Job Aid: What Provisioning Tools and Wizards Should I Use?

Avaya Media Servers, Media Gateways, Wireless Gateways, and Data Switches

To save time on installations and upgrades of the Avaya media servers, media gateways, and converged switches, there are four tools available for your use:

- The Installation Wizard (with the Electronic Preinstallation Worksheet and other templates)
- The Gateway Installation Wizard (with the Electronic Preinstallation Worksheet)
- The Software Update Manager
- The Upgrade Tool

To save time and to simplify initial configurations of devices in large networks, and to make ongoing configuration and policy changes easier, there are four additional tools available for your use:

- The Provisioning and Installation Manager
- Secure Access Administration
- The Network Configuration Manager
- The Network Region Wizard

The following table shows at-a-glance when you would use each of the standard tools (IW=Installation Wizard, UT = Upgrade Tool, GIW = Gateway Installation Wizard, PIM = Provisioning Installation Manager, SAA = Secure Access Administration, SUM = Software Update Manager, NCM = Network Configuration Manager, NRW = Network Region Wizard):

Component	Use	New Installation	Upgrade Firmware	Upgrade Software	Configure Devices
G700	with an S8300	IW	SUM[2], IW, UT		NCM, NRW[1]
	without an S8300	GIW	SUM[2], UT[3]		NCM
G350	with an S8300	IW	SUM[2], IW, UT		PIM, SAA, NCM, NRW[1]
	without an S8300	GIW	SUM[2], UT		PIM,SAA,NCM
G250, G250-BRI, G250-DS1, or G250-DCP	with an S8300	IW	SUM[2], IW		PIM[4], SAA, NCM, NRW[1]
	without an S8300	GIW	SUM[2]		PIM, SAA, NCM
S8300	as an LSP	IW		UT[5]	
	as a Primary Controller	IW		UT[6]	NRW1
S8400	as a Primary Controller	IW		UT[6]	NRW1
S8500, S8500B, S8700, S8710, or S8720	as a Primary Controller	IW		UT[6]	NRW1
	as an LSP (S8500/ S8500B only) or ESS	IW		UT[5]	
P330, P580, P882, C360, C460, P130, and X330	Any		SUM		SAA NCM

1. Use the Network Region Wizard (from the primary controller) only to configure network regions, which includes assigning gateways to regions.
2. The Software Update Manager, when available, is the preferred tool because it can automatically filter the necessary firmware required from the Avaya support Web site and perform multiple gateway upgrades.
3. Use the Upgrade Tool to schedule upgrades of multiple gateways connected to a single Communication Manager server. Use the IW on site for an upgrade of a single gateway or G700 stack. You cannot use the IW on a pre-3.0 release of Communication Manager to *upgrade* an S8300, S8500, or S8700/S8710 Media Server to Communication Manager R3.1.
4. PIM is the only tool available to configure the Survivable Local Server capability on the G250 family of media gateways.
5. Use the Upgrade Tool from the primary controller to schedule upgrades of multiple LSPs or ESSs. (The Upgrade Tool must reside on a primary controller with Communication Manager R2.0 software or higher. Prior to running the Upgrade Tool for CM R2.0 through R2.2, you must install a pre-upgrade service pack and copy CM 3.1 software over to each LSP using the Copy function of the Manage Software page of the Maintenance Web page. Also, LSPs and ESSs must be upgraded *before* upgrading the primary controller to the same release of software.)
6. The Upgrade Tool must reside on a primary controller with Communication Manager R2.1 or higher. The Upgrade Tool is the best option when you want to upgrade LSPs, ESSs, remote media gateways, and other devices at the same time as the primary controller. A pre-upgrade service pack for CM R2.0 through R2.2 must first be installed before performing an upgrade of CM.

The following table summarizes when you would use each of the standard tools and what it does for you.

If you need to:	Then use:
Install a new or upgrade a single existing S8300, S8400, S8500/S8500B, S8700, S8710, or S8720 Media Server, including: 1. The G250, G250-BRI, G250-DS1, G250-DCP, G350 or G700 Media Gateway that contains an S8300 2. Other G700s in the stack that contains an S8300 primary controller 3. Media modules within the media gateways	The Installation Wizard (IW) on site, with a laptop connection to the media server. This wizard installs new software on media servers and performs the initial configuration. It upgrades firmware on new or existing media gateway processors and media modules. You will also use the Electronic Preinstallation Worksheet (EPW), which you get from your project manager. You may also use the Name and Number List (for S8300 only) and the Custom Template (for S8300 only) with the wizard for more comprehensive custom installations. **Note:** For some media server upgrades, The Upgrade Tool might be the best option.
Install a new G250, G250-BRI, G250-DS1, G250-DCP, G350, or G700 that does not contain an S8300.	The Gateway Installation Wizard (GIW) on site, with a laptop connection to the G250, G250-BRI, G250-DS1, G250-DCP, G350, or G700. You will also use the Electronic Preinstallation Worksheet (EPW), which you get from your project manager. This wizard configures the IP addresses for the gateway, including the gateway processors, the controller list, and the VoIP engine.
Upgrade multiple, geographically-distributed G250/G250-BRI/G250-DS1/ G250-DCP/G350/G700 gateways, along with X330 WAN Expansion modules, data switches, and wireless switches and endpoints.	The Software Update Manager from a customer's Enterprise Network Management server connected to the customer's WAN/LAN.

If you need to:	Then use:
Schedule upgrades of multiple, geographically-distributed LSPs, ESSs, or G250/G250-BRI/G250-DS1/ G250-DCP/G350/G700 gateways: all of which have the same remote primary controller, either an S8300, S8400, S8500, S8700, S8710, or S8720	The Software Update Manager from a customer's Enterprise Network Management server connected over the customer's WAN/LAN. This is the preferred tool for upgrading firmware and supports large, distributed networks of gateways connected to multiple Communication Managers. Software Update Manager can also be used to upgrade and configure devices at a staging center prior to shipping the gateways to remote locations. The Software Update Manager cannot upgrade LSPs or ESSs. OR The Upgrade Tool on the primary controller, connected over the customer's WAN/LAN.. This tool upgrades the software on LSPs, ESSs, and the firmware for the gateway processors and media modules connected to a single Communication Manager server. The tool can also upgrade the primary controller if the tool resides on Communication Manager R2.1 software or higher. **CAUTION:** Ping must be enabled for the Upgrade Tool to be able to upgrade LSPs or media gateways. Also, the Upgrade Tool *cannot* upgrade G250, G20-BRI, G250-DS1, or G250-DCP Media Gateways. **Note:** To upgrade an LSP running Communication Manager R2.x to Communication Manager R3.1, you must first locally install the pre-upgrade service pack on each LSP and copy the software from the Communication Manager software distribution CD to the LSP. Then, the Upgrade Tool on the main server can install the software. To copy the CD software, use the Manage Software screen, which is available after the service pack is installed. To upgrade the main server running Communication Manager R2.x, you must also install the pre-upgrade service pack and copy the CD software to the server before running the Upgrade Tool.

If you need to:	Then use:
Upgrade (download) firmware to multiple TN circuit packs.	The Software Update Manager from a customer's Enterprise Network Management server connected to the customer's WAN/LAN. This function is available for S8400, S8500, S8500B, S8700, S8710, and S8720 Media Servers running Communication Manager R3.1. **Note:** This option is not available with the DEFINITY Server CSI.
Configure G250/G250-BRI/ G250-DS1/G250-DCP/G350 Media Gateways that have already been added to, and are accessible over, the WAN/LAN.	The Provisioning and Installation Manager (PIM) from a customer's Enterprise Network Management server connected to the customer's WAN/LAN. PIM can also be used to configure devices at a staging center prior to shipping the gateways to remote locations.
Configure the Survivable Local Server (SLS) on a G250/G250-BRI/G250-DS1/ G250-DCP Media Gateway.	The Provisioning and Installation Manager (PIM) from a customer's Enterprise Network Management server connected to the customer's WAN/LAN. PIM can also be used to configure devices at a staging center prior to shipping the gateways to remote locations.
Configure gateways or data switches that have already been installed and initially configured and are accessible over the LAN.	The Network Configuration Manager from a customer's Enterprise Network Management server connected to the customer's WAN/LAN. The NCM uses configuration files that have been backed up and stored in a configuration library.
Configure a large VoIP network with multiple network regions, including codec sets and call admission control via bandwidth limits (CAC-BL).	The Network Region Wizard, on the main server, using a connection to the customer's WAN/LAN. Use the Electronic Preinstallation Worksheet for Network Regions (EPW-NR) with the Network Region Wizard, which allows you to automatically fill in the administration parameters in the Network Region Wizard.
Configure and manage secure access by administrators of gateways or converged switches in a network.	Secure Access Administration from a customer's Enterprise Network Management server connected to the customer's WAN/LAN. SAA manages CLI and SNMPv3 login names and passwords, user roles, and SSH certificates for access to network devices.

Access to the Wizards and Provisioning Tools

The Installation Wizard, Network Region Wizard, and Upgrade Tool are accessed from the Avaya Integrated Management web interface, which is embedded in Communication Manager. The Gateway Installation Wizard is downloadable from the support.avaya.com/avayaiw Web site and runs on a laptop. The Software Update Manager and Network Configuration Manager are launched from the Network Manager Console, the main control panel for the Enterprise Network Management offer. The Provisioning and Installation Manager is also launched from the Network Manager Console, though PIM is separately installed.

Note:

For the configuration of the Survivable Local Server on the G250 Media Gateway, PIM is the only tool available. However, generally these tools do not replace *all* normal installation or upgrade procedures. And, for Communication Manager software installations and upgrades, the Maintenance Web Pages embedded in the server are always an available tool. However, the provisioning tools automate some or many of the tasks associated with an installation or an upgrade. For information on additional tasks required for an installation or upgrade, see:

- *Quick Start for Hardware Installation: Avaya S8300 Media Server and Avaya G700 Media Gateway,* 555-233-150
- *Installing and Upgrading the Avaya G700 Media Gateway and S8300 Media Server*, 555-234-100
- *Quick Start for Hardware Installation: Avaya G350 Media Gateway,* 03-300148
- *Installing and Upgrading the Avaya G350 Media Gateway*, 03-300394
- *Quick Start for Hardware Installation: Avaya G250 Media Gateways,* 03-300433
- *Installing and Upgrading the Avaya G250 Media Gateway*, 03-300434
- *Provisioning and Installation Manager Configuration,* 14-300286
- The appropriate installation documents for data switches available at http://avaya.com/support under the LAN, Backbone, and Edge Access Switches section

The Installation Wizard

You can use the Avaya Installation Wizard (IW) as a tool to assist you in the installation and upgrade processes for S8300, S8400, S8500, S8500B, S8700, S8710 and S8720 Media Servers and G250, G250-BRI, G250-DS1, G250-DCP, G350, and G700 Media Gateways. The Installation Wizard is designed to get the system up and running in a basic installation as quickly as possible.

The Avaya Installation Wizard ships with the media server software and is accessable on the home page of the Integrated Management web interface. The most recent version of Avaya Installation Wizard, as well as its documentation, can be accessed online at http://support.avaya.com/avayaiw.

What the Wizard Can and Cannot Do

You can use the Avaya Installation Wizard to do the following:

Note:

To install or upgrade software on a media server, the IW must be running on that media server. To install or upgrade firmware on a G700, G350, G250, G250-BRI, G250-DS1, or G250-DCP Media Gateway, IW must be running on the S8300 that resides in the media gateway; or, for a G700 stack, IW must be running on an S8300 that resides in a G700 in the stack.

Note:

You cannot use the IW on pre-3.0 release of Communication Manager to upgrade a media server to Communication Manager R3.1.

- Install a new S8400, S8500B, S8710, or S8720 Media Server, with the S8500B configured as a primary controller, Enterprise Survivable Server (ESS), or Local Survivable Processor (LSP), and the S8710/8720 Media Server configured either as a primary controller or ESS.
- Install an S8300/G700 stack, an S8300/G350, or an S8300/G250/G250-BRI/G250-DS1/G250-DCP, with S8300 configured as a primary controller or Local Survivable Processor (LSP).
- You can also install IA770 INTUITY AUDIX Messaging when the S8300 or S8400 is a primary controller (*only* if you run the IA770 installation concurrently with the Communication Manager installation).

CAUTION:

If you install or upgrade Communication Manager on the media server and do not concurrently install or upgrade IA770 INTUITY AUDIX Messaging software, you must reinstall Communication Manager, along with IA770 software, if you want to install or upgrade IA770 software later.

- Install service packs to Communication Manager software.
- Upgrade Communication Manager R3.0 or R3.1 software on an S8300, S8400, S8500, S8500B, S8700, S8710, or S8720 Media Server to a later release. You can also upgrade IA770 INTUITY AUDIX Messaging on an S8300 or S8400 primary controller (*only* if you run the IA770 upgrade concurrently with the Communication Manager upgrade).

  Note:

  You cannot use IW to upgrade Communication Manager from a pre-R3.0 version of Communication Manager.

  CAUTION:

  Be sure that messaging is enabled *before* you run the IA770 software upgrade with the Installation Wizard. You can check this with the Maintenance Web Interface by selecting Messaging Software under Miscellaneous. Messaging is enabled if you see the Disable button and "Internal Messaging is enabled" at the end of the note on the screen. The IA770 upgrade will fail if you disable IA770 prior to running the IW for the upgrade.
- Upgrade firmware on G250, G250-BRI, G250-DS1, G250-DCP, G350, and G700 Media Gateways and their media modules.
- Configure alarming strategy.
- Configure the USB modem on the G250, G250-BRI, G250-DS1, G250-DCP, and G350 Media Gateways, including enabling Access Security Gateway (ASG) or CHAP authentication.
- Set Product ID and install unicode files.
- For the S8300 only, configure telephony and trunking parameters and trunk diagnostics.

You cannot use the Avaya Installation Wizard to do the following:

- Install a G700 Media Gateway that is not in a stack containing an S8300 Media Server, acting either as a primary controller or as LSP.
- Install a G350, G250, G250-BRI, G250-DS1, or G250-DCP Media Gateway that does *not* contain an S8300 Media Server, acting either as a primary controller or as an LSP.
- Install or upgrade an LSP or a G250, G250-BRI, G250-DS1, G250-DCP, G350, or G700 Media Gateway from a remote primary controller.
- Install a P330 Expansion Module in a G700 or an X330WAN Module

In addition, there are some installation tasks that you must still perform manually following instructions in *Installing and Upgrading the Avaya G700 Media and S8300 Media Server*, 555-234-100, *Installing and Upgrading the Avaya G350 Media Gateway,* 03-300394, or *Installing and Upgrading the Avaya G250 Media Gateway,* 03-300434. These are tasks such as completing the RFA process for acquiring license and authentication files.

Electronic Pre-installation Worksheets and Templates

To speed the installation process, use the following electronic worksheets (as Microsoft Excel files) with the Installation Wizard:

- Electronic Preinstallation Worksheet (EPW)
- Name and Number List (for S8300 only)
- Custom Template (for S8300 only)

These worksheets provide a way of collecting critical information before going on site. If these worksheets are populated and downloaded onto your laptop, then the data in these worksheets can be imported directly into the wizard at the appropriate time.

EPW, Name and Number List and Custom Template spreadsheets can be downloaded from http://support.avaya.com/avayaiw. Information on how to use these files is contained within the files themselves.

Electronic Preinstallation Worksheet (EPW)

For greatest efficiency, obtain the Electronic Preinstallation Worksheet (EPW), which is filled in by the customer and the Avaya project manager. This worksheet is an Excel spreadsheet from which the Avaya Installation Wizard imports IP address-related data to configure and install the S8300/S8400/S8500B/S8710/S8720 Media Servers, G250/G250-BRI/G250-DS1/ G250-DCP/ G350/G700 Media Gateways, P330 Stack Processor, and VoiP Engines. The EPW also can be used to supply basic translations for the S8300/G700, S8300/G350, and S8300/G250/ G250-BRI/G250-DS1/G250-DCP configurations.

Once the EPW has been imported, all the values from the EPW appear as defaults in the wizard.

Name and Number List (for S8300 only)

The Name and Number List, like the EPW, is an Excel spreadsheet. The Name and Number List contains administration data for multiple users. The IW pulls this data to automatically administer users on the new system. This administration includes users' names, unicode names (for native names in Chinese, Japanese, and other non-ASCII character languages), extensions, telephone types, classes of service, languages, locations, and voice mail capability. The Name and Number List also includes hunt group port configuration for new IA770 INTUITY AUDIX systems.

CAUTION:

For the IW to install an IA770 INTUITY AUDIX Messaging system, you *must* complete the subscriber data on the Name and Number List and then use the Name and Number List with the IW.

As each user's name and accompanying data is imported, the wizard will administer the station using the provided information along with default values for other station fields. After the import has completed, each station will be ready to be plugged into the wall jack and activated. Analog and digital phones will be ready for a TTI registration sequence. IP phones will be ready for an IP registration sequence.

The default values used by the wizard can be viewed at http://support.avaya.com/avayaiw under the "View Default Parameters" link. If the wizard defaults do not meet the customer's needs, you can use a custom template.

Custom Template (for S8300 only)

The Custom Template is a third Excel spreadsheet that allows automatic administration of key custom Communication Manager translations. These are:

- Classes of Service
- Feature Access Codes
- Trunk Access Codes
- Telephone button assignments
- TTI codes
- Voice mail hunt group number and coverage path
- You can use a custom template in the following countries:
  - United States and Canada
  - France
  - Japan
  - United Kingdom
  - Russia
  - Germany
  - Brazil
  - Mexico
  - Italy
  - Spain

If multiple installations can use similar default translations, you can use a single Custom Template for all installations.

The Gateway Installation Wizard

Use the Avaya Gateway Installation Wizard to install or upgrade the following:

- A new G250, G250-BRI, G250-DS1, G250-DCP, G350 or G700 Media Gateway that is controlled by a remote media server but does *not* have an S8300.

The Gateway Installation Wizard allows you to configure the gateway IP addresses without having to enter CLI commands. It also allows you to install firmware that has been made available on either a TFTP or an FTP server.

Note:

You cannot use the Gateway Installation Wizard to configure an X330 Expansion module.

As with the Avaya Installation Wizard, obtain and use the Electronic Preinstallation Worksheet (EPW) for greatest efficiency. From the worksheet, the GIW imports IP address-related data to configure and install the G250/G250-BRI/G250-DS1/G250-DCP/G350/G700 Media Gateways, P330 Stack Processor, and VoiP Engines.

Once the EPW has been imported, all the values from the EPW appear as defaults in the wizard.

For more information, see *Job Aid: Avaya Gateway Installation Wizard*.

The Software Update Manager

The Avaya Software Update Manager allows you to automatically upgrade software and firmware on a number of devices used in the customer's network, including:

- The G700, G350, G250, G250-BRI, G250-DS1, and G250-DCP Media Gateways, including their media modules
- Self-downloadable TN circuit packs with the required minimum firmware version for centralized firmware download:
  - TN799DP CLAN circuit pack, firmware version 17 or higher
  - TN2602AP IP Media Resource 320, firmware version 20 or higher
  - TN2501AP VAL circuit pack, firmware version 10 or higher
  - TN2312BP IPSI circuit pack, any firmware version
  - TN8412 SIPI circuit pack, any firmware version

- Non-self-downloadable TN circuit packs:
  - TN464GP/HP DS1 circuit pack
  - TN2464BP/CP DS1 circuit pack
  - TN2313AP DS1 circuit pack
  - TN2302AP IP Media Processor circuit pack
  - TN771DP Maintenance Test circuit pack
  - TN2214CP DCP circuit pack
  - TN2224CP DCP circuit pack
  - TN793CP Analog circuit pack
  - TN8400AP processor circuit pack
- The C360 and C460 converged switches
- The P882 and P580 Multiservice switches, P130 Workgroup switches, and P330 switches

The software you can upgrade includes the following software types:

- Image
- Boot Loader
- Web Management

To use the Software Update Manager, the customer should have Integrated Management Enterprise Network Management, which is an entitlement for any new Communication Manager customers who purchase non-introductory offers of Communication Manager.

Avaya Software Update Manager is launched from the Network Manager Console, the main control panel for Enterprise Network Management. Software Update Manager can be operated manually, where the operator specifies the firmware images to be downloaded by consulting the Avaya Support Web site for the latest available version. Software Update Manager can also retrieve image files automatically from the Avaya Support Web site. To operate the upgrade automatically, the PC hosting Software Update Manager must have external Internet access.

The Software Update Manager is the preferred tool for downloading firmware to multiple TN circuit packs that reside in CMC1, SCC1, MCC1, G600, and G650 Media Gateways connected to S8400, S8500, S8500B, and S8700-series Media Servers. The Software Update Manager uses Secure Copy (SCP) to automatically download files from a centralized SCP-enabled server to any number of TN circuit packs simultaneously.

Note:

The DEFINITY Server CSI does *not* support the centralized download of firmware by Software Update Manager. Software Update Manager supports only servers running Communication Manager R3.1 software or higher.

The Software Update Manager is preferable to the Upgrade Tool for simultaneously upgrading firmware on multiple G700, G350, G250, G250-BRI, G250-DS1, and G250-DCP Media Gateways. The Software Update Manager, which can be run manually or scheduled to run, can also perform, on networks with single or multiple Communication Manager servers, firmware upgrades on data devices and perform both of the following two key functions:

- Automatically locate and download the most up-to-date firmware from the Avaya support Web site.
- Automatically upgrade firmware on the G700, G350, G250, G250-BRI, G250-DS1, and G250-DCP Media Gateways in the network.

Note:

The Software Update Manager cannot upgrade the S8300 Media Server or LSPs. However, in a network with LSPs and G250, G250-BRI, G250-DS1, G250-DCP, G350, and G700 Media Gateways, you may find it most efficient to use the Upgrade Tool to upgrade LSPs only, and then use the Software Update Manager to upgrade the gateways, their media modules, as well as other Avaya devices, such as the wireless gateways, converged switches, etc.

For more information, see *Avaya Software Update Manager User Guide*.

The Upgrade Tool

The Upgrade Tool allows you to schedule automatic upgrades of Enterprise Survivable Processors (ESSs), Local Survivable Processors (LSPs), and G350 and G700 Media Gateways from the primary controller. The primary controller can be an S8300, S8400, S8500, S8500B, S8700, S8710, or an S8720 Media Server. An ESS can be an S8500, S8500B, S8700, S8710, or S8720 Media Server. An LSP can be an S8300, S8500, or S8500B Media Server. The Upgrade Tool also allows you to upgrade the primary controller itself.

Note:

You *cannot* use the Upgrade Tool to upgrade a G250, G250-BRI, G250-DS1, or G250-DCP Media Gateway.

Note:

The Upgrade Tool running either on the earlier Release 2.1, R2.2, or R3.0 of Communication Manager software is used to upgrade the primary controller or LSPs to Communication Manager R3.1. However, a pre-upgrade service pack must be installed on the pre-3.0 releases first before you can use the Upgrade Tool.

The Upgrade Tool on Communication Manager R3.1 software is used to upgrade the primary controller or LSPs to a release higher than R3.1.

CAUTION:

Ping must be enabled for the Upgrade Tool to be able to upgrade LSPs or media gateways.

You can schedule upgrades for:

- Any or all LSPs registered with the primary controller
- Any or all G350s and G700s currently or previously registered with the primary controller, including any media modules installed in the G350s and G700s.

Note:

The Software Update Manager is the preferred tool for firmware upgrades because it can automatically filter the necessary firmware required from the Avaya support Web site and can upgrade devices in a network with multiple Communication Manager servers.

With the upgrade tool, you do not have to physically be at the LSP and gateway locations in order to perform the upgrades. Additionally, you do not have to run the upgrades one by one. You simply enter the needed information into the upgrade tool for the LSPs and G350s and G700s that you want to upgrade. Then, at the scheduled time, the Upgrade Tool automatically upgrades the software and firmware on all the specified LSPs and gateways.

Note:

You must still complete the normal prerequisite tasks such as completing the RFA process for license files, installing a pre-upgrade service pack, uploading the most recent Communication Manager software (for an LSP or primary controller) to the server, or uploading the most recent firmware (for a media gateway) to an FTP (G350 only) or TFTP server.

You **cannot** use the Upgrade Tool to do the following:

- Install or upgrade a G250, G250-BRI, G250-DS1, or G250-DCP Media Gateway.
- Install a new LSP or G350 or G700 Media Gateway. For each new installation, you must be on site and use the Avaya Installation Wizard (for an LSP), the Avaya Gateway Installation Wizard (for a media gateway), or perform a manual installation.
- Upgrade LSPs to a release of Avaya Communication Manager *after* the primary controller has already been upgraded to that release of Communication Manager. An LSP must always have a release of Communication Manager that is equal to or higher than the Upgrade Tool. Thus, the Upgrade Tool running on a Communication Manager R2.0, 2.1, R2.2, or 3.0 media server is used for LSP upgrades to Communication Manager 3.1.
- Upgrade an active LSP (one that has taken control of calls because of a problem with the primary controller).
- Upgrade an LSP or ESS by running the Upgrade Tool on the LSP or ESS itself.
- Upgrade P330 Expansion modules.
- Upgrade G600, G650, CMC1, SCC1, or MCC1 Media Gateways.

The LSP/Gateway Upgrade Tool ships with the server software and is available on the home page of the media server's Maintenance Web Interface. For more information, see the *Job Aid: Upgrade Tool and Worksheets*.

The Provisioning and Installation Manager

The Provisioning and Installation Manager (PIM) allows you to remotely manage and configure the following media gateways:

- G250, G250-BRI, G250-DS1, and G250-DCP Media Gateways, for general configuration and also configuration of Standard Local Survivability (SLS) when an S8300 LSP is not present
- G350 Media Gateway

You can also use PIM to configure media gateways at a staging center prior to shipping the gateways to remote locations. This use of PIM enables lower cost configurations with reduced errors, especially when the PIM templates are used to configure multiple devices simultaneously.

Note:

Initially install the media gateway with the GIW so that the media gateway is added to the LAN/WAN. You can then complete the configuration of the media gateway with PIM.

You can manage and configure media gateways individually, as groups, or all together. With PIM, you can save large amounts of configuration time. PIM allows you to do the following:

- Create device templates that media gateways can share

  Once you have created and validated a device template, you can apply it to multiple devices simultaneously. Device templates include hardware data for media modules, including slot locations, Ethernet port parameters, and other media module parameters for LAN/WAN media modules.

- Create monitoring templates that the media gateways can share

  Once you have created and validated a monitoring template, you can apply it to multiple devices simultaneously. Monitoring templates include definitions for Quality of Service (QOS) and Real-Time Transport Protocol (RTP) data in the Management Information Base (MIB) and definitions of Converged Network Analyzer (CNA) test plugs for media gateways.

- Create general and DHCP configuration templates that the media gateways can share

  Once you have created and validated a configuration template, you can apply it to multiple devices simultaneously. Templates include configuration data for items such as DHCP servers, SNMP, RADIUS servers, media gateway controller lists, and routing.

- Create a profile for each media gateway in order to configure unique aspects of a gateway.

  A profile includes configuration data such as IP address, static routes, and modem configuration, plus an ARS table for use in SLS mode. A profile can be configured from scratch, or it can incorporate the copy of a profile from another device profile or from an Electronic Preinstallation Worksheet (EPW).

- Create groups that share similar locations, network regions, or other characteristics, such that they can be scheduled for configuration or reconfiguration at the same time. Configuration templates may be distributed to groups, thereby handling a large number of configuration changes as a single task.

- Create schedules that automatically, and on a recurring basis, synchronize the subset of Communication Manager translations that the G250/G250-BRI/G250-DS1/G250-DCP Media Gateways store for use in SLS mode. A schedule can synchronize translations up to eight times a day.

PIM is installed on an Enterprise Windows Server that has a 3.1 version of the Integrated Management Enterprise Network Management offer. PIM is accessed using a web browser. Device access for PIM configuration is over a LAN/WAN using SNMPv1 or SNMPv3 and SSH.

High-level steps for configuring media gateways using PIM

At a high level, the process for configuring media gateways with PIM might consist of the following steps:

1. Network experts create configuration templates at the staging location.

   Each template contains a set of information to be applied to a group of gateways

2. Network experts or the administrator creates device profiles at the staging location.using the PIM device profile wizard, an EPW, or imported files

   A device profile applies to an individual media gateway.

3. The administrator creates a “job” and schedules it to run.

   The job merges the configuration information and downloads it to each media gateway. The administrator can later change the configuration of multiple media gateways simultaneously using a single change to a shared configuration template.

The Network Configuration Manager

The Avaya Network Configuration Manager allows you to remotely configure media gateways, wireless gateways, and data switches, including:

- The G700, G350, G250, G250-BRI, G250-DS1, and G250-DCP Media Gateways, including their media modules
- The C360 and C460 converged switches
- The P882 and P580 Multiservice switches, P130 Workgroup switches, and P330 switches

To use the Network Configuration Manager, the customer should have Enterprise Network Management, an entitlement for almost all Communication Manager R3.1 customers (excluding very small Communication Manager installations, where multiple branch offices are not in use and would have no need for the tool).

With the Network Configuration Manager, you manage configuration files to configure and maintain the configuration of devices in your VoIP network. The Network Configuration Manager lets you perform the following tasks related to configuration files:

- Copy and edit configuration files for media gateways and network infrastructure switches
- Download a single configuration file to one or multiple devices
- Simultaneously download multiple configuration files to multiple devices
- Compare the content of configuration files for different devices
- Back up and restore configuration files, including scheduled backups

You can choose secure copy protocol (SCP), file transfer protocol (FTP), or trivial file transfer protocol (TFTP) to transfer protocols for downloading, restoring, and backing up configuration files, depending on the devices you are configuring and the capabilities of the customer's PC and LAN. In addition, Network Configuration Manager checks configuration files for device applicability and will not install a configuration file to a device for which the configuration does not apply.

For more information, see *Avaya Network Configuration Manager User Guide*.

The Network Region Wizard

The Avaya Network Region Wizard guides you through the steps to configure network regions in your VoIP network and assign the media gateways in your network to those regions. The configuration includes defining:

- Codec sets
- Intra-region transmission parameters
- Inter-region parameters, including call admission control via bandwidth settings.

These parameters include settings to support:

- Fax, Teletypewriter device (TTY), and modem calls using pass-through mode or proprietary relay mode
- T.38 fax calls
- 64kbps clear channel for BRI secure telephones and data appliances, including video

Note:

You cannot use the Network Region Wizard to define and assign network regions to data devices such as the P330 or C360 switches.

The following features of the Network Region Wizard can make network region configuration much easier and faster than configuration using manual planning and the Communication Manager SAT command line interface.

- Default values that are commonly used for network regions. Any of these values can be modified within the NRW, as necessary. For most networks, the defaults are suitable.
- The Electronic Preinstallation Worksheet — Network Region Wizard (EPW-NRW), a separate Excel spreadsheet which allows network planners or design specialists to complete the configuration ahead of time. You can then simply run the Network Region Wizard, which can automatically load the parameters from the EPW-NRW into Communication Manager.
- A grid tool that allows you to create inter-region and intra-region connections by simply clicking on regions listed on the grid. After you select a source region and then click on any other desired region listed on the grid, the Network Region Wizard automatically creates a connection between the regions using appropriate codec sets and CAC bandwidth limits.
- Automatic creation of indirect connections between regions for which you did not specify direct connections. The Network Region Wizard also creates a table of indirectly connected regions so you can quickly see opportunities for better routing.

The Network Region Wizard allows you to configure up to 250 network regions on an S8400, S8500, S8500B, S8700, S8710, or S8720 Media Server, and up to 50 network regions on an S8300 Media Server. It is available if the customer has the Standard Management Solutions package of the Integrated Management suite.

For more information, see *Network Region Job Aid*.

Secure Access Administration

Avaya Secure Access Administration allows you manage secure access to devices in your network. Secure Access Administration allows you to do the following:

- Administer login names and passwords for Integrated Management users
- Associate roles with each user
- Manage SNMPv3 user passwords and views in branch gateways and converged switches
- Administer CLI users and passwords in branch gateways and converged switches
- Synchronize password changes across all network devices
- Manage SSH Certificates for device identification

Avaya Secure Access Administration supports the following devices:

- G250, G250-BRI, G250-DS1, G250-DCP, and G350 Media Gateways
- The C360 converged switches
- The P882 and P580 Multiservice switches
- P330ML Ethernet switch

To use Secure Access Administration, the customer should have Enterprise Network Management, an entitlement for customers who purchase non-introductory offers of Communication Manager.