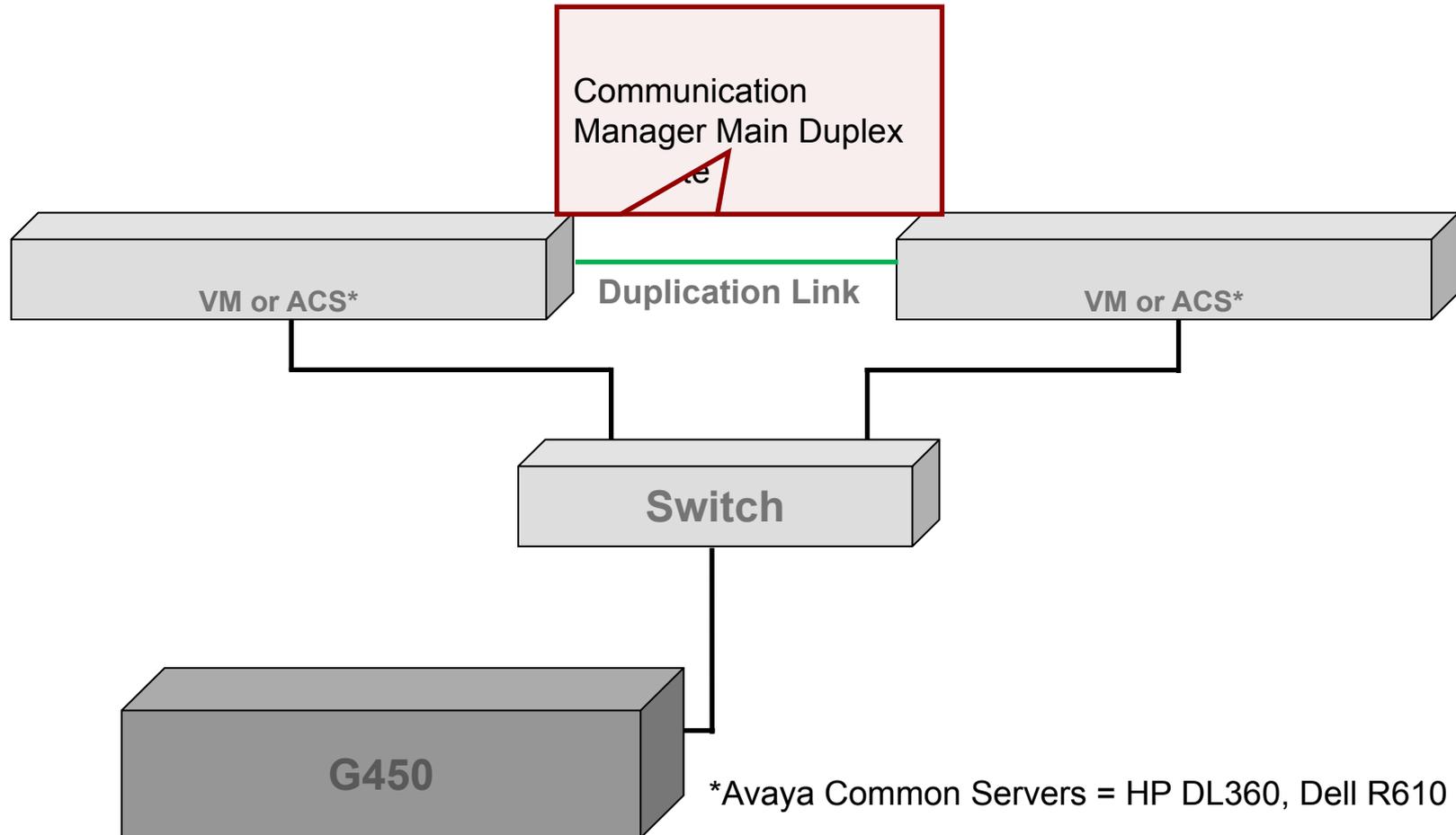


Install the CM Duplex

Hardware Configuration

Hardware Configuration—General

4 Avaya Aura[®] Communication Manager Main Duplex in this configuration:



Hardware Configuration (continued)

Equipment checklist:

- 4 Ensure that the following equipment is properly rack-mounted and grounded according to local codes:
 - Avaya Common Server (ACS) or VMware VM
 - Ethernet switch – connect one end of the power cord to the Ethernet switch and the other end to an outlet on the UPS.
 - Avaya G450 Gateway
 - UPS improves availability of the system, protects the equipment from electrical surges, and provides an input voltage of 110 V or 220 V auto-sensing to the internal power supply of the server.
 1. Place the UPS at the bottom of rack.
 2. Connect one end of the server power supply connector to the UPS.
 3. Connect the power cord of the UPS to a properly grounded electrical outlet.



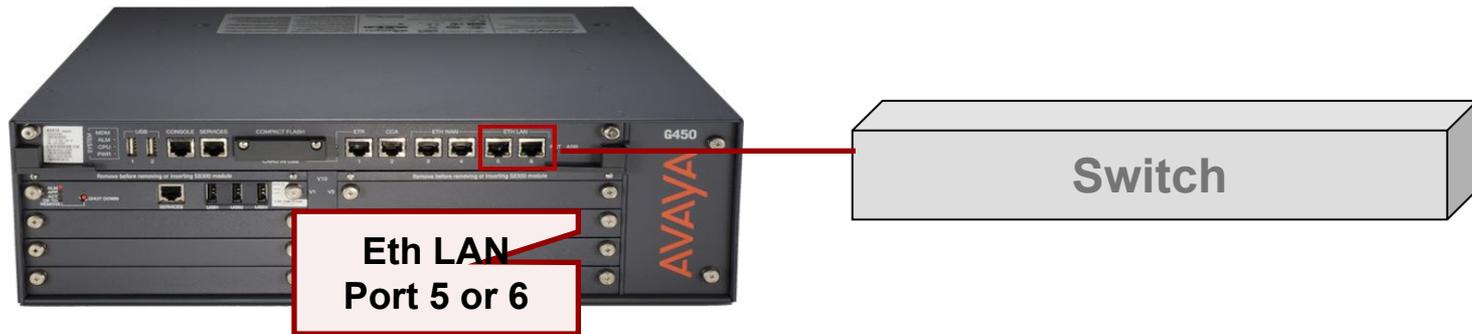
Note

Avaya recommends using separate UPS units for each server in a duplex system.

Hardware Configuration (continued)

Gateway checklist:

1. Ensure that the media modules are inserted in the correct slots
2. Connect LAN cable from the Eth LAN 5 or 6 on gateway to the switch



3. Connect power cable to the gateway.

G450 Media Module Slot Assignments

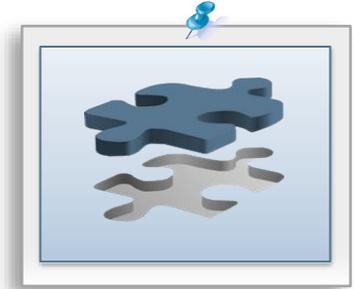
Media module	Permitted slots	Description
MM340	V3, V4, V8	Provides one E1/T1 WAN port for connecting to a WAN endpoint device.
MM342	V3, V4, V8	Provides one USP WAN port for connecting to a WAN endpoint device.
MM710	V1 - V8	Provides one E1/T1 trunk port for connecting an E1/T1 telephone trunk.
MM711	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



Deployment of the CM OVA

Deploy the CM OVA

- At the end of this lesson, you should be able to:
 - Identify the steps to deploy the CM OVA.



Deployment and Servers

- **Virtualized Environment (VE) – Avaya and customer work together to enable the solution:**
 - Avaya supplied server and VMware® (AVP)
 - Customer supplied server and VMware® (VE)
- **Avaya Appliance Model - Deploy or upgrade to Avaya Aura® Release applications on the following servers:**
 - Dell™ PowerEdge™
 - HP ProLiant DL360
 - S8300D
- **Deployment into the blade, cluster, and server is managed as follows:**
 - Avaya Appliance Virtualization Platform (AVP) from System Manager Solution Deployment Manager or the Solution Deployment Manager client
 - Virtualized Environment (VE) – VMware® vSphere or VMware® vCenter



Note

The deployment method used in our labs is VE (vCenter/vSphere).

Planning and Configuration

- Ensure that you complete the following before deploying the Communication Manager open virtual application (OVA):

	Task	Description
1	Identify the hypervisor and verify that the capacity meets the OVA requirements.	See <i>Server hardware and resources</i> .
2	Plan the staging and verification activities and assign the resources.	See <i>Communication Manager virtual machine resource requirements</i> .
3	Purchase the required licenses. Note: WebLM Licensing for CM is covered in Lesson 2.	Go to the Avaya Product Licensing and Delivery System at https://plds.avaya.com/ .
4	Download the required Communication Manager OVA.	See <i>Downloading software from PLDS</i> .
5	If applicable, migrate from Communication Manager 5.2.1 or Communication Manager 6.3 to Communication Manager .	See <i>Migration data</i> .

Communication Manager Resource Requirements

- The CM virtual machine requires the following set of resources to be available on the ESXi host before deployment. CM OVA specifies the required resources.

VMware Resources	Simplex Values	Duplex Values
CPU Core	CPU to support up to 1000 users on a Main server •1 CPU to support up to 1000 users on a survivable server •2 CPU to support up to 2400 users on a Main server •2 CPU to support up to 36,000 users on a Main server	3
CPU Reservation	•3900 MHz to support up to 1000 users on a Main server •1950 MHz to support up to 1000 users on a survivable server	• 7800 MHz to support up to 36,000 users • 6600 MHz to support up to 30,000 users

Communication Manager Resource Requirements (cont'd)

- The CM virtual machine requires the following set of resources to be available on the ESXi host before

VMware Resources	Simplex Values	Duplex Values
CPU Resources (cont'd)	<p>4400 MHz to support up to 2400 users on a Main server</p> <ul style="list-style-type: none"> •4400 MHz to support up to 36,000 users on a Main server •For a S8300D or S8300E Server: When you deploy Communication Manager using System Manager Solution Deployment Manager, the CPU reservation is reduced to 0. •For an Midsize Enterprise deployment: The CPU reservation is reduced to 2200 MHz. 	<p>To reduce reservation on Communication Manager Duplex server, see Reducing reservation on CM Duplex Server in the Deploying Avaya Aura® Communication Manager in Virtualized Environment Guide</p>
Minimum CPU speed based on Xeon E5620 or equivalent processor	2400 MHz	<ul style="list-style-type: none"> • 2900 MHz to support up to 36,000 users • 2400 MHz to support up to 30,000 users

Communication Manager Resource Requirements (cont'd)

- The CM virtual machine requires the following set of resources to be available on the ESXi host before

VMware Resources	Simplex Values	Duplex Values
Memory Reservation	<ul style="list-style-type: none"> •3.5 GB to support up to 1000 users on a Main server •3.5 GB to support up to 1000 users on a survivable server •4.0 GB to support up to 2400 users on a Main server •4.0 GB to support up to 36,000 users on a Main server 	5.0 GB
Minimum CPU speed based on Xeon E5620 or equivalent processor	2400 MHz	<ul style="list-style-type: none"> • 2900 MHz to support up to 36,000 users • 2400 MHz to support up to 30,000 users

Communication Manager Resource Requirements (cont'd)

- The CM virtual machine requires the following set of resources to be available on the ESXi host before

VMware Resources	Simplex Values	Duplex Values
Storage Reservation	64 GB	64 GB
Shared NICs	Two vmxnet3 @ 1000 Mbps	Three vmxnet3 @ 1000 Mbps
IOPS	4	4
Average Network usage	3500 Kbps	3500 Kbps CM duplication bandwidth requires 1Gbps for CM duplication link bursts. For more information about Communication Manager duplication bandwidth, see PSN003556u .

VMware Software Requirements

- The following VMware software versions are supported:
 - VMware vSphere ESXi 5.0
 - VMware vSphere ESXi 5.1
 - VMware vSphere ESXi 5.5
 - VMware vCenter Server 5.0
 - VMware vCenter Server 5.1
 - VMware vCenter Server 5.5
 - VMware vSphere ESXi 6.0

- ESXi 5.0 can be added under vCenter Server 5.0 and vCenter Server 5.1. However, ESXi 5.1 can be added only under vCenter Server 5.1 and ESXi 5.5 under vCenter Server 5.5. To view compatibility with other solution releases, see *VMware Product Interoperability Matrices* at [http:// partnerweb.vmware.com/comp_guide2/sim/interop_matrix.php](http://partnerweb.vmware.com/comp_guide2/sim/interop_matrix.php).

Note:
ESXi 4.1 is not supported.

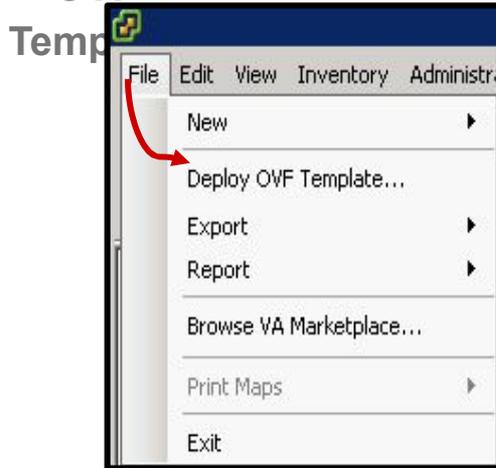
Deploy Communication Manager

- Gather the following information before you deploy the OVA:

Name	Description
CM IPv4 Address	Specifies the IP address of the Communication Manager virtual machine.
CM IPv4 Netmask	Specifies the subnet mask of the Communication Manager virtual machine.
CM IPv4 Gateway	Specifies the IP address of the default gateway.
Out of Band Management IPv4 Address	Specifies the IP Address for Out-of-Band Management. This is an optional field. If you do not want to configure Out-of-Band Management, leave the value of this field as zeros.
Out of Band Management IPv4 Netmask	Specifies the netmask for Out-of-Band Management. This is an optional field. If you do not want to configure Out-of-Band Management, leave the value of this field as zeros.
CM Hostname	Specifies the host name or an FQDN of Communication Manager.
NTP Server(s)	Specifies the IP Address of the Network Time Protocol (NTP) server for the Communication Manager virtual machine. This is an optional field. You can add up to three NTP servers.
DNS Server(s)	Specifies the IP Address of the Domain Name System (DNS) server for the Communication Manager virtual machine. This is an optional field. You can add up to three DNS servers.
Search Domain List	This is an optional field.
WebLM Server IPv4 Address	Specifies the IP address of WebLM Server .
CM Privileged Administrator User Login	Specifies the login name for the Communication Manager privileged administrator.
CM Privileged Administrator User Password	Specifies the password for the Communication Manager privileged administrator. The value range is from 8 to 255 characters.

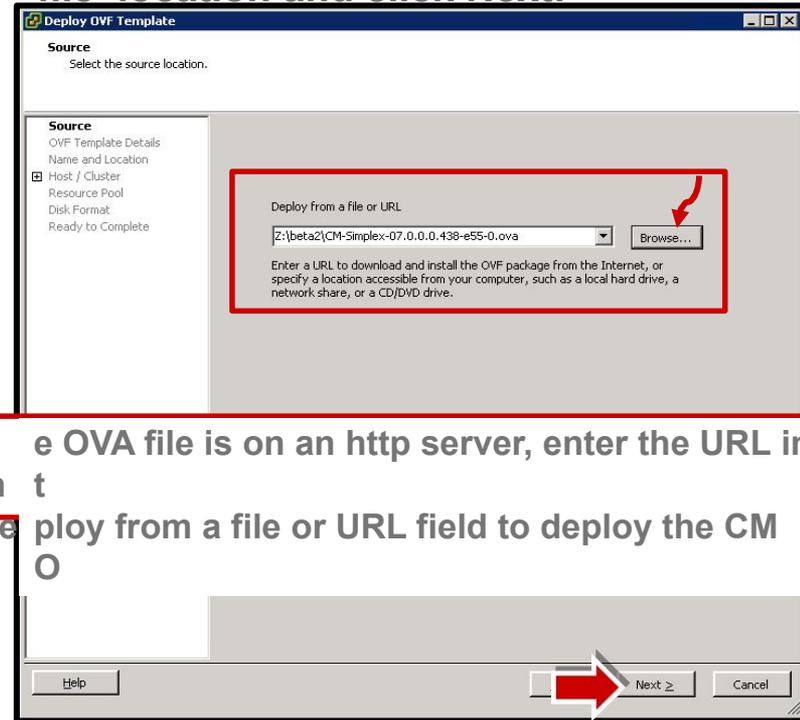
Deploy Communication Manager (cont'd)

- From File, click Deploy OVF



Note: An OVA is an OVF file packaged together with all of its supporting files (disk images, etc.).

- Click Browse and provide the CM OVA file location and click Next:

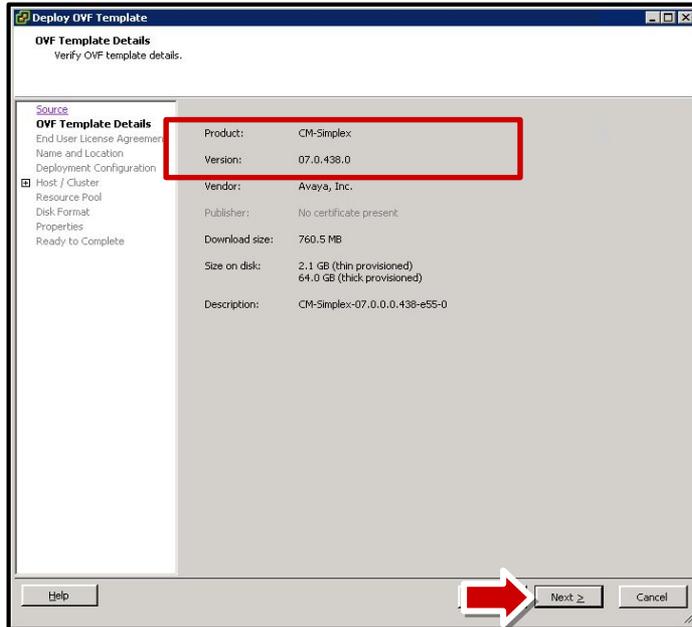


If the OVA file is on an http server, enter the URL in the text box.

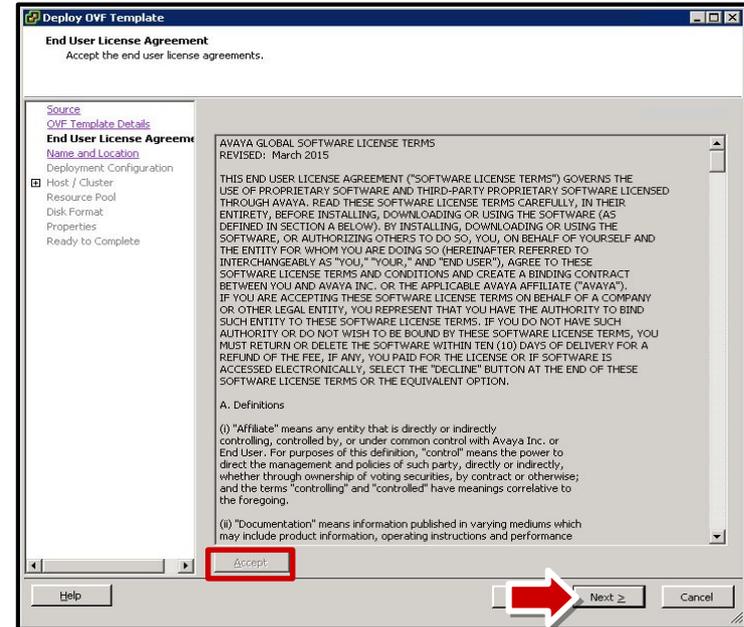
Deploy from a file or URL field to deploy the CM OVA.

Deploy Communication Manager (cont'd)

- Verify the details of the installed OVA Template and click Next.



- Read the *License Agreement* and click Accept to accept the license, and then click Next:



Deploy Communication Manager (cont'd)

- In the Name field, type the name of the new virtual machine and select the Inventory Location to deploy the virtual machine and click Next:

Name:

The name can contain up to 80 characters and it must be unique within the inventory folder.



- Select a Deployment Configuration and click Next:

[Source](#)
[OVF Template Details](#)
[End User License Agreement](#)
[Name and Location](#)
Deployment Configuration
[Host / Cluster](#)
Resource Pool
Disk Format
Properties
Ready to Complete

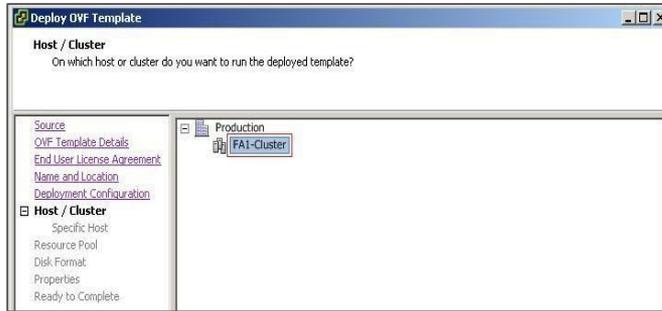
Configuration:

Medium Main only supporting up to 2400 users. Resources: 2 vCPUs, 4400 MHz, 4.0 Gb RAM. This profile is targeted as a migration path for CM on Midsize Enterprise.

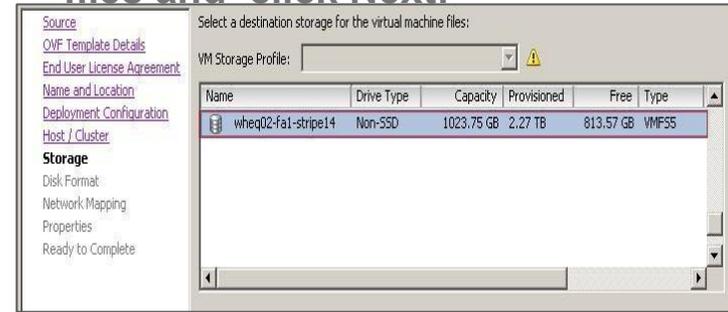


Deploy Communication Manager (cont'd)

- Select the Host/Cluster to run the deployed template and click Next:



- Select the data store location to store the virtual machine files and click Next:



Deploy Communication Manager (cont'd)

- On the *Disk Format* page, select the required disk format and click **Next**:

Note: In this example we will use *Thick Provision Lazy Zeroed*

Source
OVF Template Details
End User License Agreement
Name and Location
Deployment Configuration
Host / Cluster
Storage
Disk Format
Network Mapping
Properties
Ready to Complete

Datstore: wheq02-fa1-stripe14

Available space (GB): 813.6

Thick Provision Lazy Zeroed
 Thick Provision Eager Zeroed
 Thin Provision



- If you have multiple virtual machine networks in your environment you will be presented with the option of selecting the appropriate network. Select the required network and click **Next**:

Source
OVF Template Details
End User License Agreement
Name and Location
Deployment Configuration
Host / Cluster
Storage
Disk Format
Network Mapping
Properties
Ready to Complete

Map the networks used in this OVF template to networks in your inventory

Source Networks	Destination Networks
Out of Band Management	dyPortGroup_d75
Public	dyPortGroup_d75



Deploy Communication Manager (cont'd)

- Next the *Management Network Settings* page will be displayed. From this page you will enter the relevant IP addresses, host names, etc. Scroll down to complete the required fields and click *Next*

[Source](#)
[OVF Template Details](#)
[End User License Agreement](#)
[Name and Location](#)
[Deployment Configuration](#)
[Host / Cluster](#)
[Storage](#)
[Disk Format](#)
[Network Mapping](#)
Properties
Ready to Complete

Application

CM IPv4 Address
CM IPv4 address

CM IPv4 Netmask
CM IPv4 Netmask

CM IPv4 Gateway
CM IPv4 Gateway

Out of Band Management IPv4 Address
(Optional). Out of Band Management IPv4 address. Leave as zeroes to not set.

Out of Band Management IPv4 Netmask
(Optional). Out of Band Management IPv4 Netmask. Leave as zeroes to not set.

CM Hostname
CM Hostname can be a simple host name or an FQDN. If an FQDN is entered, this will also administer the local domain name.

- Management Network Settings (cont'd)

Scroll down

[Source](#)
[OVF Template Details](#)
[End User License Agreement](#)
[Name and Location](#)
[Deployment Configuration](#)
[Host / Cluster](#)
[Storage](#)
[Disk Format](#)
[Network Mapping](#)
Properties
Ready to Complete

CM Hostname
CM Hostname can be a simple host name or an FQDN. If an FQDN is entered, this will also administer the local domain name.

NTP Server(s)
(Optional). Enter up to 3 NTP servers. Either IP address or resolvable hostnames separated by commas.

DNS Server(s)
(Optional). Enter up to 3 DNS servers. Either IP address or resolvable hostnames separated by commas.

Search Domain List
(Optional). Enter Domain search list, comma separated.

WebLM Server IPv4 Address
Enter the IPv4 Address for the WebLM Server.

CM Privileged Administrator User Login
CM Privileged Administrator User Login

Deploy Communication Manager (cont'd)

- Management Network Settings (cont'd)
- Scroll down to complete the remaining fields and click Next.

Source
OVF Template Details
End User License Agreement
Name and Location
Deployment Configuration
Host / Cluster
Storage
Disk Format
Network Mapping
Properties
Ready to Complete

(Optional). Enter up to 3 NTP servers. Either IP address or resolvable hostnames separated by commas.
198.152.7.12

DNS Server(s)
(Optional). Enter up to 3 DNS servers. Either IP address or resolvable hostnames separated by commas.
135.60.128.251

Search Domain List
(Optional). Enter Domain search list, comma separated.

WebLM Server IPv4 Address
Enter the IPv4 Address for the WebLM Server.
135 . 9 . 181 . 64

CM Privileged Administrator User Login
CM Privileged Administrator User Login
student

CM Privileged Administrator User Password
CM Privileged Administrator User Password
Enter password *****
Confirm password *****



- The *Ready to Complete* screen displays the values you entered for review. Click *Finish* to build the virtual machine.

Source
OVF Template Details
End User License Agreement
Name and Location
Deployment Configuration
Host / Cluster
Storage
Disk Format
Network Mapping
Properties
Ready to Complete

When you click Finish, the deployment task will be started.

Deployment settings:

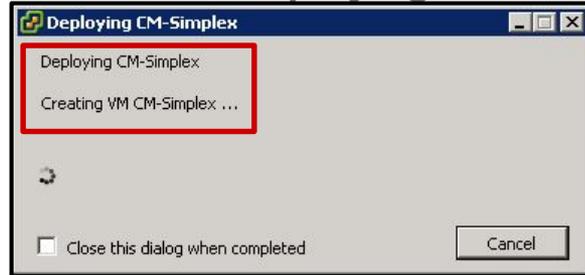
OVF File:	Z:\Avaya VE Images\Aura 7 Beta\Beta 5 Candidate GA...
Download size:	744.4 MB
Size on disk:	64.0 GB
Name:	uk-c3-cm5a
Folder:	Core
Deployment Configuration:	CM Main Max users 2400
Host/Cluster:	FA1-Cluster
Datastore:	wheq02-fa1-stripe14
Disk provisioning:	Thick Provision Lazy Zeroed
Network Mapping:	"Public" to "dvPortGroup_d75"
Network Mapping:	"Out of Band Management" to "dvPortGroup_d75"
IP Allocation:	Fixed, IPv4
Property:	ip0 = 135.60.135.215
Property:	netmask0 = 255.255.255.128
Property:	gateway = 135.60.135.254
Property:	ip1 = 0.0.0.0
Property:	netmask1 = 0.0.0.0
Property:	hostname = uk-c3-cm5a
Property:	ntpervers = 198.152.7.12
Property:	dns = 135.60.128.251
Property:	searchlist =

Power on after deployment

Help Finish Cancel

Deploy Communication Manager (cont'd)

- View the Deploying



- Deployment Completed

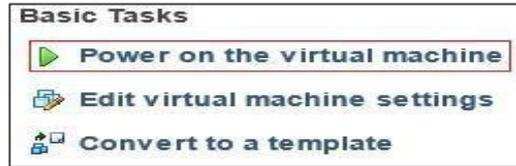


Note : It is possible to further refine the virtual machine settings once deployment has completed. For details on how to edit the virtual machine, download the *Deploying Avaya Aura Communication Manager on VMware in Virtualized Environment* guide from the Avaya Support website.

Deploy Communication Manager (cont'd)

Starting the Virtual Machine

1. The new virtual machine will be in a powered-off state after deployment. To power on the virtual machine, select the virtual machine and then click the *Power on virtual machine* option in the main window.



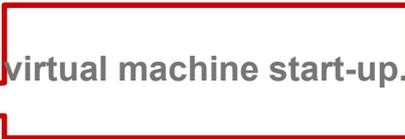
Note: Alternatively, right-click on the virtual machine *Power On*.



and select *Power*

2. Next you will open a Console to allow initial administration of the new Communication Manager system. Right click on the virtual machine and select *Open Console*.

From here you can view the newly deployed virtual machine start-up.



Communication Manager (CM) OVA Deployment - Duplex

To deploy the Duplex OVA, install the Duplex OVA on two different hosts. Ensure that the hosts reside on two different clusters. Similar to the Simplex OVA, the Duplex OVA has one network interface configured in the OVA. The system automatically assigns the Duplex OVAs first NIC and second NIC to the one network. An example host configuration for the Duplex OVA can be setup to include two virtual machine network connection type vSwitches, For example,

- **VM Network** to use with the CM NIC 0 administration/call_processing traffic – connected to say vmnic 0
 - **CM_duplication_link** to use with the CM NIC 1 duplication link traffic – connected to say vmnic 2
- Before you start the virtual machine, you must change the CM virtual machine settings to configure the second NIC. For information about changing the virtual machine settings, see *Changing the virtual machine settings* in the guide listed below.

Note:

For the CM Duplex virtual appliance:

- If you are using a 2900 MHz (2.9GHZ) processor, the CM virtual appliance supports the 36000 endpoints.
- If you are using a 2400 MHz (2.4GHZ) processor, the CM virtual appliance supports the 30000 endpoints.

For more detailed information on Deploying the CM OVA, refer to the following Avaya support document: [Deploying Avaya Aura® Communication Manager on VMware®](#)

Install the CM Main Duplex

- 4 Launch another browser on your computer.
- 4 Type the Communication Manager IP address for this server in the **Address** field and press **Enter**.
- 4 Log in to the Communication Manager System Management Interface using the customer login you created when you installed the template (**newlogin/newlogin01**).



Logon

Logon ID:

Password:

Install the CM Main Duplex

- 4 The Messages page indicates the last time that login was used. Click **Continue**.



- 4 Select **Administration > Server (Maintenance)**.



Install the CM Main Duplex

- 4 Select **Server Configuration > Network Configuration** to administer the network connections (top of page shown).

The screenshot displays the Avaya Administration web interface. The top navigation bar includes 'Help', 'Log Off', 'Administration', and 'Upgrade'. Below this, the breadcrumb path is 'Administration / Server (Maintenance)'. The left sidebar contains a tree view with categories: Alarms, Diagnostics, Server, Server Configuration, Server Upgrades, and IPSI Firmware Upgrades. Under 'Server Configuration', 'Network Configuration' is highlighted with a red box. The main content area is titled 'Network Configuration' and contains a warning icon and a list of notes. A large red 'Server 1' watermark is overlaid on the page. Below the notes, there are several input fields: 'Host Name' (containing 'S8800dupAserver6'), 'Alias Host Name', 'DNS Domain', 'Search Domain List' (with '(comma separated)' to its right), 'Primary DNS', 'Secondary DNS', and 'Tertiary DNS'. At the bottom, the 'Server ID' field contains the value '1' and is also highlighted with a red box, with '(Range 1 to 256)' to its right.

AVAYA

Help Log Off Administration Upgrade

Administration / Server (Maintenance)

Network Configuration

This implementation is used to configure the IP related settings for this server. Please note that Configuration" category - please make sure to check all pages related to this configuration.

Notes

- The host name and ID of each server in the system must be unique.
- The below fields is used to indicate how each Ethernet port is to be used (functional assignment multiple purposes, except for the port assigned to the laptop, which must be dedicated to only one purpose).
- An Ethernet port can be configured without a functional assignment. However, any port intended for a functional assignment.
- Physical connections to the Ethernet ports must match settings provided below. Please keep track of the physical connections. For example, eth0 could be labeled 1, eth1 could be labeled 2, etc.
- Note that any configuration data obtained from an external source will be displayed read-only.
- A restart of Communication Manager is needed after the server has been successfully configured after all configuration is completed. Too many restarts may escalate to a full Communication Manager restart.
- An alias host name should only be specified if one or more alias IP addresses are supplied.

Host Name:

Alias Host Name:

DNS Domain:

Search Domain List: (comma separated)

Primary DNS:

Secondary DNS:

Tertiary DNS:

Server ID: (Range 1 to 256)

Install the CM Main Duplex

- 4 Complete the administration of **eth1** at the bottom of the **Network Configuration** page.
- 4 Click **Change**.

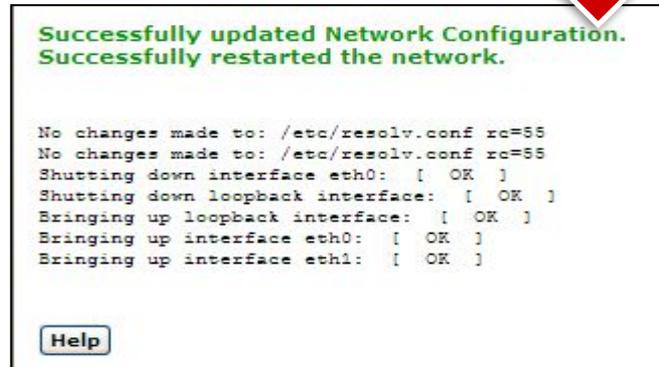
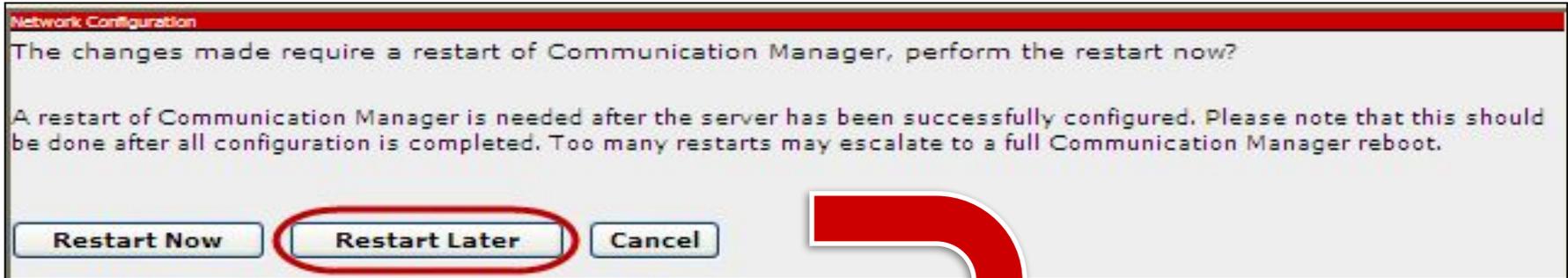
IPv6 is currently disabled.

	IPv4	IPv6		
Default Gateway:	<input type="text" value="192.168.60.1"/>	<input type="text"/>		
eth0:	IPv4 Address	Mask	IPv6 Address	Prefix
IP Configuration:	<input type="text" value="192.168.60.71"/>	<input type="text" value="255.255.255.0"/>	<input type="text"/>	<input type="text"/>
Alias IP Address:	<input type="text" value="192.168.60.73"/>		<input type="text"/>	<input type="text"/>
Functional Assignment:	<input type="text" value="Corporate LAN/Processor Ethernet/Contr"/>			
eth1:	IPv4 Address	Mask	IPv6 Address	Prefix
IP Configuration:	<input type="text" value="192.11.13.13"/>	<input type="text" value="255.255.255.252"/>	<input type="text"/>	<input type="text"/>
Alias IP Address:	<input type="text"/>		<input type="text"/>	<input type="text"/>
Functional Assignment:	<input type="text" value="Duplication Link"/> <input type="button" value="v"/>			

Duplication link is eth1 in software and eth3 on the server chassis.

Install the CM Main Duplex

- 4 A message asking if you want to restart CM now or later displays.
- 4 Click **Restart Later**.



Install the CM Main Duplex

- 4 Select **Server Configuration > Duplication Parameters** to administer the duplicate server parameters, then click **Change**.

AVAYA

Help Log Off Administration Upgrade

Administration / Server (Maintenance)

Alarms

- Current Alarms
- Agent Status
- SNMP Agents
- SNMP Traps
- Filters
- SNMP Test

Diagnostics

- Restarts
- System Logs
- Ping
- Traceroute
- Netstat

Server

- Status Summary
- Process Status
- Interchange Servers
- Busy-Out/Release Server
- Shutdown Server
- Server Date/Time
- Software Version

Server Configuration

- Server Role
- Network Configuration
- Duplication Parameters**
- Static Routes
- Display Configuration

Server Upgrades

- Pre Update/Upgrade Step
- Manage Updates

IPSI Firmware Upgrades

- IPSI Version
- Download IPSI Firmware
- Download Status
- Activate IPSI Upgrade
- Activation Status

Duplication Parameters

Select Server Duplication

This is a duplicated server using software-based duplication.

This is a duplicated server using encrypted software-based duplication.

Duplication Parameters for the Other Server:

Hostname: S8800dupBserver6

Server ID: 2

IPv6 is currently disabled.

	IPv4	IPv6
Corporate LAN/PE IP:	192.168.60.72	
Duplication IP:	192.11.13.14	

Processor Ethernet (PE) Parameters:

PE Interchange Priority: HIGH EQUAL LOW IGNORE

	IPv4	IPv6
IP address for PE Health Check:	192.168.60.1	::

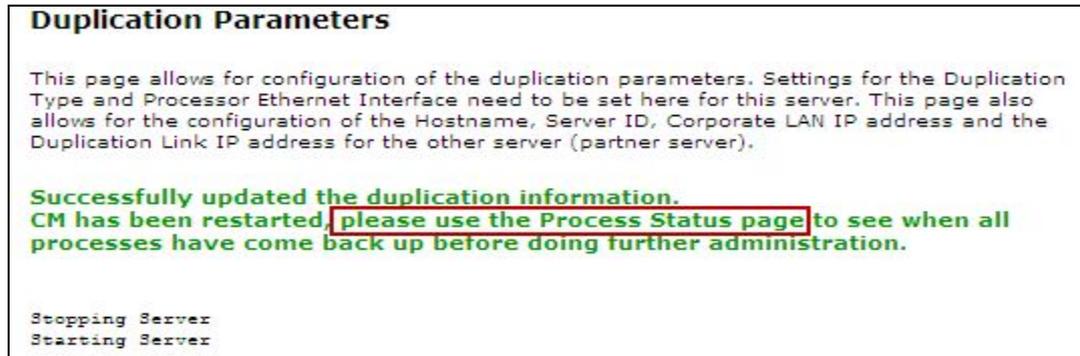
Change Restart CM Help

Install the CM Main Duplex

4 Click **Restart Now**.



4 A message indicating that the duplication parameters have been updated.



4 You have completed the **Server 1** administration ONLY.

4 Next you will configure the standby server (**Server 2**).

Install the CM Main Duplex

4 Select **Server > Process Status** and ensure that Communication Manager is **up**.

AVAYA Avaya

Administration Upgrade
(Maintenance)

Process Status

The Process Status SMI page provides information about server applications.

Content

- Summary
- Detailed

Frequency

- Display once
- Refresh Page every seconds

View **Help**

Process Status Results

Watchdog	11/11	UP	STANDBY
TraceLogger	3/ 3	UP	STANDBY
ENV	1/ 1	UP	STANDBY
LicenseServer	2/ 2	UP	STANDBY
SME	9/ 9	UP	STANDBY
MasterAgent	1/ 1	UP	STANDBY
MIB2Agent	1/ 1	UP	STANDBY
MVSubAgent	1/ 1	UP	STANDBY
LoadAgent	1/ 1	UP	STANDBY
FPAgent	1/ 1	UP	STANDBY
INADSAlarmAgent	1/ 1	UP	STANDBY
GRM	4/ 4	UP	STANDBY
SNMFManager	1/ 1	UP	STANDBY
arbiter	2/ 2	UP	STANDBY
fileyncd	8/ 8	UP	STANDBY
dupmgr	3/ 3	UP	STANDBY
MCD	1/ 1	UP	STANDBY
CommunicaMgr	42/42	UP	STANDBY

Status Summary
Process Status
Interchange Servers
Busy-Out/Release Server
Shutdown Server

4 You have completed the **server1** administration ONLY.

4 Next you will configure the standby server (**server2**).

Install the CM Main Duplex

4 At Server 2, do the following:

- Install System Platform using the information in the *ATI02348IEN-VEN-Lab Logins, Hostnames, and IP Addresses* document.
- Install the CM_Duplex template with the following parameters:
 - CM IP address is **192.168.n0.72**, where *n* is your lab number.
 - The server name is **S8800dupBserver<n>**, where *n* is your lab number.
 - Same customer login (newlogin/newlogin01) as Server1.

Install the CM Main Duplex

- 4 Log in to Server 2 System Management Interface (SMI) and select **Server Configuration > Network Configuration** to administer the network connections for Server2:
- 4 Click **Change**.

AVAYA **Server 2**

Help Log Off Administration Upgrade

Administration / Server (Maintenance)

Alarms

- Current Alarms
- Agent Status
- SNMP Agents
- SNMP Traps
- Filters
- SNMP Test

Diagnostics

- Restarts
- System Logs
- Ping
- Traceroute
- Netstat

Server

- Status Summary
- Process Status
- Interchange Servers
- Busy-Out/Release Server
- Shutdown Server
- Server Date/Time
- Software Version

Server Configuration

- Server Role
- Network Configuration**
- Duplication Parameters
- Static Routes
- Display Configuration

Server Upgrades

- Pre Update/Upgrade Step
- Manage Updates

IPSI Firmware Upgrades

- IPSI Version
- Download IPSI Firmware
- Download Status
- Activate IPSI Upgrade
- Activation Status

Search Domain List: (comma separated)

Primary DNS:

Secondary DNS:

Tertiary DNS:

Server ID: (Range 1 to 256)

IPv6 is currently disabled.

Default Gateway: IPv4 IPv6

eth0: IPv4 Address Mask IPv6 Address Prefix

IP Configuration: / /

Alias IP Address:

Functional Assignment: Corporate LAN/Processor Ethernet/Control Network

eth1: IPv4 Address Mask IPv6 Address Prefix

IP Configuration: /

Alias IP Address:

Functional Assignment: Duplication Link

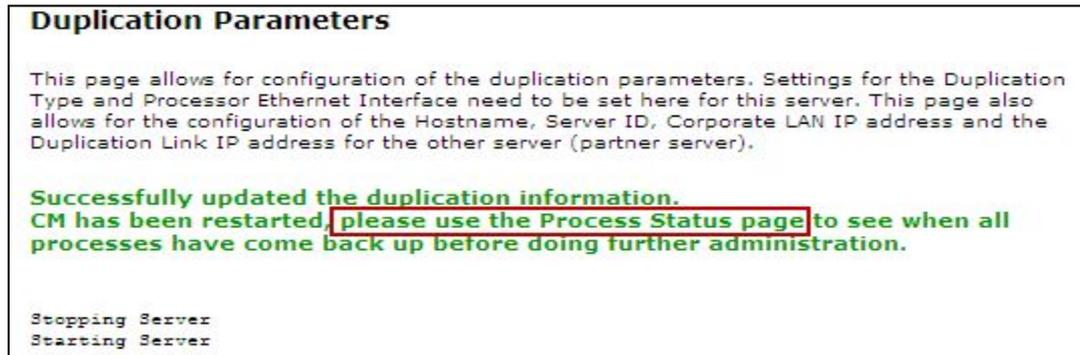
Change Restart CM Help

Install the CM Main Duplex

4 Click **Restart Now**.



4 A message indicating that the duplication parameters have been updated.



Install the CM Main Duplex

- 4 At the SMI for **server2** select **Server Configuration > Duplication Parameters** to administer the duplicate server parameters.
- 4 Click **Change**.

Server 2

Select Server Duplication

This is a duplicated server using software-based duplication.
 This is a duplicated server using encrypted software-based duplication.

Duplication Parameters for the Other Server:

Hostname:
Server ID:

IPv6 is currently disabled.

	IPv4	IPv6
Corporate LAN/PE IP:	<input type="text" value="192.168.60.71"/>	<input type="text"/>
Duplication IP:	<input type="text" value="192.11.13.13"/>	<input type="text"/>

Processor Ethernet (PE) Parameters:

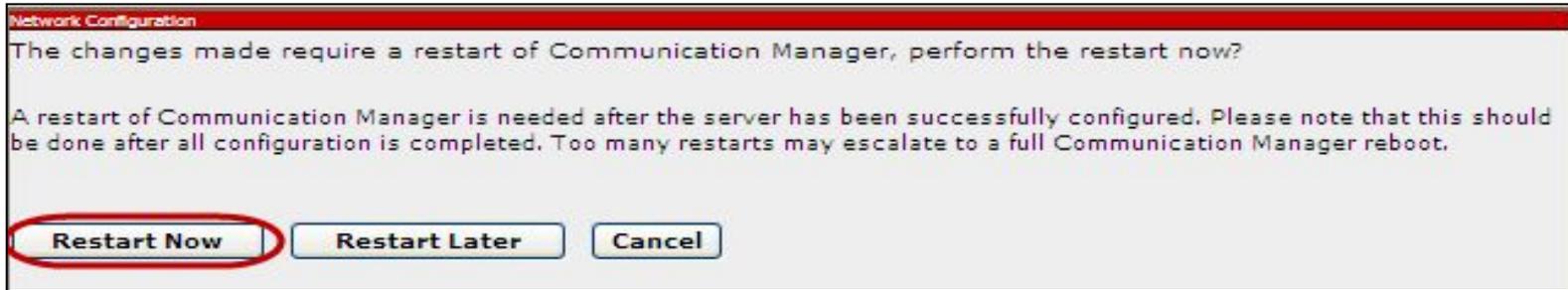
PE Interchange Priority: HIGH EQUAL LOW IGNORE

	IPv4	IPv6
IP address for PE Health Check:	<input type="text" value="192.168.60.1"/>	<input type="text" value="::1"/>

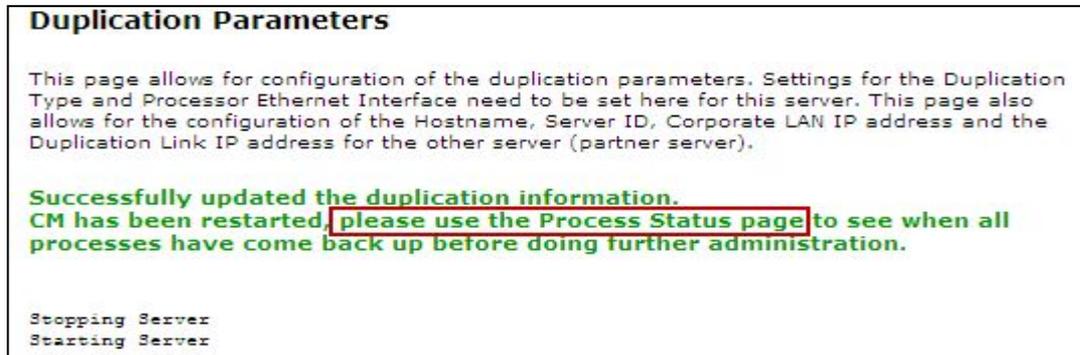
Change **Restart CM** **Help**

Install the CM Main Duplex

4 Click **Restart Now**.



4 A message indicating that the duplication parameters have been updated.



Install the CM Main Duplex

4 To check the progress of the CM restart select **Server > Process Status**.

The screenshot shows the Avaya Administration interface. On the left, the 'Process Status' page is visible, with the 'View' button circled in red. A red arrow points from this button to the 'Status' menu item in the 'Administration / Server (Maintenance)' dropdown menu. The main content area displays 'Process Status Results' for 'Server 2'. The results table is as follows:

Process Name	Instances	Running	UP	STANDBY
Watchdog	11/ 11	UP	STANDBY	
TraceLogger	3/ 3	UP	STANDBY	
EMV	1/ 1	UP	STANDBY	
LicenseServer	3/ 3	UP	STANDBY	
SME	9/ 9	UP	STANDBY	
MasterAgent	1/ 1	UP	STANDBY	
MIB2Agent	1/ 1	UP	STANDBY	
MVSubAgent	1/ 1	UP	STANDBY	
LoadAgent	1/ 1	UP	STANDBY	
FPAgent	1/ 1	UP	STANDBY	
INADSAlarmAgent	1/ 1	UP	STANDBY	
GMM	4/ 4	UP	STANDBY	
SNMPManager	1/ 1	UP	STANDBY	
arbiter	2/ 2	UP	STANDBY	
filesyncd	8/ 8	UP	STANDBY	
dupmgr	3/ 3	UP	STANDBY	
MCD	1/ 1	UP	STANDBY	
CommunicaMgr	42/ 42	UP	STANDBY	

4 Wait until **dupmgr** and **CommunicaMgr** are **standby**.

Install the CM Main Duplex

- 4 At the SMI for both **Server 1** and **Server 2** select **Server > Status Summary**.
- 4 Ensure that each server reports the proper active and standby server roles, the duplication link is up and that the Standby is refreshed.

Status Summary

The Status Summary Web page displays information about the status and the

SERVER STATUS

Cluster ID: 001
Duplication: sw
Standby Busyed? no
Standby Refreshed? yes
Standby Shadowing: on
Duplication Link: up

Elapsed Time since Init/Interchange: 10d 19:59:59

	server1	server2
ID:	001 (1)	002 (2)
Mode:	Active	Standby
Major Alarms:	yes	yes
Minor Alarms:	no	no
Control Network:	2 / 2 / 2	2 / 2 / 2
Processor Ethernet:	unused	unused
PE Priority:		
Server Hardware:	okay	okay
Processes:	okay	okay

Install the CM Main Duplex

- 4 At the SMI for the Standby Server select **Server > Busyout/Release Server**.
- 4 Click **Release** to put this server into service.

The screenshot shows the Avaya SMI interface. The top navigation bar includes 'Help', 'Log Off', 'Administration', and 'Upgrade'. The current page is 'Administration / Server (Maintenance)'. The left sidebar contains a menu with categories: Alarms, Diagnostics, Server, Server Configuration, and Server Upgrades. The 'Server' category is expanded, and 'Busy-Out/Release Server' is highlighted with a red circle. The main content area is titled 'Busy-Out/Release Server' and contains the following text:

This page can be used to place a standby server (i.e.: not an active server) more be used to disengage the server from busy-out mode. It can also dis

SERVER STATUS

Cluster ID: 001
Duplication: sw
Standby Busied? yes
Standby Refreshed? no
Standby Shadowing: off
Duplication Link: init
Elapsed Time since Init/Interchange: (none so far)

Pod1Lab4-CM	Remote
ID: 001 (1)	ID: ??? (2)
Mode: BUSY OUT	Mode: Not Ready
Major Alarms: no	Major Alarms:
Minor Alarms: yes	Minor Alarms:
Control Network: 0 / 0 / 0	Control Network:
Processor Ethernet: unused	Processor Ethernet:
PE Priority:	PE Priority:
Server Hardware: okay	Server Hardware:
Processes: okay	Processes:

Click the button below to **Release** this server.

Release **Help**

Install the CM Main Duplex

- 4 At the System Platform Management Interface (cdom) for both **Server 1** and **Server 2** select **Server Management > Network Configuration**.
- 4 Ensure that the **eth3** interface is assigned to **cmdup** on both servers.

The screenshot displays the 'System Platform' interface for 'Server 1 and Server 2'. The left sidebar shows a navigation menu with 'Network Configuration' highlighted. The main content area is titled 'Server Management' and 'Network Configuration'. It includes sections for 'Enable IPv6', 'General Network Settings', and 'Domain Network Interface'. The 'Domain Network Interface' section contains a table with columns for Bridge, Interface, IP, Netmask, and Gateway. The 'cmdup' bridge and 'eth3' interface are highlighted with a red box.

System Platform
Server 1 and Server 2

Server Management
Network Configuration

Enable IPv6
Turn On IPv6 Requires System Reboot

General Network Settings

Default Gateway: 192.168.60.1
Primary DNS:
Secondary DNS:
Domain Search List:
Cdom Hostname: IPT1Lab6S88b-Cdom
Dom0 Hostname: IPT1Lab6S88b-Dom0

Domain Network Interface

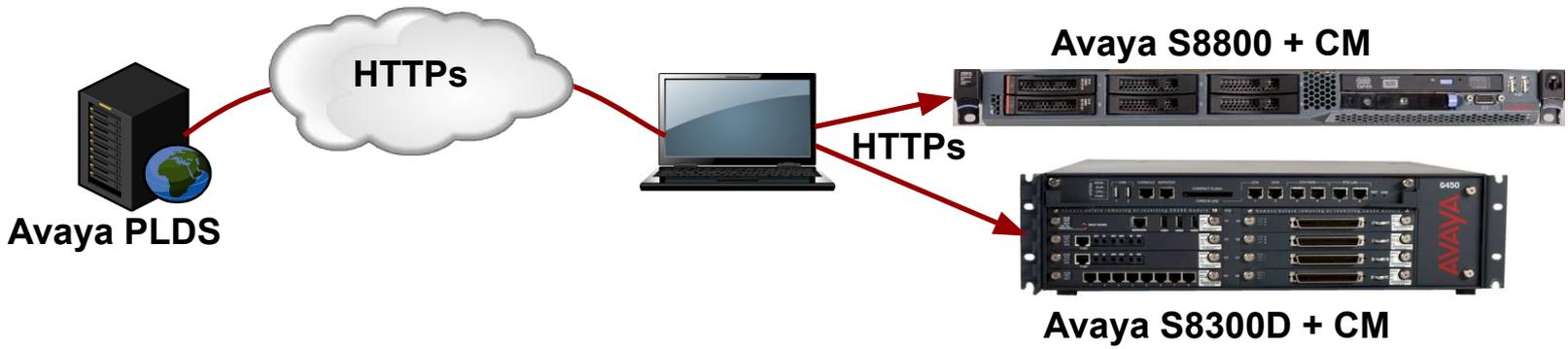
Bridge	Interface	IP	Netmask	Gateway
avprivate		172.20.10.1	255.255.255.0	
avpublic	eth0	192.168.60.8	255.255.255.0	
cmdup	eth3			
service	eth1	192.11.13.6	255.255.255.252	

Install the License Files

Download License from PLDS

Download License from PLDS

- 4 System Platform (SP) does not require a license.
- 4 Communication Manager (the “solution ”) does require a license.
- 4 The license generation and installation process involves multiple interfaces:
 - Avaya PLDS
 - Avaya Aura System Platform Console (cdom)
 - Communication Manager SAT and SMI



Download License from PLDS (continued)

4 PLDS lookup through:

- **License Activation Code (LAC)**
- **License Host** is the MAC address established at the time System Platform is installed.

The screenshot displays the Avaya Product Licensing and Delivery System (PLDS) interface. At the top, the Avaya logo is on the left, and navigation links for Home, Assets, Activation, Reports, Administration, Help, and Log out are on the right. Below the navigation bar, the user is logged in as Lawrence Brown. The main content area features a 'Quick Activation' section with a green box around the input fields for 'LAC(s)' and 'License Host'. A red callout box points to the 'License Host' field with the text 'System Platform MAC address'. Below the 'Quick Activation' section, there are three main sections: 'Asset Mgmt' with links for Asset Dashboard, View Entitlements, and View Downloads; 'Activation Mgmt' with links for Activation Dashboard and View Activation Record; and 'Reports' with a Reports link. An 'Administration' section is also visible with links for My Users, My Company, Manage Groups, and More...

Download License from PLDS (continued)

4 Select **Activation** > **View Activation Record**.

The screenshot displays the Avaya PLDS web interface. At the top left is the Avaya logo. A navigation bar contains links for Home, Assets, Activation, Reports, Administration, Help, and Log out. A user is logged in as Lawrence Brown. A dropdown menu is open under the 'Activation' link, with 'View Activation Record' highlighted in a green box. Other options in the menu include Activation Dashboard, Activate, Upgrade, Rehost/Move, Regenerate, De-Activate, Transfer License Host, and Troubleshooting License. Below the menu is a 'Quick Activation' section with input fields for LAC(s) and License Host, and a 'View Activation Record >>' button. The main content area is divided into three sections: Asset Mgmt (Asset Dashboard, View Entitlements, View Downloads), Activation Mgmt (Activation Dashboard, View Activation Record), and Reports (Reports). An Administration section is also visible at the bottom left.

Download License from PLDS (continued)

4 Type the **Host ID** (MAC address).

4 Click **Search Activation Record**.

AVAYA Home Assets Activation Reports Administration Help Log out

TEST 0.5.3131.00 Search Activation Records ?

Logged in as: << Return

To search activation records, provide search criteria, then click Search Activation Records. To display additional search criteria, click Advanced Search. [Click here for additional Search Tips.](#)

%indicates wildcard search

To view Activation Record information, you must at least provide a Company, License Host, Host ID, or LAC.

%Company:

%License Host:

Host ID:

%Group name:

%Group ID:

Application:

Home
Assets
Activation
- Activation Dashboard
▶ View Activation Record
- Activate
- Upgrade
- Rehost/Move
- Regenerate
- De-Activate
- Transfer License Host
- Troubleshooting License
Reports
Administration

**Enter Host ID
(MAC or VMD)**

Download License from PLDS (continued)

4 To view the license details, click **View**.

The screenshot shows a web interface for searching activation records. On the left is a navigation menu with options like Home, Assets, Activation, and Reports. The main area contains search filters for Company, License Host, Host ID, Group name, Group ID, and Application. A table below shows one search result with columns for Options, License Host, Host ID, and Applications. A red callout box with a white background and a red border points to the 'View' button in the first row of the table.

Shivang Naik

Home
Assets
Activation
- Activation Dashboard
▶ View Activation Record
- Activate
- Upgrade
- Rehost/Move
- Regenerate
- De-Activate
- Transfer License Host
- Troubleshooting License
Reports
Administration
Help
Log out

To search activation records, provide search criteria, then click Search Activation Records. To display additional search criteria, click Advanced Search. [Click here for additional Search Tips.](#)

%indicates wildcard search

%Company: Training Corp Site B - 332211 -- Miami, FL; United States

%License Host:

Host ID: 20-00-45-67-89-01

%Group name:

%Group ID:

Application:

Search Activation Records >> [Advanced Search]

Showing: 1-1 of 1

Options	License Host	Host ID	Applications
View	training video host [View summary] [Edit]	20-00-45-67-89-01	Interactive Response

Showing: 1-1 of 1

Click View for license details

Download License from PLDS (continued)

4 Click **License Key** then select the license.

AVAYA Home Assets Activation Reports Administration Help Log out

TEST 0-5-313100 View Activation Record (training video host) ?

Logged in as: Shivang Naik

Return to previous page Print Email Upgrade Options

Overview Ownership **License/Key** Features Transactions

License Host Summary

License Host: training video host

Host ID (MAC Address format XX-XX-XX-XX-XX-XX): 20-00-45-67-89-01

Click License Key

Activation Details

Interactive Response	Product	Software Version	Total Qty	
Standard Remaining Moves: 999998	IR PORTS	2	10 for a production license	Download Details

Select license

Home
Assets
Activation
- Activation Dashboard
▶ View Activation Record
- Activate
- Upgrade
- Rehost/Move
- Regenerate
- De-Activate
- Transfer License Host
- Troubleshooting License
Reports
Administration
Help
Log out

Download License from PLDS (continued)

- 4 Click **Save to File**.
- 4 Save file to Service PC.

AVAYA Home Assets Activation Reports Administration Help Log out

TEST 10.5.3111.001 View Activation Record (training video host) ?

Logged in as: << Return to previous page Print Email Upgrade Options

Overview Ownership **License/Key** Features Transactions

Activated: May 11, 2010
Interactive Response License File

Save to File Options

Click Save to File

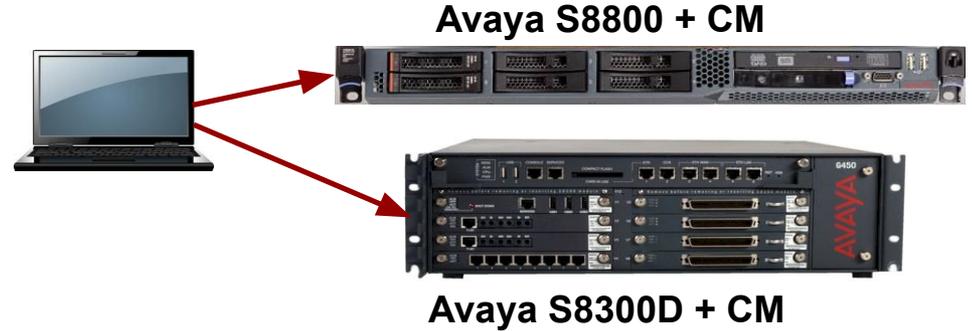
License Key

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<!DOCTYPE LAR SYSTEM "lar.dtd">
<LAR platformType="IR" sid="2" version="1.0">
<License genDate="2010/05/11" genTime="07:41:44 MDT"
type="enterprise" version="1.0">
```

Install the License File

Install the License File

4 Connect Service PC to Services port on server.



4 Open a browser.

4 Go to System Platform console (cdom) for Communication Manager.

4 Select **Server Management > License Management**.

4 Click **Launch WebLM License Manager**.

4 Click **License Administration**.

The screenshot shows the Avaya System Platform console. On the left, the 'Server Management' menu is expanded, and 'License Management' is selected. On the right, the 'Server Management License Management' page is displayed, showing a message: 'License Management will be done by WebLM License Manager. WebLM License Manager will be opened in new browser window.' A button labeled 'Launch WebLM License Manager' is highlighted with a red circle. A red arrow points from this button to a separate window titled 'AVAYA WebLM Version 4.7.1 License Administration', where the 'License Administration' link is also highlighted with a red circle.

Install the License File (continued)

The first time that you launch the Web License Manager you must log in with these credentials:

- 4 User Name: **admin**
- 4 Password: **weblmadmin**



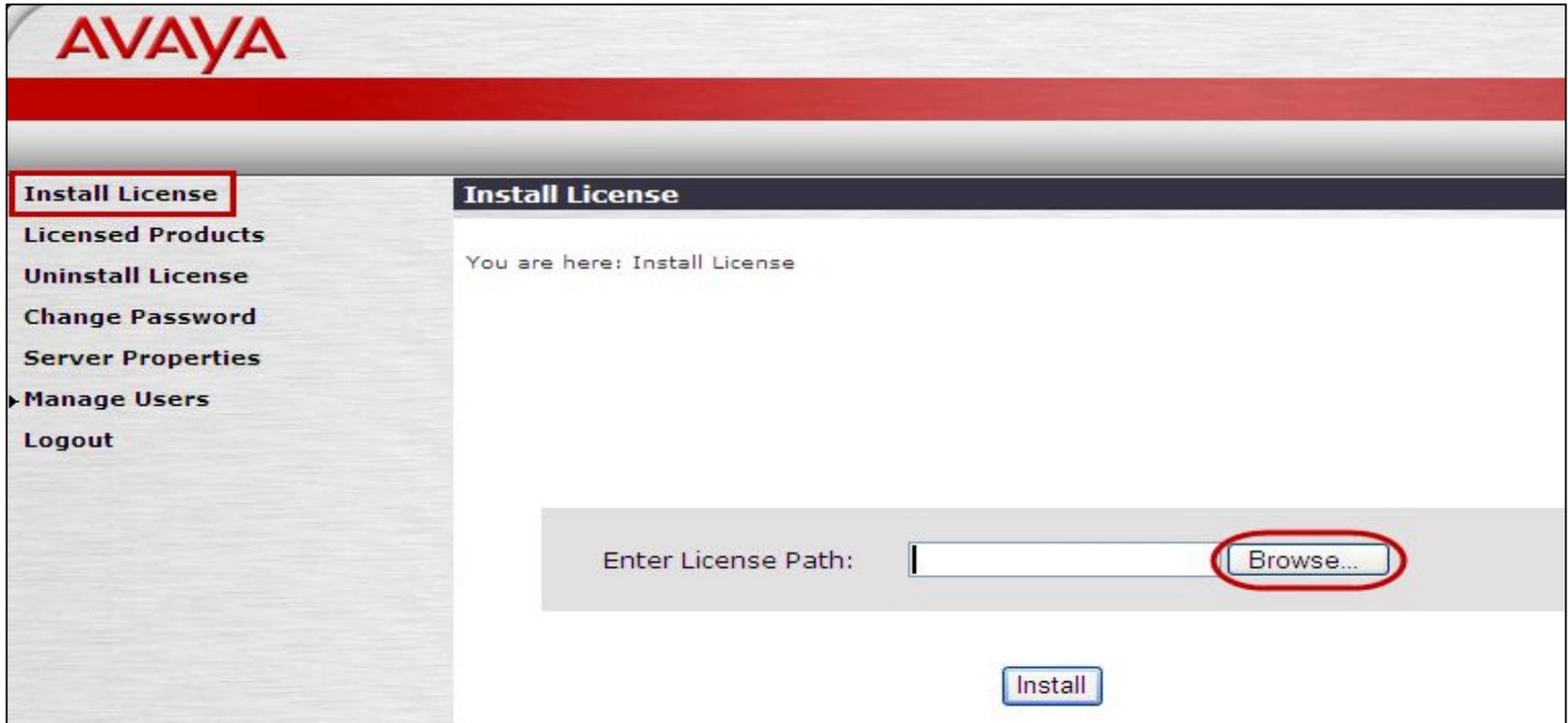
Then you must reset the WebLM password:

- 4 Type the Current Password.
- 4 Type the New Password .
- 4 Re-type the new password.
- 4 Click **Submit**.



Install the License File (continued)

- 4 Select **Install License**.
- 4 **Browse** to the license file location on the Service PC.



AVAYA

Install License

Licensed Products
Uninstall License
Change Password
Server Properties
▶ Manage Users
Logout

Install License

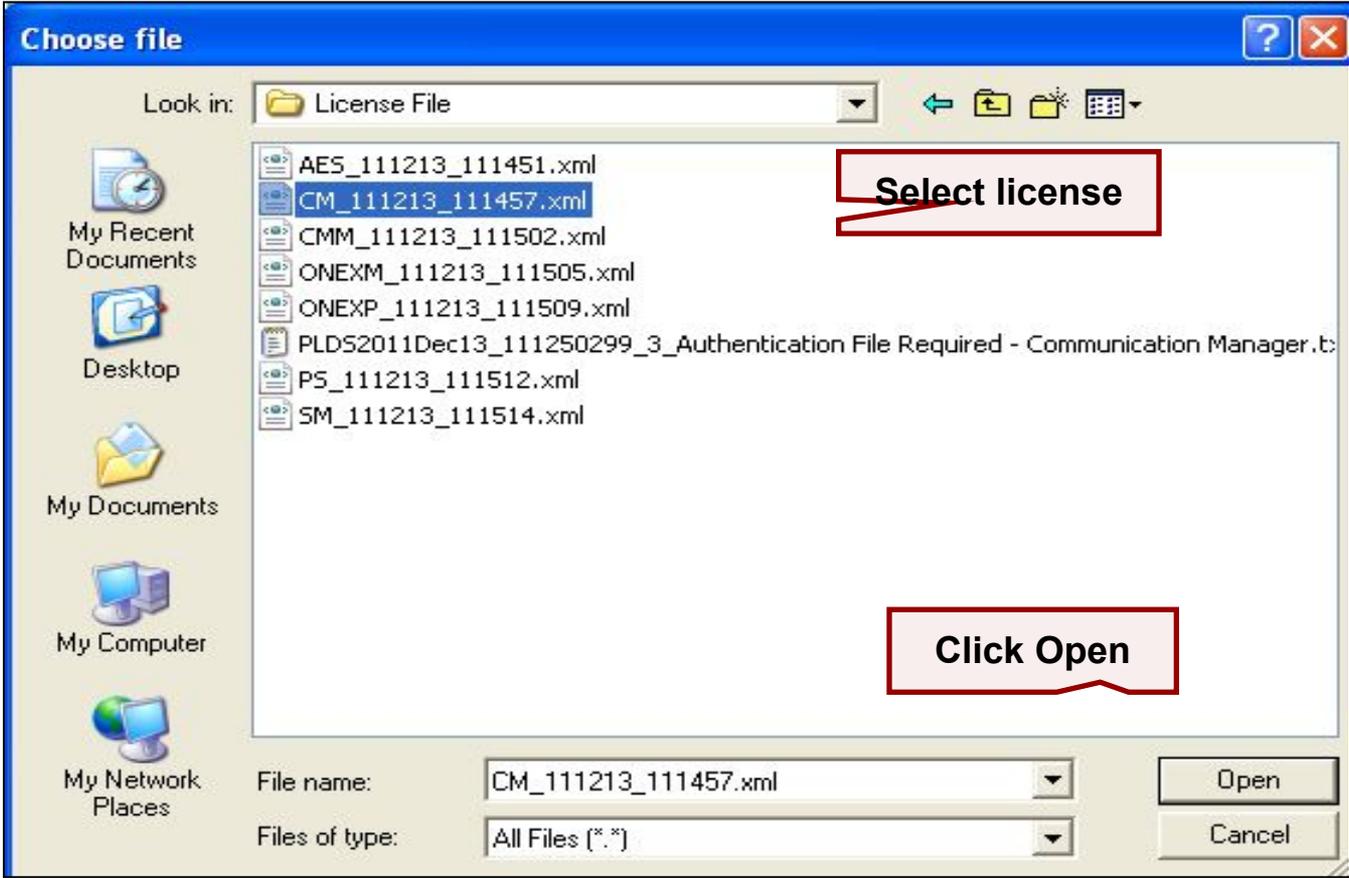
You are here: Install License

Enter License Path: **Browse...**

Install

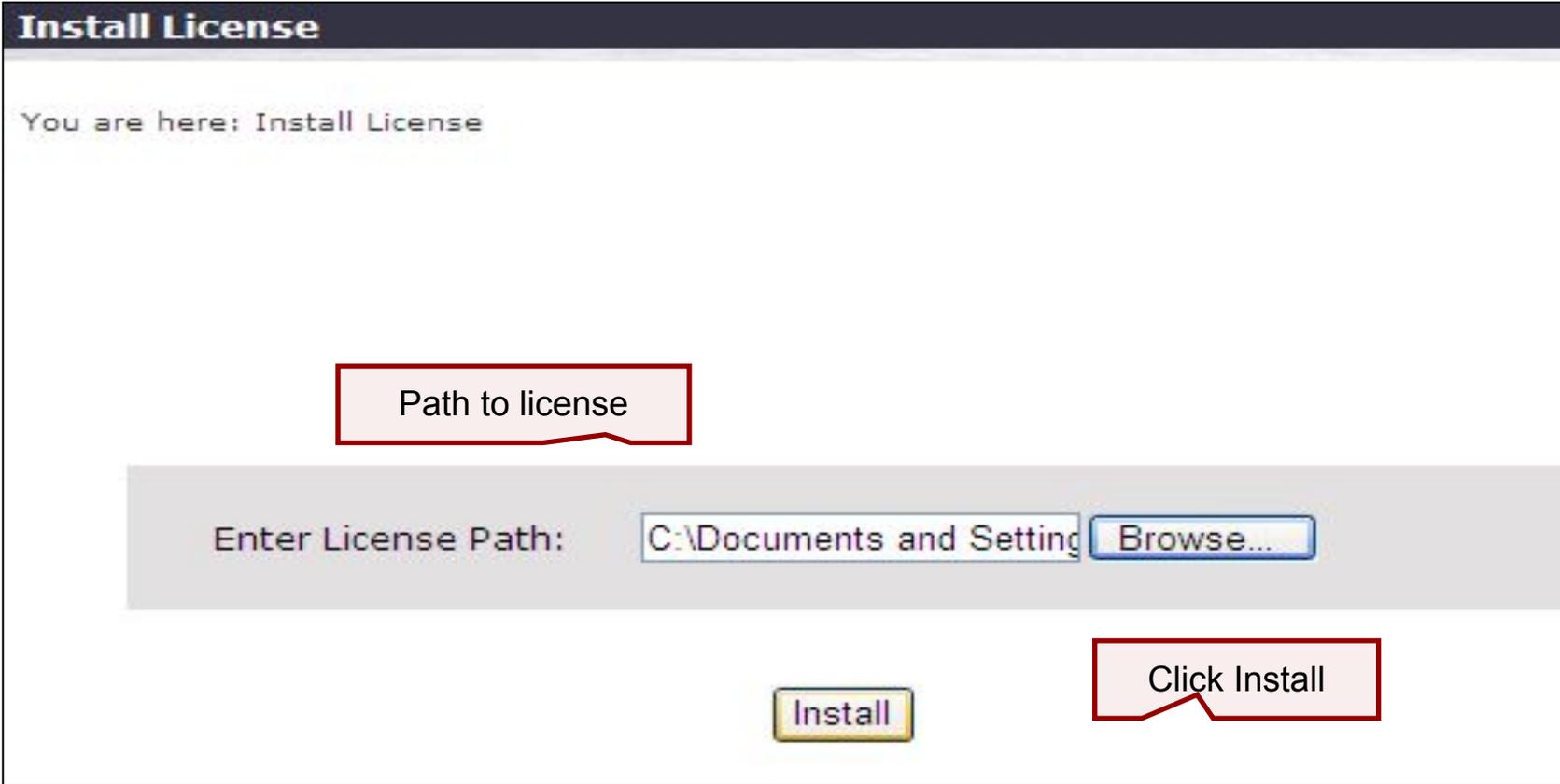
Install the License File (continued)

4 Select the license and click **Open**.



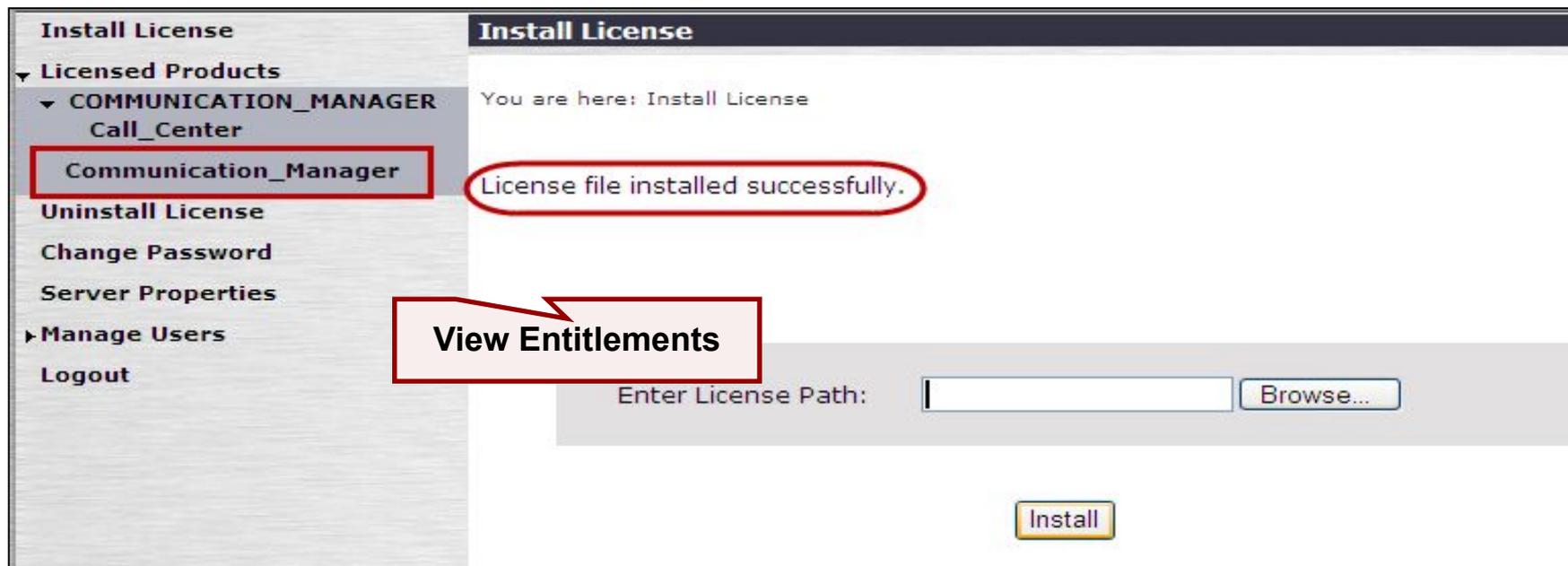
Install the License File (continued)

4 Click Install.



Install the License File (continued)

- 4 Ensure that the **Licensed Products** page shows the license was installed successfully.
- 4 Click on **Communication_Manager**.



Install the License File (continued)

Install License **Communication Manager - Release: 6 - SID: 7** (Standard License File)

Licensed Products

- COMMUNICATION_MANAGER
 - Call_Center
 - Communication_Manager

Uninstall License

Change Password

Server Properties

Manage Users

Logout

You are here: Licensed products > Communication Manager

License installed on: Dec 13, 2011 11:47:55 AM MST

[View Peak Usage](#)

License Owner: AVAYA UNIVERSITY 8740 LUCENT BLVD HIGHLANDS RANCH CO
80129-2509 United States

License Host: 00-1B-4F-40-0E-ED

Notes: This production license file is for use on a production license host.

Licensed Features

Feature (Keyword)	Expiration Date	Licensed	Acquired
Support End Date for Communication Manager (VALUE_CM_SED)	permanent	20 September 2012	Not counted
Maximum ESS Stations (VALUE_CM_ESS_STA)	permanent	6300	0
Media Encryption (FEAT_CM_ME)	permanent	on	Not counted
Maximum Stations (VALUE_CM_STA)	permanent	100	0
Edition (VALUE_CM_EDITION)	permanent	ENTERPRISE	Not counted
Maximum LSP Stations (VALUE_CM_LSP_STA)	permanent	100	0
Maximum Mobility Enabled Stations (VALUE_CM_MOBILITY)	permanent	100	0
Maximum Survivable Processors (VALUE_CM_SP)	permanent	313	0

Licensed Features

Complete Installation

Log in to Communication Manager



After initial start-up, not all commands are yet available in ASA (Avaya Site Administration).

**Open ASA:
save translation
reset system 4 (System reboots)
Close ASA
Open ASA**



**After logging in to ASA again,
all commands will be available.**

Save Communication Manager Translations

- 4 Type **save translation** and press **Enter** to save changes to the system in case it loses power before the next backup.
- 4 Ensure that the command completes successfully with an **Error Code** of **0**.

```
save translation
SAVE TRANSLATION
Command Completion Status      Error Code
Success                        0
Command successfully completed
Command: █
```

Reset System 4

- 4 Type **reset system 4** and press **Enter** to commit the updates to the system.
- 4 The command reboots the system, breaking the connection with ASA.
- 4 After the system reboots, log back into Communication Manager.

```
save translation
                                     SAVE TRANSLATION
Command Completion Status              Error Code
Success                                0
Command successfully completed
Command: reset system 4
```

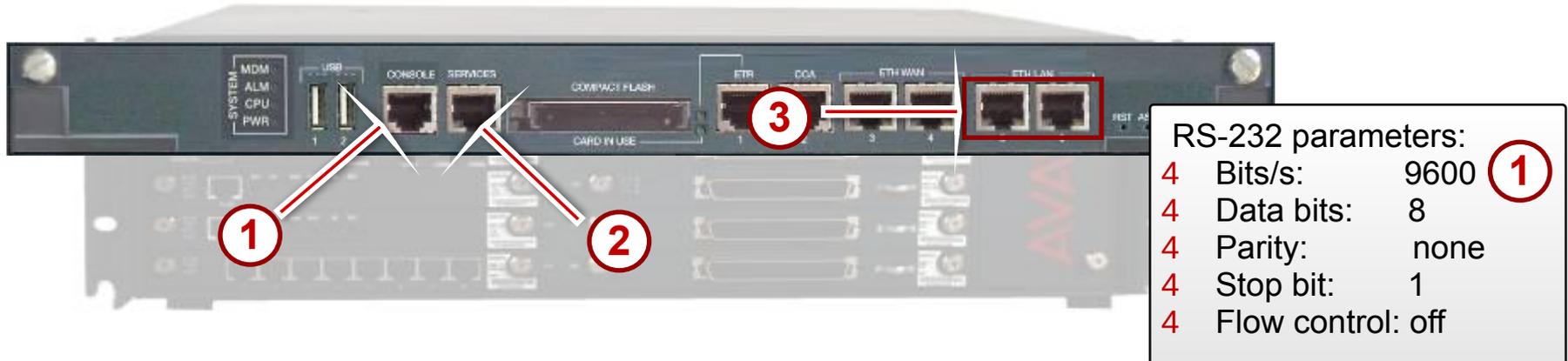
Configure G430/G450 Gateway

Log in to Gateway CLI

Log in to Gateway Command Line Interface (CLI)

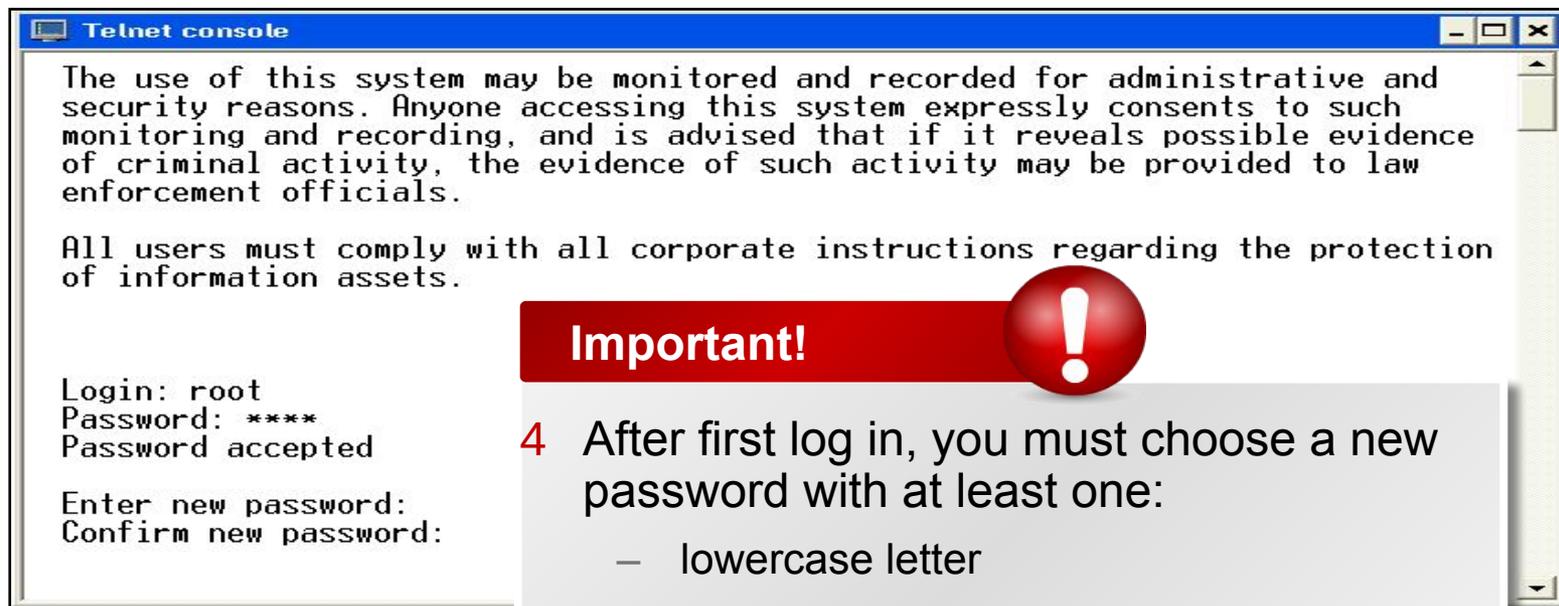
You can connect to the G450 Command Line Interface (CLI) using:

- ① HyperTerminal: CONSOLE socket with RS-232 cable, used for the initial configuration of the G450 and for subsequent modifications.
 - ② Ethernet: SSH session on Service IP address (192.11.13.6/255.255.255.252) of the G450, used for the initial configuration of the G450 and for subsequent modifications.
 - ③ Ethernet: SSH session on IP address (PMI) of the G450, used for subsequent modifications if access to corporate network is possible.
- 4 For more information on the servers, see the following document:
- *Administration for the Avaya G450 Media Gateway*



Log in to the Gateway CLI (continued)

- 4 Log in to the gateway using HyperTerminal, PuTTY, or other connection software:
 - User: **root**
 - Password (**vILT only**): **Passw0rd1** (case-sensitive)



```
Telnet console
The use of this system may be monitored and recorded for administrative and
security reasons. Anyone accessing this system expressly consents to such
monitoring and recording, and is advised that if it reveals possible evidence
of criminal activity, the evidence of such activity may be provided to law
enforcement officials.

All users must comply with all corporate instructions regarding the protection
of information assets.

Login: root
Password: ****
Password accepted

Enter new password:
Confirm new password:
```

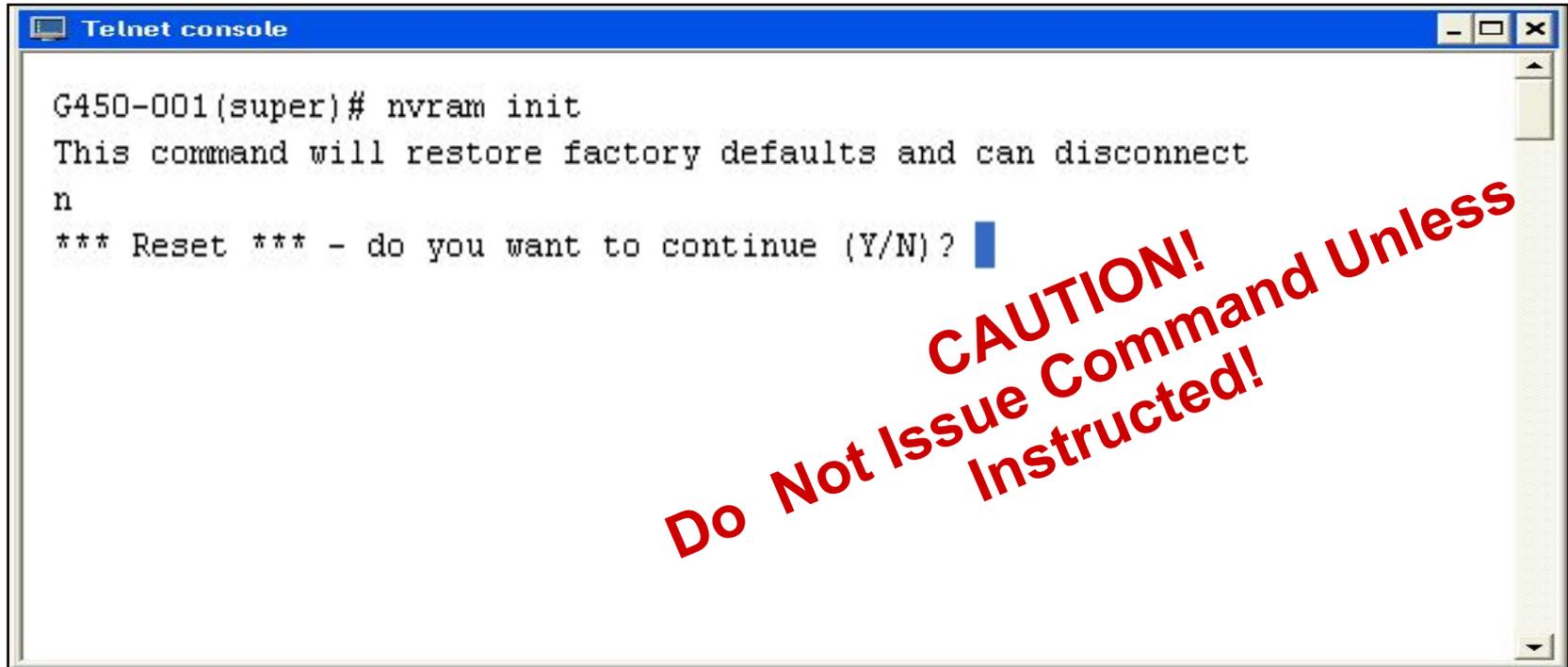
Important!

- 4 After first log in, you must choose a new password with at least one:
 - lowercase letter
 - digit

Gateway Configuration

Restore Factory Defaults

- 4 At the gateway CLI type **nvramp init** and press **Enter**.
This command deletes all data and returns to factory default settings.
- 4 Type **Y** at the prompt to continue.



```
Telnet console
G450-001(super)# nvramp init
This command will restore factory defaults and can disconnect
n
*** Reset *** - do you want to continue (Y/N)?
```

CAUTION!
Do Not Issue Command Unless Instructed!

Manual vs. Automatic Gateway Configuration

Two types of gateway configuration:

- 4 Manual – use when repurposing or reconfiguring a gateway
- 4 Automatic – use when gateway is new

Manual Gateway Configuration

- 4 Execute the following commands at the gateway command line interface (CLI):
 - **interface vlan 1 x.x.x.x y.y.y.y**, where “x” is the IP address and “y” is the subnet mask.
NOTE THE SPACE!
 - **set mgc list z.z.z.z.**, where “z” is the Processor Ethernet (PE) or CLAN IP address supplying control to the gateway
 - **copy run start** copies the running configuration file to non-volatile memory (NVRAM)
 - **reset** command resets the gateway and reads the new configuration file

Automatic Gateway Configuration Script

- 4 After you re-login and enter the password, the Gateway Configuration Script is automatically launched.
- 4 For the lab exercise, use the *ATI02348IEN-VEN -Lab Logins, Hostnames, and IP Addresses* document for the IP addresses.

```
Telnet console

--- Gateway Configuration Script ---
The script will provide you basic gateway connectivity configuration.
Configuration Script - do you want to continue (Y/N)? y

Default settings are in square brackets '['].
Vlan [1] :1
IP address [169.254.0.2] :192.168.10.1
Subnet mask [255.255.255.0] :255.255.255.0
Default gateway [169.254.0.1] :192.168.10.254
MGC controllers (up to 4 elements separated with commas) [0.0.0.0] :192.168.10.35
35
Hostname [G450] :Lab1G450
```

Check network worksheet for correct addresses

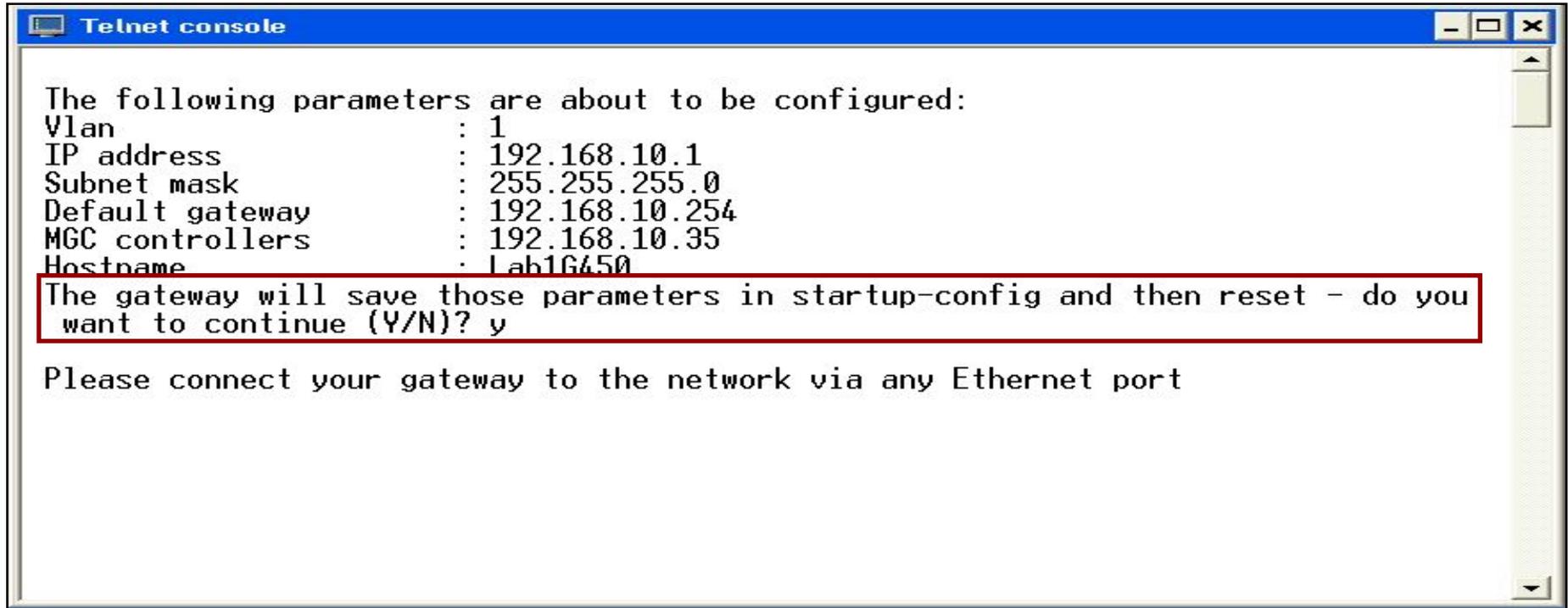
IP address of the G450

IP address of the Media Gateway Controller (S8300D Server)

IP address of the Standard Gateway in the customer network

Automatic Gateway Configuration Script (continued)

- 4 When the script has completed, save the new configuration by typing y at the prompt.
- 4 The Gateway automatically resets.



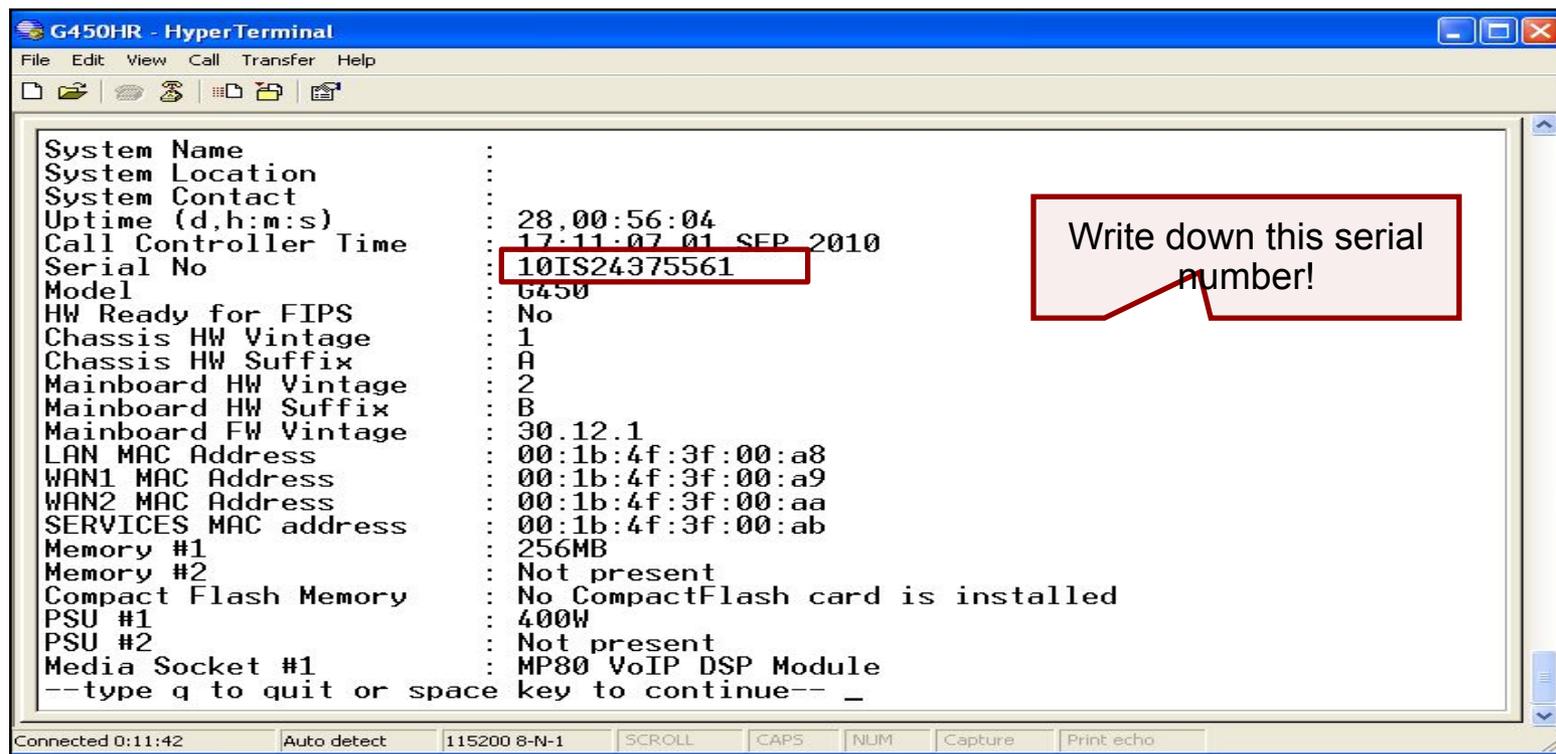
```
Telnet console

The following parameters are about to be configured:
Vlan          : 1
IP address    : 192.168.10.1
Subnet mask   : 255.255.255.0
Default gateway : 192.168.10.254
MGC controllers : 192.168.10.35
Hostname      : Lab1G450
The gateway will save those parameters in startup-config and then reset - do you
want to continue (Y/N)? y

Please connect your gateway to the network via any Ethernet port
```

Review Gateway Administration

- 4 Use the **show system** command to review the gateway administration.
- 4 Write down the serial number of the gateway—it is required for Communication Manager administration.



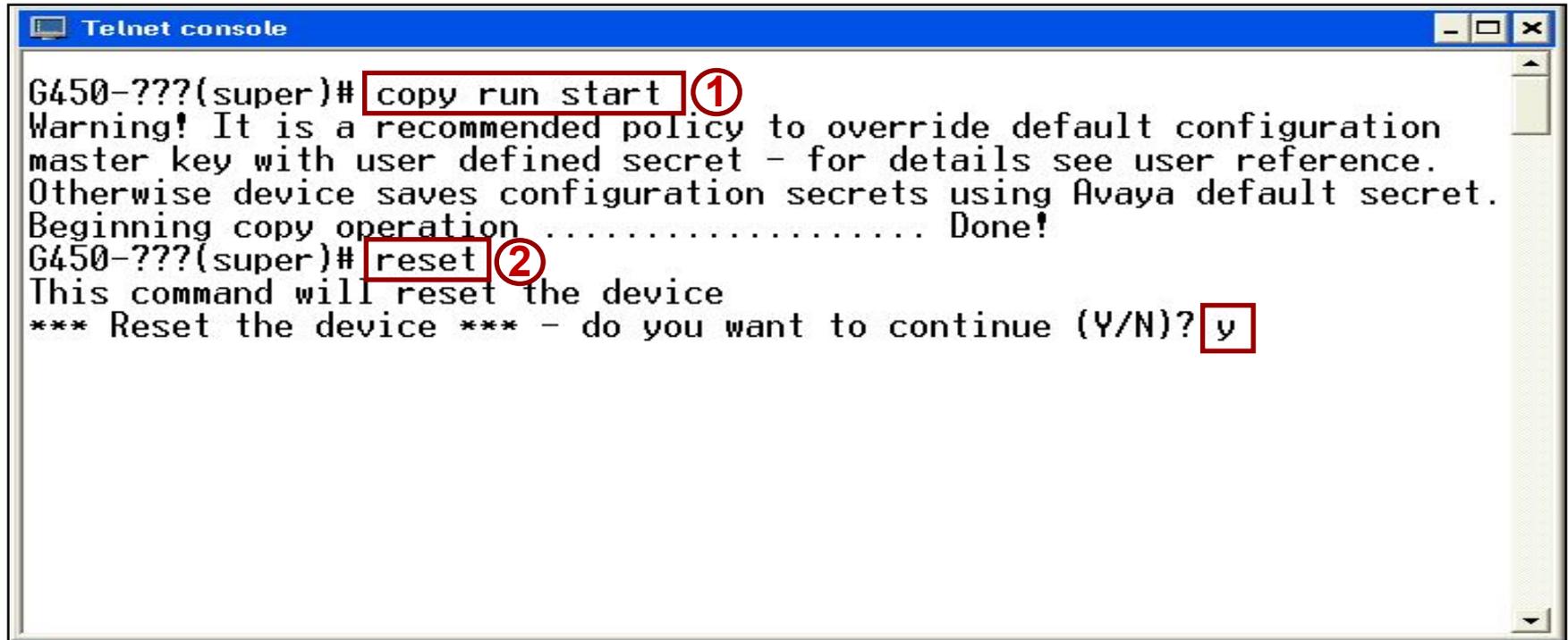
```
G450HR - HyperTerminal
File Edit View Call Transfer Help
System Name      :
System Location  :
System Contact   :
Uptime (d,h:m:s) : 28,00:56:04
Call Controller Time : 17-11-07 01 SEP 2010
Serial No       : 10IS24375561
Model          : G450
HW Ready for FIPS : No
Chassis HW Vintage : 1
Chassis HW Suffix  : A
Mainboard HW Vintage : 2
Mainboard HW Suffix : B
Mainboard FW Vintage : 30.12.1
LAN MAC Address   : 00:1b:4f:3f:00:a8
WAN1 MAC Address  : 00:1b:4f:3f:00:a9
WAN2 MAC Address  : 00:1b:4f:3f:00:aa
SERVICES MAC address : 00:1b:4f:3f:00:ab
Memory #1        : 256MB
Memory #2        : Not present
Compact Flash Memory : No CompactFlash card is installed
PSU #1           : 400W
PSU #2           : Not present
Media Socket #1  : MP80 VoIP DSP Module
--type q to quit or space key to continue-- _
```

Write down this serial number!

Connected 0:11:42 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

Save Gateway Administration

- ① Copy the configuration from the volatile to the non-volatile memory of the G450 gateway using the **copy run start** command at the gateway CLI.
- ② **Reset** the G450 gateway so that IP address is adopted.



```
Telnet console
G450-???(super)# copy run start ①
Warning! It is a recommended policy to override default configuration
master key with user defined secret - for details see user reference.
Otherwise device saves configuration secrets using Avaya default secret.
Beginning copy operation ..... Done!
G450-???(super)# reset ②
This command will reset the device
*** Reset the device *** - do you want to continue (Y/N)? y
```

Add the Gateway to CM Administration

Add Gateway to CM Administration

- 4 At the CM SAT type **add media-gateway 1** and press **Enter**.
- 4 Set the **Type** field to **G450**.
- 4 Type a descriptive name in the **Name** field.
- 4 Type the gateway serial number (**show system**) in the **Serial No.** field (serial number obtained from gateway CLI using **show system** command),
- 4 Set **Network Region** field to **1**.
- 4 Optional: Describe the physical location of the gateway in the **Site Data** field. This helps Avaya Services dispatch a technician to the correct location.
- 4 Save the changes.

```
cancel  refresh  enter  clear  help  go to page  next page  prev page
add media-gateway 1                                     Page 1 of 2
                                MEDIA GATEWAY 1
                                Type: g450
                                Name: Lab1G450
                                Serial No: 10IS07361150
                                Encrypt Link? u
                                Network Region: 1
                                Location: 1
                                Site Data:
                                Recovery Rule: none
                                Registered? n
                                FW Version/HW Uintage:
                                MGP IPU4 Address:
                                MGP IPU6 Address:
                                Controller IP Address:
                                MAC Address:
```

G450 – Display Media Gateway 1 – Page 1

- 4 Type **display media-gateway 1** to verify the gateway administration.
- 4 Ensure that the **Registered** field is y.

```
display media-gateway 1                                     Page 1 of 2
MEDIA GATEWAY 1
Type: g450
Name: Lab1G450
Serial No: 10IS07361150
Encrypt Link? y
Network Region: 1                                         Location: 1
                                                           Site Data:
Recovery Rule: none
Registered? y
FW Version/HW Uintage: 30 .12 .1 /1
MGP IPU4 Address: 192.168.10.2
MGP IPU6 Address:
Controller IP Address: 192.168.10.35
MAC Address: 00:1b:4f:3e:9e:98
```

Gateway operational only if "y"

G450 – Display Media Gateway 1 – Page 2

- 4 Go to Page 2.
- 4 Ensure that an Avaya server is in slot V1 and that the report shows the media module/slot assignments.

```
display media-gateway 1 Page 2 of 2
```

MEDIA GATEWAY 1
Type: g450

Slot	Module	Type	Name	DSP Type	FW/HW version
U1:	S8300		ICC MM	MP80	44 6
U2:					
U3:	MM711		ANA MM		
U4:					
U5:	MM710		DS1 MM		
U6:					
U7:	MM712		DCP MM		
U8:					
U9:					

Max Survivable IP Ext: 8

Displays installed media modules

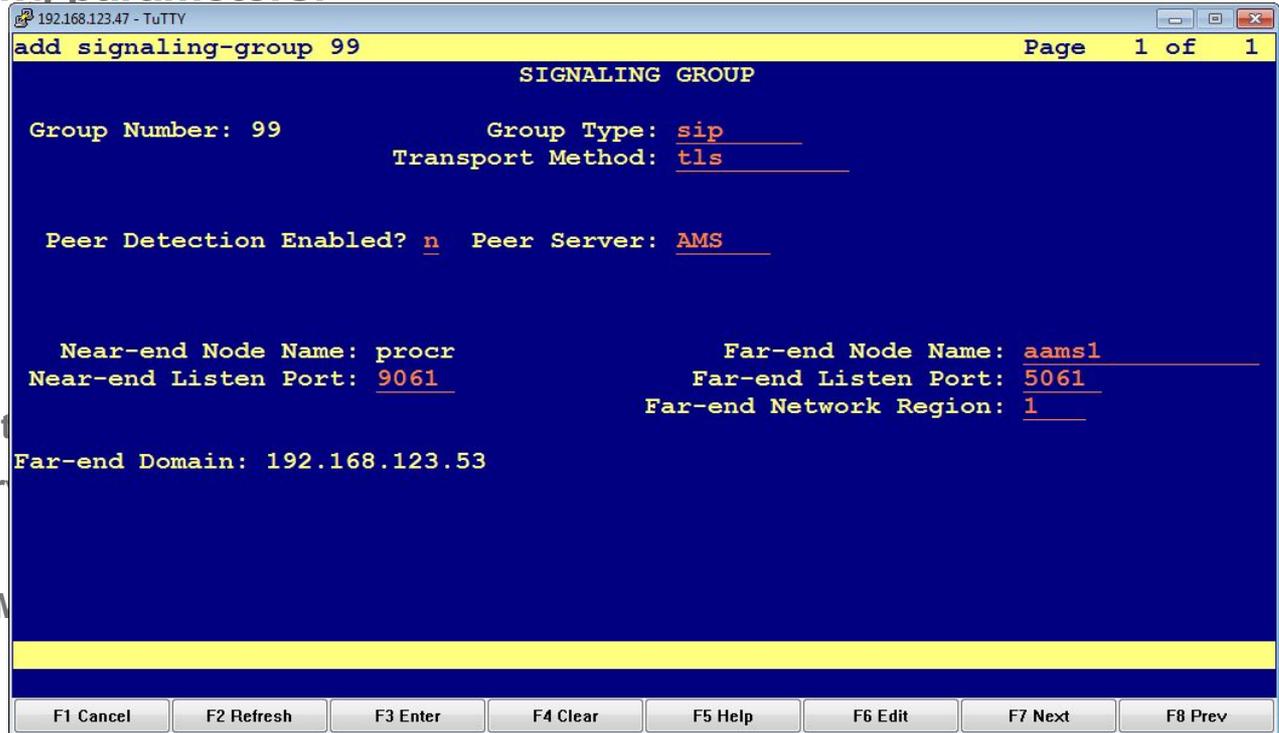
DSP resources

Gateway firmware and hardware versions

Configuring Communication Manager for AAMS connectivity

Configuring Communication Manager for AAMS connectivity

- Next we need to add a Signaling Group to define parameters of signaling between CM and AAMS servers. Use “add signaling-group 99” command to add a new one and specify following parameters:



Group Type: sip Transport Method:

Detection Enabled: n Peer Server:

Near-end Listen Port: 9061

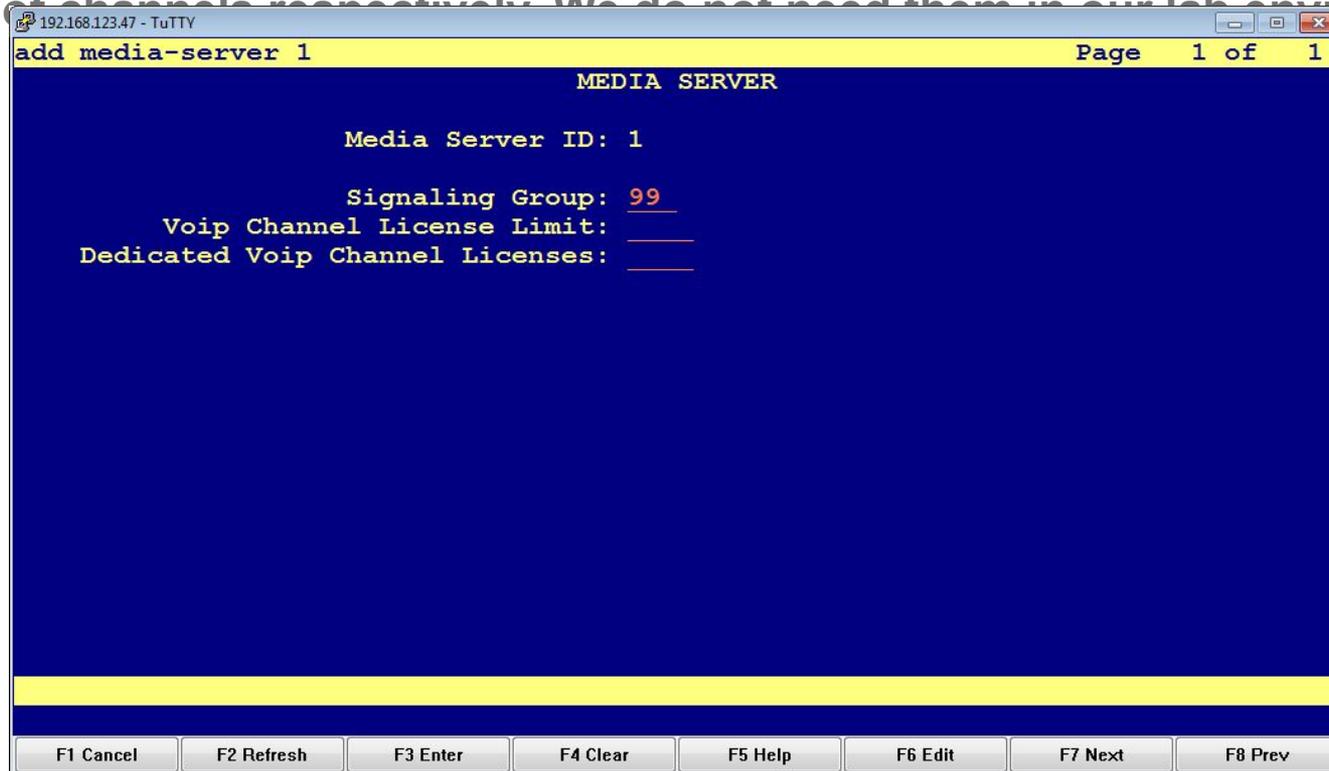
Far-end Node Name: Your AAMS

Far-end Listen Port: 5061

Far-end Network Region: 1

Configuring Communication Manager for AAMS connectivity

- And now we can add a media server to CM configuration. Use “add media-server 1” (or use can always use “next” instead of a particular number) to add a new one. Type Signaling Group (99) number in corresponding field. Fields “Voip Channel License Limit” and “Dedicated Voip Channel Licenses” can be used in production environment to limit the number of resources and to reserve certain amount of channels respectively. We do not need them in our lab environment.



```
192.168.123.47 - TuTTY
add media-server 1                                     Page 1 of 1
MEDIA SERVER
Media Server ID: 1
Signaling Group: 99
Voip Channel License Limit: _____
Dedicated Voip Channel Licenses: _____

F1 Cancel  F2 Refresh  F3 Enter  F4 Clear  F5 Help  F6 Edit  F7 Next  F8 Prev
```

Configuring Communication Manager for AAMS connectivity

- After adding the Media Server you can check it's status by issuing the “status media-server XXX” command, where XXX is a sequential number of your media server. Health state must be “in-service”. Now CM has access to AAMS resources.

```
192.168.123.47 - TuTTY
status media-server 1
MEDIA SERVER STATUS

Media Server Number: 1
State: in-service
Signaling-group: 99
Node Name: aams1
IP Address: 192.168.123.53
Network Region: 1
SW-Version: 7.7.0.200
Voip Channel License Limit:
Dedicated Voip Channel Licenses:
Voip Channel Licenses in-use: 0
Load Factor: 0
Estimated Channel Capacity: 500
Announcements Present: 0

Command:
F1 Cancel F2 Refresh F3 Enter F4 Clear F5 Help F6 Edit F7 Next F8 Prev
```

Configure IPSI Circuit Pack

Configure IPSI–Overview

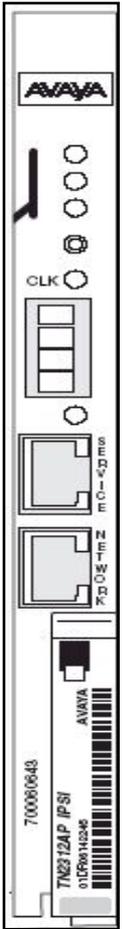
Overview - TN2312BP IP Server Interface (IPSI)

- 4 When a circuit pack wants to send a message to the CM server (such as “a telephone just went off-hook”), it puts a Control Channel Message Sequence (CCMS) message onto the port network’s signaling bus.
- 4 The IPSI takes the messages from the signaling bus, puts them into an Ethernet frame, and sends the frame across the LAN to the Communication Manager server for processing.
- 4 After processing, the CM server sends its messages to the IPSI, which takes the messages out of the frames and puts them onto the signaling bus.
- 4 These control messages direct the actions of all circuit packs within that port network.

Configure IPSI–Overview (continued)

Overview - TN2312BP IP Server Interface (IPSI)

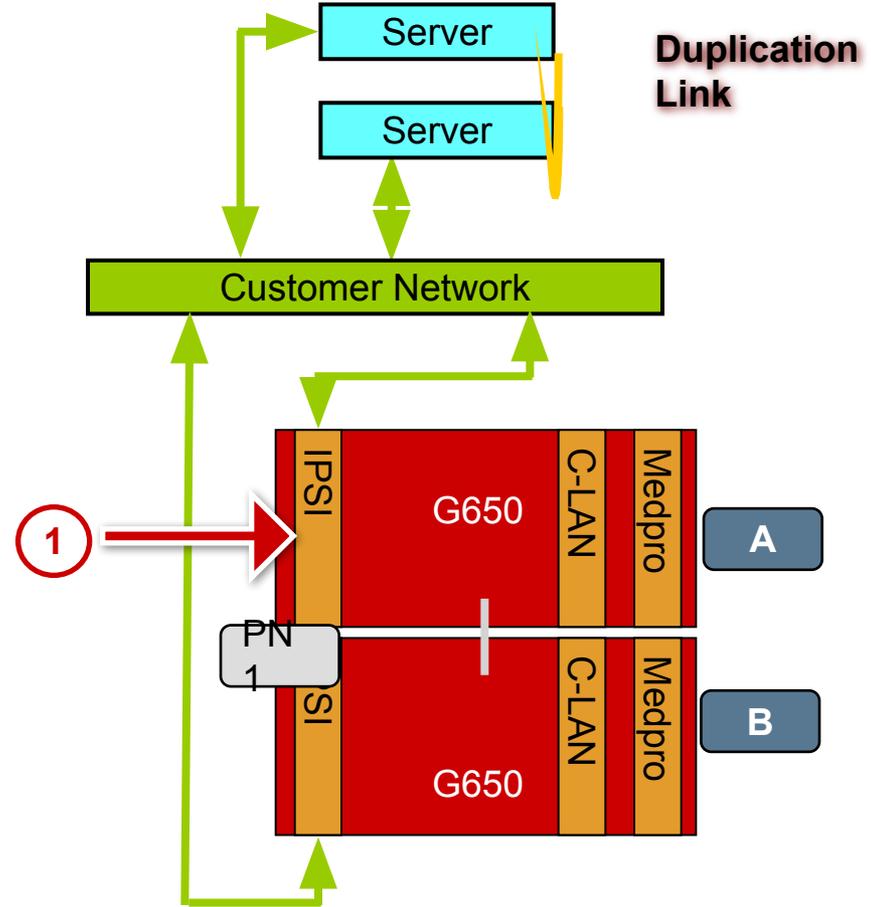
- 4 In addition to sending control messages across the IP network, the IPSI also provides many of the services required for a port network, such as:
- Tone generation
 - Tone detection
 - Call classification
 - Clock generation (equivalent to TN2182 and TN744)
 - Packet bus
 - Environmental maintenance
 - Emergency transfer
 - Customer-provided alarm device control



Configure IPSI–Duplication

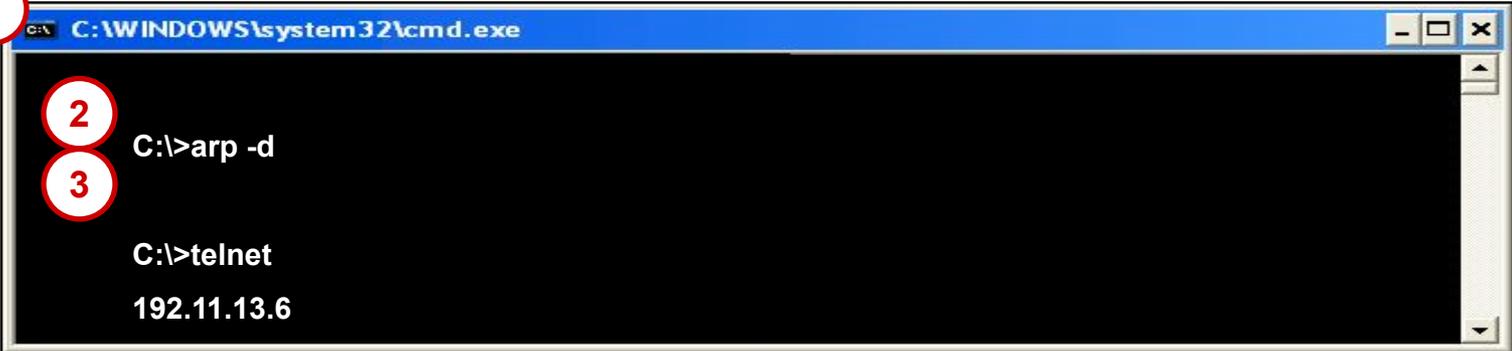
- 4 For High and Critical Reliability
- 4 IPSI 1 = Slot 01A01
- 4 IPSI 2 (redundant) = Slot 01B01
- 4 Short service interruption can occur if the active IPSI fails (if TDM bus involved)
- 4 Yellow LED on IPSI on = active IPSI
- 4 Active/standby changeover (without service interruption) possible with this ASA command:

set ipserver-interface <slot of new active IPSI >



Configure IPSI–Access

1. Open a command line interface on the Service PC (**Start > Run > cmd**).
2. Type **arp -d** and press **Enter** to delete the cache memory from the Service PC. This is needed if the same IP address, but a different MAC address, was worked on the server shortly before attempting this connection.
3. Type **telnet <IPSIboardIPaddress>** and press **Enter** to start a Telnet session to the IPSI circuit pack.



A screenshot of a Windows command prompt window titled "C:\WINDOWS\system32\cmd.exe". The window has a blue title bar and standard Windows window controls. The command prompt shows the following text:

```
C:\>arp -d  
C:\>telnet  
192.11.13.6
```

Red circles with numbers 1, 2, and 3 are overlaid on the image. Circle 1 is around the title bar. Circle 2 is around the 'arp -d' command. Circle 3 is around the 'telnet' command.

Configure IPSI-Administration

- 4 Commands must be entered in the full syntax as shown with no abbreviations nor shortcuts.

```
C:\ Telnet 192.11.13.6
TN2312 IPSI IP Adm:
Copyright Avaya Inc. Reserved
[IPSI]: ipsilogin
Login: craft
Password: serv1ces
[IPADMIN]: set control interface 192.168.40.21 255.255.255.0_
[IPADMIN]: set control gateway 192.168.40.1
[IPADMIN]: exit_

C:\ Telnet 192.11.13.6
[IPADMIN]: show control interface
Control Network IP Address = 192.168.40.21
Control Network Subnetmask = 255.255.255.0
Control Network Default Gateway = 192.168.40.1
IPSI is not configured for DHCP IP address administration
[IPADMIN]: _
```

network parameters for network socket

User: craft
Password: serv1ces

Default gateway (optional)

Log out + log in again for IPSI to apply the new data

Check network worksheet for correct addresses

Configure IPSI–Administration (continued)

```
cxv Telnet 192.11.13.6

[IPADMIN]: set port negotiation 1 disable
[IPADMIN]: set port speed 1 100MB
[IPADMIN]: set port duplex 1 full
[IPADMIN]: reset

WARNING! You are about to reset this board! You will
need to restore your telnet connection after the reset.
Enter 'y' to continue, or any other key to quit: y
```

Switch off automatic negotiation

Reset IPSI for data takeover

Set LAN switch port to the same values

Log in again

```
cxv Telnet 192.11.13.6

[IPADMIN]: show port 1
Link: established
Autonegotiation: disabled
Speed: 100 Mb
Duplex: full
Flow control: disabled
```

Port 1 = network socket
Port 2 = service socket

Link parameter should be “established” if connected correctly. All other parameters should be what you input above.

G650 Cabinet and Circuit Pack Administration in CM

Add Cabinet for Port Network 1

4 At the CM SAT type **add cabinet 1** and press **Enter**.

add cabinet 1 Page 1 of 1

CABINET

CABINET DESCRIPTION

Cabinet: 1

Cabinet Layout: G650-rack-mount-stack

Cabinet Type: expansion-portnetwork

Optional site data

Location: 1 IP Network Region: 1

Rack: 1 Room: 200 Floor: West Building: Denver

CARRIER DESCRIPTION

Carrier	Carrier Type	Number
E	not-used	
D	not-used	
C	not-used	
B	G650-port	
A	G650-port	

Two G650s (Carrier A and Carrier B)

Add Cabinet for Port Network 2

4 At the CM SAT type **add cabinet 2** and press **Enter**.

```
add cabinet 2 Page 1 of 1
CABINET
CABINET DESCRIPTION
  Cabinet: 2
  Cabinet Layout: G650-rack-mount-stack
  Cabinet Type: expansion-portnetwork
  Location: 1
  IP Network Region: 1
Rack: 1 Room: 1-115 Floor: Building: Westmin
CARRIER DESCRIPTION
  Carrier      Carrier Type      Number
  E            not-used
  D            not-used
  C            not-used
  B            not-used
  A            G650-port
```

Optional site data

One G650 (Carrier A)

Enable IPSI Control of Port Networks

- 4 At the CM SAT type **change system-parameters ip-server-interface** and press **Enter**.
- 4 Set the **IPSI Control of Port Networks** field to **enabled**.

```
change system-parameters ipserver-interface Page 1 of 1
IP SERVER INTERFACE (IPSI) SYSTEM PARAMETERS

SERVER INFORMATION

Primary Control Subnet Address:
Secondary Control Subnet Address:

OPTIONS

Switch Identifier: A
IPSI Control of Port Networks: enabled
A-side IPSI Preference: enabled
IPSI Socket Sanity Timeout: 15

QoS PARAMETERS

802.1p: 6
DiffServ: 46
```



Administer IPSI 1

- 4 At the CM SAT type **add ipserver-interface 1** and press **Enter**.
- 4 Administer the form like the example.
- 4 **IMPORTANT:** use the *ATI02348/EN-VEN-Lab Logins, Hostnames, and IP Addresses* information for your lab.

```
add ipserver-interface 1
IP SERVER INTERFACE (IPSI) ADMINISTRATION - PORT NETWORK 1

IP Control? y                Ignore Connectivity in Server Arbitration? n
Encryption? y                Administer secondary ip server interface board? n

PRIMARY IPSI                                QoS AND ETHERNET SETTINGS
  Location: 1A01                        Use System Level Parameter Values? y
Subnet Mask: /24                        802.1p: 6
IP Address: 192.168.50.16                DiffServ: 46
Gateway: 192.168.50.1                    Auto? n
                                           Speed: 100Mbps
                                           Duplex: Full
```

Use IP addresses for your course only.

Administer IPSI 2

- 4 At the CM SAT type **add ipserver-interface 2** and press **Enter**.
- 4 Administer the form like the example.
- 4 **IMPORTANT:** use the ATI02348IEN-VEN-Lab Logins, Hostnames, and IP Addresses information for your lab.

```
add ipserver-interface 2
IP SERVER INTERFACE (IPSI) ADMINISTRATION - PORT NETWORK 2

IP Control? y                Ignore Connectivity in Server Arbitration? n
Encryption? y

PRIMARY IPSI                                QoS AND ETHERNET SETTINGS
  Location: 2A01                            Use System Level Parameter Values? y
  Subnet Mask: /24                          802.1p: 6
  IP Address: 192.168.50.21                 DiffServ: 46
  Gateway: 192.168.50.1                     Auto? n
                                           Speed: 100Mbps
                                           Duplex: Full
```

Check IPSI Status

- 4 At the CM SAT type **add ipserver-interface 2** and press **Enter**.
- 4 Verify that all IPSI interfaces have been added correctly and are operational.

```
list ipserver-interface
```

IP SERVER INTERFACE INFORMATION							
Port Ntwk Num	Pri/ Sec Bd Loc	Primary/ Secondary IP Address	Primary/ Secondary Host Name	Primary/ Secondary DHCP ID	Serv State	Control State	State Of Health C P E G
1	1A01	192.168.50.16	192.168.50.16	ipsi-A01a	IN	actv-aa	0.0.0.0
2	2A01	192.168.50.21	192.168.50.21	ipsi-A02a	IN	actv-aa	0.0.0.0

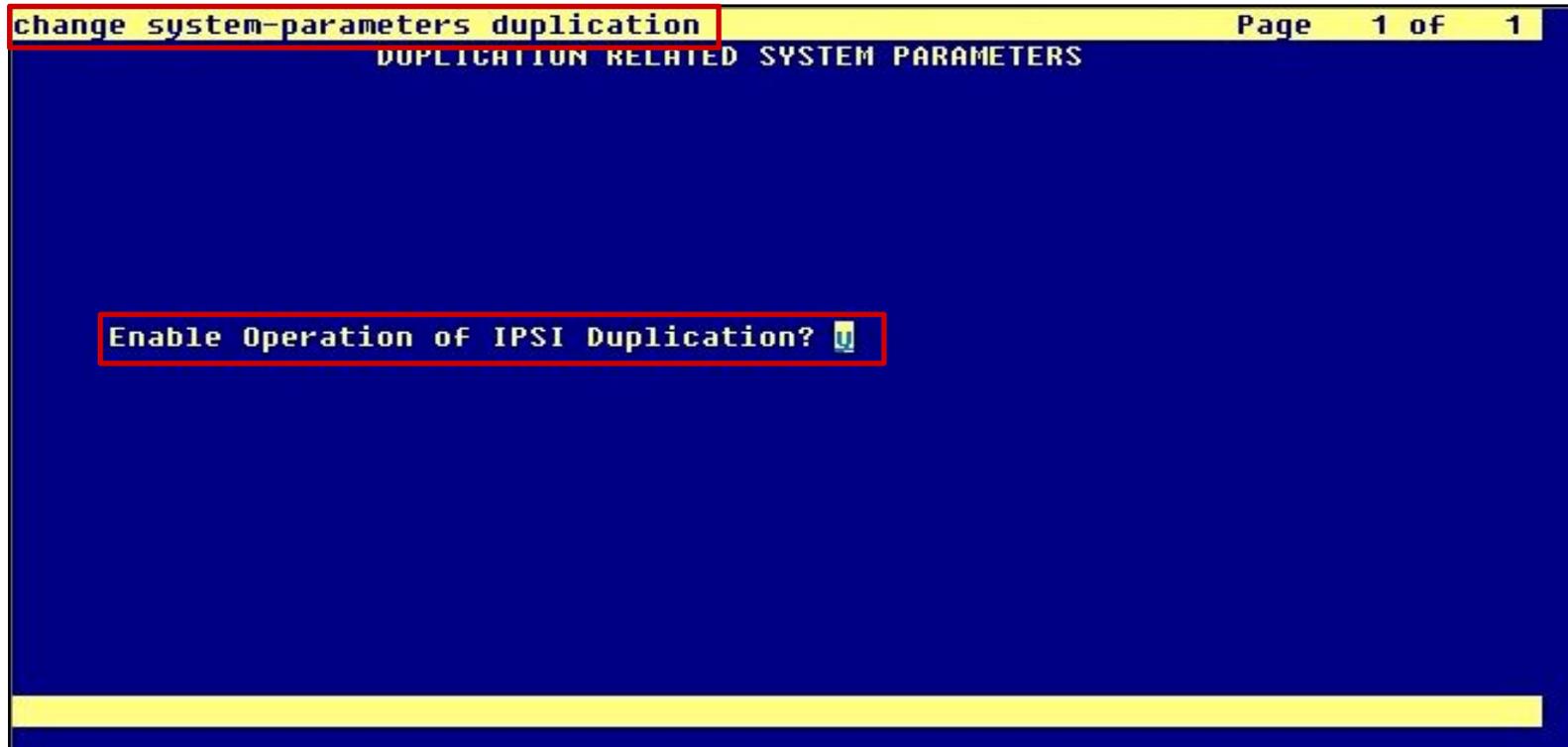
- IPSI in operation, all data entered correctly
- IPSI is immediately in communication with S8800
- IPSI initialises the TDM bus in the G650 and automatically reads in all additional circuit packs
- IPSI must be in operation, or it is impossible to configure the other modules

State of health of the clock (C), packet interface (P), the expansion archangel link €, and the Tone Generator (G):
0=healthy, 1=unhealthy

```
Command successfully completed
Command:
```

Enable Operation of IPSI Duplication

- 4 At the CM SAT type **change system-parameters duplication** and press **Enter**.
- 4 Set the **Enable Operation of IPSI Duplication** field to **y**.



Duplicated IPSI Administration in CM

- 4 Go back to the IPSI interface 1 form and add the duplicated IPSI administration.
- 4 At the CM SAT type **change ipserver-interface 1** and press **Enter**.

```
change ipserver-interface 1 Page 1 of 1
IP SERVER INTERFACE (IPSI) ADMINISTRATION - PORT NETWORK 1

IP Control? y Ignore Connectivity in Server Arbitration? n
Encryption? y Administer secondary ip server interface board? y

PRIMARY IPSI QoS AND ETHERNET SETTINGS
Location: 1A01 Use System Level Parameter Values? y
Subnet Mask: /24 802.1p: 6
IP Address: 192.168.50.16 DiffServ: 46
Gateway: 192.168.50.1 Auto? n
Speed: 100Mbps
Duplex: Full

SECONDARY IPSI QoS AND ETHERNET SETTINGS
Location: 1B01 Use System Level Parameter Values? y
Subnet Mask: /24 802.1p: 6
IP Address: 192.168.50.17 DiffServ: 46
Gateway: 192.168.50.1 Auto? n
Speed: 100Mbps
Duplex: Full
```

Add duplicated IPSI administration here.

Use IP addresses for your course only.

Check IPSI Status

- 4 At the CM SAT type **list ipserver-interface** and press **Enter**.
- 4 Verify that the duplicated IPSI administration is correct and that it is operational.

```
list ipserver-interface
```

```
IP SERVER INTERFACE INFORMATION
```

Port Ntwk Num	Pri/ Bd Loc	Primary/ Secondary IP Address	Primary/ Secondary Host Name	Primary/ Secondary DHCP ID	Serv State	Control State	State Of Health C P E G
1	1A01	192.168.50.16	192.168.50.16	ipsi-A01a	IN	actv-aa	0.0.0.0
	1B01	192.168.50.17	192.168.50.17	ipsi-A01b	IN	standby	0.0.0.0
2	2A01	192.168.50.21	192.168.50.21	ipsi-A02a	IN	actv-aa	0.0.0.0

Duplicated IPSI administration here.

```
Command successfully completed
```

```
Command: |
```

Confirm System Configuration

- 4 At the CM SAT type **list configuration** all and press **Enter**.
- 4 Verify that all circuit packs have been detected and appear in the report.

```
list configuration all Page 1
```

```
                SYSTEM CONFIGURATION
```

Board Number	Board Type	Code	Vintage	Assigned Ports u=unassigned t=tti p=psa								
01A00	POWER SUPPLY	655A										
01A01	IP SERVER INTFC	TN2312BP	HW36	FW050	01	02	03	04	05	06	07	08
01A06	DIGITAL LINE	TN2224CP	HW10	FW015	u	u	u	u	u	u	u	u
					u	u	u	u	u	u	u	u
					u	u	u	u	u	u	u	u
01A08	MAINTENANCE/TEST	TN771DP	HW07	FW020	u	02	03	04				
01A10	CONTROL-LAN	TN799DP	HW16	FW035	u	u	u	u	u	u	u	u
					u	u	u	u	u	u	u	u
					17							
01A12	IP MEDIA PROCESSOR	TN2602AP	HW28	FW052	01	02						
01B00	POWER SUPPLY	655A										
01B01	IP SERVER INTFC	TN2312BP	HW33	FW046	01	02	03	04	05	06	07	08

```
press CANCEL to quit -- press NEXT PAGE to continue
```

Administer Node Names IP Table

- 4 At the CM SAT type **change node-names ip** and press **Enter**.
- 4 Add all C-LAN and Medpro/MedRes circuit pack administration.

```
change node-names ip Page 1 of 2
```

Name	IP Address
DefGW	192.168.50.1
clan1pn1	192.168.50.12
clan1pn2	192.168.50.22
clan2pn1	192.168.50.14
default	0.0.0.0
medpro1pn1	192.168.50.13
medpro1pn2	192.168.50.23
medpro2pn1	192.168.50.15
procr	192.168.50.73
procr6	::

Use IP addresses for your course only.

The IP Node Names form maps a node name to an IP address.

(11 of 11 administered node-names were displayed)
Use 'list node-names' command to see all the administered node-names
Use 'change node-names ip xxx' to change a node-name 'xxx' or add a node-name

Look Up C-LAN Configuration

- 4 At the CM SAT type **list configuration circuit-pack TN799** and press **Enter**.
- 4 Look up the location of the C-LAN circuit packs in the system.

```
list configuration circuit-pack TN799

SYSTEM CONFIGURATION

Board Number   Board Type           Code   Vintage   Assigned Ports
                u=unassigned t=tti p=psa
01A10          CONTROL-LAN          TN799DP HW16 FW035 u u u u u u u u
                u u u u u u u u
                17
01B10          CONTROL-LAN          TN799DP HW16 FW035 u u u u u u u u
                u u u u u u u u
                17
02A10          CONTROL-LAN          TN799DP HW16 FW035 u u u u u u u u
                u u u u u u u u
                17

Note these C-LAN addresses!

Command successfully completed
Command:
```

C-LAN 1 Administration

- 4 At the CM SAT type **add ip-interface 01a10** and press **Enter**.
- 4 Assign a **Node Name** for this interface and administer the form like the example.
- 4 Go to the next page.

```
add ip-interface 01a10 Page 1 of 2
IP INTERFACES
Type: C-LAN
Slot: 01A10 Target socket load and Warning level: 400
Code/Suffix: TN799 D Receive Buffer TCP Window Size: 8320
Enable Interface? y Allow H.323 Endpoints? y
ULAN: n Allow H.248 Gateways? y
Network Region: 1 Gatekeeper Priority: 5
IPV4 PARAMETERS
Node Name: clan1pn1 IP Address: 192.168.50.12
Gateway Node Name: DefGW IP Address: 192.168.50.1
Subnet Mask: /24
Ethernet Link: 1
Network uses 1's for Broadcast Addresses? y
```

Assign a Node Name to this interface.

Enable Interface? y
ULAN: n
Network Region: 1

Node Name: clan1pn1
Gateway Node Name: DefGW
Subnet Mask: /24

Ethernet Link: 1
Network uses 1's for Broadcast Addresses? y

C-LAN 1 Administration (continued)

- 4 Set the **Auto** (negotiation) field to n.
- 4 Set the **Speed** and **Duplex** fields.

```
addip-interface 01a10                                     Page 2 of 2
                                                         IP INTERFACES
                                                         ETHERNET OPTIONS
Slot: 01A10
Auto? n
Speed: 100Mbps
Duplex: Full
                                                         IPV6 PARAMETERS
Node Name: _____
Subnet Mask: /64
Gateway Node Name: _____
Enable Interface? n

Ethernet Link: _____
```

C-LAN 2 Administration

- 4 At the CM SAT type **add ip-interface 01b10** and press **Enter**.
- 4 Assign a **Node Name** for this interface and administer the form like the example.
- 4 Go to the next page.

```
add ip-interface 01b10 Page 1 of 2
IP INTERFACES
Type: C-LAN
Slot: 01B10
Code/Suffix: TN700 D
Target socket load and Warning level: 400
Receive Buffer TCP Window Size: 8320
Enable Interface? y
ULAN: n
Network Region: 1
Assign a Node Name to this interface.
Allow H.323 Endpoints? y
Allow H.248 Gateways? y
Gatekeeper Priority: 5
IPV4 PARAMETERS
Node Name: clan2pn1
Gateway Node Name: DefGW
Subnet Mask: /24
IP Address: 192.168.50.14
IP Address: 192.168.50.1
Ethernet Link: 2
Network uses 1's for Broadcast Addresses? y
```

C-LAN 2 Administration (continued)

- 4 Set the **Auto** (negotiation) field to n.
- 4 Set the **Speed** and **Duplex** fields.

```
addip-interface 01b10                                     Page 2 of 2
IP INTERFACES
ETHERNET OPTIONS
  Slot: 01B10
  Auto? n
  Speed: 100Mbps
  Duplex: Full
IPV6 PARAMETERS
  Node Name: _____
  Subnet Mask: /64
  Gateway Node Name: _____
  Enable Interface? n
Ethernet Link: _____
```

C-LAN 3 Administration

- 4 At the CM SAT type **add ip-interface 02a10** and press **Enter**.
- 4 Assign a **Node Name** for this interface and administer the form like the example.
- 4 Go to the next page.

```
add ip-interface 02a10 Page 1 of 2
IP INTERFACES

Type: C-LAN
Slot: 02A10
Code/Suffix: TN799 D
Target socket load and Warning level: 400
Receive Buffer TCP Window Size: 8320
Enable Interface? y
ULAN: n
Network Region: 1
Allow H.323 Endpoints? y
Allow H.248 Gateways? y
Gatekeeper Priority: 5

IPV4 PARAMETERS
Node Name: clan1pn2 IP Address: 192.168.50.22
Gateway Node Name: DefGW IP Address: 192.168.50.1
Subnet Mask: /24
Ethernet Link: 3
Network uses 1's for Broadcast Addresses? y
```

Assign a Node Name to this interface.

C-LAN 3 Administration (continued)

- 4 Set the **Auto** (negotiation) field to n.
- 4 Set the **Speed** and **Duplex** fields.

```
add ip-interface 02a10 Page 2 of 2
IP INTERFACES
ETHERNET OPTIONS
Slot: 02a10
Auto? n
Speed: 100Mbps
Duplex: Full
IPV6 PARAMETERS
Node Name: _____
Subnet Mask: /64
Gateway Node Name: _____
Enable Interface? n
Ethernet Link: _____
```

Verify C-LAN Status

- 4 At the CM SAT type **status clan-all** and press **Enter**.
- 4 Verify that all configured C-LAN circuit packs are **in service**.

```
status clan-all
CLAN STATUS FOR FIRMWARE DOWNLOAD (FWDL)
Slot      Service      Auto FWDL      Slot      Service      Auto FWDL
State     Capable
01A10    in-service     y              02A10    in-service     y
01B10    in-service     y

Command successfully completed
Command:
```

List Configuration for MedPro

- 4 At the CM SAT type **list configuration circuit-pack TN2302** and press **Enter**.
- 4 Look up the location of the MedPro circuit packs in the system.

```
list configuration circuit-pack TN2302
```

SYSTEM CONFIGURATION

Board Number	Board Type	Code	Uintage	Assigned Ports			
				u=unassigned	t=tti	p=psa	
01A11	IP MEDIA PROCESSOR	TN2302AP	HW20 FW118	01	03	05	07

Note the MedPro address!

Note

Only TN2602 circuit packs used in vLab.

List Configuration for Media Resource 320

- 4 At the CM SAT type **list configuration circuit-pack TN2602** and press **Enter**.
- 4 Look up the location of the Media Resource circuit packs in the system.

```
list configuration circuit-pack TN2602
```

```
SYSTEM CONFIGURATION
```

Board Number	Board Type	Code	Vintage	Assigned Ports
				u=unassigned t=tti p=psa
01A12	IP MEDIA PROCESSOR	TN2602AP	HW28 FW052	01 02
01B12	IP MEDIA PROCESSOR	TN2602AP	HW28 FW052	01 02
02A12	IP MEDIA PROCESSOR	TN2602AP	HW28 FW052	01 02

Note the Media Resource addresses!

```
Command successfully completed
```

```
Command :
```

Media Resource 1 Administration

- 4 At the SAT type **add ip-interface 01a12** and press **Enter**.
- 4 Set the **Enable Interface** field to **y**.
- 4 Assign a **Node Name** and complete the form like the example.
- 4 Go to the next page.

```
add ip-interface 01a12 Page 1 of 3
IP INTERFACES
Critical Reliable Bearer? n
Type: MEDPRO
Slot: 01A12
Code/Suffix: TN2602
Enable Interface? y
ULAN: n
Network Region: 1
VOIP Channels: 80
IPV4 PARAMETERS
Node Name: medpro1pn1 IP Address: 192.168.50.13
Gateway Node Name: DefGW IP Address: 192.168.50.1
Subnet Mask: /24
```

Assign a Node Name to this interface.

Media Resource 1 Administration (continued)

- 4 Set the **Auto** (negotiation) field to **n**.
- 4 Set the **Speed** and **Duplex** fields.

```
add ip-interface 01a12 Page 2 of 3
IP INTERFACES
ETHERNET OPTIONS
  Slot: 01A12
  Auto? n
  Speed: 100Mbps
  Duplex: Full
IPV6 PARAMETERS
  Node Name: _____
  Subnet Mask: /64
  Gateway Node Name: _____
  Enable Interface? n
```

Media Resource 2 Administration

- 4 At the SAT type **add ip-interface 01b12** and press **Enter**.
- 4 Set the **Enable Interface** field to **y**.
- 4 Assign a **Node Name** and complete the form like the example.
- 4 Go to the next page.

```
add ip-interface 01b12 Page 1 of 3
IP INTERFACES
Critical Reliable Bearer? n
Type: MEDPRO
Slot: 01B12
Code/Suffix: TN2602
Enable Interface? y
ULAN: n
Network Region: 1
VOIP Channels: 80
IPU4 PARAMETERS
Node Name: medpro2pn1
Gateway Node Name: DefGW
Subnet Mask: /24
IP Address: 192.168.50.16
IP Address: 192.168.50.1
```

Assign a Node Name to this interface.

Media Resource 2 Administration (continued)

- 4 Set the **Auto** (negotiation) field to **n**.
- 4 Set the **Speed** and **Duplex** fields.

```
add ip-interface 01b12 Page 2 of 3
IP INTERFACES
ETHERNET OPTIONS
  Slot: 01B12
  Auto? n
  Speed: 100Mbps
  Duplex: Full
IPV6 PARAMETERS
  Node Name: _____
  Subnet Mask: /64
  Gateway Node Name: _____
  Enable Interface? n
```

Media Resource 3 Administration

- 4 At the SAT type **add ip-interface 02a12** and press **Enter**.
- 4 Set the **Enable Interface** field to **y**.
- 4 Assign a **Node Name** and complete the form like the example.
- 4 Go to the next page.

```
add ip-interface 02a12 Page 1 of 3
IP INTERFACES
Critical Reliable Bearer? n
Type: MEDPRO
Slot: 02A12
Code/Suffix: TN2602
Enable Interface? y
ULAN: n
Network Region: 1
VOIP Channels: 80
IPU4 PARAMETERS
Node Name: medpro1pn2 IP Address: 192.168.50.23
Gateway Node Name: DefGW IP Address: 192.168.50.1
Subnet Mask: /24
```

Assign a Node Name to this interface.

Enable Interface? y
ULAN: n
Network Region: 1
VOIP Channels: 80

Node Name: medpro1pn2
Gateway Node Name: DefGW
Subnet Mask: /24

Media Resource 3 Administration (continued)

- 4 Set the **Auto** (negotiation) field to **n**.
- 4 Set the **Speed** and **Duplex** fields.

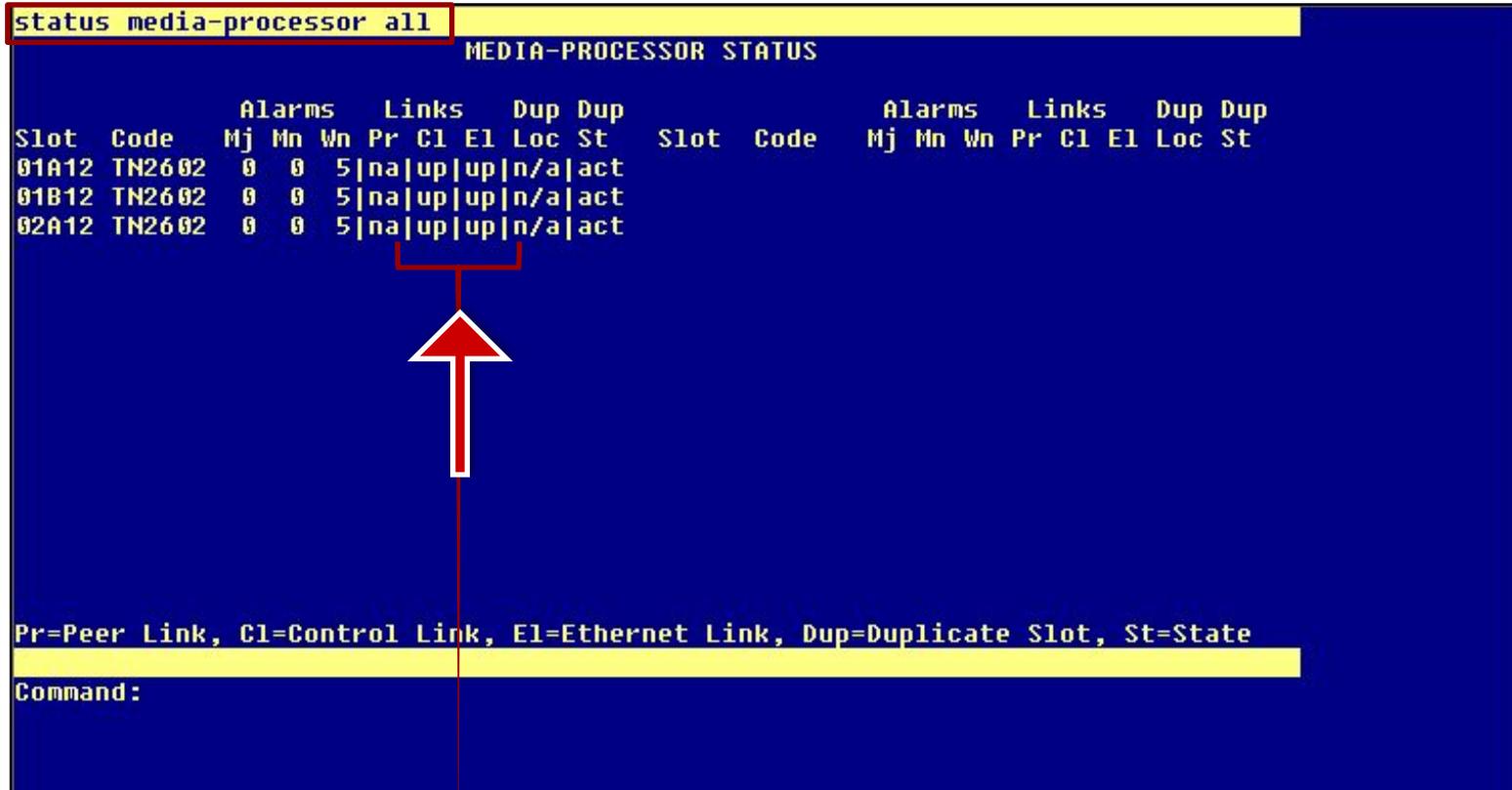
```
add ip-interface 02a12                                     Page 2 of 3
IP INTERFACES
ETHERNET OPTIONS
  Slot: 02A12
  Auto? n
  Speed: 100Mbps
  Duplex: Full
IPV6 PARAMETERS
  Node Name: _____
  Subnet Mask: /64
  Gateway Node Name: _____
  Enable Interface? n
```

Verify Media Processor/Resource Status

- 4 At the SAT type **status media-processor all** and press **Enter**.
- 4 Verify that all configured Media Processor/Resource circuit packs are in service.

```
status media-processor all
MEDIA-PROCESSOR STATUS
Slot Code      Alarms Links Dup Dup      Slot Code      Alarms Links Dup Dup
Mj Mn Wn Pr C1 E1 Loc St  Mj Mn Wn Pr C1 E1 Loc St
01A12 TN2602    0  0  5|na|up|up|n/a|act
01B12 TN2602    0  0  5|na|up|up|n/a|act
02A12 TN2602    0  0  5|na|up|up|n/a|act

Pr=Peer Link, C1=Control Link, E1=Ethernet Link, Dup=Duplicate Slot, St=State
Command:
```

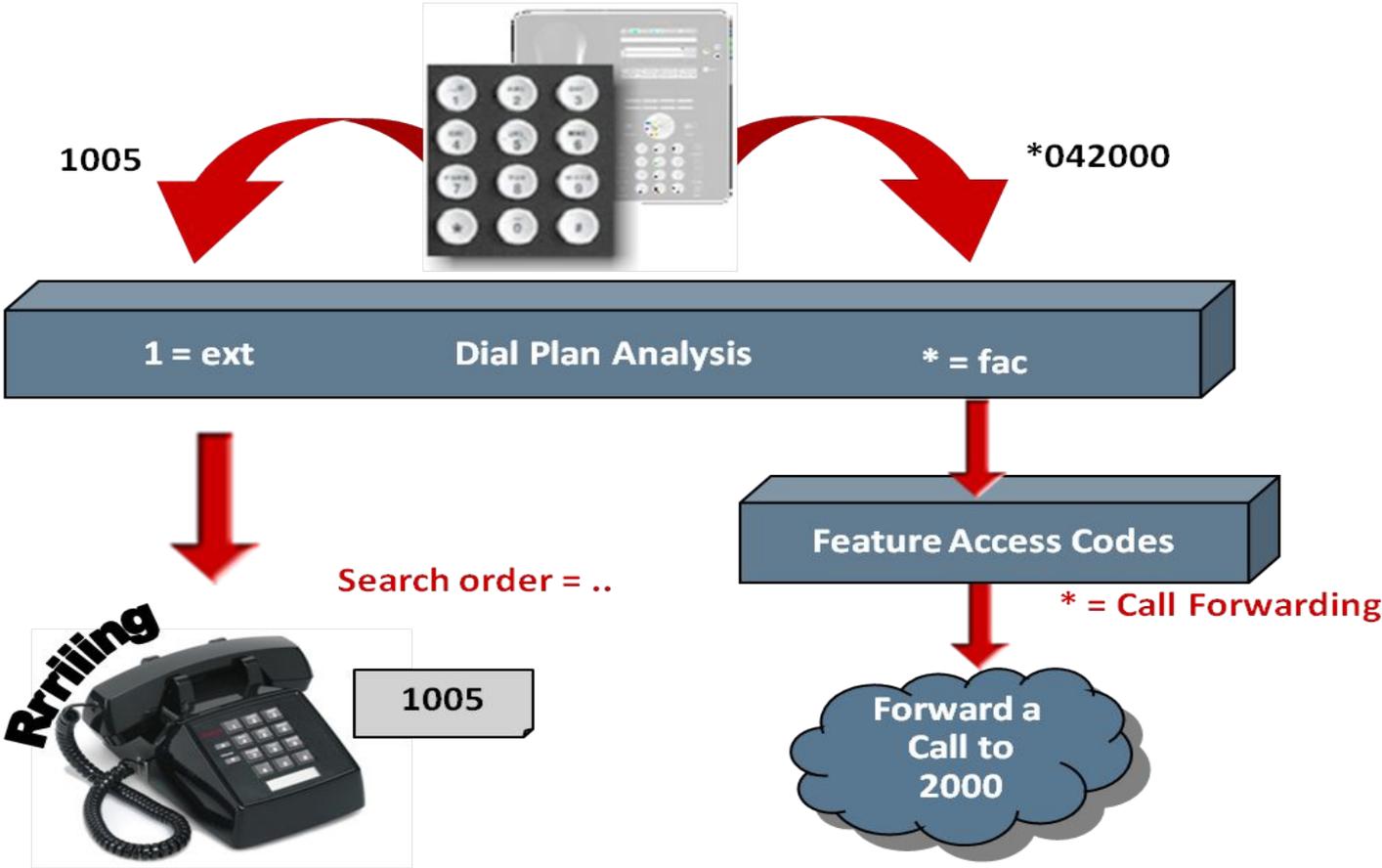


Make a Test Call

Administer CM Endpoints

Administer CM Endpoints—Dial Plan

The dial plan interprets dialed digits.



Administer CM Endpoints—Dial Plan (continued)

4 The recommended dial plan for this course contains 3 types of entries:

- Extensions
- Feature Access Codes (FAC)
- Dial Access Codes (DAC)

Extensions	Feature Access Codes	Dial Access Codes
Defines the extension ranges and extension length in the system.	Activates or deactivates a feature. FAC assignment must match dial plan.	Allows use of trunk access codes and feature access codes in the same range.

Administer CM Endpoints—Create Endpoints

- 4 Launch Avaya Site Administration, select **Advanced > Terminal Emulation**, and connect to Communication Manager at the IP address provided.
- 4 At the SAT command line, type **add station 1001** and press **Enter**.
- 4 Complete the fields as indicated then press **Enter**.

```
add station 1001                                     Page 1 of 5
STATION
Extension: 1001                                     Lock Messages? n                                     BCC: 0
Type: 4620                                         Security Code: 12345                                 TN: 1
Port: IP                                           Coverage Path 1: _____                       COR: 1
Name: User 1001                                    Coverage Path 2: _____                       COS: 1
                                                    Hunt-to Station: _____

STATION OPTIONS
Group: 19                                           Time of Day Lock Table: _____
Personalized Ringing Pattern: 1
Message Lamp Ext: 1
Mute Button Enabled? y
Expansion Module? n
Phone: 2-way
Language: english
Name: _____
COR: internal
Media Complex Ext: _____
Survivable Trunk Dest? y                          IP SoftPhone? y
                                                    IP Video Softphone? n
Short/Prefixed Registration Allowed: default
Customizable Labels? y
```

Set this field according to the phone type:
4620 for softphone (vILT)
Hardphone type (ILT)

Set this field according to the course type:
vILT: y
ILT: n

Administer CM Endpoints—Create Endpoints (continued)

Repeat the administration for extension 1002.

- 4 At the SAT command line, type **add station 1002** and press **Enter**.
- 4 Complete the fields as indicated then press **Enter**.

```
add station 1002                                     Page 1 of 5
                                                    STATION
Extension: 1002                                     Lock Messages? n                               BCC: 0
Type: 4620                                         Security Code: 12345                             TN: 1
Port: IP                                           Coverage Path 1: _____                     COR: 1
Name: User 1002                                   Coverage Path 2: _____                     COS: 1
                                                    Hunt-to Station: _____

STATION OPTIONS
Loss Group: 19                                     Time of Day Lock Table: _____
Personalized Ringing Pattern: 1
Speakerphone: 2-way                               Message Lamp Ext: 1002
Display Language: english                         Mute Button Enabled? y
Survivable GK Node Name: _____                 Expansion Module? n
Survivable COR: internal                           Media Complex Ext: _____
Survivable Trunk Dest? y                            IP SoftPhone? y
                                                    IP Video Softphone? n
Short/Prefixed Registration Allowed: default
                                                    Customizable Labels? y
```

Administer CM Endpoints—Create Endpoints (continued)

Confirm the station administration:

- 4 At the SAT command line, type **list station** and press **Enter**.
- 4 Ensure that the two extensions appear in the list.

```
list station
```

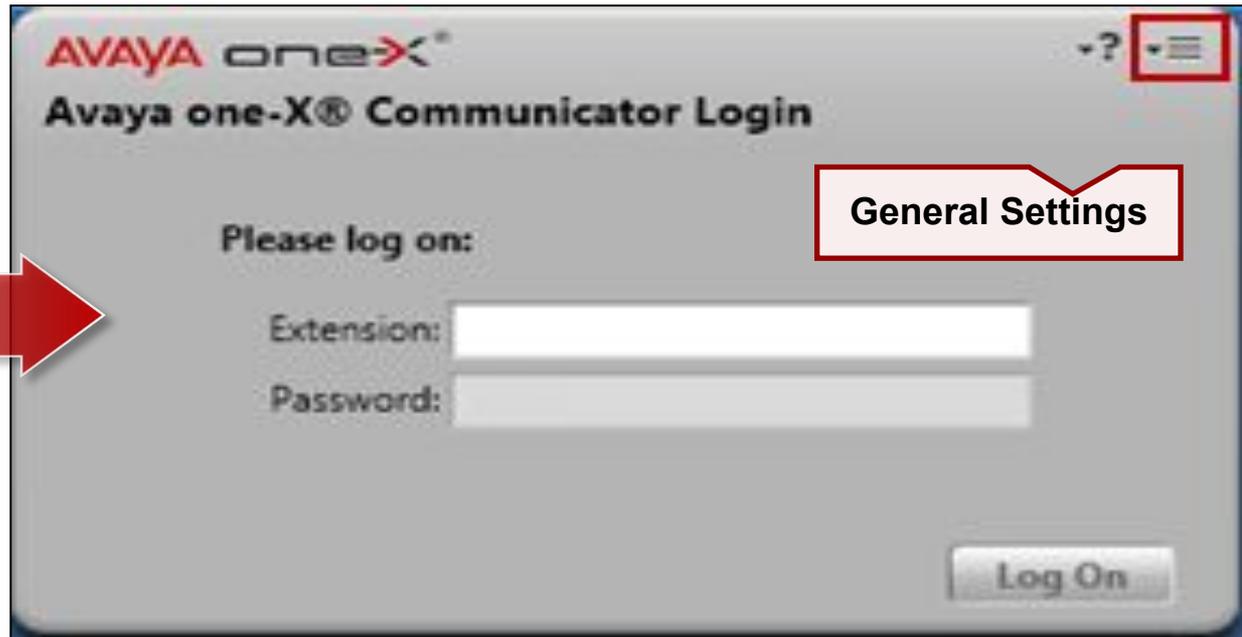
STATIONS									
Ext/ Hunt-to	Port/ Type	Name/ Surv GK NN	Move	Room/ Data Ext	Cv1/ Cv2	COR/ COS	Cable/ TN	Jack	
1001	S00002 4620	User 1001	no			1			
1002	S00005 4620	User 1002	no			1	1		

AVAYA | LEARNING

Administer one-X[®] Communicator

Administer one-X[®] Communicator

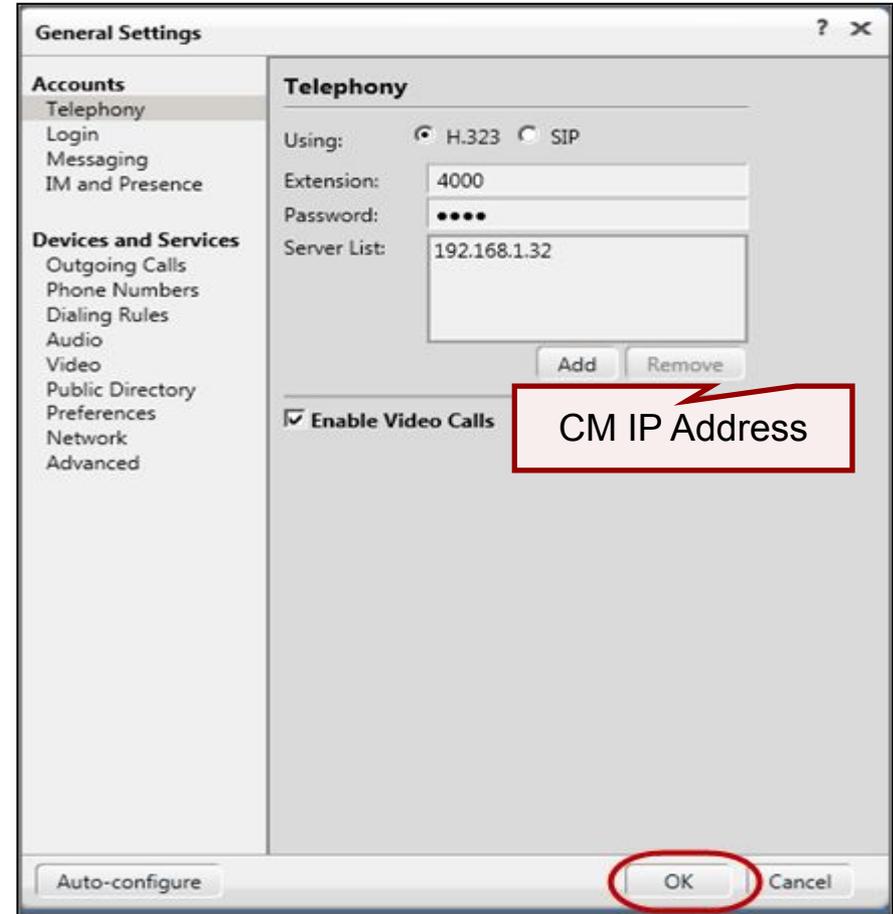
- 4 Click **Start** and select **Programs** > **Avaya one-X[®] Communicator** or double-click the **Avaya one-X[®] Communicator** application icon on the desktop.
- 4 Click on the **General Settings** icon in the upper-right corner of the login screen.



Administer one-X[®] Communicator (continued)

Configure the settings as follows:

- 4 **Using** – select H.323 or SIP
- 4 **Extension** – station number from add station
- 4 **Password** – the security code created on the add station form
- 4 **Server List** – IP address for CM
- 4 **Enable Video Calls** – select if you have capability for video calling
- 4 Click **OK**.



Administer one-X[®] Communicator (continued)

- 4 Log on with the extension (station number) and password that you configured on the settings menu.



Verify IP Telephone Registration

- 4 At the Avaya Site Administration window, type **list registered-ip-stations** and press **Enter**.
- 4 The two one-X[®] Communicator extensions that you used to make the test call should show as registered to Communication Manager.

```
list registered-ip-stations
```

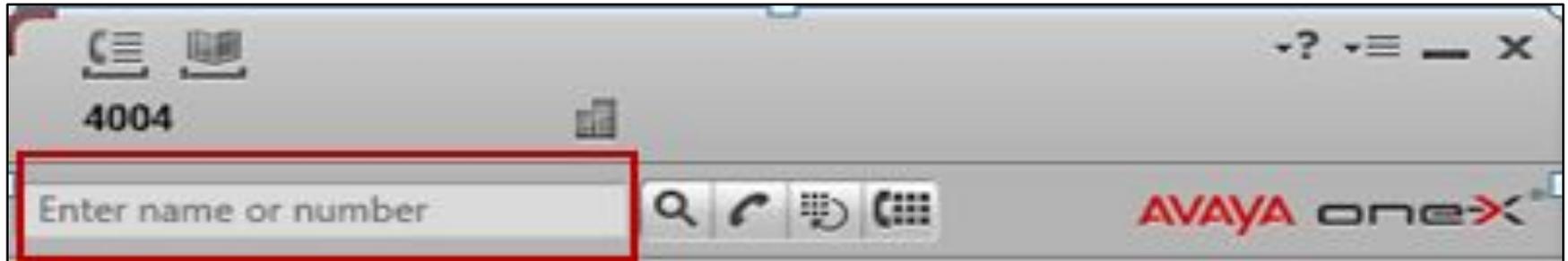
REGISTERED IP STATIONS					
Station Ext or Orig Port	Set Type/ Net Rgn	Prod ID/ Release	TCP Skt	Station IP Gatekeeper	Address/ IP Address
1001	4620	IP_Soft	y	135.122.80.71	
	1	5.650		135.122.80.82	
1002	4620	IP_Soft	y	135.122.80.72	
	1	5.650		135.122.80.82	

```
Command successfully completed  
Command:
```

Dial the Test Call

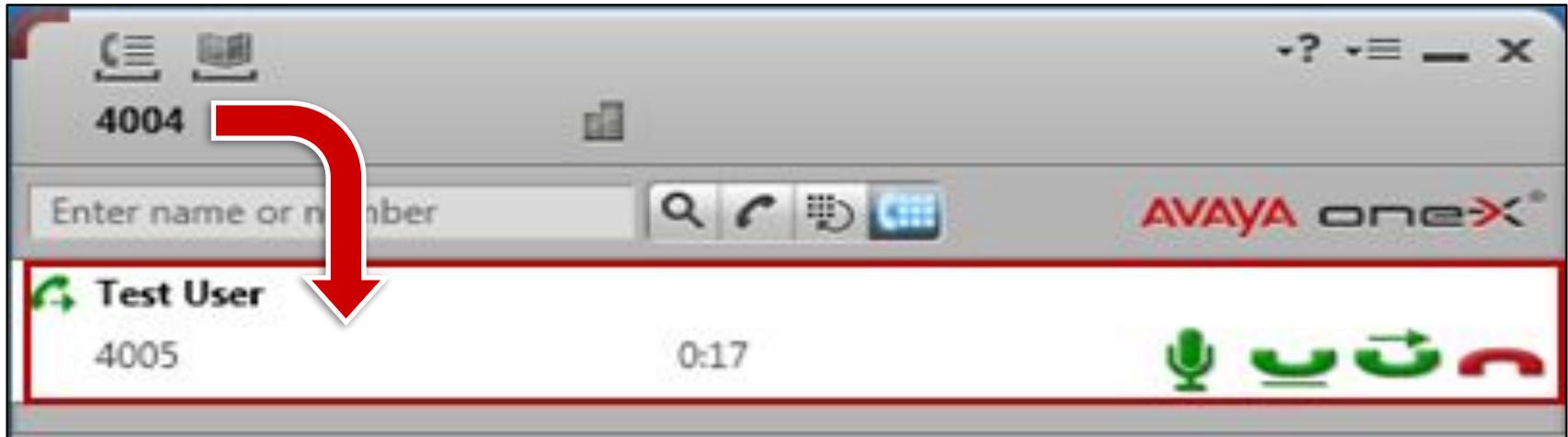
Dial the Test Call

- 4 Type the number of the extension that you want to call in the address bar and press **Enter** to dial the call.



Dial the Test Call (continued)

- 4 The example below shows a call from extension 4004 to extension 4005:



Dial the Test Call (continued)

4 The Call Log at the bottom of the window shows the call status:

Call Log		Show: All		?	
	Name/Number	Time	Length		
	Test User	11:17 AM	00:31		
	Test User	11:16 AM	00:31		
	Test User	10:16 AM	00:31		

Summary

You should now be able to:

- 4 Cable and configure all hardware components
- 4 Install and configure the Communication Manager – Embedded CM Main
- 4 Describe the Dot Release and Patch Guardian functionality
- 4 Install the license file
- 4 Install Communication Manager patches
- 4 Configure the G450/G430 Gateway and media modules.
- 4 Make a test call

