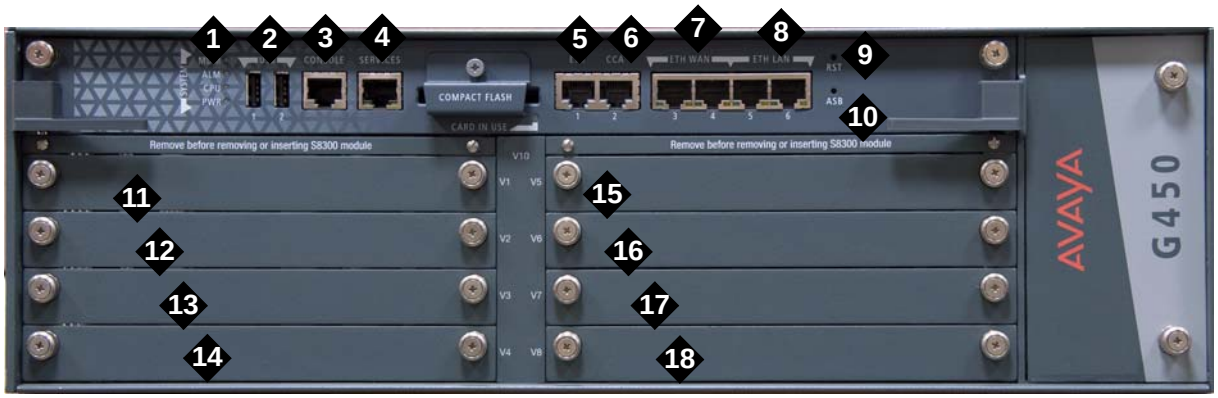

Figure notes:

1. **System LEDs**
2. **USB ports**
3. **Console port**
4. **Services port**
5. **ETR (Emergency Transfer Relay) port**
6. **CCA (Contact Closure) port**
7. **ETH WAN ports**
8. **ETH LAN ports**
9. **RST button**
10. **ASB button**
11. **V1 — slot for media module or S8300 Server**
12. **V2 — media module slot**
13. **V3 — media module slot**
14. **V4 — media module slot**
15. **V5 — media module slot**
16. **V6 — media module slot**
17. **V7 — media module slot**
18. **V8 — media module slot**

Table 2: Permitted slots for media modules

Media module	Permitted slots	Description
MM340	V3, V4, V8	Provides one E1/T1 WAN port for connecting to a WAN endpoint device.
MM342	V3, V4, V8	Provides one USP WAN port for connecting to a WAN endpoint device.
MM710	V1 – V8	Provides one E1/T1 trunk port for connecting an E1/T1 telephone trunk.
MM710B	V1 – V8	Provides one E1/T1 trunk port for connecting an E1/T1 telephone trunk.
MM711	V1 – V8	Provides eight universal analog ports for connecting analog telephones or trunks.
MM712	V1 – V8	Provides eight ports for connecting DCP telephones.
MM714	V1 – V8	Provides four analog ports for analog telephones and four analog ports for analog trunks.
MM714B	V1 – V8	Provides four analog ports for analog telephones, four analog ports for analog trunks, and an emergency transfer relay.
MM716	V1 – V8	Provides one amphenol connector that connects to a punch down block to provide 24 analog line ports.
MM717	V1 – V8	Provides one amphenol connector that connects to a punch down block to provide 24 ports for connecting DCP telephones.
MM720	V1 – V8	Provides eight ports for connecting up to eight ISDN trunks or 16 ISDN BRI stations.
MM722	V1 – V8	Provides two ports for connecting ISDN trunks.
S8300	V1	Server

Installing an S8300 server module

You can only insert the S8300 in slot V1 on the left side of the Avaya G450 Media Gateway.

1. If you are inserting an S8300C or S8300D module, rIf you are installing an S8300B, remove the plate above slot V1, labelled “Remove before removing or inserting S8300 module”.
2. Remove the blank plate from slot V1.
3. Position the media module before the V1 bay opening and engage both sides of the module in the interior guides.
4. Slide the S8300 module slowly into the chassis. Maintain an even pressure to ensure that the module does not become twisted or disengaged from the guides.

Figure 7: Inserting the S8300 Server module

5. Apply firm pressure to engage the connectors.
6. Tighten the spring-loaded captive screws on the front of the module to lock the S8300 Server module into the chassis.
7. If you are inserting an S8300 module, rIf you are installing an S8300B, replace the plate labelled “Remove before removing or inserting S8300 module” above slot V1 and tighten the screws on the front of the plate.

Installing other Media Modules

Combination Limitations

The following limitations apply to combining media modules in the G450:

- No more than three MM340/MM342 WAN modules

- The MM760 is not supported

  The following limitations apply to combining media modules in the G450:

  - Three MM340/MM342 WAN modules
  - The MM760 is not supported

Inserting media modules

Media modules are restricted to certain slots. Ensure that you insert each module in a slot appropriate for that module. For a list of allowable slots for each media module, see Table 2.

Insert the media modules needed for your configuration.

Chapter 5: Install Media Resources, PSU, and Memory

You can optionally add or remove media resources (VoIP) modules, a power supply unit (PSU), or a memory upgrade kit for increasing the number of supported announcement files.

For instructions on how to install the upgrade memory kit, refer to *Job Aid: Replacing the Field Replaceable Units (FRUs) for the Avaya G450 Media Gateway,* 03-602059.

Note:

There are two hardware versions of the G450, referred to as *G450 1.x* and *G450 2.x*. G450 1.x is the G450 version with hardware suffix 1, and the G450 2.x is the G450 version with hardware suffix 2.
On the G450 version 1.x, the ASB button is to the *right* of the RST button.
On the G450 version 2.x, the RST button is *above* the ASB button.
In cases where the instructions differ depending on the G450 version, instructions are given for both versions.

Adding or removing media resources

You can add or remove media resources (VoIP) modules in the G450 main board. To do so, you must pull out the G450 main board. The G450 supports hot insertion and removal of the main board without power drop. However, all services are suspended while the G450 main board is out, and all calls are disconnected. Any translation and other data that is in the running configuration but has not been saved to the startup configuration is lost.

This procedure requires the following steps:

1. Removing the G450 main board.
2. Adding or removing media resource modules: MP20 and MP80.
3. Inserting the G450 main board.

Removing the G450 main board

1. Unscrew the two captive screws, one at each side of the G450 main board front panel.
2. Open the latches on both sides of the main board.
3. Grasp the latches and pull out the main board from its slot.
4. Place the main board carefully on a table.

Figure 8: Removing and inserting the G450 main board

Adding or removing media resource modules: MP20 and MP80

The G450 main board has four slots for VoIP engines. Each slot can accommodate either an MP20 (Media Processor 20) module or an MP80 (Media Processor 80) module. An MP20 provides 25 channels for G.711 and G.726 and 20 channels for G.729, and an MP80 provides 80 channels.

Note:

The G450 prior to release 5.2.1 supports up to 240 channels.

The G450 supports a maximum of 320 active channels. Therefore, any combination of MP80 and MP20 in the four DSP slots can be supported.

5. To insert an MP20 or MP80 module:

   a. Locate the MP20 or MP80 module slot. The location differs depending on the hardware version of the G450 (see Figure b and Figure 9).

b. Location of MP20 and MP80 module slots in a G450 1.x

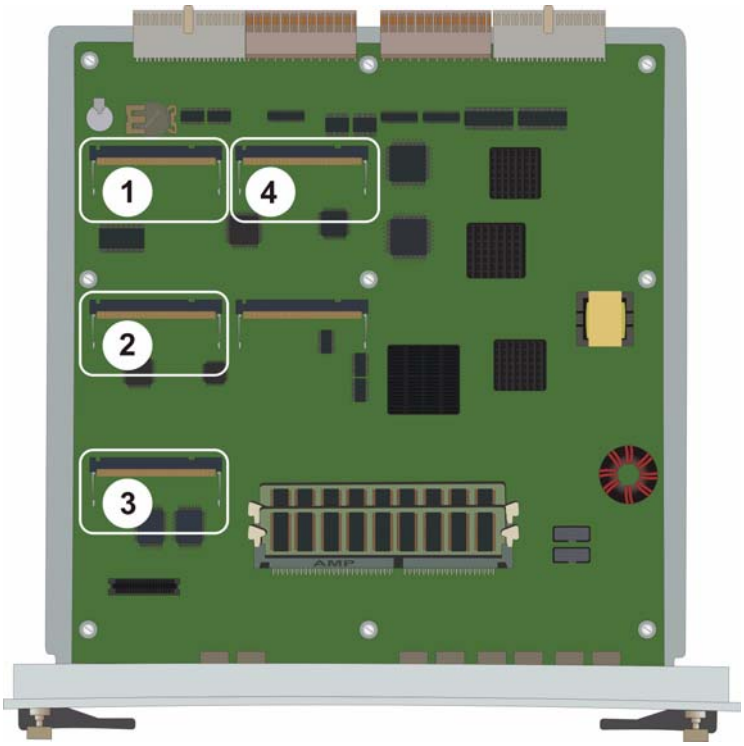

Figure notes:

1. MP20 or MP80 module slot
2. MP20 or MP80 module slot
3. MP20 or MP80 module slot
4. MP20 or MP80 module slot

Figure 9: Location of MP20 and MP80 module slots in a G450 2.x

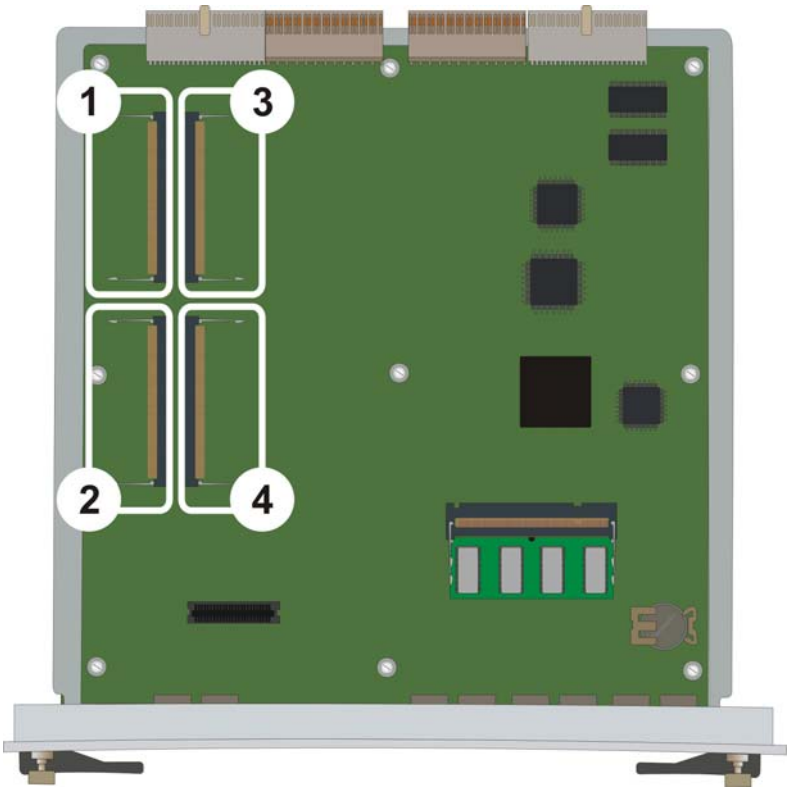

Figure notes:

1. MP20 or MP80 module slot
2. MP20 or MP80 module slot
3. MP20 or MP80 module slot
4. MP20 or MP80 module slot

c. Position the MP20 or MP80 module at a 45 degree angle to the main board, and start inserting it into an MP20 or MP80 slot (see Figure 10 and Figure 11).

Figure 10: Adding or removing an MP20 or MP80 module in a G450 1.x

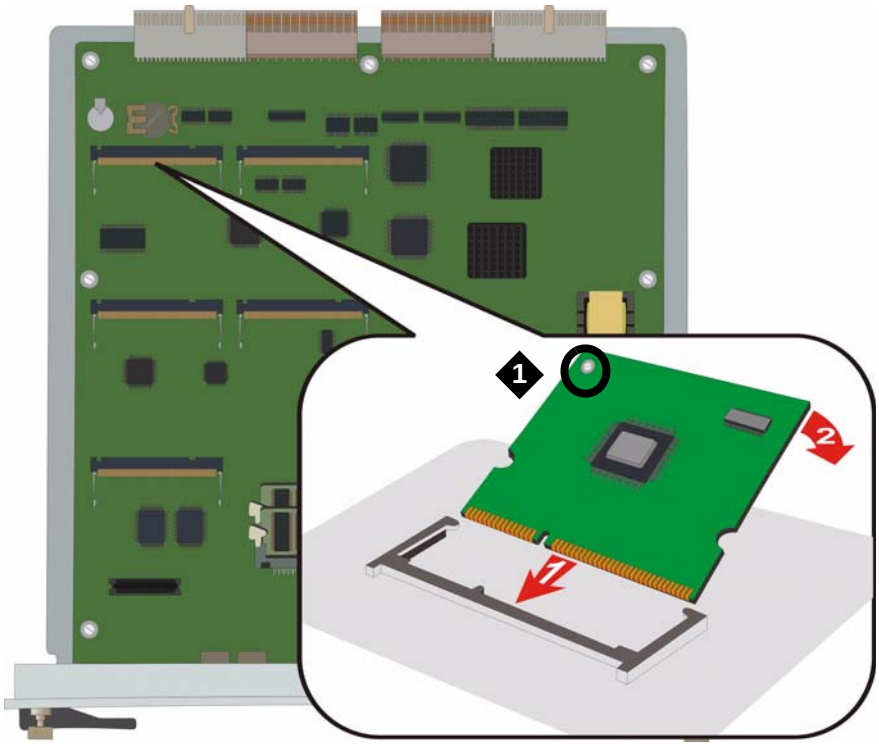

Figure notes:

1. VoIP module locking screw

Figure 11: Adding or removing an MP20 or MP80 module in a G450 2.x

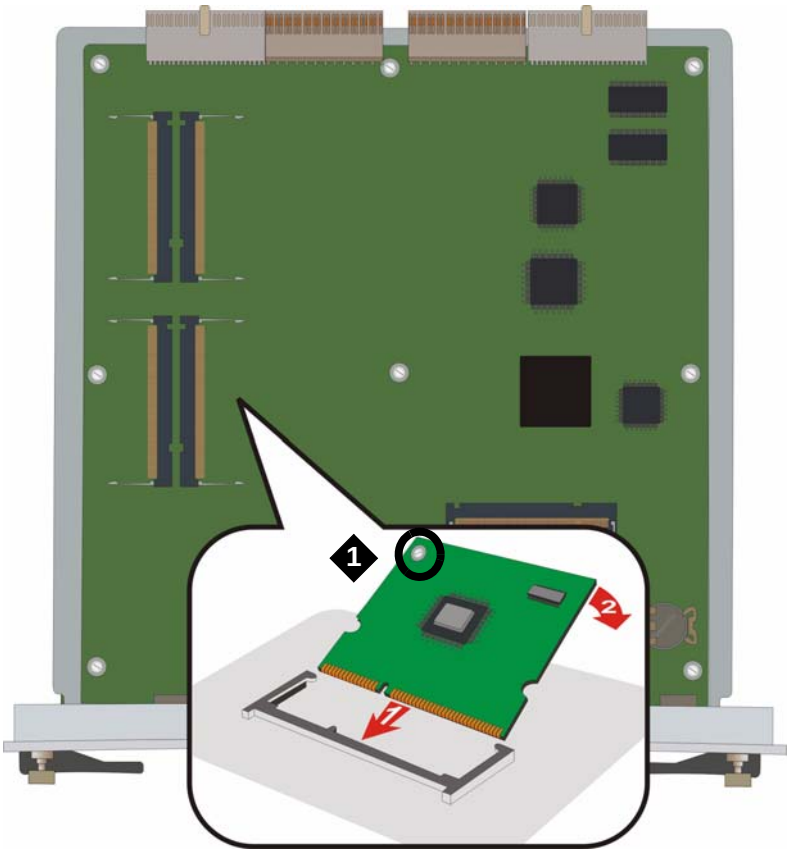

Figure notes:

1. VoIP module locking screw

d. Push the module in all the way. Do not use too much force.

e. Flatten the module so it is flush with the main board. The latches at both sides click shut.

f. Tighten the locking screw affixed to the VoIP module. This secures the VoIP module to the motherboard.

6. To remove an MP20 or MP80 module:

a. Unscrew the locking screw attaching the VoIP module to the motherboard (see Figure 10 and Figure 11).

b. Open the latches on both sides of the module slot. The module lifts up.

c. Pull out the module. Touch the module only at the edges.

Inserting the G450 main board

1. Open the latches on both sides of the slot.

2. Insert the G450 main board vertically into the slot.
3. Push the main board in until the latches begin to close.
4. Close and tighten the two captive screws on the front panel.

Inserting a power supply unit

The G450 provides full redundant, load sharing power supply units (1 + 1). A single power supply unit provides sufficient power for any G450 configuration. If you choose to install two power supply units, they operate in a load sharing mode.

Figure 12: Inserting a power supply unit

1. Position the power supply unit before the opening and engage both sides of the unit in the interior guides.
2. Slide the power supply unit slowly into the chassis, maintaining an even pressure to assure that the unit does not become twisted or disengaged from the guides.
3. Close and tighten the captive screws next to the power supply handles on the rear panel.
4. Connect a power cable to the power connector on the power supply unit.
5. Plug the power cable into a mains socket.

Chapter 6: Power up

Grounding requirements

Note:

Grounding requirements differ widely from country to country. In addition to the grounding instructions presented in this section, you must follow the local electrical installation codes for your location.

You must use two safety grounds to ensure safe operation of the G450 Media Gateway:

- The ground conductor that is part of the AC power cord.
- The field-installed green/yellow conductor, referred to as the supplementary ground conductor.

Both safety grounds must be connected to an approved ground (see Chapter 2 of *Installing and Upgrading the Avaya G450 Media Gateway*, 03-602054, for the definition of an approved ground). If a power cord accompanies the G450, use that cord whenever possible.

WARNING:

Connection of both grounds (the AC power cord and the supplementary ground conductor) is required for safe operation of the G450 Media Gateway.

WARNING:

An improper ground can cause electrical shock, equipment failures, and service outages.

Connecting ground conductors

1. Place the ring terminal of the 10 AWG (4.0 mm^2) Supplementary Ground Conductor on the ground screw that was provided in the accessories box.
2. Insert the ground screw on the rear of the chassis adjacent to the ground symbol and securely tighten the screw such that it cannot be loosened without the use of a tool.

Using a ground block

A ground block must be provided for use with multiple Media Gateway installations. If the ground block is to be used, you must supply it and have it installed by an electrician.

To attach the supplementary ground conductor (that is already attached to the grounding screw on the chassis) to a ground block:

1. Cut the supplementary ground conductor to the length needed to terminate the conductor into one of the terminals of the ground block. Do not coil the supplementary ground conductor.
2. Attach one end of the remaining 10 AWG (4 mm^2) ground wire to one of the terminals in the ground block and the other end to an approved ground.
3. Cut this ground wire to the length needed to reach the approved ground. Do not coil this wire.

Table 3: Power Supply Unit PWR LED

LED	Name	State	Color	Indication
PWR	Power	On	Green	Power is OK
		On	Red	A power fault
		Off		The PSU unit is broken or not powered

Connecting power

1. Connect the AC power cable to the inlet receptacle on the rear of the chassis.
2. Connect the other end of the power cable into a mains socket.

LED sequence

When you turn on the G450, the following LED sequence occurs:

1. The PWR LED on the front panel lights, indicating the operational status of the power supply unit (see Table 3).
2. The CPU LED lights if the firmware is running.
3. At least one LED on each media module lights initially and then goes off after about 20 seconds.

Chapter 7: Prepare for configuration

Before you prepare the G450 for configuration, ensure that you load the completed Electronic Pre-Installation Worksheet onto the laptop. You should also load any CM license and authentication files and any firmware files that you have prepared onto the laptop.

Preparations for configuration differ depending on whether your G450 contains an S8300 Server. This chapter describes both options.

Preparing a G450 with an S8300 server

Use the Avaya Installation Wizard (IW) to configure the G450 with an S8300.

1. Connect a laptop computer to the Services port of the S8300, using a crossover cable.
2. Make sure the laptop is configured as follows:
   - IP Address: 192.11.13.5
   - NetMask: 255.255.255.252
   - Disable DNS
   - Clear the primary WINS and secondary WINS IP Addresses
   - Disable the Proxy Server in the Internet Explorer
3. Launch Internet Explorer on the laptop and type the following URL to access the S8300 Server Home Page: http://192.11.13.6.

   The welcome screen for Avaya Integrated Management appears.
4. Click **Continue**. The Logon screen for Integrated Management appears.
5. Enter the appropriate login name and password.
6. Ask a customer representative for a login name and password that the customer would like for the superuser login. If you are a business partner, you can also repeat this procedure to add the dadmin login.

   Note:

   Make sure the customer can change this login, its password, or its permissions later.
7. From the Integrated Management main menu, select **Launch Maintenance Web Interface**.
8. From the navigation menu of the Maintenance Web Pages, select **Security** > **Administrator Accounts**.

   The Administrator Accounts screen appears.
9. Select **Add Login**.
10. Select **Privileged Administrator** and click **Submit**.

    The Administrator Logins -- Add Login: Privileged Administrator screen appears.

11. Type a login name for the account in the **Login name** field.
12. Verify the following:
    - **susers** appears in the **Primary group** field.
    - **prof18** appears in the **Additional groups (profile)** field. *prof18* is the code for the customer superuser.
    - **/bin/bash** appears in the **Linux shell** field.
    - **/var/home/*login name*** appears in the **Home directory** field, where ***login name*** is the name you entered in step 11.
13. Skip the fields **Lock this account** and **Date on which account is disabled-blank to ignore**.
14. For the **Select type of authentication** option, select **password**.

    Note:

    Do not lock the account or set the password to be disabled.
15. Enter the password in the **Enter password or key** field and the **Re-enter password or key** field.
16. In the section **Force password/key change on next login** select **no**.
17. Click **Submit**.

    The system informs you that the login is added successfully.
18. From the Integrated Management main menu, select **Launch Avaya IW**. The Avaya Installation Wizard (IW) opening screen appears.

Configuring the G450 and S8300 using the Avaya IW

Step through the screens of the Avaya IW to configure the S8300 and the G450. Take note of the following items:

1. On the initial IW screen, you can upgrade the wizard if you have a more current version of the `AIW.rpm` wizard file. You can download the most current version of the `AIW.rpm` wizard file from the Avaya Web site at http://support.avaya.com/avayaiw. The format of the name of the file is `si_S8300-<version_number>.noarch.rpm`, where `<version_number>` is the Avaya IW version number.
2. On the Import EPW screen, import the Electronic Pre-Installation Worksheet (EPW) that was prepared.
3. On the Usage Options screen, verify the role of this S8300 server.
4. Use the NVRAM Init screen to initialize the G450.
5. On the Date/Time screen, set the correct date, time, and time zone.
6. Click **Continue** in the Communication Manager Software Upgrade screen. You cannot use the Avaya IW to upgrade Communication Manager software. Use the Software Update Manager instead.
7. On the SES Co-Res screen, you can optionally enable SES.
8. If you have a software update (patch) file for Communication Manager, use the Software Update screen to select the file and update the software.
9. On the Phone Message Files screen, you can install standard and custom phone message files.

10. On the Media Server - IP Addresses screen, enter IP information for the S8300.
11. If you selected the **Install this media server as an LSP** option in the Usage Options screen, the LSP Controller screen appears. Enter the primary controller IP addresses for registration and synchronization.
12. You can configure optional services: Uninterruptible Power Supply (UPS), Domain Name Service (DNS), Network Time Protocol (NTP), or INADS remote support.
13. If you are *not* using IW to generate basic translations, select the **Translation will be added after the installation** option on the Translation Source screen.
14. On the Security File screen, load the CM License file that you prepared from your laptop.
15. On the IP Addresses screen, click  to configure the following information for the G450:
    a. To specify the details of the Primary Management Interface of the G450, use the PMI screen.
    b. To specify SNMP community strings and trap destinations, use the SNMP screens.
    c. To specify the Media Gateway Controller(s) used to manage the G450 and the Transition Point information, use the MGC List screen. Click **Ping Test** to test the accessibility of each MGC.
16. On the Firmware screen, upgrade G450 and media module firmware. New firmware files can be loaded from your laptop directly into the server /tftpboot directory, if needed.
17. Use the Change Master Key - Optional screen to optionally change the master key which is used to encrypt gateway secrets (passwords, etc.) in the gateway configuration file.
18. If you have a service contract, the Gateway Authentication screen displays the installed gateway Authentication file.
19. Review the status of the Field Replaceable Units (FRU) in the FRU Status screen.
20. On the TFTP Server screen, configure the media gateway TFTP server capability to upload IP Phone configuration files.
21. You can configure the modem in the modem configuration screens.
22. If you selected the option **Use this wizard to create basic translations** in the Translation Source screen, you can configure Telephony, Trunking, and Endpoints.
23. Optionally configure alarming for the modem, OSS alarming, and SNMP alarming.
24. Optionally change the root password on the media gateway.
25. On the Authentication File screen, load the CM authentication file that you prepared from your laptop.

Preparing a G450 without an S8300 server

You can use the Gateway Installation Wizard (GIW) to configure the Avaya G450 Media Gateway without an S8300. You can perform the configuration on site, or prepare the G450 for a remote configuration.

1. Install the GIW software on your laptop. You can download the GIW software from the Avaya support Web site, at http://support.avaya.com/avayaiw and go to File Downloads.
2. Connect the flat RJ-45 to RJ-45 cable to the DB-9 cable adapter
3. Plug the RJ-45 cable into the G450 Console port.

4. Plug the DB-9 end of the cable into a COM port of the laptop.
5. Double-click the GIW icon on the laptop to open the Gateway Installation Wizard. The Overview screen appears.
6. Click **Continue**. The Gateway Connection Details screen appears.
7. Select **Select if this is any Gateway other than G430**
   a. At the prompt, enter username **root** and password **root**.
   b. Change the password when prompted.
8. Click Continue. The Initialize Components screen appears.
9. To perform an on site configuration using the GIW, continue with Configuring the G450 using the GIW on page 30. To prepare for a remote configuration, continue with Preparing for a remote configuration of the G450 on page 31.

Configuring the G450 using the GIW

1. On the Initialize Components screen, check the options that are appropriate for your installation.
2. On the Import EPW screen, import the Electronic Pre-Installation Worksheet (EPW) that was prepared.
3. Use the IP Address screen to configure addresses and communication parameters for the G450. Click  to configure the following information for the media gateway:
   a. To specify the details of the Primary Management Interface of the G450, use the PMI screen.
   b. To specify SNMP community strings and trap destinations, use the SNMP screens.
   c. To specify the Media Gateway Controller(s) used to manage the G450, and the Transition Point information, use the MGC List screen. Click **Ping Test** to test the accessibility of each MGC.
4. On the Firmware screen, identify the TFTP server used for file transfer, and specify the firmware upgrade files to load.
5. Use the Change Master Key - Optional screen to optionally change the master key which is used to encrypt gateway secrets (passwords, etc.) in the gateway configuration file.
6. The Gateway Authentication screen displays the installed gateway Authentication file.
7. Review the status of the Field Replaceable Units (FRU) in the FRU Status screen.
8. On the TFTP Server screen, configure the media gateway TFTP server capability to upload IP Phone configuration files.
9. You can configure the modem in the modem configuration screens.
10. Change the root password on the media gateway.
11. Click **Finish** to complete the G450 configuration.

Note:

If you run GIW, ensure that services can log in to the system using USB modem after you run the GIW.

Preparing for a remote configuration of the G450

The G450 can be remotely configured through the network or via a modem.

Preparing for a remote configuration of the G450 through the network

If you need to prepare the G450 for remote configuration through the network, run the installation script for newly installed gateways. The installation script configures the gateway's basic network parameters required to achieve network connectivity: VLAN number, IP address, IP netmask, IP address for the default router, MGCs list, and hostname. A remote technician can then further configure the gateway as required.

Run the installation script after installing the G450 and connecting it to power, as described in previous chapters.

Note:

The installation script is supported from branch gateway firmware version 29.22.x.

1. Prepare a laptop with SSH client software.
2. Set the laptop's TCP/IP properties as follows:
   - IP address: 192.11.13.5
   - Subnet mask: 255.255.255.252
   - Disable DNS service
   - Disable WINS Resolution
3. Connect the laptop computer to the G450 Services port, using an Ethernet cable.
4. SSH to 192.11.13.6.
5. At the prompt, enter username **root** and password **root**.
6. At the prompt, configure a new password.
7. At the prompt, enter **y** to configure basic gateway connectivity.

Note:

If you enter **n** but then change your mind, you can use the **`script-config`** CLI command to run the installation script, so long as you have not saved any configuration changes you may have made.

8. You are prompted to configure the following parameters. For each parameter, you can enter a value, or press Enter to accept the default value shown in square brackets:
   - VLAN number
   - IP address for the primary management interface
   - Subnet mask for the primary management interface
   - IP address for the default gateway (router)
   - Up to four IP addresses to specify the Media Gateway Controllers
   - Hostname for the G450

9. The settings you configured are displayed, and you are prompted for confirmation.
   - If you confirm the settings, they are saved and the G450 reboots.
   - If you do not confirm the settings, you are prompted to re-configure them. If you enter **y**, the parameters are presented again for configuration.
10. Connect the Ethernet port to the network to enable remote access to the gateway. A remote technician can now further configure the gateway using the CLI.

Preparing for a remote configuration of the G450 via a modem

If you need to prepare the G450 for a remote configuration via a modem, you must attach a modem and enable it using the GIW.

Note:

If you have an Avaya Service contract, no configuration is necessary for Services personnel to remotely access the gateway through a USB modem. Simply connect the modem to a USB port and plug in a loop start dial tone line into it, and a remote technician can dial in to the G450 and complete the configuration using the CLI interface.

Note:

You must provide the loop start dial tone for the modem to dial in to the Media Gateway.

1. Click **Continue** until the Modem Type Selection screen appears.
2. Select the type of modem you are using, and click **Continue**.
3. In the Modem Configuration screen, enter the modem parameters. If you are configuring a USB modem and do not have an Avaya Service contract, select **Enable CHAP Authentication** and enter the CHAP secret key.
4. Click **Continue** until you exit the Gateway Installation Wizard.
5. Connect the modem that you specified in Step 2 and plug in a loop start dial tone line into it .
6. Dial in to the modem to ensure that it is set up correctly.
7. A remote technician can now dial in to the G450 and complete the configuration using the **`script-config`** CLI command to run the installation script.

Next steps

Using Avaya IW and GIW

The full configuration process is performed using the Avaya Installation Wizard or Gateway Installation Wizard interface. For more detailed information about IW and GIW:

- See the online help for IW and GIW at http://support.avaya.com/avayaiw.
- Review *Job Aid: Avaya Installation Wizard*, 555-245-754, and *Job Aid: Avaya Gateway Installation Wizard*, 555-245-756.

Using the Command Line Interface

For information about configuring the G450 with the Command Line Interface:

- For instructions on how to connect to the CLI, review Chapter 4 of *Administration for the Avaya G450 Media Gateway*, 03-602055 - Accessing the Avaya Media Gateway.
- For detailed information about CLI commands, refer to the *Avaya Aura G450 CLI Reference*, 03-602056.