



Upgrading from Voice Portal 4.1 or 5.0 to Release 5.1

March 2012

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Chapter 1: What's new between Voice Portal release 5.0 and 5.1

Component	Changes		For more information, see...
Operating system	Voice Portal 5.1 requires: <ul style="list-style-type: none"> • Red Hat Enterprise Linux Server Release 5.6 or later. Or <ul style="list-style-type: none"> • RHE5.7-AV16.0VP5 or later. 		Upgrading the operating system on all Voice Portal servers on page 9
Managed Applications	Voice Portal 5.1 provides a single point of management for managed applications, that includes the following features: <ul style="list-style-type: none"> • Acquire and maintain licenses • Add managed application to VPMS • Roles based access • Multi-tenancy • Logging and Alarming • Reports related to managed applications 		Managed Applications topic in the Administering Voice Portal guide.
SIP	Voice Portal now supports the following: <ul style="list-style-type: none"> • SIP failover • Different certificate for each SIP proxy 		Following topics in the Voice Portal online help: <ul style="list-style-type: none"> SIP tab on the VoIP Connections page field descriptions SIP tab on the VoIP Connections page field descriptions

What's new between Voice Portal release 5.0 and 5.1

Component	Changes		For more information, see...
Auxiliary VPMS	<ul style="list-style-type: none"> • Secondary VPMS is renamed as Auxiliary VPMS • Added support for multiple Auxiliary VPMS servers • Added support for managed applications 		VPMS Servers page field descriptions topic in the Voice Portal online help.
Telephony	<p>Added support for:</p> <ul style="list-style-type: none"> • G.729 encoding • DTMF type ahead • SIP failover • Enhanced consultative transfer to use SIP INVITE with REPLACES • Enhanced outbound call classification to detect color ringtone • Receiving SIP REFER requests • DNS SRV 		<p>Following topics in the Voice Portal online help:</p> <ul style="list-style-type: none"> VoIP Settings page field descriptions Add Application page field descriptions SIP tab on the VoIP Connections page field descriptions Add SIP Connection page field descriptions
Video	<p>Added support for:</p> <ul style="list-style-type: none"> • H.264 encoding • Real Time Streaming Protocol 		
Availability	<ul style="list-style-type: none"> • Enhanced MPP to support application failover • Enhanced VPMS to stop downloading data on the hard disk when disk usage is dangerously high 		VPMS Settings page field descriptions topic in the Voice Portal online help.
Security	<ul style="list-style-type: none"> • Enhanced MPP to support authentication with application servers • Enhanced VPMS to run Linux services ActiveMQ, SL, and Tomcat as avayavp user instead of root • Enhanced web services to support role based 		Add Application page field descriptions topic in the Voice Portal online help.

Component	Changes		For more information, see...
	<p>authentication using VPMS user name</p> <ul style="list-style-type: none"> • Enhanced security certificate handling to allow multiple SIP proxies to have different certificates 		
Administrative	<ul style="list-style-type: none"> • Added support for configuring CCXML properties Fetch Timeout and Number of Threads for Asynchronous Fetch • Added support for sending audit log entries and event log entries to Syslog • Enhanced System Monitor to show information about the Voice Portal database 		<p>Following topics in the Voice Portal online help: Browser Settings page field descriptions Syslog Settings page field descriptions <VPMS Name> Details page field descriptions</p>
Reporting	<ul style="list-style-type: none"> • Added support for using Microsoft SQL Server to manage external database • Added support for exporting reports in PDF format • Added support for exporting and importing custom reports • Added filter Originating Number Count to Call Summary and Call Detail reports • Added filter Sessions from Custom Report to Application Summary, Application Detail, Call Summary, Call Detail, Session Summary, and Session Detail reports • Added Application Session Variables filters to Session Summary and Session Detail reports • Added Sort By option to filter pages for Application 		<p>Custom Reports page field descriptions topic in the Voice Portal online help.</p>

What's new between Voice Portal release 5.0 and 5.1

Component	Changes		For more information, see...
	<p>Detail, Call Detail, and Session Detail reports</p> <ul style="list-style-type: none"> • Added option to Summarize by RTP Statistics to Call Summary report • Added column Average Duration to Call Summary report when summarize by hour of day • Added option to view call flow graph to Application Summary report when summarize by call flow 		
Licensing	<ul style="list-style-type: none"> • Added support for using ten telephony ports for thirty days without a license file after installation • Changed name of “non media ports” to “SIP signaling connections • Enhanced Call Classification is now a licensed feature. 		
Localization	<p>Added support for the following languages:</p> <ul style="list-style-type: none"> • French • German • Italian • Portuguese (Brazilian) • Russian • Spanish (International) 		

Chapter 2: Upgrading the operating system on all Voice Portal 4.1 or 5.0 servers

Upgrading the operating system on all Voice Portal servers

In order to upgrade to Voice Portal to 5.1 , you need to upgrade:

- Avaya Enterprise Linux to version RHE5.7-AV16.0VP5 or later if you originally purchased the bundled server offer.
- Red Hat Enterprise Linux to Red Hat Enterprise Linux Server Release 5.6 or later if you originally purchased the software-only offer.

After you have upgraded the operating system, you can upgrade the VPMS and MPP software.

! Important:

You cannot run an older version of the Voice Portal VPMS or MPP software on a server running the upgraded operating system. Therefore, make sure you have enough time to upgrade the Voice Portal software as well as the operating system before you begin this procedure for a particular server.

If your Voice Portal system consists of multiple servers, you can leave all MPPs running while you upgrade the VPMS server operating system and Voice Portal software. The VPMS server will not be able to communicate with the MPPs until the MPPs have been upgraded, but the MPPs can continue to handle calls. In addition, if you have multiple MPPs you can take each one through the entire upgrade process while leaving the others running so that there is always an MPP to handle incoming calls.

Backing up your existing Voice Portal 4.1 or 5.0 data

You should always back up your Voice Portal data before you upgrade the system.

Procedure

1. Backup your Voice Portal database.
 2. If you have changed how the VPMS handles retired alarm or event records after the retention period expires, you should take note of the current settings on the Viewer Settings page in the VPMS because the upgrade procedure sets all of these values back to the defaults.
 3. If you have changed the VPMS web interface using the VPMS `properties` files, you need to back up your changes and reapply them after the upgrade is complete.
 4. If desired, back up the Tomcat logs and custom configuration files in the `/opt/Tomcat/apache-tomcat-rel_number` directory.
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Upgrading Avaya Enterprise Linux

If this installation uses Avaya-provided hardware for the Voice Portal servers, you need to upgrade Avaya Enterprise Linux to version RHE5.7-AV16.0VP5 or later.

Before you begin

If the server is running the Voice Portal MPP software, take the MPP offline before you can upgrade the operating system as described in [Taking the MPP offline using the 4.1 or 5.0 VPMS web interface](#) on page 17.

Procedure

1. Log in to Linux on the Voice Portal server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.

2. Insert the Avaya Enterprise Linux installation DVD into the server's DVD device.
3. If the DVD device is not automatically mounted, mount the drive by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point typically associated with the DVD device in the `fstab` file.
If the `mount` commands shown above do not work, consult your server documentation for the appropriate `mount` command.
4. Upgrade the operating system by entering the `bash /mnt/cdrom/upgrade/vpupgrade.sh` command.
5. Press `Enter` to confirm that you want to run the upgrade script.
6. Wait until the script has finished processing.
When the script has finished processing, it displays the message `Voice Portal pre-upgrade script complete!` and prompts you to reboot the server.
7. Press `Enter` to reboot the server.
8. Remove the Avaya Enterprise Linux installation DVD from the drive.
9. When the server comes back online, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.

*** Note:**

If you need the password for the `sroot` account, contact Avaya Services.

10. For security reasons, change the passwords for the two Linux customer-related accounts created during the installation.

*** Note:**

If this procedure is performed by an Avaya Services representative, you should either have the customer enter the new passwords, or enter default passwords and inform the customer what passwords you used and that they need to change those passwords as soon as possible.

- a. Enter the `passwd root` command.
 - b. Type the password and press `Enter`.
 - c. Confirm the password at the prompt.
 - d. Enter the `passwd cust` command.
 - e. Type the password and press `Enter`.
 - f. Confirm the password at the prompt.
11. At this point, the server has two partitions, the primary boot partition with the previous operating system and an auxiliary partition containing the upgraded 5.1 operating system. You need to use the `cpartition` command to designate the 5.1 environment as the primary boot partition and the previous environment as the auxiliary partition. To do so:
 - a. Verify that the DVD drive door is closed or the `cpartition` command will not run correctly.

- b. Enter the `/opt/ecs/install/bin/cpartition -p` command.
 12. If you moved the MPP logs to a new directory or partition using the `mppMoveLogs.sh` script, add that mount point to the `/etc/fstab` file as described in the *Moving the MPP logs to a different location* topic in the *Administering Voice Portal* guide.
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Upgrading Red Hat Enterprise Linux on the dedicated VPMS server

If this installation uses customer-provided hardware for a dedicated server running the Voice Portal VPMS software, you need to upgrade Red Hat Enterprise Linux on that server to version Red Hat Enterprise Linux Server Release 5.6 or later.

Procedure

1. Log in to Linux on the Voice Portal server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Turn off the automatic process restart feature for Tomcat by entering the `chkconfig tomcat off` command.
3. Remove the ASG RPM by entering the `rpm -e asgtools-cs` command.

! Important:

The Voice Portal upgrade process installs the updated ASG RPM automatically.

4. Insert your Red Hat Enterprise Linux Server Release 5.6 or later installation CD-ROM into the CD drive on the server you want to upgrade.
5. Reboot the server so that it boots from the Red Hat Enterprise Linux Server Release 5.6 or later CD.

! Important:

If you want to upgrade an existing installation, enter the `linux upgradeany` command and select the **upgrade** option.

To continue with a fresh installation, you can skip the `linux upgradeany` command.

6. Follow the installation prompts.

! Important:

- Avaya recommends that you select the *Upgrade an existing Installation* option.
- Ensure that the default *Update boot loader configuration* option is selected.

7. If you want to use the new MultiTech USB modem, model number MT9234ZBA-USB, you need to install the new Linux driver on the server. The drivers are available in the `/Support/VP-Tools/modem/drivers` directory of the Voice Portal installation DVD.

*** Note:**

The new MultiTech USB modem replaces the previous version, model number MT5634ZBA-USB, which is discontinued by the manufacturer.

- a. To install the Linux driver, open a command window in Linux.
- b. Enter the `uname -r` command to determine the kernel version.

! Important:

For kernel version 2.6.18-92.el5, you need to install the `SMP_ti_usb_3410_5052-1.28-1.i386.rpm` driver file.

For kernel version 2.6.18-92.el5PAE-67, you need to install the `PAE_ti_usb_3410_5052-1.28-1.i386.rpm` driver file.

- c. Enter the `rpm -Uvh <driver-rpm-name.rpm>` command to install the Linux driver. For example, on a Red Hat 5 Update 2 system, enter the `rpm -Uvh SMP_ti_usb_3410_5052-1.28-1.i386.rpm` command.

8. Once the upgrade has finished, reboot the server machine.

*** Note:**

After rebooting, you may see some error messages about Voice Portal services failing to start or about missing configuration files. You can safely ignore these messages, as the issues will be fixed when you install the updated software.

Upgrading Red Hat Enterprise Linux on a dedicated MPP server

If this installation uses customer-provided hardware for dedicated MPP servers, you need to upgrade Red Hat Enterprise Linux on those servers to version Red Hat Enterprise Linux Server Release 5.6 or later.

Procedure

1. Take the MPP offline before you upgrade the operating system as described in [Taking the MPP offline using the 4.1 or 5.0 VPMS web interface](#) on page 17.
2. Log in to Linux on the Voice Portal server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.

3. Turn off the automatic process restart feature for the MPP service by entering the `chkconfig mpp off` command.
4. Insert your Red Hat Enterprise Linux Server Release 5.6 or later installation CD-ROM into the CD drive on the server you want to upgrade.
5. Reboot the server so that it boots from the Red Hat Enterprise Linux Server Release 5.6 or later CD.

❗ Important:

If you want to upgrade an existing installation, enter the `linux upgradeany` command and select the **upgrade** option.

To continue with a fresh installation, you can skip the `linux upgradeany` command.

6. Follow the installation prompts.

❗ Important:

- Avaya recommends that you select the *Upgrade an existing Installation* option.
- Ensure that the default *Update boot loader configuration* option is selected.

7. Once the upgrade has finished, reboot the server machine.

*** Note:**

After rebooting, you may see some error messages about Voice Portal services failing to start or about missing configuration files. You can safely ignore these messages, as the issues will be fixed when you install the updated software.

8. If you moved the MPP logs to a new directory or partition using the `mppMoveLogs.sh` script, add that mount point to the `/etc/fstab` file as described in the *Moving the MPP logs to a different location* topic in the *Administering Voice Portal* guide.

Upgrading Red Hat Enterprise Linux on a single server system

If this installation uses customer-provided hardware for a single server running the Voice Portal VPMS and MPP software, you need to upgrade Red Hat Enterprise Linux on that server to version Red Hat Enterprise Linux Server Release 5.6 or later.

Procedure

1. Take the MPP offline before you upgrade the operating system as described in [Taking the MPP offline using the 4.1 or 5.0 VPMS web interface](#) on page 17.
2. Log in to Linux on the Voice Portal server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
3. Turn off the automatic process restart feature for the MPP service by entering the `chkconfig mpp off` command.
4. Turn off the automatic process restart feature for Tomcat by entering the `chkconfig tomcat off` command.
5. Remove the ASG RPM by entering the `rpm -e asgtools-cs` command.

! Important:

The Voice Portal upgrade process installs the updated ASG RPM automatically.

6. Insert your Red Hat Enterprise Linux Server Release 5.6 or later installation CD-ROM into the CD drive on the server you want to upgrade.
7. Reboot the server so that it boots from the Red Hat Enterprise Linux Server Release 5.6 or later CD.

! Important:

If you want to upgrade an existing installation, enter the `linux upgradeany` command and select the **upgrade** option.

To continue with a fresh installation, you can skip the `linux upgradeany` command.

8. Follow the installation prompts.
9. If you want to use the new MultiTech USB modem, model number MT9234ZBA-USB, you need to install the new Linux driver on the server. The drivers are available in the `/Support/VP-Tools/modem/drivers` directory of the Voice Portal installation DVD.

*** Note:**

The new MultiTech USB modem replaces the previous version, model number MT5634ZBA-USB, which is discontinued by the manufacturer.

- a. To install the Linux driver, open a command window in Linux.
- b. Enter the `uname -r` command to determine the kernel version.

! Important:

For kernel version 2.6.18-92.el5, you need to install the `SMP_ti_usb_3410_5052-1.28-1.i386.rpm` driver file.

For kernel version 2.6.18-92.el5PAE-67, you need to install the `PAE_ti_usb_3410_5052-1.28-1.i386.rpm` driver file.

- c. Enter the `rpm -Uvh <driver-rpm-name.rpm>` command to install the Linux driver. For example, on a Red Hat 5 Update 2 system, enter the `rpm -Uvh SMP_ti_usb_3410_5052-1.28-1.i386.rpm` command.
10. Once the upgrade has finished, reboot the server machine.

*** Note:**

After rebooting, you may see some error messages about Voice Portal services failing to start or about missing configuration files. You can safely ignore these messages, as the issues will be fixed when you install the updated software.

11. If you moved the MPP logs to a new directory or partition using the `mppMoveLogs.sh` script, add that mount point to the `/etc/fstab` file as described in the *Moving the MPP logs to a different location* topic in the *Administering Voice Portal* guide.
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Taking the MPP offline using the 4.1 or 5.0 VPMS web interface

About this task

Before you work with an MPP server, you need to take the MPP offline. This procedure explains how to do so using the VPMS web interface that is included with Voice Portal release 4.1 and higher.

Procedure

1. Log in to the VPMS web interface using an account with the Administration or Operations user role.
 2. From the VPMS main menu, select **System Management > MPP Manager**.
 3. On the MPP Manager page, use the Selection check box in the MPP server table to select which MPP server you want to take offline.
 4. Click the **Stop** button in the **State Commands** group and confirm your selection when prompted.
Voice Portal stops the selected the MPP server when the last active call completes or the grace period expires, whichever comes first.
 5. After a few minutes, click **Refresh** and verify that the **State** is **Stopped** for the MPP server you want to upgrade.
 6. If the MPP operational state:
 - Changed to **Stopped**, continue with this procedure.
 - Did *not* change, you need to stop the `mpp` service as described in [Stopping the MPP service](#) on page 18.
 7. Use the Selection check box in the MPP server table to reselect the MPP server you want to take offline.
 8. Click **Offline** in the **Mode Commands** group.
 9. Click **Refresh** and verify that the **Mode** is **Offline** for the MPP server you want to upgrade.
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Stopping the MPP service

You should always try to take the MPP offline using the VPMS web interface. If the VPMS is not communicating with the MPP, however, you can take the MPP offline by stopping the `mpp` service.

Procedure

1. Log in to Linux on the Voice Portal MPP server.

If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:

- Log in to the local Linux console as `sroot`.
- Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.

2. Enter the `/sbin/service mpp stop` command.
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Chapter 3: Software upgrade prerequisites

Software upgrade prerequisite overview for upgrading from 4.1 or 5.0

Complete these tasks before you upgrade the Voice Portal software to Release 5.1 .

✓	Description
	Make sure that you have access to the Voice Portal site-specific licensing information from Avaya, as described in License Requirements on page 20.
	Verify that you can access all of the target systems using at least one of the following methods: <ul style="list-style-type: none"><li data-bbox="391 953 1351 1016">• _____ A computer on the customer’s network that has an SSH client to reach the target system<li data-bbox="391 1037 1351 1068">• _____ A keyboard, monitor, and mouse, attached directly to the target system<li data-bbox="391 1089 1351 1152">• _____ A cross-over cable that connects a second computer that has a keyboard, monitor, mouse, and an SSH client.
	Disable any firewall or anti-virus software on the target systems.
	Check to see if there are any Voice Portal patches available on the Avaya online support Web site, http://support.avaya.com . If there are, download those patches before you begin the software upgrade.
	Verify that the Linux operating system has been properly upgraded. For details, see Verifying the Linux version number on page 21.
	If the VPMS software is installed on a dedicated server, verify that the VPMS server can communicate with all of the MPP servers. For details, see Verifying communication between the upgraded Voice Portal servers on page 21.
	Make sure that none of the mount points are stale or hung. For details, see Checking for stale or hung mount points on page 23.
	Verify that the time is still synchronized between all the Voice Portal servers. For details, see Verifying server time synchronization on page 23. ⓘ Important: If the time is not properly synchronized between the VPMS and MPP servers, the upgrade process could hang.

✓	Description
	If this Voice Portal system is connected to an external database, verify that the database is properly configured as described in Verifying the external database configuration on page 24.
	If you have enabled SELinux on the RHEL based Voice Portal server and do not use a modem, temporarily disable the <code>initmgetty</code> script before upgrading the Voice Portal server. For details, see Disabling the <code>initmgetty</code> script on page 26.

License Requirements

Before you configure Voice Portal, ensure that Avaya provides the following site-specific items:

- **Product ID:** The unique product ID for your site. This is a numeric identifier that must be provided when the VPMS software is installed.
- **The Voice Portal license file:** Determines the maximum number of telephony ports available to this Voice Portal system, as well as whether the speech applications in the system can use ASR or Text-to-Speech TTS resources. The license file must be installed on the Avaya WebLM server.

*** Note:**

Before upgrading a Voice Portal system to a newer version, it is important to upgrade the license to a newer version. If a Voice Portal system is upgraded to a newer version (say from 3.0 to 4.0 or from 4.0 to 5.0) and the license is not upgraded, the system provides a grace period of 30 days. During this grace period, you must upgrade the license as per the following compatibility matrix otherwise the license grace period will end and the system will no longer be functional.

The compatible versions of Voice Portal and WebLM licenses are:

Voice Portal Version	License Version
Voice Portal 3.x	All versions of licenses.
Voice Portal 4.x	4.0 or later versions.
Voice Portal 5.x	5.0 or later versions.

- If Avaya Services maintain the Voice Portal system, then the Avaya Services representative should get:
 - The Avaya Service Account authentication file used to create Avaya Service accounts after the Voice Portal software is installed.
 - The Listed Directory Number (LDN) in the Avaya Services database for each Voice Portal VPMS and MPP server, and each associated speech server.
 - If this system is maintained over a dial-up modem, the unique Remote Access Service (RAS) IP address that is used with the Voice Portal system.

Verifying the Linux version number

Procedure

1. On the Voice Portal server, log in to Linux as any user.
 2. If you are using:
 - Avaya Enterprise Linux, enter the `swversion` command.
The result should state that it is version RHE5.7-AV16.0VP5 or later. If this version is not correct, upgrade the operating system on the server.
 - Red Hat Enterprise Linux, enter the `cat /etc/issue` command.
The result should be Red Hat Enterprise Linux Server Release 5.6 or later. If you have an earlier version of Red Hat, upgrade the operating system on the server.
- + Tip:**
If you are not sure which operating system a server is using, enter the `swversion` command. If the command returns information about your operating system, the server is running Avaya Enterprise Linux.
3. If you are using Red Hat Enterprise Linux, enter the `rpm -q redhat-release` command to ensure that the Linux build version is correct.
The result should state that it is build redhat-release-5Server-5.3.0.3 or later. If this build is not correct, please obtain the latest build from Red Hat.
-

Verifying communication between the upgraded Voice Portal servers

If the VPMS is running on a dedicated server, make sure that the VPMS can still communicate with all MPP servers, PBXs, and application servers using the IP address and hostname.

Procedure

1. Log in to Linux on the Voice Portal primary VPMS server.
2. Verify the primary VPMS server's IP address and hostname:
 - a. Enter the `hostname -i` command.
This command should return the server's IP address and not `127.0.0.1`. If this check fails, you need to manually map the hostnames as described in the

Manually mapping hostnames to connect the primary VPMS with other servers topic in the *Implementing Voice Portal on multiple servers* guide.

- b. Enter the `hostname -s` command.
This command should return the server's hostname and not `localhost`. If this check fails, you need to manually map the hostnames as described in the *Manually mapping hostnames to connect the primary VPMS with other servers* topic in the *Implementing Voice Portal on multiple servers* guide.
3. Verify that the primary VPMS server can communicate with all MPP servers:
 - a. Enter the `ping -c 4 <mpp_hostname>` command, where:
`<mpp_hostname>` is the hostname of the MPP server you are testing.
 - b. Wait for the system to respond with the contact information.
 - c. If either of this check fails, you need to manually map the hostnames as described in the *Manually mapping hostnames to connect the primary VPMS with other servers* topic in the *Implementing Voice Portal on multiple servers* guide.
 - d. If your Voice Portal system contains more than one MPP server, repeat this step for each of the MPP servers.
4. If this system is going to have an auxiliary VPMS server, verify that the primary VPMS server can communicate with the auxiliary VPMS server by hostname or IP address:
 - a. Enter the `ping -c 4 <auxiliary_vpms_hostname>` command, where:
`<auxiliary_vpms_hostname>` is the hostname of the auxiliary VPMS server.
 - b. Wait for the system to respond with the contact information.
 - c. If this check fails, enter the `ping -c 4 <auxiliary_vpms_ipaddress>` command, where:
`<auxiliary_vpms_ipaddress>` is the IP address of the auxiliary VPMS server.
 - d. Wait for the system to respond with the contact information.
 - e. If both of these checks fail, you need to manually map the hostnames.
5. Verify that the primary VPMS server can communicate with the external servers by hostname or IP address:
 - a. Enter the `ping -c 4 <server_hostname>` command, where:
`<server_hostname>` is the hostname of the one of the following external components attached to your Voice Portal system:
 - A PBX server.
 - An application server.
 - A speech server.
 - Communication Manager.

- Avaya SIP Enablement Services.
 - b. Wait for the system to respond with the contact information.
 - c. If this check fails, enter the `ping -c 4 <server_ipaddress>` command, where:
 - `<server_ipaddress>` is the IP address of the server whose hostname you specified in the previous `ping` command.
 - d. Wait for the system to respond with the contact information.
 - e. If either of this check fails, you need to manually map the hostnames as described in the *Manually mapping hostnames to connect the primary VPMS with other servers* topic in the *Implementing Voice Portal on multiple servers* guide.
 - f. Repeat this procedure for each external server in your Voice Portal system.
-

Checking for stale or hung mount points

If you have any file systems mounted on your Voice Portal servers, check that none of these mounts points are stale or hung. Stale or hung mount points can cause RPM installations to hang while installing the Voice Portal software.

Procedure

1. On the Voice Portal server, log in to Linux as any user.
 2. Enter the `df` command.
If the server:
 - Responds to this command, then the mount points are working.
 - Does not return right away, then a mount point is stale or hung. Enter the `umount` command to unmount any stale or hung mount points.
-

Verifying server time synchronization

After you upgrade the operating systems on all Voice Portal servers, you should make sure that the times on all servers are still synchronized.

About this task

*** Note:**

While Voice Portal only requires that the VPMS and MPP servers be synchronized, Avaya strongly recommends that you also synchronize all of the servers that Voice Portal connects

to, including the application server, any speech servers, and the PBX. For more information, see [External time sources](#) on page 92.

Procedure

1. On each Voice Portal server, at roughly at the same time, enter the `date` command.
2. Verify that all Voice Portal servers report times within a few seconds of each other. If there is a time difference, verify that the planned MPP servers lag behind the planned VPMS server.
For example, an MPP server time of 2:10:00 and a VPMS server time of 2:10:03 is acceptable.
3. If one or more servers are off by more than a few seconds, set the appropriate date and time by entering the `date MMDDhhmmYY.ss` command, where `MMDDhhmmYY.ss` is the two-digit month, day, hour, minute, year, and seconds you want to set based on the 24-hour clock.
For example, to set the date to 2:15:35 p.m. on March 31, 2008, you would enter `date 0331141508.35`.

Verifying the external database configuration

If this Voice Portal system is connected to an external database, you need to verify that the external database is properly configured before you upgrade the VPMS software.

Procedure

1. Use your database administration tools to verify that the `VPUCIDMap` table exists in the external database.
2. If the table does not exist:
 - a. Insert the Voice Portal installation DVD into the DVD device of the server on which the external database resides.
 - b. Based on the external database and upgrade scenario, run the required scripts as mentioned in steps c and d.
 - c. If you are using Oracle:
 - For a 4.1 to 5.1 upgrade scenario, run the scripts in the following order:

```
- Oracle_New_Columns_50.sql
- Oracle_Add_Defaults_50.sql
- Oracle_NewColumns_50SP1.sql
- Oracle_NewColumns_51.sql
```

- For a 4.1SPx to 5.1 upgrade scenario, run the scripts in the following order:
 - `Oracle_New_Columns_50.sql`
 - `Oracle_Add_Defaults_50.sql`
 - `Oracle_NewColumns_50SP1.sql`
 - `Oracle_NewColumns_51.sql`
 - For a 5.0 to 5.1 upgrade scenario, run the scripts in the following order:
 - `Oracle_NewColumns_50SP1.sql`
 - `Oracle_NewColumns_51.sql`
 - For a 5.0 SPx to 5.1 upgrade scenario, run the `Oracle_NewColumns_51.sql` script.
- d. If you are using Postgres:
- For a 4.1 to 5.1 upgrade scenario, run the scripts in the following order:
 - `New_Columns_50.sql`
 - `NewColumns_50SP1.sql`
 - `NewColumns_51.sql`
 - For a 4.1SPx to 5.1 upgrade scenario, run the scripts in the following order:
 - `New_Columns_50.sql`
 - `NewColumns_50SP1.sql`
 - `NewColumns_51.sql`
 - For a 5.0 to 5.1 upgrade scenario, run the scripts in the following order:
 - `NewColumns_50SP1.sql`
 - `NewColumns_51.sql`
 - For a 5.0 SPx to 5.1 upgrade scenario, run the `NewColumns_51.sql` script.
- * Note:**
- If you are using Microsoft SQL, you do not need to run the upgrade scripts as Microsoft SQL was not supported prior to Voice Portal 5.1.
- e. If you are using Oracle, change to the Oracle support directory `Support/ExternalDB/Oracle` and use your database administration tools to run the `Oracle_VPUCIDMap.sql` script.
 - f. If you are using Postgres, change to the Postgres support directory `Support/ExternalDB/Postgres` and use your database administration tools to run the `VPUCIDMap.sql` script.
-

Disabling the initmgetty script

If you have enabled SELinux on the RHEL based Voice Portal server and do not use a modem, you need to temporarily disable the initmgetty script before you upgrade the Voice Portal server. This ensures that the linux console does not get flooded with errors and interfere with the upgrade process.

Procedure

1. On the Voice Portal server, log in to Linux.
2. Open the `/etc/inittab` file in an ASCII text editor.
3. Edit the `/etc/inittab` file and change 'respawn' to 'off' as follows:
Change `R0:2345:respawn:bash /sbin/initmgetty -x 4 ttyACM0` to:
`R0:2345:off:bash /sbin/initmgetty -x 4 ttyACM0`.
4. Save and close the file.
5. Restart the Voice Portal server or enter `init q` on the command line.

Chapter 4: Upgrading the VPMS and MPP software on different servers

VPMS software upgrade overview

When you install the VPMS software, Voice Portal automatically records your answers to basic questions, such as what installation directory you want to use, the name of the VPMS server, and what security certificate you want to use. It then compiles these answers into a file that can be used to upgrade the VPMS software on a server without further user input.

Therefore, after you have installed the Voice Portal software there are two VPMS upgrade options.

Automatic upgrade

On the VPMS server, you launch the Voice Portal installation program and run the auto upgrade utility. No prompts are displayed when the upgrade is in progress. For details, see [Automatically upgrading the 4.1 or 5.0 Voice Portal software](#) on page 28

+ Tip:

Automatic upgrade is the recommended upgrade option if you need to upgrade the VPMS software without making any changes to the configurations.

By default, the automatic upgrade:

- Uses the default installation directory `/opt/Avaya/VoicePortal`.
- Specifies the IP address of the server on which you installed the VPMS software.
- Uses the existing security certificate for the VPMS.
- Keeps the existing user accounts.

* Note:

You cannot change these options during the upgrade.

Error messages, if any, are displayed at the end of the upgrade process and all messages are recorded in the installation log files.

Interactive VPMS upgrade

On the VPMS server, you launch the Voice Portal installation program and answer the prompts as they are displayed. For details, see [Upgrading the 4.1 or 5.0 Voice Portal software interactively](#) on page 31

+ Tip:

Interactive upgrade is the recommended upgrade option if you need to make changes to the configurations during the upgrade.

Automatically upgrading the 4.1 or 5.0 Voice Portal software

Before you begin

- Make sure you have upgraded the operating system on the server as described in [Upgrading the operating system on all Voice Portal servers](#) on page 9.
- For upgrading the primary VPMS server, complete the [Primary VPMS server upgrade worksheet](#) on page 129.
- For upgrading the auxiliary VPMS server, complete the [Auxiliary VPMS server upgrade worksheet](#) on page 131.
- Before you upgrade the software, read the Voice Portal release notes on the Voice Portal installation DVD under `Documentation`. These release notes contain information about the product that is not included in the formal documentation set.
- Go to the Avaya online support Web site, <http://support.avaya.com>, and download any patches for Voice Portal Release 5.1 .
- Make sure you have completed the software upgrade prerequisites described in [Software upgrade prerequisite overview for upgrading from 4.1 or 5.0](#) on page 19.

Procedure

1. Log into the server on which you want to upgrade the Voice Portal software.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Insert the Voice Portal installation DVD into the server's DVD drive.

+ Tip:

These instructions assume that you are going to access the Voice Portal installation DVD by mounting the appropriate DVD drive on the target system. If you want to access the installation DVD files from a shared network directory or a local directory, you can copy the files from the Voice Portal installation DVD to that directory. However, that directory needs to be readable by all users on the system because the Voice Portal installation script changes users during

execution. If the directory is only readable by the root or `sroot` user, the installation script will encounter errors and will not complete successfully.

3. Mount the Voice Portal installation DVD. The `mount` command depends on the server's hardware and operating system.
 - If you are working with Avaya Enterprise Linux, mount the DVD by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point typically associated with the DVD device in the `fstab` file.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, to mount the DVD:
 - Enter the `mkdir /media/cdrom` command.

 **Note:**

This command is required only if the `/mnt/cdrom` mount point is not created.

- Enter the `mount /dev/cdrom /media/cdrom` command.

 **Warning:**

When Red Hat Enterprise Linux Server Release 5.6 or later automatically mounts the DVD, the files on the DVD are not executable. You must manually mount the Voice Portal installation DVD using the commands shown above.

If the `mount` commands shown above do not work, consult your server documentation for the appropriate `mount` command.

4. Change to the mount point directory.
5. Enter the `bash autoupgradevp` command to start the upgrade script. No prompts are displayed when the upgrade is in progress. As the script proceeds, it produces messages similar to the following:

```
Starting automatic upgrade for Voice Portal software. This will take
several minutes to complete. Please wait...
The Voice Portal installation has completed. Review the following
information. If there are errors or warnings, then please review the
installation logs.
Installing Documentation...
...done installing Documentation
Installing VPMS...
...done installing VPMS
Moving installation logs to: /opt/Avaya/VoicePortal/logs/
install_2008-08-07.000
```

 **Tip:**

You can press *Shift+Page Up* and *Shift+Page Dn* to scroll through the messages.

6. Check the status of the `vpms` service by entering the `/sbin/service vpms status` command.

If the `vpms` service is running properly, the command displays the messages indicating that the `tomcatd`, `SL`, and `ActiveMQ` services are all running. It ends with the message: `Overall Status: VPMS is running.`

7. To unmount and eject the DVD:
 - a. Change directories to anything outside the mount point. For example, you could enter the `cd /` command to change to the root directory.
 - b. If necessary, unmount the DVD device as described in your server documentation.
 - c. To eject the Voice Portal installation DVD, press the button on the DVD device or enter the `eject` command.
8. Load the environment variables created during the installation by logging out of Linux and then logging back in as a non-root user. To do so:
 - a. Log completely out of the Linux system.
 - b. Log back in to Linux by entering a non-root user name and password at the prompts.
 - c. Log back in as root or `sroot`. To do so:
 - If you are working with Avaya Enterprise Linux, enter the `su - sroot` command.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, enter the `su -` command.
9. To verify that NTP is operating properly on the server, enter the `/usr/sbin/ntpq -np` command.
A status message similar to the following is displayed:

```
remote refid st t when poll reach delay offset jitter
=====
*127.127.1.0 73.78.73.84 5 1 4 64 377 0.000 0.000 0.001
```

Make sure that:
 - The remote IP address is `*127.127.1.0`.
 - The jitter value is *not* 4000. If it is, see [Time synchronization problems](#) on page 115.
10. If you are using Avaya Enterprise Linux and this is a single Voice Portal server which has an application server installed on it, you need to start the application server by entering the `/sbin/service appserver start` command.

Next steps

- Upgrade the auxiliary VPMS server by repeating this procedure.
- Install any required patches you downloaded from the Avaya online support Web site, <http://support.avaya.com>.

- Reestablish the link between the MPP and the VPMS as described in [Reestablishing the link between the VPMS and the MPP](#) on page 64.
- If the Avaya Service Account authentication file is installed on the server, you need to reinstall it. The file is generated by the Authentication File System (AFS) tool. For more information, refer to the *Reinstalling the Avaya Service Account authentication file* section of the *Troubleshooting Voice Portal* guide.
- If you want to enable organization level access:
 - Navigate to the Support/VP-Tools directory which is also available in the Voice Portal installation DVD.
 - Enter the `EnableOrganizations` command.
 - Type `Y` and press `Enter` to restart the `vpms` service.

For more information, refer to the *Configuring organization level access in Voice Portal* section of the *Administering Voice Portal* guide.

- If you wish to change the postgres database password specified by the auto upgrade utility, run the `SetDbPassword.sh` script. For more information, see the *Configuring the PostgreSQL database user accounts* section of the *Administering Voice Portal* guide.

*** Note:**

The auto upgrade utility specifies the postgres database password entered during the Voice Portal installation. It overwrites the post installation password changes, if any.

- If you have selected the external database option in the VPMS Servers > Report Database Settings page in the Voice Portal Management System (VPMS), you need to upgrade the database tables.
 - For the Oracle database, execute the `Oracle_New_Columns_50.sql` SQL command.
 - For the external Postgres database, execute all the scripts prefixed with `NEW_`, available in the Postgres ExternalDB directory of the Voice Portal installation DVD.

Upgrading the 4.1 or 5.0 Voice Portal software interactively

Before you begin

- Make sure you have upgraded the operating system on the server as described in [Upgrading the operating system on all Voice Portal servers](#) on page 9.
- Complete the [Primary VPMS server upgrade worksheet](#) on page 129 and have it available to help answer the questions raised during the installation.
- Before you upgrade the software, read the Voice Portal release notes on the Voice Portal installation DVD under `Documentation`. These release notes contain information about the product that is not included in the formal documentation set.

- Go to the Avaya online support Web site, <http://support.avaya.com>, and download any patches for Voice Portal Release 5.1 .
- Make sure you have completed the software upgrade prerequisites described in [Software upgrade prerequisite overview for upgrading from 4.1 or 5.0](#) on page 19.

Procedure

1. Log into the server on which you want to upgrade the Voice Portal software.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.
2. Insert the Voice Portal installation DVD into the server's DVD drive.

+ Tip:

These instructions assume that you are going to access the Voice Portal installation DVD by mounting the appropriate DVD drive on the target system. If you want to access the installation DVD files from a shared network directory or a local directory, you can copy the files from the Voice Portal installation DVD to that directory. However, that directory needs to be readable by all users on the system because the Voice Portal installation script changes users during execution. If the directory is only readable by the root or `sroot` user, the installation script will encounter errors and will not complete successfully.

3. Mount the Voice Portal installation DVD. The `mount` command depends on the server's hardware and operating system.
 - If you are working with Avaya Enterprise Linux, mount the DVD by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point typically associated with the DVD device in the `fstab` file.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, to mount the DVD:
 - Enter the `mkdir /media/cdrom` command.

* Note:

This command is required only if the `/mnt/cdrom` mount point is not created.

- Enter the `mount /dev/cdrom /media/cdrom` command.

⚠ Warning:

When Red Hat Enterprise Linux Server Release 5.6 or later automatically mounts the DVD, the files on the DVD are not executable. You must manually mount the Voice Portal installation DVD using the commands shown above.

If the `mount` commands shown above do not work, consult your server documentation for the appropriate `mount` command.

4. Change to the mount point directory.
5. Enter the `bash installvp` command and press `Enter` to start the installation script.

! Important:

When choosing installation options, be sure to wait for the next prompt before pressing a key. The installation stores your key presses in a buffer and enters all of them after the current processing completes. For example, if you press the `Enter` key repeatedly while the system is performing its prerequisite checks, you may unintentionally skip options you want to change. If that happens, use the **Previous** option on any screen to go back and change your earlier choices.

6. On the Installation Destination screen, press `Enter` to upgrade the software in the same location as the previous release.

! Important:

Avaya recommends that you do not change the installation directory when upgrading to a new release.

7. Press `Enter` to move to the next screen.
8. On the Voice Portal Feature Selection screen:
 - a. Ensure **VPMS** and **Documentation** options are selected.
 - b. Press `Enter` to confirm your selections.
9. Press `Enter` to move to the next screen.
10. On the Version Confirmation screen, verify that:
 - The **New Version** column indicates that you are upgrading to release 5.1 .
 - The **Install Type** column says **Upgrade** for all selected features.

! Important:

If the **Install Type** says **Full Install** instead of **Upgrade**, you will lose all Voice Portal configuration information if you continue with this procedure.

If this is the case, type 3 and press `Enter`, then type 1 and press `Enter` to exit the installation script. Then restart this procedure, making sure that you log in as described so that the environment variables are properly loaded.

11. Press `Enter` to move to the next screen.
12. Read through the end user license agreement, pressing `Enter` to page through it until you get to the end.
13. On the final End User License Agreement page, type 1 and press `Enter` to select option **1 - I accept the terms of the license agreement**.
The screen refreshes with **1 - I accept the terms of the license agreement** as the selected option.

14. Press `Enter` to accept the agreement.
15. Press `Enter` to move to the next screen.
Voice Portal automatically starts the Prerequisite Checker, which analyzes your system's hardware and operating system configuration.
16. After the Prerequisite Checker has finished, it displays a message stating whether all prerequisite checks passed followed by the first Prerequisite Status page. Press `Enter` as necessary to view the rest of the Prerequisite Status pages.
If any prerequisite installations fail, examine the Prerequisite Status pages carefully to determine which checks failed. You must correct these issues before you can continue with this procedure. For troubleshooting information, see [Fixing Prerequisite Checker failures](#) on page 103.
17. When all prerequisite checks pass, press `Enter` to move to the next screen.
Voice Portal automatically starts the Prerequisite Installer, which attempts to install some required software on the Voice Portal server.

! Important:

This length of time the Prerequisite Installer takes depends on the size of your old Voice Portal database, because this process is also upgrading that database. Typically, this process takes 5 to 10 minutes, but, for very large databases, it could take over an hour. Do NOT cancel the installation while the Prerequisite Installer is running or you may damage your database.

18. After the Prerequisite Installer has finished, it displays a message stating whether all prerequisite installs were successful followed by the first Installation Status page. Press `Enter` as necessary to view the rest of the Installation Status pages.
If any prerequisite installations fail, examine the Installation Status pages carefully to determine which installations failed. You must correct these issues before you can continue with this procedure. For troubleshooting information, see [Fixing Prerequisite Installer failures](#) on page 105.
19. When all prerequisite installs succeed, press `Enter` to move to the next screen.
20. On the Existing VPMS User Manager Account Found screen, if you want to:
 - Create a new VPMS user account with full security access or change the password for an existing account:
 - i. Verify that option **1 - Yes** is selected. If it is not selected, type `1` and press `Enter`.
 - ii. Press `Enter` twice to confirm the selection and move to the next screen.
 - iii. On the VPMS Administrator screen, if you want to use the default account user name, press `Enter`. Otherwise, type the new or existing account user name and press `Enter`.

*** Note:**

If you enter an existing account user name, Voice Portal changes the password for that account. Make sure that any users who log in with that user name know about the new password.

- iv. Type the password for this account and press `Enter`.
 - v. Confirm the password by typing it again and pressing `Enter`.
- Use an existing VPMS user account:
 - i. Verify that option **2 - No** is selected. If it is not selected, type `2` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
21. Press `Enter` to move to the next screen.
22. On the Database Logins screen:, type a password for the postgres user account and press `Enter`.
- The VPMS server uses this account to log in to the Voice Portal database to store and retrieve data, and to install new updates or patches. The database administrator can use this account to log into the local `VoicePortal` database and perform database administration tasks.
23. Confirm the password by typing it again and pressing `Enter`.
24. You can create a PostgreSQL database user account that can read the report data in the Voice Portal database. If you:
- Want to create the report reader database account:
 - i. Type `1` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
 - iii. If you want to use the account name displayed in `[]` (square brackets) after the installation prompt, press `Enter`. Otherwise, type a unique user name for the account and press `Enter`.
 - iv. Type a password for the account and press `Enter`.
 - v. Confirm the password by typing it again and pressing `Enter`.
 - Do not want to create the report reader account:
 - i. Verify that option **2 - No** is selected. If it is not selected, type `2` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.

*** Note:**

This user account can only read those tables in the Voice Portal database that store report data. Speech application developers can use this account to login to

the database to create custom reports using any SQL-enabled report generation tool.

25. Press `Enter` to move to the next screen.
26. On the Database Login for Auxiliary VPMS screen, you can specify whether you want to create a PostgreSQL user account for the optional auxiliary VPMS server. This account allows the auxiliary VPMS server limited access the main Voice Portal database, and it is required if you plan to configure a auxiliary VPMS server.
 - If you want to create the auxiliary VPMS login account:
 - i. Type `1` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
 - iii. If you want to use the account name displayed in `[]` (square brackets) after the installation prompt, press `Enter`. Otherwise, type a unique user name for the account and press `Enter`.
 - iv. Type a password for the account and press `Enter`.
 - v. Confirm the password by typing it again and pressing `Enter`.
 - If you do not want to create the auxiliary VPMS account:
 - i. Verify that option **2 - No** is selected. If it is not selected, type `2` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
27. On the Product ID screen, if you want to:
 - Use the existing Product ID that was generated with the Automatic Registration Tool (ART) for this installation of Avaya Voice Portal, press `Enter`.
 - Use a new Product ID, type the ID and press `Enter`.

The Product ID is used by Avaya to identify the system. The notification feature includes this ID in all SNMP traps.
28. Press `Enter` to move to the next screen.
29. Voice Portal uses SSL protocol to establish a secure connection between its servers. This connection requires a security certificate that can be created by Voice Portal or purchased from a third-party company. On the Security Certificate screen:
 - If you want Voice Portal to create a security certificate:
 - i. Verify that option **1 - Create a new certificate for this server** is selected. If not, type `1` and press `Enter` to select it.
 - ii. Press `Enter` to confirm that selection.
 - If you want Voice Portal to use a certificate from a company such as VeriSign, you can import that certificate as long as it is in PKCS12 format and it resides on the local server or on a locally accessible NFS-mounted drive. To do so:

- i. Verify that option **2 - Import a certificate from a specified location** is selected. If not, type 2 and press `Enter` to select it.
- ii. Press `Enter` to confirm that selection.
- iii. Type the full file path and name of the security certificate and press `Enter`.

The screen refreshes with the location that you entered displayed for your verification.

- iv. Type the password for the security certificate and press `Enter`.
30. Press `Enter` to move to the next screen.
 31. On the Security Certificate Verification screen, verify the security certificate and press `Enter` to move to the next screen.

+ Tip:

When you add the MPP to Voice Portal through the VPMS, the VPMS displays the MPP security certificate. You should record the fingerprint information from this security certificate so that you can compare it to the one displayed in the VPMS.

32. On the Pre Installation Summary screen, verify the installation information and press `Enter` to install the Voice Portal software.

Voice Portal displays the Installation Progress screen and begins installing the software. During the install, it displays messages indicating its progress.

Be patient because the installation process can appear completed or stopped even though it is still processing and installing the software. Wait until Voice Portal displays the Post Installation Summary screen.

33. On the Post Installation Summary screen, verify that the **Installation Progress Bar** has reached 100% and that the message `...done installing feature_name` appears for each feature that you selected on the Voice Portal Feature Selection screen.

*** Note:**

If the **Installation Progress Bar** on the Installation Progress screen stopped at 25% and the Post Installation Summary screen states that no summary information could be found, see [Installation Progress Bar stops at 25% completed](#) on page 109.

34. Press `Enter` to end the installation script.
During the installation process, Voice Portal creates several log files that you can use to verify what happened during installation. When the installation process is complete, Voice Portal moves those logs to the standard log directory and displays the exact path on the screen. For more information, see [Upgrade installation log files](#) on page 101.
35. To unmount and eject the DVD:

- a. Change directories to anything outside the mount point. For example, you could enter the `cd /` command to change to the root directory.
 - b. If necessary, unmount the DVD device as described in your server documentation.
 - c. To eject the Voice Portal installation DVD, press the button on the DVD device or enter the `eject` command.
36. Load the environment variables created during the installation by logging out of Linux and then logging back in as a non-root user. To do so:
- a. Log completely out of the Linux system.
 - b. Log back in to Linux by entering a non-root user name and password at the prompts.
 - c. Log back in as root or `sroot`. To do so:
 - If you are working with Avaya Enterprise Linux, enter the `su - sroot` command.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, enter the `su -` command.
37. Check the status of the `vpms` service by entering the `/sbin/service vpms status` command.
- If the `vpms` service is running properly, the command displays the messages indicating that the `tomcatd`, `SL`, and `ActiveMQ` services are all running. It ends with the message: `Overall Status: VPMS is running.`

Next steps

- Install any required patches you downloaded from the Avaya online support Web site, <http://support.avaya.com>.
- Reestablish the link between the MPP and the VPMS as described in [Reestablishing the link between the VPMS and the MPP](#) on page 64.
- If the Avaya Service Account authentication file is installed on the server, you need to reinstall it. The file is generated by the Authentication File System (AFS) tool. For more information, refer to the *Reinstalling the Avaya Service Account authentication file* section of the *Troubleshooting Voice Portal* guide.
- If you want to enable organization level access:
 - Navigate to the Support/VP-Tools directory which is also available in the Voice Portal installation DVD.
 - Enter the `EnableOrganizations` command.
 - Type `Y` and press `Enter` to restart the `vpms` service.

For more information, refer to the *Configuring organization level access in Voice Portal* section of the *Administering Voice Portal* guide.

- If you have selected the external database option in the VPMS Servers > Report Database Settings page in the Voice Portal Management System (VPMS), you need to upgrade the database tables.
 - For the Oracle database, execute the `Oracle_New_Columns_50.sql` SQL command.
 - For the external Postgres database, execute all the scripts prefixed with `NEW_`, available in the Postgres ExternalDB directory of the Voice Portal installation DVD.

Upgrading the MPP software

MPP software upgrade overview

When you upgrade the VPMS software, Voice Portal automatically records your answers to basic questions, such as what installation directory you want to use, the name of the VPMS server, and what security certificate you want to use. It then compiles these answers into a file that can be used to upgrade the MPP software on a server without further user input.

Therefore, after you have upgraded the VPMS software there are three MPP upgrade options.

Automatic upgrade

On the MPP server, you launch the Voice Portal installation program and run the auto upgrade utility. No prompts are displayed when the upgrade is in progress. For details, see [Automatically Upgrading the MPP software](#) on page 40.

+ Tip:

Auto upgrade is the recommended upgrade option if you need to upgrade the MPP software without making any changes to the configurations.

Interactive MPP upgrade

On each server, you launch the Voice Portal installation program and answer the prompts as they are displayed, just as you did for the VPMS software upgrade. For details, see [Upgrading the MPP software interactively](#) on page 43.

+ Tip:

Interactive upgrade is the recommended upgrade option if you need to make changes to the MPP configurations during the upgrade.

Silent MPP upgrade

On each server, you copy the installation files to a local directory on the MPP and run the silent install utility. No prompts are displayed, but any error messages are displayed at the end of

the install process and all messages are recorded in the installation log files. For details, see [Upgrading the MPP software silently](#) on page 49.

*** Note:**

You can change these options before running the silent installer, but if you do so, you are responsible for saving the customized install file in case you need to reinstall at a later date.

Related topics:

[Automatically Upgrading the MPP software](#) on page 40

[Upgrading the MPP software interactively](#) on page 43

[Upgrading the MPP software silently](#) on page 49

[Customizing the MPP silent install file for all MPPs](#) on page 52

Automatically Upgrading the MPP software

Before you begin

- Complete the [MPP server upgrade worksheet](#) on page 134 and have it available to help answer the questions raised during the installation.
- Make sure you have upgraded the server operating system as described in [Upgrading the operating system on all Voice Portal servers](#) on page 9.
- Make sure the MPP server is offline.
- Make sure you have upgraded the VPMS software on the primary VPMS server as described in [VPMS software upgrade overview](#) on page 27.
- Go to the Avaya online support Web site, <http://support.avaya.com>, and download any patches for Voice Portal Release 5.1 .

Procedure

1. Log into the server on which you want to upgrade the MPP software.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Insert the Voice Portal installation DVD into the server's DVD drive.

+ Tip:

These instructions assume that you are going to access the Voice Portal installation DVD by mounting the appropriate DVD drive on the target system. If you want to access the installation DVD files from a shared network directory or a local directory, you can copy the files from the Voice Portal installation DVD to

that directory. However, that directory needs to be readable by all users on the system because the Voice Portal installation script changes users during execution. If the directory is only readable by the root or sroot user, the installation script will encounter errors and will not complete successfully. You also need to ensure the directory name does not contain spaces. If there are spaces in the directory name, the installation script will encounter errors and will not complete successfully.

3. Mount the Voice Portal installation DVD. The `mount` command depends on the server's hardware and operating system.
 - If you are working with Avaya Enterprise Linux, mount the DVD by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point typically associated with the DVD device in the `fstab` file.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, to mount the DVD:

- Enter the `mkdir /media/cdrom` command.

 **Note:**

This command is required only if the `/mnt/cdrom` mount point is not created.

- Enter the `mount /dev/cdrom /media/cdrom` command.

 **Warning:**

When Red Hat Enterprise Linux Server Release 5.6 or later automatically mounts the DVD, the files on the DVD are not executable. You must manually mount the Voice Portal installation DVD using the commands shown above.

If the `mount` commands shown above do not work, consult your server documentation for the appropriate `mount` command.

4. Change to the mount point directory.
5. Enter the `bash autoupgradevp` command to start the upgrade script. No prompts are displayed when the upgrade is in progress.
As the script proceeds, it produces messages similar to the following:

```
Starting automatic upgrade for MPP software. This will take several minutes
to complete. Please wait...
The MPP installation has completed. Review the following information. If
there are errors or warnings, then please review the installation logs.
Installing Documentation...
...done installing Documentation
Installing MPP...
...done installing MPP
Moving installation logs to: /opt/Avaya/VoicePortal/logs/
install_2008-08-07.000
```

6. Enter the `/sbin/service mpp status` command to verify that the MPP system manager is running.

The MPP server returns the message `mppsystmgr (pid <pid>) is running`, where `<pid>` is the process id.

7. To unmount and eject the DVD:
 - a. Change directories to anything outside the mount point. For example, you could enter the `cd /` command to change to the root directory.
 - b. If necessary, unmount the DVD device as described in your server documentation.
 - c. To eject the Voice Portal installation DVD, press the button on the DVD device or enter the `eject` command.
8. Load the environment variables created during the installation by logging out of Linux and then logging back in as a non-root user. To do so:
 - a. Log completely out of the Linux system.
 - b. Log back in to Linux by entering a non-root user name and password at the prompts.
 - c. Log back in as root or `sroot`. To do so:
 - If you are working with Avaya Enterprise Linux, enter the `su - sroot` command.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, enter the `su -` command.
9. To verify that NTP is operating properly on the MPP enter the `/usr/sbin/ntpq -np` command.

A status message similar to the following is displayed:

```
remote refid st t when poll reach delay offset jitter
=====
123.123.123.123 127.127.1.0 6 u 23 64 1 0.354 0.361 0.004
```

Make sure that:

- The remote IP address points to the primary VPMS server.
- The jitter value is *not* 4000. If it is, see [Time synchronization problems](#) on page 115.

Next steps

- Install any required patches you downloaded from the Avaya online support Web site, <http://support.avaya.com>.
- If desired, upgrade the MPP software on another server machine by repeating this procedure on that machine.

- Reestablish the connection between the upgraded MPP and the VPMS server as described in [Reestablishing the link between the VPMS and the upgraded MPP](#) on page 53.
- If you have run the `setup_vpms.php` script on the MPP to point the MPP to a different VPMS server, you need to run the script again after the MPP upgrade, provided you have upgraded the operating system prior to upgrading Voice Portal.

Upgrading the MPP software interactively

Before you begin

- Complete the [MPP server upgrade worksheet](#) on page 134 and have it available to help answer the questions raised during the installation.
- Make sure you have upgraded the server operating system as described in [Upgrading the operating system on all Voice Portal servers](#) on page 9.
- Make sure the MPP server is offline.
- Make sure you have upgraded the VPMS software on the primary VPMS server as described in [VPMS software upgrade overview](#) on page 27.
- Go to the Avaya online support Web site, <http://support.avaya.com>, and download any patches for Voice Portal Release 5.1 .

Procedure

1. Log into the server on which you want to upgrade the MPP software.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.
 Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Insert the Voice Portal installation DVD into the server's DVD drive.

+ Tip:

These instructions assume that you are going to access the Voice Portal installation DVD by mounting the appropriate DVD drive on the target system. If you want to access the installation DVD files from a shared network directory or a local directory, you can copy the files from the Voice Portal installation DVD to that directory. However, that directory needs to be readable by all users on the system because the Voice Portal installation script changes users during execution. If the directory is only readable by the `root` or `sroot` user, the installation script will encounter errors and will not complete successfully. You also need to ensure the directory name does not contain spaces. If there are spaces in the

directory name, the installation script will encounter errors and will not complete successfully.

3. Mount the Voice Portal installation DVD. The `mount` command depends on the server's hardware and operating system.
 - If you are working with Avaya Enterprise Linux, mount the DVD by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point typically associated with the DVD device in the `fstab` file.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, to mount the DVD:
 - Enter the `mkdir /media/cdrom` command.

 **Note:**

This command is required only if the `/mnt/cdrom` mount point is not created.

- Enter the `mount /dev/cdrom /media/cdrom` command.

 **Warning:**

When Red Hat Enterprise Linux Server Release 5.6 or later automatically mounts the DVD, the files on the DVD are not executable. You must manually mount the Voice Portal installation DVD using the commands shown above.

If the `mount` commands shown above do not work, consult your server documentation for the appropriate `mount` command.

4. Change to the mount point directory.
5. Enter the `bash installvp` command and press `Enter` to start the installation script.

 **Important:**

When choosing installation options, be sure to wait for the next prompt before pressing a key. The installation stores your key presses in a buffer and enters all of them after the current processing completes. For example, if you press the `Enter` key repeatedly while the system is performing its prerequisite checks, you may unintentionally skip options you want to change. If that happens, use the **Previous** option on any screen to go back and change your earlier choices.

6. On the Installation Destination screen, press `Enter` to upgrade the software in the same location as the previous release.

 **Important:**

Avaya recommends that you do not change the installation directory when upgrading to a new release.

7. Press `Enter` to move to the next screen.
8. On the Voice Portal Feature Selection screen:
 - a. Type `1` and press `Enter` to clear **VPMS**.

- The screen refreshes with only **Documentation** selected.
- b. Type 2 and press `Enter` to select **MPP**.
The screen refreshes with both **MPP** and **Documentation** selected.
 - c. Press `Enter` to confirm your selections.
9. Press `Enter` to move to the next screen.
 10. On the Version Confirmation screen, verify that the **New Version** column indicates that you are about to upgrade to release 5.1 of the MPP software.
 11. Press `Enter` to move to the next screen.
 12. Read through the end user license agreement, pressing `Enter` to page through it until you get to the end.
 13. On the final End User License Agreement page, type 1 and press `Enter` to select option **1 - I accept the terms of the license agreement**.
The screen refreshes with **1 - I accept the terms of the license agreement** as the selected option.
 14. Press `Enter` to accept the agreement.
 15. Press `Enter` to move to the next screen.
Voice Portal automatically starts the Prerequisite Checker, which analyzes your system's hardware and operating system configuration.
 16. After the Prerequisite Checker has finished, it displays a message stating whether all prerequisite checks passed followed by the first Prerequisite Status page. Press `Enter` as necessary to view the rest of the Prerequisite Status pages.
If any prerequisite installations fail, examine the Prerequisite Status pages carefully to determine which checks failed. You must correct these issues before you can continue with this procedure. For troubleshooting information, see [Fixing Prerequisite Checker failures](#) on page 103.
 17. When all prerequisite checks pass, press `Enter` to move to the next screen.
Voice Portal automatically starts the Prerequisite Installer, which attempts to install some required software on the Voice Portal server.
 18. After the Prerequisite Installer has finished, it displays a message stating whether all prerequisite installs were successful followed by the first Installation Status page. Press `Enter` as necessary to view the rest of the Installation Status pages.
If any prerequisite installations fail, examine the Installation Status pages carefully to determine which installations failed. You must correct these issues before you can continue with this procedure. For troubleshooting information, see [Fixing Prerequisite Installer failures](#) on page 105.
 19. When all prerequisite installs succeed, press `Enter` to move to the next screen.
 20. Press `Enter` to move to the next screen.
 21. On the Primary VPMS Server Location screen, specify the server name or IP address of the VPMS server. If you want to:

- Use the existing VPMS server and port number that is displayed in square brackets [] after the installation prompt, press `Enter`.
- If no existing VPMS location exists or you want to change the location of the VPMS server, type the server name or IP address where the VPMS software is installed. If you used a port other than the default VPMS port (80), append `:port_number` to the address. When you are done, press `Enter` to submit the new address.

For example, to specify the machine with the server name `VPMS_Server` on the default port, type `VPMS_Server`. To specify the same machine on port 86, type `VPMS_Server : 86`.

*** Note:**

The previous releases of the VPMS software defaulted to port 8080. If you used the default VPMS port in both cases, you need to remove the **:8080** from the existing VPMS location.

The MPP installation uses this information to retrieve the public key from the VPMS. The public key provides authentication between the VPMS and MPP servers to help secure your Voice Portal system.

22. Press `Enter` to move to the next screen.
23. On the Public Key Verification screen, if you recorded the fingerprint information from the VPMS security certificate during the primary VPMS software installation, compare it to the Public Key fingerprint information presented in this screen. The fingerprint information from Public Key should match the fingerprint information from the VPMS security certificate.

If the public key could not be downloaded, see [MPP could not import VPMS key](#) on page 112.

24. Press `Enter` to move to the next screen.
25. Voice Portal uses SSL protocol to establish a secure connection between its servers. This connection requires a security certificate that can be created by Voice Portal or purchased from a third-party company. On the Security Certificate screen:
 - If you want Voice Portal to create a security certificate:
 - i. Verify that option **1 - Create a new certificate for this server** is selected. If not, type `1` and press `Enter` to select it.
 - ii. Press `Enter` to confirm that selection.
 - If you want Voice Portal to use a certificate from a company such as VeriSign, you can import that certificate as long as it is in PKCS12 format and it resides on the local server or on a locally accessible NFS-mounted drive. To do so:
 - i. Verify that option **2 - Import a certificate from a specified location** is selected. If not, type `2` and press `Enter` to select it.
 - ii. Press `Enter` to confirm that selection.

- iii. Type the full file path and name of the security certificate and press `Enter`.

The screen refreshes with the location that you entered displayed for your verification.

- iv. Type the password for the security certificate and press `Enter`.

26. Press `Enter` to move to the next screen.
27. On the Security Certificate Verification screen, verify the security certificate and press `Enter` to move to the next screen.

+ Tip:

When you add the MPP to Voice Portal through the VPMS, the VPMS displays the MPP security certificate. You should record the fingerprint information from this security certificate so that you can compare it to the one displayed in the VPMS.

28. On the Pre Installation Summary screen, verify the installation information and press `Enter` to install the Voice Portal software.
Voice Portal displays the Installation Progress screen and begins installing the software. During the install, it displays messages indicating its progress.

Be patient because the installation process can appear completed or stopped even though it is still processing and installing the software. Wait until Voice Portal displays the Post Installation Summary screen.

29. On the Post Installation Summary screen, verify that the **Installation Progress Bar** has reached 100% and that the message `...done installing feature_name` appears for each feature that you selected on the Voice Portal Feature Selection screen.

*** Note:**

If the **Installation Progress Bar** on the Installation Progress screen stopped at 25% and the Post Installation Summary screen states that no summary information could be found, see [Installation Progress Bar stops at 25% completed](#) on page 109.

30. Press `Enter` to end the installation script.
During the installation process, Voice Portal creates several log files that you can use to verify what happened during installation. When the installation process is complete, Voice Portal moves those logs to the standard log directory and displays the exact path on the screen. For more information, see [Upgrade installation log files](#) on page 101.
31. Enter the `/sbin/service mpp status` command to verify that the MPP system manager is running.
The MPP server returns the message `mppsysmgr (pid <pid>) is running`, where `<pid>` is the process id.
32. To unmount and eject the DVD:

- a. Change directories to anything outside the mount point. For example, you could enter the `cd /` command to change to the root directory.
 - b. If necessary, unmount the DVD device as described in your server documentation.
 - c. To eject the Voice Portal installation DVD, press the button on the DVD device or enter the `eject` command.
33. Load the environment variables created during the installation by logging out of Linux and then logging back in as a non-root user. To do so:
- a. Log completely out of the Linux system.
 - b. Log back in to Linux by entering a non-root user name and password at the prompts.
 - c. Log back in as root or `sroot`. To do so:
 - If you are working with Avaya Enterprise Linux, enter the `su - sroot` command.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, enter the `su -` command.
34. To verify that NTP is operating properly on the MPP enter the `/usr/sbin/ntpq -np` command.

A status message similar to the following is displayed:

```
remote refid st t when poll reach delay offset jitter
=====
123.123.123.123 127.127.1.0 6 u 23 64 1 0.354 0.361 0.004
```

Make sure that:

- The remote IP address points to the primary VPMS server.
- The jitter value is *not* 4000. If it is, see [Time synchronization problems](#) on page 115.

Next steps

- Install any required patches you downloaded from the Avaya online support Web site, <http://support.avaya.com>.
- If desired, upgrade the MPP software on another server machine by repeating this procedure on that machine.
- Reestablish the connection between the upgraded MPP and the VPMS server as described in [Reestablishing the link between the VPMS and the upgraded MPP](#) on page 53.

Upgrading the MPP software silently

Before you begin

- If you want to change any of the default upgrade options for all MPPs, edit the default MPP answer file as described in [Customizing the MPP silent install file for all MPPs](#) on page 52.
- Make sure you have upgraded the server operating system as described in [Upgrading the operating system on all Voice Portal servers](#) on page 9.
- Make sure the MPP server is offline.
- Make sure you have upgraded the VPMS software on the primary VPMS server as described in [VPMS software upgrade overview](#) on page 27.
- Go to the Avaya online support Web site, <http://support.avaya.com>, and download any patches for Voice Portal Release 5.1 .

About this task

Note:

To upgrade the MPP software silently, you need to copy the installation files to the MPP or any other accessible file server. If you are using Red Hat Enterprise Linux Server Release 5.6 or later, you can share the appropriate directory on the VPMS server with your MPP servers instead of copying the files. This option does not work with Avaya Enterprise Linux, however, because network shares cannot be created with that operating system.

In order to work with all operating systems, these instructions assume that you are copying the files directly to the MPP. If you are sharing the VPMS directory or using a file server, make the necessary adjustments to this procedure.

Procedure

1. Log in to Linux on the Voice Portal MPP server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Make sure that the local directory into which you want to copy the files already exists. If not, create it.
You can create a directory using the following command: `mkdir /opt/<directory_name>`.

*** Note:**

Ensure that the directory name does not contain spaces. If there are spaces in the directory name, the installation script will encounter errors and will not complete successfully.

3. Copy the installation files from the VPMS server to the MPP with a utility such as SCP.

If you are using SCP, enter the `scp -rp`

`<NON_ROOT_USER>@<VPMS_HOSTNAME>:/opt/Avaya/InstallAgent/download/<ISO_Name>.iso /opt/<directory_name>` command, where:

- `<NON_ROOT_USER>` is the name of a non-root user account on the VPMS server
- `<VPMS_HOSTNAME>` is the hostname or IP address of the VPMS server
- `/opt/Avaya/InstallAgent/download/` is the directory in which the VPMS software is installed.
- `<ISO_NAME>.iso` is the name of the ISO file to be transferred.
- `<directory_name>` is the name of the local directory that you have created.

For example, `scp -rp NonRoot@VPMSserver:/opt/Avaya/InstallAgent/download/5.0.0.0.2501.iso /opt/<directory_name>`

The message for authenticity of host and the RSA key fingerprint is displayed if you are using `scp` with this host for the first time.

For example:

The authenticity of host '`<host_IP_address>` (`<host_IP_address>`)' can't be established. RSA key fingerprint is `b9:de:40:81:62:7d:ba:ba:13:a1:e6:fa:69:8c:72:f1`.

4. Select **Yes** to continue connecting. The following message is displayed:

```
Warning: Permanently added 'host IP address' (RSA) to the list of known hosts.
```

5. Enter the non root user password.
6. Create a local directory using the `mkdir /opt/mppanswerfile` command.
7. Copy the `mppanswerfile` from the VPMS server to the MPP. You can use a utility such as SCP.

For example: `scp -rp <NonRoot>@<VPMSserver>:/opt/Avaya/VoicePortal/VPMS/share/mppanswerfile /opt/mppanswerfile`

8. Enter the non root user password.
9. Create a directory where you want to mount the ISO image.

For example, enter the `mkdir /mnt/<directory_name>` command.

10. Enter the `mount -o loop -t iso9660 ./<ISO_name>.iso /mnt/<directory_name>` command to mount the ISO image.
For example: `mount -o loop -t iso9660 ./5.0.0.0.2501.iso /mnt/share`.
11. Enter the `bash silentinstallmpp /opt/mppanswerfile/mppanswerfile` command to start the installation script.
As the script proceeds, it produces messages similar to the following:


```
Starting silent install for Voice Portal MPP. This will take several
minutes to complete. Please wait...
The Voice Portal installation has completed. Review the following
information. If there are errors or warnings, then please review the
installation logs.
Installing Documentation...
...done installing Documentation
Installing MPP...
...done installing MPP
Moving installation logs to: /opt/Avaya/VoicePortal/logs/
<install_log_directory>
```
12. Load the environment variables created during the installation by logging out of Linux and then logging back in as a non-root user. To do so:
 - a. Log completely out of the Linux system.
 - b. Log back in to Linux by entering a non-root user name and password at the prompts.
 - c. Log back in as root or `sroot`. To do so:
 - If you are working with Avaya Enterprise Linux, enter the `su - sroot` command.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, enter the `su -` command.
13. To verify that NTP is operating properly on the MPP enter the `/usr/sbin/ntpq -np` command.
A status message similar to the following is displayed:


```
remote refid st t when poll reach delay offset jitter
=====
123.123.123.123 127.127.1.0 6 u 23 64 1 0.354 0.361 0.004
```

 Make sure that:
 - The remote IP address points to the primary VPMS server.
 - The jitter value is *not* 4000. If it is, see [Time synchronization problems](#) on page 115.
14. After the installation has completed, you can either delete the local directory into which you copied the installation files or leave those files on the server in case you need to reinstall the MPP.

15. If this is the last MPP server in the Voice Portal system, you can delete the files in the `$AVAYA_HOME/VPMS/share` directory on the VPMS server, especially if you have saved the relevant installation files to the MPP server.

! Important:

If you leave the files on the VPMS or MPP servers and you have included secure information such as the password for a third-party certificate in the MPP answer file, verify that you secure the local installation directory so that only root or sroot users have access to those files.

Next steps

- Install any required patches you downloaded from the Avaya online support Web site, <http://support.avaya.com>.
- If desired, upgrade the MPP software on another server machine by repeating this procedure on that machine.
- Reestablish the connection between the upgraded MPP and the VPMS server as described in [Reestablishing the link between the VPMS and the upgraded MPP](#) on page 53.

Customizing the MPP silent install file for all MPPs

Follow this procedure to change the default options specified in the MPP installation answer file created by the VPMS for all MPPs.

About this task

+ Tip:

If you want to change the install file for a specific MPP, you should do that after you copy the installation files to the MPP. For details, see .

Procedure

1. Log in to Linux on the Voice Portal MPP server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as sroot.
 - Or log in remotely as a non-root user and then change the user to sroot by entering the `su - sroot` command.Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.
2. Change to the share directory by entering the `cd $AVAYA_HOME/VPMS/share` command, where `$AVAYA_HOME` is the environment variable pointing to the name

of the installation directory specified during the VPMS software installation. The default variable definition is `/opt/Avaya/VoicePortal`.

3. Make a back up copy of the original MPP answer file by entering the `cp mppanswerfile mppanswerfile_original` command.
 4. Open `mppanswerfile` in an ASCII editor.
 5. Change the information as appropriate. Verify that you read the instructions in the file carefully before you change any of the information or the installation will not run properly.
 6. Save and close the file.
-

Reestablishing the link between the VPMS and the upgraded MPP

After you upgrade the MPP software, you need to reestablish the link between the MPP and the VPMS by trusting the MPP's security certificate.

Procedure

1. Log in to the VPMS web interface using an account with the Administration user role.
2. From the VPMS main menu, select **System Configuration > MPP Servers**.
3. Click the name of the MPP server.
4. On the Change MPP Server page, go to the **MPP Certificate** section and select the **Trust new certificate** check box if that check box is visible.
5. At the bottom of the page, click **Save**.
6. From the VPMS main menu, select **System Management > MPP Manager**.
7. On the MPP Manager page, look at the **Mode** column for this server. If it says **Offline**:
 - a. Select the check box next to the name of the MPP.
 - b. In the **Mode Commands** group, click **Online**.
 - c. In a few moments, click **Refresh** to verify that the **Mode** column now says **Online**.
8. Select the check box next to the name of the MPP.
9. In the **State Commands** group, click **Start** and confirm your selection when prompted.

10. In a few minutes, click **Refresh** to verify that the current **State** is **Running**.
 11. If desired, make sure that telephony ports were correctly allocated to the MPP server:
 - a. From the VPMS main menu, select **Real-Time Monitoring > Port Distribution**.
 - b. On the Port Distribution page, examine the **Current Allocation** column to find the ports allocated to this MPP.
 - c. Look at the **Mode** and **State** columns to make sure the assigned ports are ready to receive calls.
-

Chapter 5: Upgrading the Voice Portal software on a single server

Voice Portal software upgrade on a single server overview

When you install the Voice Portal software, it automatically records your answers to basic questions, such as what installation directory you want to use, the name of the VPMS server, and what security certificate you want to use. It then compiles these answers into a file that can be used to upgrade the Voice Portal software on a server without further user input.

Therefore, after you have installed the Voice Portal software there are two upgrade options.

Automatic upgrade

On the VPMS server, you launch the Voice Portal installation program and run the auto upgrade utility. No prompts are displayed when the upgrade is in progress. For details, see [Automatically upgrading the 4.1 or 5.0 Voice Portal software](#) on page 28

+ Tip:

Automatic upgrade is the recommended upgrade option if you need to upgrade the Voice Portal software without making any changes to the configurations.

By default, the automatic upgrade:

- Uses the default installation directory `/opt/Avaya/VoicePortal`.
- Uses the existing security certificate for the VPMS.
- Keeps the existing user accounts.

* Note:

You cannot change these options during the upgrade.

Error messages, if any, are displayed at the end of the upgrade process and all messages are recorded in the installation log files.

Interactive VPMS upgrade

On the VPMS server, you launch the Voice Portal installation program and answer the prompts as they are displayed. For details, see [Upgrading the 4.1 or 5.0 Voice Portal software interactively on a single server](#) on page 56

+ Tip:

Interactive upgrade is the recommended upgrade option if you need to make changes to the configurations during the upgrade.

Upgrading the 4.1 or 5.0 Voice Portal software interactively on a single server

Before you begin

- Make sure you have upgraded the operating system on the server as described in [Upgrading the operating system on all Voice Portal servers](#) on page 9.
- Complete the [Primary VPMS server upgrade worksheet](#) on page 129 and have it available to help answer the questions raised during the installation.
- Before you upgrade the software, read the Voice Portal release notes on the Voice Portal installation DVD under `Documentation`. These release notes contain information about the product that is not included in the formal documentation set.
- Go to the Avaya online support Web site, <http://support.avaya.com>, and download any patches for Voice Portal Release 5.1 .
- Make sure you have completed the software upgrade prerequisites described in [Software upgrade prerequisite overview for upgrading from 4.1 or 5.0](#) on page 19.

Procedure

1. Log into the server on which you want to upgrade the Voice Portal software.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Insert the Voice Portal installation DVD into the server's DVD drive.

+ Tip:

These instructions assume that you are going to access the Voice Portal installation DVD by mounting the appropriate DVD drive on the target system. If you want to access the installation DVD files from a shared network directory or a local directory, you can copy the files from the Voice Portal installation DVD to that directory. However, that directory needs to be readable by all users on the system because the Voice Portal installation script changes users during execution. If the directory is only readable by the `root` or `sroot` user, the installation script will encounter errors and will not complete successfully.

3. Mount the Voice Portal installation DVD. The `mount` command depends on the server's hardware and operating system.
 - If you are working with Avaya Enterprise Linux, mount the DVD by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point typically associated with the DVD device in the `fstab` file.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, to mount the DVD:

- Enter the `mkdir /media/cdrom` command.

 **Note:**

This command is required only if the `/mnt/cdrom` mount point is not created.

- Enter the `mount /dev/cdrom /media/cdrom` command.

 **Warning:**

When Red Hat Enterprise Linux Server Release 5.6 or later automatically mounts the DVD, the files on the DVD are not executable. You must manually mount the Voice Portal installation DVD using the commands shown above.

If the `mount` commands shown above do not work, consult your server documentation for the appropriate `mount` command.

4. Change to the mount point directory.
5. Enter the `bash installvp` command and press `Enter` to start the installation script.

 **Important:**

When choosing installation options, be sure to wait for the next prompt before pressing a key. The installation stores your key presses in a buffer and enters all of them after the current processing completes. For example, if you press the `Enter` key repeatedly while the system is performing its prerequisite checks, you may unintentionally skip options you want to change. If that happens, use the **Previous** option on any screen to go back and change your earlier choices.

6. On the Installation Destination screen, press `Enter` to upgrade the software in the same location as the previous release.

 **Important:**

Avaya recommends that you do not change the installation directory when upgrading to a new release.

7. Press `Enter` to move to the next screen.
8. On the Voice Portal Feature Selection screen:
 - a. Type `2` and press `Enter` to select **MPP**.
The screen refreshes with **VPMS**, **MPP**, and **Documentation** selected.
 - b. Press `Enter` to confirm your selections.

9. Press `Enter` to move to the next screen.
10. On the Version Confirmation screen, verify that:
 - The **New Version** column indicates that you are upgrading to release 5.1 .
 - The **Install Type** column says **Upgrade** for all selected features.

! Important:

If the **Install Type** says **Full Install** instead of **Upgrade**, you will lose all Voice Portal configuration information if you continue with this procedure.

If this is the case, type 3 and press `Enter`, then type 1 and press `Enter` to exit the installation script. Then restart this procedure, making sure that you log in as described so that the environment variables are properly loaded.

11. Press `Enter` to move to the next screen.
12. Read through the end user license agreement, pressing `Enter` to page through it until you get to the end.
13. On the final End User License Agreement page, type 1 and press `Enter` to select option **1 - I accept the terms of the license agreement**.
The screen refreshes with **1 - I accept the terms of the license agreement** as the selected option.
14. Press `Enter` to accept the agreement.
15. Press `Enter` to move to the next screen.
Voice Portal automatically starts the Prerequisite Checker, which analyzes your system's hardware and operating system configuration.
16. After the Prerequisite Checker has finished, it displays a message stating whether all prerequisite checks passed followed by the first Prerequisite Status page. Press `Enter` as necessary to view the rest of the Prerequisite Status pages.
If any prerequisite installations fail, examine the Prerequisite Status pages carefully to determine which checks failed. You must correct these issues before you can continue with this procedure. For troubleshooting information, see [Fixing Prerequisite Checker failures](#) on page 103.
17. When all prerequisite checks pass, press `Enter` to move to the next screen.
Voice Portal automatically starts the Prerequisite Installer, which attempts to install some required software on the Voice Portal server.

! Important:

This length of time the Prerequisite Installer takes depends on the size of your old Voice Portal database, because this process is also upgrading that database. Typically, this process takes 5 to 10 minutes, but, for very large databases, it could take over an hour. Do NOT cancel the installation while the Prerequisite Installer is running or you may damage your database.

18. After the Prerequisite Installer has finished, it displays a message stating whether all prerequisite installs were successful followed by the first Installation Status page. Press `Enter` as necessary to view the rest of the Installation Status pages.
If any prerequisite installations fail, examine the Installation Status pages carefully to determine which installations failed. You must correct these issues before you can continue with this procedure. For troubleshooting information, see [Fixing Prerequisite Installer failures](#) on page 105.
19. When all prerequisite installs succeed, press `Enter` to move to the next screen.
20. On the Existing VPMS User Manager Account Found screen, if you want to:
 - Create a new VPMS user account with full security access or change the password for an existing account:
 - i. Verify that option **1 - Yes** is selected. If it is not selected, type `1` and press `Enter`.
 - ii. Press `Enter` twice to confirm the selection and move to the next screen.
 - iii. On the VPMS Administrator screen, if you want to use the default account user name, press `Enter`. Otherwise, type the new or existing account user name and press `Enter`.
 - **Note:**
If you enter an existing account user name, Voice Portal changes the password for that account. Make sure that any users who log in with that user name know about the new password.
 - iv. Type the password for this account and press `Enter`.
 - v. Confirm the password by typing it again and pressing `Enter`.
 - Use an existing VPMS user account:
 - i. Verify that option **2 - No** is selected. If it is not selected, type `2` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
21. Press `Enter` to move to the next screen.
22. On the Database Logins screen:, type a password for the postgres user account and press `Enter`.
The VPMS server uses this account to log in to the Voice Portal database to store and retrieve data, and to install new updates or patches. The database administrator can use this account to log into the local `VoicePortal` database and perform database administration tasks.
23. Confirm the password by typing it again and pressing `Enter`.

24. You can create a PostgreSQL database user account that can read the report data in the Voice Portal database. If you:

- Want to create the report reader database account:
 - i. Type `1` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
 - iii. If you want to use the account name displayed in `[]` (square brackets) after the installation prompt, press `Enter`. Otherwise, type a unique user name for the account and press `Enter`.
 - iv. Type a password for the account and press `Enter`.
 - v. Confirm the password by typing it again and pressing `Enter`.
- Do not want to create the report reader account:
 - i. Verify that option **2 - No** is selected. If it is not selected, type `2` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.

*** Note:**

This user account can only read those tables in the Voice Portal database that store report data. Speech application developers can use this account to login to the database to create custom reports using any SQL-enabled report generation tool.

25. Press `Enter` to move to the next screen.

26. On the Database Login for Auxiliary VPMS screen, you can specify whether you want to create a PostgreSQL user account for the optional auxiliary VPMS server. This account allows the auxiliary VPMS server limited access the main Voice Portal database, and it is required if you plan to configure a auxiliary VPMS server.

- If you want to create the auxiliary VPMS login account:
 - i. Type `1` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
 - iii. If you want to use the account name displayed in `[]` (square brackets) after the installation prompt, press `Enter`. Otherwise, type a unique user name for the account and press `Enter`.
 - iv. Type a password for the account and press `Enter`.
 - v. Confirm the password by typing it again and pressing `Enter`.
- If you do not want to create the auxiliary VPMS account:
 - i. Verify that option **2 - No** is selected. If it is not selected, type `2` and press `Enter`.

- ii. Press `Enter` to confirm your selection.
27. Press `Enter` to move to the next screen.
28. On the Product ID screen, if you want to:
 - Use the existing Product ID that was generated with the Automatic Registration Tool (ART) for this installation of Avaya Voice Portal, press `Enter`.
 - Use a new Product ID, type the ID and press `Enter`.

The Product ID is used by Avaya to identify the system. The notification feature includes this ID in all SNMP traps.

29. Press `Enter` to move to the next screen.
30. Voice Portal uses SSL protocol to establish a secure connection between its servers. This connection requires a security certificate that can be created by Voice Portal or purchased from a third-party company. On the Security Certificate screen:
 - If you want Voice Portal to create a security certificate:
 - i. Verify that option **1 - Create a new certificate for this server** is selected. If not, type `1` and press `Enter` to select it.
 - ii. Press `Enter` to confirm that selection.
 - If you want Voice Portal to use a certificate from a company such as VeriSign, you can import that certificate as long as it is in PKCS12 format and it resides on the local server or on a locally accessible NFS-mounted drive. To do so:
 - i. Verify that option **2 - Import a certificate from a specified location** is selected. If not, type `2` and press `Enter` to select it.
 - ii. Press `Enter` to confirm that selection.
 - iii. Type the full file path and name of the security certificate and press `Enter`.

The screen refreshes with the location that you entered displayed for your verification.
 - iv. Type the password for the security certificate and press `Enter`.

31. Press `Enter` to move to the next screen.
32. On the Security Certificate Verification screen, verify the security certificate and press `Enter` to move to the next screen.

+ Tip:

When you add the MPP to Voice Portal through the VPMS, the VPMS displays the MPP security certificate. You should record the fingerprint information from this security certificate so that you can compare it to the one displayed in the VPMS.

33. On the Pre Installation Summary screen, verify the installation information and press `Enter` to install the Voice Portal software.

Voice Portal displays the Installation Progress screen and begins installing the software. During the install, it displays messages indicating its progress.

Be patient because the installation process can appear completed or stopped even though it is still processing and installing the software. Wait until Voice Portal displays the Post Installation Summary screen.

34. On the Post Installation Summary screen, verify that the **Installation Progress Bar** has reached 100% and that the message `...done installing feature_name` appears for each feature that you selected on the Voice Portal Feature Selection screen.

*** Note:**

If the **Installation Progress Bar** on the Installation Progress screen stopped at 25% and the Post Installation Summary screen states that no summary information could be found, see [Installation Progress Bar stops at 25% completed](#) on page 109.

35. Press `Enter` to end the installation script.
During the installation process, Voice Portal creates several log files that you can use to verify what happened during installation. When the installation process is complete, Voice Portal moves those logs to the standard log directory and displays the exact path on the screen. For more information, see [Upgrade installation log files](#) on page 101.

36. Enter the `/sbin/service mpp status` command to verify that the MPP system manager is running.

The MPP server returns the message `mppsystmgr (pid <pid>) is running`, where `<pid>` is the process id.

37. Check the status of the `vpms` service by entering the `/sbin/service vpms status` command.

If the `vpms` service is running properly, the command displays the messages indicating that the `tomcatd`, `SL`, and `ActiveMQ` services are all running. It ends with the message: `Overall Status: VPMS is running`.

38. To verify that NTP is operating properly on the server, enter the `/usr/sbin/ntpq -np` command.

A status message similar to the following is displayed:

```
remote refid st t when poll reach delay offset jitter
=====
*127.127.1.0 73.78.73.84 5 1 4 64 377 0.000 0.000 0.001
```

Make sure that:

- The remote IP address is `*127.127.1.0`.
- The jitter value is *not* 4000. If it is, see [Time synchronization problems](#) on page 115.

39. To unmount and eject the DVD:
 - a. Change directories to anything outside the mount point. For example, you could enter the `cd /` command to change to the root directory.
 - b. If necessary, unmount the DVD device as described in your server documentation.
 - c. To eject the Voice Portal installation DVD, press the button on the DVD device or enter the `eject` command.
40. Load the environment variables created during the installation by logging out of Linux and then logging back in as a non-root user. To do so:
 - a. Log completely out of the Linux system.
 - b. Log back in to Linux by entering a non-root user name and password at the prompts.
 - c. Log back in as root or `sroot`. To do so:
 - If you are working with Avaya Enterprise Linux, enter the `su - sroot` command.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, enter the `su -` command.
41. If you are using Avaya Enterprise Linux and if you have installed an application server on this server, you need to start the application server by entering the `/sbin/service appserver start` command.

Next steps

- Install any required patches you downloaded from the Avaya online support Web site, <http://support.avaya.com>.
- Reestablish the link between the MPP and the VPMS as described in [Reestablishing the link between the VPMS and the MPP](#) on page 64.
- If the Avaya Service Account authentication file is installed on the server, you need to reinstall it. The file is generated by the Authentication File System (AFS) tool. For more information, refer to the *Reinstalling the Avaya Service Account authentication file* section of the *Troubleshooting Voice Portal* guide.
- If you want to enable organization level access:
 - Navigate to the Support/VP-Tools directory which is also available in the Voice Portal installation DVD.
 - Enter the `EnableOrganizations` command.
 - Type `Y` and press `Enter` when prompted to restart the `vpms` service.

For more information, refer to the *Configuring organization level access in Voice Portal* section of the *Administering Voice Portal* guide.

- Upgrade the coresident application server, if required. For more information, see [Optional: Updating the co-resident application server](#) on page 75.
- If you have selected the external database option in the VPMS Servers > Report Database Settings page in the Voice Portal Management System (VPMS), you need to upgrade the database tables.
 - For the Oracle database, execute the `Oracle_New_Columns_50.sql` SQL command.
 - For the external Postgres database, execute all the scripts prefixed with `NEW_`, available in the Postgres ExternalDB directory of the Voice Portal installation DVD.

Reestablishing the link between the VPMS and the MPP

After you upgrade the Voice Portal software, you need to reestablish the link between the MPP and the VPMS.

Procedure

1. Log in to the VPMS web interface using an account with the Administration or Operations user role.
2. From the VPMS main menu, select **System Management > MPP Manager**.
3. On the MPP Manager page, look at the **Mode** column for this server. If it says **Offline**:
 - a. Select the check box next to the name of the MPP.
 - b. In the **Mode Commands** group, click **Online**.
 - c. In a few moments, click **Refresh** to verify that the **Mode** column now says **Online**.
4. Select the check box next to the name of the MPP.
5. In the **State Commands** group, click **Start** and confirm your selection when prompted.
6. In a few minutes, click **Refresh** to verify that the current **State** is **Running**.

Next steps

Configure the upgraded system as described in [Voice Portal system configuration overview for a 4.1 or 5.0 system upgraded to 5.1](#) on page 79.

Chapter 6: Upgrading the 4.1 or 5.0 auxiliary VPMS server

Auxiliary VPMS software upgrade overview

There are two upgrade options for the auxiliary VPMS server.

Automatic upgrade

On the auxiliary VPMS server, you launch the Voice Portal installation program and run the auto upgrade utility. No prompts are displayed when the upgrade is in progress. For details, see [Automatically upgrading the 4.1 or 5.0 Voice Portal software](#) on page 28

! Important:

Upgrading the primary VPMS server before the auxiliary VPMS server is the recommended upgrade option.

+ Tip:

Automatic upgrade is the recommended upgrade option if you need to upgrade the VPMS software without making any changes to the configurations.

By default, the automatic upgrade:

- Uses the default installation directory `/opt/Avaya/VoicePortal`.
- Uses the existing security certificate for the auxiliary VPMS.
- Keeps the existing user accounts.

* Note:

You cannot change these default options during the upgrade.

Error messages, if any, are displayed at the end of the upgrade process and all messages are recorded in the installation log files.

Interactive VPMS upgrade

On the auxiliary VPMS server, you launch the Voice Portal installation program and answer the prompts as they are displayed. For details, see [Upgrading the 4.1 or 5.0 auxiliary Voice Portal software interactively](#) on page 66

! Important:

Upgrade the primary VPMS server before the auxiliary VPMS server. While upgrading the auxiliary VPMS server, you are prompted for the IP address of the primary VPMS server so

that the security certificate can be retrieved. To ensure the updated certificate is retrieved from the primary server, it is recommended to upgrade the primary server first.

+ Tip:

Interactive upgrade is the recommended upgrade option if you need to make changes to the configurations during the upgrade.

Upgrading the 4.1 or 5.0 auxiliary Voice Portal software interactively

Before you begin

- Upgrade the primary VPMS server before you upgrade the auxiliary VPMS server.
- Complete the [#unique_45](#) and have it available to help answer the questions raised during the upgrade.
- Before you upgrade the software, read the Voice Portal release notes on the Voice Portal installation DVD under `Documentation`. These release notes contain information about the product that is not included in the formal documentation set.
- Go to the Avaya online support Web site, <http://support.avaya.com>, and download any patches for Voice Portal Release 5.1 .
- Make sure you have upgraded the server operating system as described in [Upgrading the operating system on all Voice Portal servers](#) on page 9.
- Make sure you have completed the software upgrade prerequisites described in [Software upgrade prerequisite overview for upgrading from 4.1 or 5.0](#) on page 19.

Procedure

1. Log into the server on which you want to upgrade the auxiliary VPMS software.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Stop the `vpms` service by entering the `/sbin/service vpms stop` command. You will see a series of messages as the command shuts down several VPMS components. When the command has successfully stopped all relevant components, it displays the message: `VPMS Shutdown Status: [OK]`.
3. Insert the Voice Portal installation DVD into the server's DVD drive.

+ Tip:

These instructions assume that you are going to access the Voice Portal installation DVD by mounting the appropriate DVD drive on the target system. If you want to access the installation DVD files from a shared network directory or a local directory, you can copy the files from the Voice Portal installation DVD to that directory. However, that directory needs to be readable by all users on the system because the Voice Portal installation script changes users during execution. If the directory is only readable by the root or `sroot` user, the installation script will encounter errors and will not complete successfully.

4. Mount the Voice Portal installation DVD. The `mount` command depends on the server's hardware and operating system.

- If you are working with Avaya Enterprise Linux, mount the DVD by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point typically associated with the DVD device in the `fstab` file.
- If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, to mount the DVD:
 - Enter the `mkdir /media/cdrom` command.

*** Note:**

This command is required only if the `/mnt/cdrom` mount point is not created.

- Enter the `mount /dev/cdrom /media/cdrom` command.

⚠ Warning:

When Red Hat Enterprise Linux Server Release 5.6 or later automatically mounts the DVD, the files on the DVD are not executable. You must manually mount the Voice Portal installation DVD using the commands shown above.

If the `mount` commands shown above do not work, consult your server documentation for the appropriate `mount` command.

5. Change to the mount point directory.
6. Enter the `bash installvp` command and press `Enter` to start the installation script.

! Important:

When choosing installation options, be sure to wait for the next prompt before pressing a key. The installation stores your key presses in a buffer and enters all of them after the current processing completes. For example, if you press the `Enter` key repeatedly while the system is performing its prerequisite checks, you may unintentionally skip options you want to change. If that happens, use the **Previous** option on any screen to go back and change your earlier choices.

7. On the Installation Destination screen, press `Enter` to upgrade the software in the same location as the previous release.

! Important:

Avaya recommends that you do not change the installation directory when upgrading to a new release.

8. Press `Enter` to move to the next screen.
9. On the Voice Portal Feature Selection screen, press `Enter` to accept the default installation options of **VPMS** and **Documentation**.
10. Press `Enter` to move to the next screen.
11. On the Version Confirmation screen, verify that:
 - The **New Version** column indicates that you are upgrading to release 5.1 .
 - The **Install Type** column says **Upgrade** for all selected features.

! Important:

If the **Install Type** says **Full Install** instead of **Upgrade**, you will lose all Voice Portal configuration information if you continue with this procedure.

If this is the case, type 3 and press `Enter`, then type 1 and press `Enter` to exit the installation script. Then restart this procedure, making sure that you log in as described so that the environment variables are properly loaded.

12. Press `Enter` to move to the next screen.
13. Read through the end user license agreement, pressing `Enter` to page through it until you get to the end.
14. On the final End User License Agreement page, type 1 and press `Enter` to select option **1 - I accept the terms of the license agreement**.
The screen refreshes with **1 - I accept the terms of the license agreement** as the selected option.
15. Press `Enter` to accept the agreement.
16. Press `Enter` to move to the next screen.
Voice Portal automatically starts the Prerequisite Checker, which analyzes your system's hardware and operating system configuration.
17. After the Prerequisite Checker has finished, it displays a message stating whether all prerequisite checks passed followed by the first Prerequisite Status page. Press `Enter` as necessary to view the rest of the Prerequisite Status pages.

If any prerequisite installations fail, examine the Prerequisite Status pages carefully to determine which checks failed. You must correct these issues before you can continue with this procedure. For troubleshooting information, see [Fixing Prerequisite Checker failures](#) on page 103.
18. When all prerequisite checks pass, press `Enter` to move to the next screen.
Voice Portal automatically starts the Prerequisite Installer, which attempts to install some required software on the Voice Portal server.

! Important:

This length of time the Prerequisite Installer takes depends on the size of your old Voice Portal database, because this process is also upgrading that database. Typically, this process takes 5 to 10 minutes, but, for very large databases, it could take over an hour. Do NOT cancel the installation while the Prerequisite Installer is running or you may damage your database.

19. After the Prerequisite Installer has finished, it displays a message stating whether all prerequisite installs were successful followed by the first Installation Status page. Press `Enter` as necessary to view the rest of the Installation Status pages.
If any prerequisite installations fail, examine the Installation Status pages carefully to determine which installations failed. You must correct these issues before you can continue with this procedure. For troubleshooting information, see [Fixing Prerequisite Installer failures](#) on page 105.
20. When all prerequisite installs succeed, press `Enter` to move to the next screen.
21. On the Primary VPMS Server Location screen, type the hostname or IP address of the primary VPMS server and press `Enter`.
22. Press `Enter` to move to the next screen.
23. On the Public Key Verification screen, if you recorded the fingerprint information from the VPMS security certificate during the primary VPMS software installation, compare it to the Public Key fingerprint information presented in this screen. The fingerprint information from Public Key should match the fingerprint information from the VPMS security certificate.
If the public key could not be downloaded, see [MPP could not import VPMS key](#) on page 112.
24. Press `Enter` to move to the next screen.
25. On the Database Login Check for Auxiliary VPMS screen, type the password for the user you specified for the auxiliary VPMS to access the external Voice Portal database user when you installed the VPMS software on the primary server machine and press `Enter`.
26. Press `Enter` to move to the next screen.
Voice Portal makes sure that it can contact the primary VPMS server, and that the password you entered matches the one specified when the primary server was installed. If the connection can be established and the password is correct, Voice Portal continues to the next screen.
27. On the Database Logins screen:, type a password for the postgres user account and press `Enter`.
The VPMS server uses this account to log in to the Voice Portal database to store and retrieve data, and to install new updates or patches. The database administrator can use this account to log into the local `VoicePortal` database and perform database administration tasks.
28. Confirm the password by typing it again and pressing `Enter`.

29. You can create a PostgreSQL database user account on the auxiliary VPMS server that can read the report data in the Voice Portal database. If you:

- Want to create the report reader database account:
 - i. Type `1` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
 - iii. If you want to use the account name displayed in `[]` (square brackets) after the installation prompt, press `Enter`. Otherwise, type a unique user name for the account and press `Enter`.
 - iv. Type a password for the account and press `Enter`.
 - v. Confirm the password by typing it again and pressing `Enter`.
- Do not want to create the report reader account:
 - i. Verify that option **2 - No** is selected. If it is not selected, type `2` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.

*** Note:**

This user account can only read those tables in the Voice Portal database that store report data. You should create this account if you plan to set up an external database on this server that is shared by multiple Voice Portal systems and you want to create custom reports for the database using an SQL-enabled report generation tool.

30. Press `Enter` to move to the next screen.

31. You can create a PostgreSQL database user account on the auxiliary VPMS server that can allow external systems to write report data into the Voice Portal database on this server.

You should create this account if you plan to set up an external database on this server that is shared by multiple Voice Portal systems.

- If you want to create the report writer database account:
 - i. Type `1` and press `Enter`.
 - ii. Press `Enter` to confirm your selection.
 - iii. If you want to use the account name displayed in `[]` (square brackets) after the installation prompt, press `Enter`. Otherwise, type a unique user name for the account and press `Enter`.
 - iv. Type a password for the account and press `Enter`.
 - v. Confirm the password by typing it again and pressing `Enter`.
- If you do not want to create the report writer account, press `Enter`.

*** Note:**

This user account can only change the data in the tables that store report data in the Voice Portal database on the auxiliary VPMS server.

32. Press `Enter` to move to the next screen.
33. Voice Portal uses SSL protocol to establish a secure connection between its servers. This connection requires a security certificate that can be created by Voice Portal or purchased from a third-party company. On the Security Certificate screen:
 - If you want Voice Portal to create a security certificate:
 - i. Verify that option **1 - Create a new certificate for this server** is selected. If not, type `1` and press `Enter` to select it.
 - ii. Press `Enter` to confirm that selection.
 - If you want Voice Portal to use a certificate from a company such as VeriSign, you can import that certificate as long as it is in PKCS12 format and it resides on the local server or on a locally accessible NFS-mounted drive. To do so:
 - i. Verify that option **2 - Import a certificate from a specified location** is selected. If not, type `2` and press `Enter` to select it.
 - ii. Press `Enter` to confirm that selection.
 - iii. Type the full file path and name of the security certificate and press `Enter`.

The screen refreshes with the location that you entered displayed for your verification.
 - iv. Type the password for the security certificate and press `Enter`.
34. Press `Enter` to move to the next screen.
35. On the Security Certificate Verification screen, verify the security certificate and press `Enter` to move to the next screen.

+ Tip:

When you add the auxiliary VPMS to Voice Portal through the VPMS, the VPMS displays the auxiliary VPMS's security certificate. You should record the fingerprint information from this security certificate so that you can compare it to the one displayed in the VPMS.

36. On the Pre Installation Summary screen, verify the installation information and press `Enter` to install the Voice Portal software.
Voice Portal displays the Installation Progress screen and begins installing the software. During the install, it displays messages indicating its progress.

Be patient because the installation process can appear completed or stopped even though it is still processing and installing the software. Wait until Voice Portal displays the Post Installation Summary screen.
37. On the Post Installation Summary screen, verify that the **Installation Progress Bar** has reached 100% and that the message `...done installing`

feature_name appears for each feature that you selected on the Voice Portal Feature Selection screen.

*** Note:**

If the **Installation Progress Bar** on the Installation Progress screen stopped at 25% and the Post Installation Summary screen states that no summary information could be found, see [Installation Progress Bar stops at 25% completed](#) on page 109.

38. Press `Enter` to end the installation script.
During the installation process, Voice Portal creates several log files that you can use to verify what happened during installation. When the installation process is complete, Voice Portal moves those logs to the standard log directory and displays the exact path on the screen. For more information, see [Upgrade installation log files](#) on page 101.
 39. To unmount and eject the DVD:
 - a. Change directories to anything outside the mount point. For example, you could enter the `cd /` command to change to the root directory.
 - b. If necessary, unmount the DVD device as described in your server documentation.
 - c. To eject the Voice Portal installation DVD, press the button on the DVD device or enter the `eject` command.
 40. Load the environment variables created during the installation by logging out of Linux and then logging back in as a non-root user. To do so:
 - a. Log completely out of the Linux system.
 - b. Log back in to Linux by entering a non-root user name and password at the prompts.
 - c. Log back in as root or `sroot`. To do so:
 - If you are working with Avaya Enterprise Linux, enter the `su - sroot` command.
 - If you are working with Red Hat Enterprise Linux Server Release 5.6 or later, enter the `su -` command.
 41. Check the status of the `vpms` service by entering the `/sbin/service vpms status` command.
If the `vpms` service is running properly, the command displays the messages indicating that the `tomcatd`, `SL`, and `ActiveMQ` services are all running. It ends with the message: `Overall Status: VPMS is running.`
-

Next steps

- Install any required patches you downloaded from the Avaya online support Web site, <http://support.avaya.com>.
- If desired, upgrade the MPP software on the MPP servers as described in [Upgrading the MPP software interactively](#) on page 43.

 **Note:**

If you log into the upgraded VPMS before you upgrade the MPPs, all MPPs in the system may show **Restart Needed** in the **State** column on the System Monitor and MPP Manager pages. The state will be automatically updated after you upgrade the MPP software and reconnect the upgraded MPP servers with the VPMS.

- After the upgrade process is complete, the auxiliary VPMS name is updated to VPMS2 in the VPMS web interface. You can change the name by selecting System Configuration > VPMS servers from the VPMS main menu.

Chapter 7: Optional: Updating the co-resident application server

Before you begin

- From the VPMS main menu, select **Real-Time Monitoring > Active Calls** and ensure that the applications hosted by the co-resident application server are not handling any active calls.
- Backup the required configuration files, data files, web applications and associated components, libraries and binaries from the directory where the application server is installed. For more information on the required backup files, contact the application developer.

Procedure

1. Log in to Linux on the Voice Portal server.

If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:

- Log in to the local Linux console as `sroot`.
- Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.

2. Enter the `/sbin/service appserver stop` command to stop the application server.
3. Navigate to the `Support/AppServer` directory under the Voice Portal installation directory by entering the `cd $AVAYA_HOME/Support/AppServer` command.
`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`.

Tip:

This script is also available in the `Support/AppServer` directory of the Voice Portal installation DVD.

4. Run the installation script by entering the `bash InstallAppServer.sh install_dir` command, where `install_dir` is the name of the directory in which you have installed the existing application server.
For example, to install the application server in the `/opt/AppServer` directory, you would enter `bash InstallAppServer.sh /opt/AppServer`.
5. Follow the prompts displayed by the script.

When the script has completed, the system displays the message `Application Server Installation complete`.

*** Note:**

The installation script also registers the application server as a Linux service so that it will be restarted whenever the server restarts.

6. Start the application server by entering the `/sbin/service appserver start` command.
7. Give the server time to start, and then check the server status by entering the following command:

```
/sbin/service appserver status.
```

The server should respond that the `tomcat` service is running.

8. If you want to administer the tomcat server from the Tomcat Manager Web interface, you need to add a tomcat user as specified in the *Adding Tomcat user accounts* section in the *Implementing Voice Portal on a single server guide*.

If you use the Avaya provided application installation script, the script creates the user accounts automatically.

*** Note:**

You can access the Tomcat Manager Web Interface from the System Management > Application Server menu in VPMS with the tomcat user account.

9. If you want to administer the server, open a web browser and go to `http://VP-server:7080/`, where `VP-server` is the hostname or IP address of the Voice Portal server.

Next steps

After you install the application server, you need to:

- Deploy the speech applications to the application server as described in your application server documentation.
- If required, delete the previous directory structure of the application server. If the new application server is installed in the same root directory as the old application server, make sure that you do not delete the new application server and the symlink named `tomcat`, which points to the new application server.

For example, if you update Tomcat-5.5.26 to Tomcat-6.0.18 in the `/opt/AppServer` directory, where `/opt/AppServer` is the root location of the old application server, you will see the following directory structure:

- `/opt/AppServer/apache-tomcat-5.5.26`
- `/opt/AppServer/apache-tomcat-6.0.18`
- `/opt/AppServer/tomcat`

If required, you should only delete `/opt/AppServer/apache-tomcat-5.5.26`.

Note:

The new version does not overwrite the existing directory structure of the application server. Instead, it creates a sub directory for the new version within the directory.

Optional: Updating the co-resident application server

Chapter 8: Configuring and testing an upgraded Voice Portal system

Voice Portal system configuration overview for a 4.1 or 5.0 system upgraded to 5.1

Step	Description
1	If the WebLM server for your installation does <i>not</i> reside on the same machine as the Voice Portal VPMS server, you need to upgrade the WebLM software to version 4.5.5 as described in the file <code>Support/WebLM/Licensing Installation Instructions.doc</code> on the Voice Portal installation DVD.
2	If you have a new license file, upgrade the 4.1 or 5.0 license as described in Upgrading the Voice Portal license on page 80.
3	Reconfigure the Avaya Service accounts as described in Avaya Services access changes between 4.1 or 5.0 and 5.1 on page 80.
4	If desired, add the Voice Portal test application as described in Adding the Voice Portal test application on page 82.
5	Test the basic system by placing a call to a custom speech application or to the sample application. For more information about the sample application, see Running the sample application on page 84.
6	If desired, test each MPP server individually as described in Testing an individual MPP on page 87.
7	If desired, connect the VPMS server to an external time source so that all servers in the Voice Portal system stay properly synchronized as described in External time sources on page 92.
8	The VPMS can accept input in non-English languages if desired. If you are using Red Hat Enterprise Linux, the languages need to be installed with the operating system. If you are using Avaya Enterprise Linux, you can configure it to accept input in Chinese, Japanese, or Korean as described in: <ul style="list-style-type: none">• Configuring Chinese on Avaya Enterprise Linux on page 95• Configuring Japanese on Avaya Enterprise Linux on page 96• Configuring Korean on Avaya Enterprise Linux on page 98

Step	Description
9	If you use Dialog Designer, Avaya strongly recommends that you upgrade the Dialog Designer software as well. However, if you want to stay with Dialog Designer 4.0, you must upgrade the Dialog Designer run time library to version 4.0.8 in order to support application logging in Voice Portal 5.1 . You can download the 4.0.8 patch from the Avaya online support Web site, http://support.avaya.com .

Avaya Services access changes between 4.1 or 5.0 and 5.1

The way an Avaya Services representative maintains the `MPPmap.data` file has changed. For details, see the *Avaya Services MPPmap.data file* topic in the *Administering Voice Portal* guide.

*** Note:**

If Avaya Services is going to access this system through a dial-up modem instead of using a Virtual Private Network (VPN), you may need to set the Remote Access Service (RAS) IP addresses on each server running the VPMS software if this was not already done in 4.1 or 5.0 . For details, see the *Setting the RAS IP address on the primary VPMS server* topic in the *Implementing Voice Portal on multiple servers* guide.

Upgrading the Voice Portal license

Before you begin

If the WebLM server for your installation does *not* reside on the same machine as the Voice Portal VPMS server, you need to upgrade the WebLM software to version 4.5.5 as described in the file `Support/WebLM/Licensing Installation Instructions.doc` on the Voice Portal installation DVD.

About this task

*** Note:**

If you have not received a license file from Avaya, contact your Avaya representative or Avaya Partner representative.

Procedure

1. Locate the email that contains the Voice Portal license file.
2. Detach the license file from the email and store the license file locally on either the WebLM server or on a computer that is accessible to the Voice Portal servers via a network connection.

For example, you can install the license file on any computer from which you can access the VPMS web interface.

3. Log in to the VPMS web interface using an account with the Administration user role.
4. From the VPMS main menu, select **Security > Licensing**.
The Licensing page opens, summarizing the license information (if available) and the location of the License server.
5. If the **License Server URL** field is blank or if the location of WebLM has changed, type the location of the license server in this field.
The URL must be in the format `https://WebLM-machine:port_num/WebLM/LicenseServer`, where *WebLM-machine* is the hostname or IP address of the WebLM server and *:port_num* is an optional parameter that consists of a colon followed by the port number for the WebLM server. If WebLM uses the default configuration, specify `:8443`. If no port number is specified, Voice Portal sets the default to `:443`.
6. Click **Verify**.
Your browser opens a separate window displaying the Avaya WebLM page, which contains a **License Administration** link.
7. Click **License Administration**. Your browser displays the Web License Manager Logon page.
8. If this is:
 - A new installation of WebLM:
 - i. Enter the default user name `admin`.
 - ii. Enter the default password `weblmadmin`.
 - iii. Press `Enter` or click the arrow button to log in.
 - iv. Complete the Change Password page, making sure that you type `weblmadmin` in the **Current Password** field.
 - v. Click **Submit**.
 - vi. On the Logon page, log in with your new password. Your browser displays the Install License page.
 - An existing installation of WebLM, type your existing user name and password and click **Continue**. Your browser displays the **Install License** page.
9. Under **Install License**, click **Browse** and locate the Voice Portal license file. After you have located the license file, click **Install**.
WebLM uploads the license file from your computer to the WebLM server and displays the message `License file installed successfully`.
10. Log out of the Web License Manager and close the Web License Manager page.

11. Return to the VPMS Licensing page and click **Apply**, then click **OK** to confirm the change.
 12. Verify that the new licensing information is correct.
-

Adding the Voice Portal test application

About this task

You can use the sample application that is installed with Voice Portal in order to test how this system handles telephony resource requests. If you run the sample application as a:

- VoiceXML application, Voice Portal uses the default CCXML page installed on the MPP server to provide basic CCXML controls. The VoiceXML application tests:
 - ASR resources.
 - TTS resources.
 - Bridge transfers.
 - Blind transfers.
 - Supervised transfers.
 - Several audio prompt formats.
 - Audio prompt recording and playback.
- CCXML application, Voice Portal uses a more advanced CCXML page that provides all the functionality of the VoiceXML application and allows you to test the following CCXML features:
 - Call conferencing.
 - Call classification.
 - Call merge for calls using a SIP connection.

In previous releases of Voice Portal, only the VoiceXML version of the application was available, and it was installed in a different directory on the MPP server. If you want to use the 5.1 VoiceXML or CCXML sample application, you must add it as described below. Otherwise, you can test the system using any of the custom speech applications currently installed on the Voice Portal system.

Procedure

1. From the VPMS main menu, select **System Configuration > Applications**.
2. On the Applications page, click **Add**.
The VPMS displays the Add Application page.
3. In the **Name** field, type the name you want to use to identify this application on the system. After you save the application, this name cannot be changed.

For example, type `Test_App`.

4. If you want to run the sample application as a:

Application type	Required parameters
VoiceXML application	In the MIME Type field, select VoiceXML . In the VoiceXML URL field, type <code>http://MPP_Identifier/mpp/misc/avptestapp/intro.vxml</code> , where <i>MPP_Identifier</i> is the hostname or IP address of any one of the MPP servers in the Voice Portal system.
CCXML application	In the MIME Type field, select CCXML . In the CCXML URL field, type <code>http://MPP_Identifier/mpp/misc/avptestapp/root.ccxml</code> , where <i>MPP_Identifier</i> is the hostname or IP address of any one of the MPP servers in the Voice Portal system.

5. Click **Verify** to make sure that the system can find this page.
If the VPMS can find the specified page, it displays that page in a separate browser window. If this check succeeds, continue with this procedure. Otherwise, correct the information in the **VoiceXML URL** or **CCXML URL** field and repeat this step until the page is found.
6. If you want to test ASR resources:
- Select the type of ASR server you want to use from the **ASR** drop-down list.
 - From the **Languages** list, select **English(US) en-us**.
7. If you want to test TTS resources:
- Select the type of TTS server you want to use from the **TTS** drop-down list.
 - From the **Voices** list, select one or more of the **English(US)** voices.
8. To associate one or more incoming numbers with this application, enter the appropriate information in the **Application Launch** group.
9. If you want to test transcriptions, go to the **Transcription** section of the **Reporting Parameters** group and set the desired transcription parameters.
10. When you have finished, go to the bottom of the page and click **Save**.
The VPMS redisplay the Applications page with the test application now listed in the table.
-

Running the sample application

Before you begin

Add the test application as described in the *Adding the Voice Portal test application* in the *Implementing Voice Portal on multiple servers* guide.

Procedure

1. Call the number you associated with the test application when you added it to Voice Portal.
2. When the system answers, press:
 - 1 to test Automatic Speech Recognition (ASR) resources
 - 2 to test Text-to-Speech (TTS) resources
 - 3 to test bridge transfers
 - 4 to test blind transfers
 - 5 to test supervised transfers
 - 6 to test the play an audio recording
3. If you are running the test application as a CCXML application, press:
 - 7 to test conferencing
 - 8 to test merge
 - 9 to test call classification
4. To exit the sample application, press 0.

Next steps

After you run the application, you can create reports about that application's performance and, if transcriptions are enabled, view the transcription data.

Configure and run the Outcall test application

You can use the Outcall test application to validate the Application Interface web service and the Voice Portal outcall functionality. Avaya supplies an installation script that automatically installs the Outcall test application when Voice Portal is installed. The application is installed in the following Voice Portal VPMS directory: `$AVAYA_HOME/Support/OutCallTest/AppIntfWS-Client`.

Related topics:

[Configuring Voice Portal for the Outcall test application](#) on page 85

[Running the Outcall test application](#) on page 85

Configuring Voice Portal for the Outcall test application

Before you begin

- Ensure that the Outcall test application is installed in the following Voice Portal VPMS directory: `$AVAYA_HOME/Support/OutCallTest/AppIntfWS-Client`.
- Verify that the hostnames are mapped to the IP addresses without a DNS, as described in the *Manually mapping hostnames to connect the primary VPMS with other servers* topic in the *Implementing Voice Portal on multiple servers* guide.

About this task

! Important:

This configuration is required only if you use Voice Portal to perform outcalls or the Application Interface web service to launch CCXML applications.

Procedure

1. Ensure that at least one of the ports in the system is configured to allow outbound calls. For more information on configuring ports, see the *H.323 tab on the VoIP Connections page field descriptions* section or the *SIP tab on the VoIP Connections page field descriptions* section of the *Administering Voice Portal* guide.
2. Ensure that a user name and password is configured in VPMS from the **System Configuration > VPMS Servers > VPMS Settings** page. This is the authentication information that is used for accessing the Application Interface web service.

Running the Outcall test application

Before you begin

Ensure that Voice Portal is configured for the Outcall test application as described in [Configuring Voice Portal for the Outcall test application](#) on page 85.

Procedure

1. Log in to Linux on the Voice Portal server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:

- Log in to the local Linux console as sroot.
- Or log in remotely as a non-root user and then change the user to sroot by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.

2. Navigate to the Outcall test application directory by entering the `cd $AVAYA_HOME/Support/OutcallTest/AppIntfWS-Client` command.
3. Enter the `./runclient.sh -n <outcall-username> -p <outcall password>` command to request the number of available outbound ports, where:
 - <outcall-username> is the user name assigned to the outcall user in the **System Configuration > VPMS Servers > VPMS Settings** page.
 - <outcall password> is the password assigned to the outcall user in the **System Configuration > VPMS Servers > VPMS Settings** page.
4. Verify that the Outcall test application displays a response that shows the total ports and unused ports available for outcalls.
For example:

```
Fri Oct 17 15:21:02 PDT 2008: TestClient: queryResources succeeded, TotalRes = 25, UnusedH323 = 15, UnusedSIP = 10
```

```
Fri Oct 17 15:21:02 PDT 2008: TestClient: exiting.
```
5. Enter the `./runclient.sh -R 1 -A VoicePortalTest -T <number-to-dial> -n <outcall-username> -p <outcall password>` command to initiate an outcall and launch the Voice Portal test application, where:
 - <number-to-dial> is the phone number to place the outcall to.
 - <outcall-username> is the user name assigned to the outcall user in the **System Configuration > VPMS Servers > VPMS Settings** page.
 - <outcall password> is the password assigned to the outcall user in the **System Configuration > VPMS Servers > VPMS Settings** page.
6. Verify that the dialed phone number rings.
7. Answer the phone and verify that the Voice Portal test application is handling the call.
 - ★ **Note:**
The application handles the call in the same way as when an actual user calls into the system.
8. Verify that the Outcall test application displays:
 - A response that shows the result of the LaunchVXML operation.
 - The total ports and the unused ports available for outcalls.

For example:

Fri Oct 17 15:24:58 PDT 2008: TestClient: launchVXML succeeded, SessionID = sys-mpp-2008291222458-2, TotalRes = 24, UnusedH323 = 12, UnusedSIP = 12

Fri Oct 17 15:24:58 PDT 2008: TestClient: exiting.

Testing an individual MPP

If your system consists of multiple MPP servers, you can test each one individually to make sure they are all running as expected.

Before you begin

Configure the system as described in [Voice Portal system configuration overview for a 4.1 or 5.0 system upgraded to 5.1](#) on page 79.

Procedure

1. From the VPMS main menu, select **System Management > MPP Manager**.
2. In the MPP server table on the MPP Manager page, click the Selection check box next to all MPP servers *except* the one you want to test.
3. Click the **Stop** button in the **State Commands** group and confirm your selection when prompted.
Voice Portal stops the selected the MPP servers. This process can take several minutes depending on how many servers there are in your system.
4. After a few minutes, click **Refresh** and verify that the **State** is **Stopped** for all MPP servers except the one you want to test.
5. Call the number you associated with the test application when adding the Voice Portal test application and use that application to verify the selected MPP. for more information, see *Adding the Voice Portal test application* topic in the *Implementing Voice Portal on multiple servers* guide.
6. When you are satisfied that the MPP works correctly, in the MPP server table on the MPP Manager page, click the Selection check box next to the MPP server you just tested.
7. Click the **Stop** button in the **State Commands** group and confirm your selection when prompted.
8. In the MPP server table, click the Selection check box next to the new MPP server that you want to test.
9. Click the **Start** button in the **State Commands** group and confirm your selection when prompted.

10. After a few minutes, click **Refresh** and verify that the **State** is **Stopped** for all MPP servers except the one you want to test.
11. Call the number you associated with the test application when adding the Voice Portal test application and use that application to verify the selected MPP. for more information, see *Adding the Voice Portal test application* topic in the *Implementing Voice Portal on multiple servers* guide.
12. Repeat steps 6-11 until each MPP server has been tested.
13. When you are finished testing the servers:
 - a. Click the Selection check box next to any MPP server whose state is **Stopped**.
 - b. Click the **Start** button in the **State Commands** group and confirm your selection when prompted.
 - c. After a few minutes, click **Refresh** and verify that the **State** is **Running** for all MPP servers.

Once the MPP servers start successfully, the basic Voice Portal system is now available.

Call activity reports

Call activity reports

The following reports track call activity in the Voice Portal system:

Call Summary report : Provides summary information about all calls handled by the specified MPPs and applications for the specified time period.

Call Detail report : Provides detailed information about all calls handled by the specified MPPs and applications for the specified time period.

Session Summary report : Provides summary information about call-handling sessions for the specified MPPs and applications for the specified time period.

Session Detail report: Provides detailed information about all call-handling sessions for the specified MPPs and applications for the specified time period. This report also provides access to any transcription information saved for the applications.

The amount of data available for these reports depends on the **Retention Period** setting for the **Call Data Record** and **Session Data** fields on the MPP Settings page.

For example, if this value is set to 14, you can enter a start date that is two weeks prior to the current date. If it is set to 7, you can only check for the previous week.

Creating a Call Detail report

About this task

The Call Detail report provides detailed information about all calls handled by the specified MPPs and applications for the specified time period.

Procedure

1. Log in to the VPMS web interface using an account with the Administration, Operations, or Maintenance user role.
2. From the VPMS main menu, select **.Reports > Standard**.
3. On the Standard Reports page, click **Call Detail** link under the **Report Name** column.
4. Optionally, click  next to **Call Detail** link to generate the report with the default selections of filters.
5. On the Call Detail page, enter the filter criteria that you want to use.

+ Tip:

Click the **more >>** link to display the rest of the optional filters.

6. Click **OK**.
7. On the Call Detail Report page, if you want to:
 - View the messages generated by one of the Dialog Designer applications listed in the table, click the appropriate name in the **Application** column. The VPMS displays the Application Detail Report page detailing the messages generated during the associated call session.
 - Get more information about how a call ended, hover the mouse over a value in the **End Type** column. Information about how a call ended is displayed in a pop-up window.
 - View details about the session that handled the call, click the **View Session Details** icon at the end of the appropriate row. The VPMS displays the Session Details page.

Creating a Call Summary report

About this task

The Call Summary report provides summary information about all calls based on the specified filtering options.

Procedure

1. Log in to the VPMS web interface using an account with the Administration, Operations, or Maintenance user role.
2. From the VPMS main menu, select **Reports > Standard**.
3. On the Standard Reports page, click **Call Summary** link under the **Report Name** column.
4. Optionally, click next to **Call Summary** link to generate the report with the default selections of filters.
5. On the Call Summary page, enter the filter criteria that you want to use.

+ Tip:

Click the **more >>** link to display the rest of the optional filters.

6. Click **OK**.
The VPMS displays the Call Summary Report page.
-

Creating a Session Detail report

About this task

The Session Detail report provides detailed information about the call-handling sessions for the specified Media Processing Platform (MPP) servers and applications for the specified time period. A session starts with the initial inbound or outbound call and ends with the termination of the CCXML page that resulted from the call.

Procedure

1. Log in to the VPMS web interface using an account with the Administration, Operations, or Maintenance user role.
2. From the VPMS main menu, select **Reports > Standard**.
3. On the Standard Reports page, click **Session Detail** link under the **Report Name** column.
4. Optionally, click  next to **Session Detail** link to generate the report with the default selections of filters.

5. On the Session Detail (Filters) page, enter the filter criteria that you want to use.

+ Tip:

Click the **more >>** link to display the rest of the optional filters.

6. Click **OK**.
The VPMS displays the Session Detail Report page.
 7. If you want to view more information about a particular session, click the **View Session Details** icon at the end of the appropriate row.
Voice Portal displays the Session Details page.
-

Creating a Session Summary report

About this task

The Session Summary report provides summary information about call handling sessions for the specified Media Processing Platform (MPP) servers and applications for the specified time period. A session starts with the initial inbound or outbound call and ends with the termination of the CCXML or VoiceXML page that resulted from the call.

Procedure

1. Log in to the VPMS web interface using an account with the Administration, Operations, or Maintenance user role.
2. From the VPMS main menu, select **Reports > Standard**.
3. Optionally, click  next to **Session Summary** link to generate the report with the default selections of filters.
4. On the Standard Reports page, click **Session Summary** link under the **Report Name** column.
5. On the Session Summary (Filters) page, enter the filter criteria that you want to use.

+ Tip:

Click the **more >>** link to display the rest of the optional filters.

6. Click **OK**.
The VPMS displays the Session Summary Report page.
-

Viewing application transcription data

Procedure

1. Log in to the VPMS web interface using an account with the Administration, Operations, or Maintenance user role.
2. From the VPMS main menu, select **Reports > Session Detail**.
3. On the Session Detail page, the **more >>** link to display the rest of the optional filters.
4. Enter any criteria you want to use for the report.

+ Tip:

If you want to limit the report to those sessions that have transcription information, select **Yes** in the **Session Transcription** field.

5. When you are finished, click **OK**.
The VPMS displays the Session Detail Report page.
 6. Locate the particular session for which you want to view the transcription data and click the **View Session Details** icon at the end of the appropriate row.
Voice Portal displays the Session Details page, which shows the both session and transcription data grouped by information category.
 7. If you want to view the transcription information in XML format, click the **Export** link in the **Session Transcription** group.
-

External time sources

To make sure that the reporting and logging activities across all servers in your network are synchronized to the same time, Avaya strongly recommends that you use the same external time source for:

- The server running the primary VPMS software
- Any application servers running on dedicated machines
- All available speech servers
- All PBX switches

You can use a corporate or a public time server as the external time source. If you intend to use a public time source, choose an appropriate one for your needs. You can find public Network Time Protocol (NTP) servers at <http://www.ntp.isc.org/bin/view/Servers/WebHome>.

*** Note:**

Avaya only provides guidelines for public time servers. It is your responsibility to make sure that the servers you choose are accessible through your corporate firewall. In addition, you should be aware that some public time servers either limit the amount of access a particular site has or charge for their services. If you select a public time server, make sure that it fits all of your needs before you change the `ntp.conf` file on the primary VPMS server.

Related topics:

[Configuring the primary VPMS server to point to an external time source](#) on page 93

Configuring the primary VPMS server to point to an external time source

Before you begin

Make sure you have the server names or IP addresses of one or two appropriate external time sources. For more information, see [External time sources](#) on page 92.

Procedure

1. Log in to Linux on the Voice Portal primary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.
2. Open the `/etc/ntp.conf` file in an ASCII text editor.
3. Edit the `/etc/ntp.conf` file to add the server you want to use as the primary external time source and an explicit declaration to set the local clock. If desired, you can also add a server to use as the secondary time source if the primary source cannot be found. The format is:

```
server xxxx           // primary external time server
server yyyy           // optional secondary external time server
server 127.127.1.0    // set local clock to time received from external
server
fudge 127.127.1.0 stratum 10
driftfile /var/lib/ntp/drift
authenticate no
```

Where `xxxx` and `yyyy` are either server names or IP addresses of the external time servers you want to use.

*** Note:**

The typical settings for `driftfile` and `authenticate` are shown above. If the `ntp.conf` file at your site has different settings, check with your system administrator before you change them.

The following uses the external time sources `clock.sjc.he.net` and `ntp-1.cede.psu.edu`:

```
server clock.sjc.he.net           // primary external time server
restrict clock.sjc.he.net nomodify
server ntp-1.cede.psu.edu         // secondary time server
restrict ntp-1.cede.psu.edu nomodify
server 127.127.1.0                // set local clock
fudge 127.127.1.0 stratum 10
driftfile /var/lib/ntp/drift
authenticate no
```

4. Save and close the file.
5. Using a text editor of your choice, open the `/etc/ntp/step-tickers` file. This file is used for initial time setup on the VPMS.
6. Add a line in the file to specify the time source server names or IP addresses. For example, if you are using the servers `clock.sjc.he.net` and `ntp-1.cede.psu.edu`, you would add the following lines:

```
clock.sjc.he.net
ntp-1.cede.psu.edu
```

7. Save and close the file.
8. Restart the `ntpd` daemon by entering the `/sbin/service ntpd restart` command.

The system returns:

```
Shutting down ntpd: [OK] Synchronizing with time server [OK] Starting ntpd:
[OK]
```

Non-English language support

Non-English character support on the VPMS web pages

While the VPMS Web pages are written in English, you can use non-English characters when entering field values if you have the appropriate languages installed on the VPMS server. If you are using:

- Red Hat Enterprise Linux, all you need to do is select the appropriate languages while installing the operating system.
- Avaya Enterprise Linux, Avaya provides a font file for Chinese, Japanese, and Korean.

Related topics:

[Configuring Chinese on Avaya Enterprise Linux](#) on page 95

[Configuring Japanese on Avaya Enterprise Linux](#) on page 96

[Configuring Korean on Avaya Enterprise Linux](#) on page 98

Configuring Chinese on Avaya Enterprise Linux

Procedure

1. Log in to Linux on the Voice Portal primary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.

2. Navigate to the Linux font directory by entering the `cd /usr/share/fonts` command.

`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`.

*** Note:**

If the font directory does not already exist, create it by entering the `mkdir /usr/share/fonts` command, then navigate to the directory you just created.

3. Copy the Chinese font file to the font directory by entering the `cp $AVAYA_HOME/Support/fonts/zh_CN/TTzh_CN.tar .` command.

`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`.

! Important:

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

4. Extract the font file by entering the `tar -xvf TTzh_CN.tar` command.
5. Copy the system language file to the Linux system configuration directory by entering the `cp $AVAYA_HOME /Support/fonts/zh_CN /i18n /etc/sysconfig/` command.
6. Navigate to the Java fonts directory by entering the `cd $JAVA_HOME/jre/lib/fonts` command.
7. Create the fallback directory by entering the `mkdir fallback` command.
8. Navigate to the fallback directory by entering the `cd fallback` command.
9. Copy the Chinese font files to the fallback directory by entering the `cp /usr/share/fonts/zh_CN/TrueType/*.ttf .` command.

! Important:

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

10. Reboot the VPMS server machine by entering the `reboot` command.

Configuring Japanese on Avaya Enterprise Linux

Procedure

1. Log in to Linux on the Voice Portal primary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:

- Log in to the local Linux console as `sroot`.
- Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.

2. Navigate to the Linux font directory by entering the `cd /usr/share/fonts` command.

`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`.

*** Note:**

If the font directory does not already exist, create it by entering the `mkdir /usr/share/fonts` command, then navigate to the directory you just created.

3. Copy the Japanese font file to the font directory by entering the `cp $AVAYA_HOME/Support/fonts/ja/TTja.tar .` command.

`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`.

! Important:

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

4. Extract the font file by entering the `tar -xvf TTja.tar` command.
5. Copy the system language file to the Linux system configuration directory by entering the `cp $AVAYA_HOME /Support/fonts/ja /i18n /etc/sysconfig/` command.
6. Navigate to the Java fonts directory by entering the `cd $JAVA_HOME/jre/lib/fonts` command.
7. Create the fallback directory by entering the `mkdir fallback` command.
8. Navigate to the fallback directory by entering the `cd fallback` command.
9. Copy the Japanese font files to the fallback directory by entering the `cp /usr/share/fonts/ja/TrueType/*.ttf .` command.

! Important:

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

10. Reboot the VPMS server machine by entering the `reboot` command.
-

Configuring Korean on Avaya Enterprise Linux

Procedure

1. Log in to Linux on the Voice Portal primary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.

2. Navigate to the Linux font directory by entering the `cd /usr/share/fonts` command.

`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`.

*** Note:**

If the font directory does not already exist, create it by entering the `mkdir /usr/share/fonts` command, then navigate to the directory you just created.

3. Copy the Korean font file to the font directory by entering the `cp $AVAYA_HOME/Support/fonts/ko/TTko.tar .` command.

`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`.

! Important:

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

4. Extract the font file by entering the `tar -xvf TTko.tar` command.
5. Copy the system language file to the Linux system configuration directory by entering the `cp $AVAYA_HOME /Support/fonts/ko /i18n /etc/sysconfig/` command.

6. Navigate to the Java fonts directory by entering the `cd $JAVA_HOME/jre/lib/fonts` command.
7. Create the fallback directory by entering the `mkdir fallback` command.
8. Navigate to the fallback directory by entering the `cd fallback` command.
9. Copy the Korean font files to the fallback directory by entering the `cp /usr/share/fonts/ko/TrueType/*.ttf .` command.

! Important:

Make sure you include the `.` (period) at the end of the `cp` command to indicate that you want Linux to copy the files to the current directory.

10. Reboot the VPMS server machine by entering the `reboot` command.
-

Chapter 9: Troubleshooting upgrade issues

Upgrade installation log files

The upgrade installation log files contain detailed information about the upgrade installation process.

Voice Portal creates several log files during the upgrade process. If the upgrade process:

- Completes successfully, Voice Portal copies the log files to `$AVAYA_HOME/logs/install_date`, where `$AVAYA_HOME` is the environment variable pointing to the installation path you specified on the Installation Destination installation screen and `date` is the date the installation process was run. The default installation directory is `/opt/Avaya/VoicePortal`.
- Does not complete successfully, Voice Portal copies the log files to `/opt/_Avaya_Voice-Portal_temp`.

General installation log files

Log filename	Description
<code>VP_Install.log</code>	Main log containing output from all VPMS and MPP installation processes. This is the first log file you should consult if you need to troubleshoot an installation issue.
<code>ISLog.log</code>	InstallShield generated log containing internal data.
<code>ISOpt.log</code>	InstallShield generated log containing internal data.
<code>installSequence.log</code>	Subset of <code>ISLog.log</code>
<code>prereqchecker.log</code>	Detailed information from the Prerequisite Checker.
<code>prereqchecker.out.log</code>	Results from the Prerequisite Checker.
<code>prereqchecker.err.log</code>	Any internal errors encountered by the Prerequisite Checker.
<code>prereqinstaller.log</code>	Detailed information from the Prerequisite Installer.
<code>prereqinstaller.out.log</code>	Results from the Prerequisite Installer.

Log filename	Description
prereqinstaller.err .log	Any internal errors encountered by the Prerequisite Installer.
SetIAVersion<component>.log	Version history of the Voice Portal components installed. The component can be the VPMS, MPP or Docs.

MPP-specific installation log files

Log filename	Description
av-mpp- <buildnumber>- Install-<date>.log	mppinstall.sh script output.
av-mpp- <buildnumber>- Install-rpm- <date>.log	Output from the Red Hat Package Manager (RPM) during the MPP software installation.
mpp.cert.gen.out.log	Results from the security certificate generation process.
mpp.cert.gen.err.log	Any internal errors generated from the certificate generation process.
mpp.cert.imp.out.log	Results from the security certificate import process.
mpp.cert.imp.err.log	Any internal errors generated from the certificate import process.
mpp.key.import.out .log	Results from the public key import process from the VPMS.
mpp.key.import.err .log	Any internal errors generated from the public key import process from the VPMS.

VPMS-specific installation log files

Log filename	Description
vpms.cert.gen.out.log	Results from the security certificate generation process.
vpms.cert.gen.err.log	Any internal errors generated from the certificate generation process.
vpms.cert.imp.out.log	Results from the security certificate import process.

Log filename	Description
vpms.cert.imp.err.log	Any internal errors generated from the certificate import process.

Fixing Prerequisite Checker failures

Solution

Procedure

1. Examine the Prerequisite Checker pages to determine exactly what problems were encountered.

+ Tip:

If the error is `UnknownHostException: localhost`, see [Prerequisite Checker fails with UnknownHostException:localhost](#) on page 103.

2. Upgrade your system to meet the minimum hardware and operating system requirements for Voice Portal, as described in the *Minimum server machine hardware requirements* topic of the *Planning for Voice Portal* guide.

Next steps

After you upgrade your system, you can resume the Voice Portal installation script at the current point as long as you did *not* exit the installation script or restart your Voice Portal server. If you want to:

- Resume the script, type 2 and press `Enter` until you go past the first Prerequisite Status page. Voice Portal reruns the Prerequisite Checker and you can then continue with the installation instructions.
- Quit the installation script, type 3 and press `Enter`, then type 1 and press `Enter` to confirm.

Prerequisite Checker fails with `UnknownHostException:localhost`

If you receive an error during the prerequisite check for the `localhost`, or a `faultString` reporting `UnknownHostException:localhost` during Voice Portal installation or upgrade, it is likely that the `/etc/hosts` file of the server is not properly set up. As a result, the installation script cannot deploy certain Voice Portal components correctly.

The `/etc/hosts` file is a simple text file that associates IP addresses with one or more hostnames. The format is one line per IP address, with the associated hostnames separated by white space (spaces or tabs).

Solution

Procedure

1. Log into Linux on the VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Back up the original file prior to editing it by entering the `cp /etc/hosts /etc/hosts.bak` command.
3. With the ASCII text editor of your choice, open the `/etc/hosts` file.
4. Verify that:
 - The first line contains `127.0.0.1 localhost localhost.localdomain`, with the IP address and hostnames separated by spaces or tabs
 - If the file has other entries, each entry must be in the form `IP_address hostname1 hostname2...`, where `IP_address` is the IP address of a server in the Voice Portal system and `hostname1 hostname2...` is one or more hostnames, separated by tabs or spaces, to associate with the IP address.

Example

The following shows a properly-formatted `/etc/hosts` file with two MPP servers:

```
127.0.0.1      localhost      localhost.localdomain      #Required first line
123.123.123.122  vpms_server_hostname      #Primary VPMS server IP
addy and hostname
123.123.123.123  first_mpp      first_mpp.domainname.com   #First MPP server
123.123.123.124  second_mpp     second_mpp.domainname.com  #Second MPP server
```

Fixing Prerequisite Installer failures

The Prerequisite Installer installs additional software required for Voice Portal such as the Apache Web Server, Tomcat, and php. The majority of this software comes from RPMs installed by the Prerequisite Installer.

These failures are generally the result of installing Voice Portal on a server running a:

- More recent version of Red Hat Enterprise Linux than Red Hat Enterprise Linux Server Release 5.6 or later. Although Voice Portal does support updates to Red Hat Enterprise Linux, some of system RPMs in the newer updates may conflict with some of the RPMs that Voice Portal is attempting to install.
- Customized Red Hat Enterprise Linux installation that is missing an RPM required by one of the Voice Portal prerequisite RPMs.

Solution

Procedure

1. Examine the Prerequisite Installer report to determine exactly what problems were encountered and what log file, if any, is available for more information.
For an example of one such error, see [Sample Prerequisite Installer error message](#) on page 106.
 2. If you are using Red Hat Enterprise Linux Server Release 5.6 or later and the Prerequisite Installer fails for any of the php RPMs, install the following RPMs from your Red Hat installation CD-ROM or the Red Hat support website:
 - `php-domxml`
 - `php`
 - `php-pear`
 3. If that does not solve the problem, see [Identifying RPM issues](#) on page 107 for more information.
-

Next steps

After you fix any prerequisite software issues, you can resume the Voice Portal installation script at the current point as long as you did *not* exit the installation script or restart your Voice Portal server. If you want to:

- Resume the script, type 2 and press `Enter` until you go past the first Installation Status page. Voice Portal reruns the Prerequisite Installer and you can then continue with the installation instructions.
- Quit the installation script, type 3 and press `Enter`, then type 1 and press `Enter` to confirm.

Sample Prerequisite Installer error message

The following is an example of the error messages produced by the Prerequisite Installer when the installer encounters a more recent version of the JDK than Voice Portal was about to install. You can use this example as a guideline for solving any Prerequisite Installer issues you encounter.

```

=====
Installation Status
=====
Third-Party Software===== | -
Network Time Protocol (NTP)-----Already Completed | - GNU
MP (Arbitrary Precision Library)-----Already Completed | - XML
Library-----Already Completed | -
Internationalized Domain Name Support Library-----Already Completed | - cURL
(File Download Utility)-----Already Completed | - GnuPG
Common Error Library-----Already Completed | - General
Purpose Crypto Library-----Already Completed | - XML File
Transform Library-----Already Completed | -
ActiveMQ-----Already Completed | -
TrueType Font Rendering Engine-----Already Completed | - Font
Configuration and Customization Library-----Already Completed | - Password
quality-control module-----Success | - Shared
Library for X Window System-----Already Completed | - Java(TM) 2
SDK Standard Edition-----Failed

```

The following line indicates the start of the error information:

```

| | Error: RPM Installation failed with the following detail. | |
===== | | jdk-1.5.0_12-fcs.i586.rpm install | | -
original directory='/mnt/cdrom/external' | | - RPM install directory='/mnt/cdrom/
external/J2SDK' | | - RPM name = 'jdk-1.5.0_12-fcs.i586.rpm' | | - LOG file = '/tmp/
Avaya/install-rpm.log' | | ----- | | >>>>>Starting
RPM installation: 'rpm -U --replacepkgs jdk-1.5.0_12- | | fcs.i586.rpm'

```

The following two lines show the installed JDK version and why it does not match the version Voice Portal needs to install:

```
| | package jdk-1.5.0_14-fcs (which is newer than jdk-1.5.0_12-fcs) is | | Already
Completed | | >>>>>RPM Installation failed: Exit Code: 2 | |
=====
```

The following three lines restate the error that the version found was not the version expected:

```
| | RPM installation check: Expecting 'Found' = 'Expected'. | | Expected:
jdk-1.6.0_07-fcs.i586.rpm | | Found: jdk-1.5.0_14-fcs Out of Date | | Non-compliant
Java SDK found. Enter "rpm -e j2sdk" in the command line | | to uninstall the SDK,
then run the prerequisite installer again.
=====
Install aborted due to installation failure.
=====
```

To resolve this issue:

1. If you want to verify that this version is actually installed, enter the `rpm -q jdk` command.
2. Before you remove the more recent RPM version that you have installed, check the Avaya online support Web site, <http://support.avaya.com>, to make sure that a solution to this issue has not been posted. If no solution is available:
 - a. Look at the RPM installation check line, which is the third highlighted line in the example. In this case, the Prerequisite Installer expected that the version it found installed on the system would be identical to the version it was installing. The solution is to remove the more recent version and let the Prerequisite Installer install the JDK version Voice Portal requires.
 - b. To remove the installed JDK version, enter the `rpm -e jdk` command.
 - c. Once the JDK version has been removed, return to the Voice Portal installation script and resume the installation.

Identifying RPM issues

If you have installed Red Hat Enterprise Linux Server Release 5.6 or later, you should also verify that the correct RPMs are installed on your system. Voice Portal requires Red Hat Enterprise Linux Server Release 5.6 or later. If you registered with Red Hat to automatically receive updates, there might be a conflict with one or more of the updated RPMs.

The Voice Portal installation included a file called `ES4-Update5.txt` that lists the RPMs and version numbers in Red Hat Enterprise Linux Server Release 5.6 or later. This file is installed in `$AVAYA_HOME/Support/RedHat-RPM-Lists` and on the Voice Portal installation DVD under `Support/RedHat-RPM-Lists`.

You can generate a listing of the RPMs that are currently installed on your system and then compare the RPMs you have installed against what has been verified. Other versions than the ones verified might cause your Voice Portal system not to operate.

*** Note:**

If the list of RPMs installed on your system does not exactly match the list of RPMs in `ES5.2.txt`, it does not necessarily mean there is a problem. However, if you are still experiencing problems after you have reviewed the installation log files and initial configuration settings, you might bring your system inline with the verified list of RPMs to see if that solves the problem.

Solution

Procedure

1. On each Voice Portal server, log in to Linux as root.
2. Enter the `cat /etc/issue` command.
3. Verify that the version is Red Hat Enterprise Linux Server Release 5.6 or later.
4. To get a list of the RPMs installed on your system and redirect the list to a file, enter the `rpm -qa | sort > /tmp/rpmlist.txt` command.
When the system has finished generating `rpmlist.txt`, it stores the file in the `/tmp` directory.
5. To find any differences between the RPMs currently installed and the RPMs that are required for Voice Portal, enter the `diff /tmp/rpmlist.txt $AVAYA_HOME/Support/RedHat-RPM-Lists/RHEL5.2.txt` command.
6. To display the differences file, enter the `cat /tmp/diffrpms.txt` command.
7. Review the reported differences and bring the installed RPMs inline with the ones listed in `ES4-Update5.txt`.
8. If you need the correct version of an RPM, download it from Red Hat website, <http://www.redhat.com>.
9. Once you have identified the problems and downloaded any required RPMs:
 - To upgrade an RPM to a different version, enter the `rpm -u path/rpmname` command, where `path/rpmname` is the complete filename and path of the RPM you are updating.
 - To install an RPM, enter the `rpm -i path/rpmname` command, where `path/rpmname` is the complete filename and path of the RPM you are installing.
 - To remove an RPM, enter the `rpm -e rpmname` command, where `rpmname` is the name of the RPM you are removing.

! Important:

Do not specify a file path when you remove an RPM.

Installation Progress Bar stops at 25% completed

If the **Installation Progress Bar** does not advance beyond 25% completed and the Post Installation Summary screen states that no summary information could be found, then InstallShield has encountered an internal error and the Voice Portal installation or upgrade was not successful.

This error condition is shown in the following example:

```
Installation Progress Note: The last portion of the install might take several
minutes to complete. Please be patient and wait for the Post Installation Summary to
be displayed. Installing Voice Portal. Please wait...
```

```
|-----|-----|-----|-----| 0% 25% 50% 75% 100% |||||
```

```
-----
Post Installation Summary The Voice Portal installation has completed. Review the
following information. If there are errors or warnings, then please review the
installation logs. No summary information could be found; please check the log files
for more information Press 3 to Finish or 5 to Redisplay [3] java.io.IOException:
java.io.IOException: /opt/_Avaya_Voice-Portal_temp/MoveLogFiles: not found at
java.lang.UNIXProcess.<init>(UNIXProcess.java:143) at
java.lang.Runtime.execInternal(Native Method) at
java.lang.Runtime.exec(Runtime.java:566) at
com.installshield.util.Java2ProcessExec.processExec(Unknown Source) at
com.installshield.util.ProcessExec.executeProcess(Unknown Source) at
com.installshield.wizardx.actions.ExecWizardAction.executeProcess(Unknown Source)
at com.installshield.wizardx.actions.ExecWizardAction.run(Unknown Source) at
java.lang.Thread.run(Thread.java:534)
```

In this case, no Voice Portal software was actually installed or upgraded.

Solution

Procedure

1. Type 3 to finish the aborted installation or upgrade process.
 2. Return to the beginning of the installation or upgrade procedure you were following and rerun the Voice Portal installation script `installvp`.
-

VPMS upgrade finishes with an Axis error

A known issue with Axis sometimes affects the VPMS software upgrade. If this problem occurs, the VPMS software installer displays either `Exception: AxisFault` or `Warning: Axis`

may not be accepting new applications properly, as shown in the following Post Installation Summary screens.

First sample Post Installation Summary screen:

```
Installing VPMS... Possible Error during operation: Register VAppLog with Axis -
Start error description - Exception: AxisFault faultCode: {http://
schemas.xmlsoap.org/soap/envelope/}Server.generalException faultSubcode:
faultString: Couldn't find an appropriate operation for XML QName {http://
xml.apache.org/axis/wsdd/}deployment faultActor: faultNode: faultDetail: {http://
xml.apache.org/axis/}hostname:takuma.avaya.com - End error description - Possible
Error during operation: Deploy Core Services (Part 2/2) - Start error description -
Error: Could not deploy network log server: 255 Error: Could not deploy alarm server:
255 - End error description -
```

Second sample Post Installation Summary screen showing the Warning: Axis may not be accepting new applications properly message:

```
Installing Documentation... ..done installing Documentation Installing VPMS...
Possible Error during operation: Start Tomcat - Start error description - Warning:
Axis may not be accepting new applications properly - End error description - ..done
installing VPMS Installing MPP... ..done installing MPP
```

Solution

Procedure

1. Type 3 to finish the incomplete installation process.
2. Return to the beginning of the installation procedure you were following and rerun the Voice Portal installation script `installvp`.

Upgrade hangs at Post Installation Summary screen

A known InstallShield issue sometimes causes the software upgrade to hang, especially if there is a long delay between steps.

In this case, the Post Installation Summary screen displays:

```
Post Installation Summary The Voice Portal installation has completed. Review the
following information. If there are errors or warnings, then please review the
installation logs. Installing Documentation... Press 3 to Finish or 5 to Redisplay
[3]
```

Solution

Procedure

Restart the installation script from the beginning, making sure that you do not pause too long between steps.

The Post Installation Summary screen should display messages similar to the following:

```
Post Installation Summary The Voice Portal installation has completed. Review
the following information. If there are errors or warnings, then please review
the installation logs. Installing Documentation... ..done installing
Documentation Installing VPMS... ..done installing VPMS Installing
MPP... ..done installing MPP Press 3 to Finish or 5 to Redisplay [3] Moving
installation logs to: /opt/Avaya/VoicePortal/logs/install_2008-01-21.000
[sroot@vpms-server cdrom]# reboot
```

MPP upgrade is hanging

Any hung or stale NFS mount points can cause RPM installations to hang while upgrading the Voice Portal software.

Solution

Procedure

1. On the MPP server, enter the `df` command.
2. If the server:
 - Responds to this command, then all NFS mount points are operational. Make sure that the VPMS and MPP clocks are properly synchronized as described in [Time synchronization problems](#) on page 115.
 - Does not respond to the command, continue with this procedure.
3. Enter the `umount -l` command to unmount any file systems.
4. If not already done, exit the Voice Portal installation script.
5. If the automount feature is enabled, disable it by commenting out the appropriate lines in the server's `/etc/fstab` file.
6. Reboot the server.

7. Restart the installation script from the beginning.

MPP could not import VPMS key

The VPMS upgrades correctly but the MPP upgrade fails with the error:

```
Failed to import key from specified host. Please check the following: URL: http://  
vp-management.research.avayalabs.com:80/cert.pem
```

The most common cause of this error is that the `iptables` firewall is enabled on the MPP server. If this is the case, disable it as described below. If not, contact Avaya technical support.

Solution

Procedure

1. Log in to Linux on the Voice Portal primary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Determine whether the `iptables` firewall is active by entering the `service iptables status` command.
3. If the firewall is:
 - Running, disable it by entering the `chkconfig --del iptables` command and proceed to Step 4.
 - Not running, try to manually download the certificate by entering the `curl http://VPMS-server/cert.pem` command, where `VPMS-server` is the domain name or IP address of the system where the primary VPMS software is installed.

If the command displays the lines `-----BEGIN CERTIFICATE-----` and `-----END CERTIFICATE-----`, regardless of what information is displayed between those lines, continue with this procedure. Otherwise, contact your Avaya Services representative.

4. Restart the `vpms` service by entering the `/sbin/service vpms restart` command.
You will see a series of messages as the command shuts down several VPMS components. When the command has successfully stopped all relevant components, it displays the message: `VPMS Shutdown Status: [OK]`.

The command immediately starts the same components. When it has finished, it displays the message: `VPMS Start Status: [OK]`.
5. Verify that you can log in to the VPMS web interface as described in the *Logging in to the Voice Portal web interface* topic in the *Administering Voice Portal* guide.
6. Return to the MPP server and either continue the current installation or restart the installation process.

Invalid password for database user

The VPMS auto upgrade fails with the invalid password error.

The most common cause of this error is that the password could not be loaded from configuration or the password validation failed.

Solution

1. Reboot the server
2. Restart the upgrade script by selecting the Interactive VPMS upgrade option. The interactive upgrade allows you to create a new user account and password to access the database.

Lost PostgreSQL user account passwords

Before you begin

If you have just installed the VPMS software and are still logged into the VPMS server, make sure that the environment variables are properly loaded.

About this task

Voice Portal uses the following PostgreSQL user accounts:

Default account name	Description
postgres	The VPMS server uses this account to log in to the Voice Portal database to store and retrieve data, and to install new updates or

Default account name	Description
	<p>patches. The database administrator can use this account to log into the local <code>VoicePortal</code> database and perform database administration tasks.</p> <p>You can set the password for this account, but you cannot add other accounts of this type, delete this account, or change the account name.</p> <p>! Important: Contact your Avaya Services representative if you need to modify the local <code>VoicePortal</code> database as the database contains critical configuration information used to run the system.</p>
report	<p>This user account can only read those tables in the Voice Portal database that store report data. Speech application developers can use this account to login to the database to create custom reports using any SQL-enabled report generation tool.</p> <p>You can have any number of accounts of this type with any account names you want to use.</p>
reportwriter	<p>This user account can only change the data in the tables that store report data in the Voice Portal database on the auxiliary VPMS server.</p> <p>You can have any number of accounts of this type with any account names you want to use.</p> <p>! Important: Contact your Avaya Services representative if you need to modify the tables that store report data in the local <code>VoicePortal</code> database.</p>
vpcommon	<p>This account allows the auxiliary VPMS server limited access the main Voice Portal database, and it is required if you plan to configure a auxiliary VPMS server.</p> <p>You can delete this account or set the password for it, but you cannot add other accounts of this type or change the account name.</p>

The `SetDbpassword` script allows you to change all account passwords and add and delete all accounts except for postgres, which cannot be deleted.

*** Note:**

This script replaces the `UpdateDbPassword` script that was included with Voice Portal 4.0 or 4.1.

Procedure

1. Log in to Linux on the primary or auxiliary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.

- Or log in remotely as a non-root user and then change the user to root by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.

2. Navigate to the `Support/VP-Tools/SetDbpassword` directory by entering the `cd $AVAYA_HOME/Support/VP-Tools/SetDbpassword/SetDbpassword.sh` command.

`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`

+ Tip:

This script is also available in the `Support/VP-Tools` directory of the Voice Portal installation DVD.

3. Enter the `bash SetDbpassword.sh update -u username -p password` command, where:
 - `username` is the name of the user account whose password you want to change
 - `password` is the new password you want to use for this account.

For example, to set the postgres password to `NewPostgres1`, you would enter the `bash SetDbpassword.sh update -u postgres -p NewPostgres1` command.

If you change the password for the postgres account, Voice Portal stops and then restarts the VPMS service.

Next steps

If you change the password for the `vpcommon` account on the primary VPMS server, you must also change the password on the auxiliary VPMS server.

Time synchronization problems

Voice Portal uses Network Time Protocol (NTP) to control and synchronize the clocks when the VPMS and MPP software is running on different servers. The dedicated MPP servers and the optional auxiliary VPMS server point to the primary VPMS server as the reference clock.

To troubleshoot synchronization errors, perform the following procedures in the order given, advancing to the next procedure only if the problem continues to persist.

Determine whether the servers are synchronized

Procedure

1. Simultaneously log in to Linux on the VPMS server, each MPP server, and, if configured, the optional auxiliary VPMS server.
 2. On the each server, at roughly at the same time enter the `date` command.
 3. Verify that each MPP server and the optional auxiliary VPMS server are synchronized with the primary VPMS server.
 4. If you find one or more unsynchronized servers, follow the procedure [Verify that the NTP service is operating properly](#) on page 116 below.
-

Verify that the NTP service is operating properly

Procedure

1. If necessary, log in to Linux on each unsynchronized MPP or auxiliary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
2. Enter the `/sbin/service ntpd status` command.
If the server returns a message stating that the NTP service is running, continue with this procedure. Otherwise, go to [Synchronizing the MPP or auxiliary VPMS clock with the primary VPMS](#) on page 117.
3. To verify that the NTP service is operating properly, enter the `/usr/sbin/ntpq -np` command.
4. A status message similar to the following is displayed:

```
remote refid st t when poll reach delay offset jitter
=====
===== 123.123.123.123 LOCAL(0) 6 u 23 64 1 0.354 0.361 0.004
```

If the `jitter` value displayed is 4000, go to [Synchronizing the MPP or auxiliary VPMS clock with the primary VPMS](#) on page 117.

*** Note:**

The remote IP address displayed should point to the primary VPMS server.

Synchronizing the MPP or auxiliary VPMS clock with the primary VPMS

Procedure

1. If you are working with an MPP server and the MPP software is running, stop it using the VPMS web interface:
 - a. Log in to the VPMS web interface using an account with the Administration or Operations user role.
 - b. From the VPMS main menu, select **System Management > MPP Manager**.
 - c. On the MPP Manager page, click the selection box associated with the MPP that you want to stop, then click **Stop** in the **State Commands** group.
 - d. Confirm the action when requested.
 - e. Wait until the operational state becomes Stopped.
To check this, click **Refresh** and look at the **State** field.

*** Note:**

The operational state changes when the last active call completes or the grace period expires, whichever comes first.

2. If necessary, log in to Linux on the server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.
3. If you are working with:
 - An MPP server, stop the `mpp` process by entering the `/sbin/service mpp stop` command.
 - The auxiliary VPMS server, stop the `vpms` process by entering the `/sbin/service vpms stop` command.
4. Restart the NTP process by entering the `/sbin/service ntpd restart` command.

The system returns:

```
Shutting down ntpd: [OK] Synchronizing with time server [OK] Starting ntpd: [OK]
```

*** Note:**

After you restart the NTP process, wait up to 10 minutes for the server to synchronize with the VPMS.

5. After you give the servers enough time to synchronize themselves, verify that the process worked by entering the `/usr/sbin/ntpq -np` command. A status message similar to the following is displayed:

```
remote refid st t when poll reach delay offset jitter
=====
===== 123.123.123.123 LOCAL(0) 6 u 23 64 1 0.354 0.361 0.004
```

*** Note:**

The remote IP address displayed should point to the primary VPMS server.

6. If the `jitter` value is still set to 4000, go to [Advanced time synchronization troubleshooting](#) on page 118 below. Otherwise continue with this procedure.
7. If you are working with:
 - An MPP server, start the `mpp` process by entering the `/sbin/service mpp start` command.
 - The auxiliary VPMS server, start the `vpms` process by entering the `/sbin/service vpms start` command.
8. Verify the service has started by entering the `/sbin/service mpp status` or `/sbin/service vpms status` command.

Advanced time synchronization troubleshooting

Procedure

1. If necessary, log in to Linux on the MPP or auxiliary VPMS server. If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.

2. Using an ASCII text editor, open the following files on the server and ensure that the hostname or the IP address of the primary VPMS server is correct:
 - `/etc/ntp.conf`
 - `/etc/ntp/step-tickers`
3. If the IP address or hostname is incorrect in either of the above files, fix it then save and close the files. Otherwise simply close the files.
4. If the primary VPMS server is synchronized with an external clock, verify that the `/etc/ntp.conf` file on the primary VPMS server is properly set up. For details, see [External time sources](#) on page 92.
5. If you made any changes to the files:

- a. Stop the appropriate service by entering the `service mpp stop` or `/sbin/service vpms stop` command.
- b. Restart the NTP process by entering the `/sbin/service ntpd restart` command.

The system returns:

```
Shutting down ntpd: [OK] Synchronizing with time server [OK] Starting
ntpd: [OK]
```

*** Note:**

After you restart the NTP process, wait up to 10 minutes for the server to synchronize with the VPMS.

- c. After you give the servers enough time to synchronize themselves, verify that the process worked by entering the `/usr/sbin/ntpq -np` command. A status message similar to the following is displayed:

```
remote refid st t when poll reach delay offset jitter
=====
===== 123.123.123.123 LOCAL(0) 6 u 23 64 1 0.354 0.361 0.004
```

*** Note:**

The remote IP address displayed should point to the primary VPMS server.

6. If the `jitter` value is still set to 4000:
 - a. Reboot the server.
 - b. Enter the `/usr/sbin/ntpq -np` command.
 - c. If the `jitter` value is still set to 4000, reinstall the MPP or auxiliary VPMS software.

Changing the Product ID for an existing Voice Portal system

Before you begin

If you have just installed or upgraded the Voice Portal software and are still logged into the server, verify that you reloaded the environment variables as described in [Reloading the Voice Portal environment variables](#) on page 121.

About this task

*** Note:**

This script stops and then restarts Tomcat automatically. This means that the VPMS will be unavailable until Tomcat reinitializes.

Procedure

1. Log in to Linux on the Voice Portal primary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.

2. Navigate to the `Support/VP-Tools` directory by entering the `cd $AVAYA_HOME/Support/VP-Tools` command.
`$AVAYA_HOME` is the environment variable pointing to the name of the installation directory specified during the Voice Portal software installation. The default value is `/opt/Avaya/VoicePortal`.

+ Tip:

This script is also available in the `Support/VP-Tools` directory of the Voice Portal installation DVD.

3. Enter the `bash ResetProductID New_ProductID` command, where `New_ProductID` is the product ID that you want to use.
 4. Follow any on-screen instructions displayed by the script.
-

Reloading the Voice Portal environment variables

After you install or upgrade a Voice Portal server, you need to load the new environment variables.

Procedure

1. Log completely out of the Linux system.
 2. Log in to Linux by entering a non-root user name and password at the prompts.
 3. If you are working with:
 - Avaya Enterprise Linux, enter the `su - sroot` command.
 - Red Hat Enterprise Linux Server Release 5.6 or later, enter the `su -` command.
-

Recovering Avaya Enterprise Linux configuration information after an upgrade

You can still access configuration information from any text files stored on your 4.1 or 5.0 Avaya Enterprise Linux system even after you upgrade the operating system.

Procedure

1. Log in to Linux on the Voice Portal server.

If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:

 - Log in to the local Linux console as `sroot`.
 - Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.
 2. Change to the `/root2` directory to access the 4.1 or 5.0 partition by entering the `cd /root2` command.

The files from the previous installation are available.
-

Restoring the previous operating system after an upgrade

Restore Voice Portal 4.1 or 5.0 on Avaya Enterprise Linux

If you want to revert an upgraded Voice Portal system running on Avaya Enterprise Linux back to 4.1 or 5.0 , you need to:

Step	Description	✓
1	Restore the previous version of Avaya Enterprise Linux on all Voice Portal servers as described in Restoring the Avaya Enterprise Linux 4.1 or 5.0 operating system on page 122.	
2	Restore the 4.1 or 5.0 VPMS server as described in Restoring the 4.1 or 5.0 software on the VPMS server or a single-server Voice Portal system running Avaya Enterprise Linux on page 123.	
3	Restore the 4.1 or 5.0 MPP servers as described in Restoring the 4.1 or 5.0 MPP software on a server running Avaya Enterprise Linux on page 124.	

Related topics:

[Restoring the Avaya Enterprise Linux 4.1 or 5.0 operating system](#) on page 122

[Restoring the 4.1 or 5.0 software on the VPMS server or a single-server Voice Portal system running Avaya Enterprise Linux](#) on page 123

[Restoring the 4.1 or 5.0 MPP software on a server running Avaya Enterprise Linux](#) on page 124

Restoring the Avaya Enterprise Linux 4.1 or 5.0 operating system

Before you begin

If you are working with an MPP server, take the MPP offline as described in [Taking the MPP offline using the 4.1 or 5.0 VPMS web interface](#) on page 17.

Procedure

1. Log in to Linux on the Voice Portal server.
 - If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as sroot.

- Or log in remotely as a non-root user and then change the user to sroot by entering the `su - sroot` command.

Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.

2. Verify that the DVD drive door is closed, or the `cpartition` command will not run correctly.
 3. Verify which partition is the boot partition by entering the `/opt/ecs/install/bin/cpartition` command.
 4. If the boot partition is not equal to the standby partition (which contains your previous Avaya Enterprise Linux version), revert to the previous boot partition by entering the `/opt/ecs/install/bin/cpartition -o` command.
 5. Reboot the server.
 6. Make this change permanent by entering the `/opt/ecs/install/bin/cpartition -p` command.
-

Restoring the 4.1 or 5.0 software on the VPMS server or a single-server Voice Portal system running Avaya Enterprise Linux

Before you begin

Make sure you have restored the operating system as described in [Restoring the Avaya Enterprise Linux 4.1 or 5.0 operating system](#) on page 122.

Procedure

1. Log in to Linux on the Voice Portal primary VPMS server.
If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:
 - Log in to the local Linux console as sroot.
 - Or log in remotely as a non-root user and then change the user to sroot by entering the `su - sroot` command.Otherwise, log in to Linux locally as root, or log in remotely as a non-root user and then change the user to root by entering the `su -` command.
2. Check the status of the `postgres` service by entering the `/sbin/service postgresql status` command.
3. If the `postgres` service is running, stop it by entering the `/sbin/service postgresql stop` command.
4. Stop the `vpms` service by entering the `/sbin/service vpms stop` command.

You will see a series of messages as the command shuts down several VPMS components. When the command has successfully stopped all relevant components, it displays the message: `VPMS Shutdown Status: [OK]`.

5. Navigate to the `pgsql` directory by entering the `cd /var/lib/pgsql` command.
6. Rename the current data directory that contains the Voice Portal 4.1 or 5.0 data by entering the `mv data data_vp4` command.
7. In the `pgsql` directory, locate the back up directory that Voice Portal created when you installed the new version. The file name has the format `data_vp_<backup_date>_<backup_time>`.
8. Copy this back up directory into the main data directory by entering the `cp -rp data_vp_<backup_date>_<backup_time> data` command.
9. Start the `postgresql` service by entering the `/sbin/service postgresql start` command.
10. Wait for a few seconds for the database to start, then verify that it is running by entering the `/sbin/service postgresql status` command.
11. Start the `vpms` service by entering the `/sbin/service vpms start` command.
You will see a series of messages as the command starts several VPMS components. When the command has successfully started all relevant components, it displays the message: `VPMS Start Status: [OK]`.

Restoring the 4.1 or 5.0 MPP software on a server running Avaya Enterprise Linux

Before you begin

- Make sure you have restored the operating system as described in [Restoring the Avaya Enterprise Linux 4.1 or 5.0 operating system](#) on page 122.
- Make sure you have restored the VPMS server as described in [Restoring the 4.1 or 5.0 software on the VPMS server or a single-server Voice Portal system running Avaya Enterprise Linux](#) on page 123.

Procedure

1. Restore the log files you packed for that MPP as part of System backup.
2. If your Voice Portal administrator moved the 4.1 or 5.0 MPP logs to a new directory or partition using the `mppMoveLogs.sh` script, make sure that the appropriate

mount point appears in the `/etc/fstab` file as described in the *Moving the MPP logs to a different location* topic in the *Administering Voice Portal* guide.

Next steps

At this point, you can: or

- Restore another MPP server.
- Start the restored MPP as described in the *Starting an MPP server* topic in the *Administering Voice Portal* guide.
- Start multiple restored MPP servers as described in the *Starting all MPP servers* topic in the *Administering Voice Portal* guide.

Restoring Voice Portal 4.1 or 5.0 on a dedicated VPMS server or a single-server Voice Portal system running Red Hat Enterprise Linux

Before you begin

Make sure you have access to the back up files created, as described in the *Backing up your existing Voice Portal 4.1 or 5.0 data* topic in the *Upgrading Voice Portal 4.1 or 5.0 to Release 5.1* guide.

About this task

* Note:

If your installation uses a dedicated VPMS server, you should always restore the VPMS server first and then you can restore each MPP server separately.

Procedure

1. Install Red Hat Enterprise Linux 4 using the Red Hat installation CD-ROM and the exact options you used for Voice Portal 4.1 or 5.0 .
2. Reinstall the VPMS software from your 4.1 or 5.0 Voice Portal installation DVD. Make sure that you select the same options that you selected during the first install.
3. Restore your Voice Portal database from the backup you made, as described in the *Backing up your existing Voice Portal 4.1 or 5.0 data* topic in the *Upgrading Voice Portal 4.1 or 5.0 to Release 5.1* guide.
4. If you changed the default log and alarm retention periods, reset those values as described in the *Setting log data retention periods* topic in the *Administering Voice Portal* guide.

Restoring a dedicated 4.1 or 5.0 MPP server on Red Hat Enterprise Linux

To restore 4.1 or 5.0 , you need to reinstall the operating system and then reinstall the Voice Portal software.

Before you begin

Make sure you have access to the back up files created, as described in the *Backing up your existing Voice Portal 4.1 or 5.0 data* topic in the *Upgrading Voice Portal 4.1 or 5.0 to Release 5.1* guide.

Make sure you have already restored your VPMS server as described in [Restoring Voice Portal 4.1 or 5.0 on a dedicated VPMS server or a single-server Voice Portal system running Red Hat Enterprise Linux](#) on page 125.

Procedure

1. Take the MPP offline as described in [Taking the MPP offline using the 4.1 or 5.0 VPMS web interface](#) on page 17.

*** Note:**

If you cannot stop the MPP through the VPMS, log onto the MPP server and stop the process by entering the `/sbin/service mpp stop` command.

2. Install Red Hat Enterprise Linux 4 using the Red Hat installation CD-ROM and the exact options you used for Voice Portal 4.1 or 5.0 .
3. Reinstall the MPP software from your Voice Portal installation DVD. Verify that you select the same options that you selected during the first install.
4. Restore the log files you packed for that MPP as part of the back up process described in the *Backing up your existing Voice Portal 4.1 or 5.0 data* topic in the *Upgrading Voice Portal 4.1 or 5.0 to Release 5.1* guide.
5. If you changed the AVB configuration files, restore the customized files you saved during the back up process described in the *Backing up your existing Voice Portal 4.1 or 5.0 data* topic in the *Upgrading Voice Portal 4.1 or 5.0 to Release 5.1* guide.

Next steps

- If necessary, restore another MPP by following this procedure on that MPP.
- If all MPP servers have been restored, reestablish the link between the restored VPMS server and the restored MPP servers. For more information, see the *Reestablishing the link between the VPMS and the upgraded MPP* topic in the *Upgrading Voice Portal 4.0 or 4.1 to Release 5.0* guide.

Taking the MPP offline using the 4.1 or 5.0 VPMS web interface

About this task

Before you work with an MPP server, you need to take the MPP offline. This procedure explains how to do so using the VPMS web interface that is included with Voice Portal release 4.1 and higher.

Procedure

1. Log in to the VPMS web interface using an account with the Administration or Operations user role.
 2. From the VPMS main menu, select **System Management > MPP Manager**.
 3. On the MPP Manager page, use the Selection check box in the MPP server table to select which MPP server you want to take offline.
 4. Click the **Stop** button in the **State Commands** group and confirm your selection when prompted.
Voice Portal stops the selected the MPP server when the last active call completes or the grace period expires, whichever comes first.
 5. After a few minutes, click **Refresh** and verify that the **State** is **Stopped** for the MPP server you want to upgrade.
 6. If the MPP operational state:
 - Changed to **Stopped**, continue with this procedure.
 - Did *not* change, you need to stop the `mpp` service as described in [Stopping the MPP service](#) on page 18.
 7. Use the Selection check box in the MPP server table to reselect the MPP server you want to take offline.
 8. Click **Offline** in the **Mode Commands** group.
 9. Click **Refresh** and verify that the **Mode** is **Offline** for the MPP server you want to upgrade.
-

Stopping the MPP service

You should always try to take the MPP offline using the VPMS web interface. If the VPMS is not communicating with the MPP, however, you can take the MPP offline by stopping the `mpp` service.

Procedure

1. Log in to Linux on the Voice Portal MPP server.

If you are an Avaya Services representative, and are using Avaya Enterprise Linux or if the Avaya Service accounts are installed on this server:

- Log in to the local Linux console as `sroot`.
- Or log in remotely as a non-root user and then change the user to `sroot` by entering the `su - sroot` command.

Otherwise, log in to Linux locally as `root`, or log in remotely as a non-root user and then change the user to `root` by entering the `su -` command.

2. Enter the `/sbin/service mpp stop` command.
-

Chapter 10: Preupgrade worksheets

Primary VPMS server upgrade worksheet

Complete this worksheet if you are installing the VPMS server on a dedicated Voice Portal server.

Requirement/ Information Needed	Your value	Notes
Ensure that the hardware meets the minimum requirements.		See <i>Minimum server machine hardware requirements</i> topic in the <i>Planning for Voice Portal</i> guide.
What access method are you going to use?	<input type="checkbox"/> Local keyboard, mouse, and monitor <input type="checkbox"/> Remote access via SSH client or modem	
Server information	IP address _____ Hostname _____	The hostname cannot contain spaces or periods.
Avaya Enterprise Linux network configuration information	Subnet mask on Corporate LAN _____ Default gateway _____ Primary DNS Server _____ DNS domain name _____ Timezone _____	See the <i>Avaya-provided server installation</i> chapter in the <i>Implementing Voice Portal on multiple servers</i> guide.
For customer-provided hardware, is Red Hat Enterprise Linux Server Release 5.6 or later installed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If No, install Red Hat Enterprise Linux Server Release 5.6 or later as described in the <i>Customer-provided operating system installation</i> chapter in the <i>Implementing Voice Portal on multiple servers</i> guide.

Requirement/ Information Needed	Your value	Notes
Is the default language for Linux set to English?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If No, set the default language to English. You can change the default language after Voice Portal is installed.
Can all planned Voice Portal servers communicate with one another?	<input type="checkbox"/> Yes <input type="checkbox"/> No	For more information, see the <i>Verifying server communication worksheet</i> topic in the <i>Implementing Voice Portal on multiple servers</i> guide.
For Avaya Enterprise Linux, user account passwords	cust account password: _____ root account password: _____	
For Red Hat Enterprise Linux Server Release 5.6 or later, user accounts and passwords	root account password: _____ Non-root account name: _____ Non-root account password: _____	
Can you log in to the Voice Portal server with the non-root account name and password?	<input type="checkbox"/> Yes <input type="checkbox"/> No	The upgrade deletes all existing root accounts. Therefore, after the upgrade, the administrator uses the non-root account name and password to log in and: <ul style="list-style-type: none"> • Install a new Authentication File System (AFS) file. • Activate the Avaya service accounts.
Will Avaya Services maintain this server?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, what is the Listed Directory Number (LDN) for this server? _____ Where is the Avaya Service Account authentication file located? _____ If Avaya Services is going to connect to the system using a dial up modem, what is the Remote Access Service (RAS) IP address for this system? _____	

Requirement/ Information Needed	Your value	Notes
WebLM information	License server URL, if not located on the VPMS server: _____ WebLM password: _____	
External time sources that the VPMS server should be synchronize with, if desired	Name or IP address of primary time source: _____ Name or IP address of secondary time source: _____	

Auxiliary VPMS server upgrade worksheet

Complete this worksheet if you are installing the VPMS server on a auxiliary Voice Portal server.

Requirement/ Information Needed	Your value	Notes
Ensure that the hardware meets the minimum requirements.		See <i>Minimum server machine hardware requirements</i> topic in the <i>Planning for Voice Portal</i> guide.
What access method are you going to use?	_____ Local keyboard, mouse, and monitor _____ Remote access via SSH client or modem	
Server information	IP address _____ Hostname _____	The hostname cannot contain spaces or periods.
Avaya Enterprise Linux network configuration information	Subnet mask on Corporate LAN _____ Default gateway _____ Primary DNS Server _____ DNS domain name _____	See the <i>Avaya-provided server installation</i> chapter in the <i>Implementing Voice Portal on multiple servers</i> guide.

Requirement/ Information Needed	Your value	Notes
	Timezone _____	
For customer-provided hardware, is Red Hat Enterprise Linux Server Release 5.6 or later installed?	_____ Yes _____ No	If No, install Red Hat Enterprise Linux Server Release 5.6 or later as described in the <i>Customer-provided operating system installation</i> chapter in the in the <i>Implementing Voice Portal on multiple servers</i> guide.
Is the default language for Linux set to English?	_____ Yes _____ No	If No, set the default language to English. You can change the default language after Voice Portal is installed.
Can all planned Voice Portal servers communicate with one another?	_____ Yes _____ No	For more information, see the <i>Verifying server communication worksheet</i> topic in the <i>Implementing Voice Portal on multiple servers</i> guide.
For Avaya Enterprise Linux, user account passwords	cust account password: _____ root account password: _____	
For Red Hat Enterprise Linux Server Release 5.6 or later, user accounts and passwords	root account password: _____ Non-root account name: _____ Non-root account password: _____	
Can you log in to the Voice Portal server with the non-root account name and password?	_____ Yes _____ No	The upgrade deletes all existing root accounts. Therefore, after the upgrade, the administrator can use the non-root account name and password to log in and: <ul style="list-style-type: none"> • Install a new Authentication File System (AFS) file. • Activate the Avaya service accounts.
Installation directory, if different from default	_____	Default directory: /opt/Avaya/VoicePortal Specify an absolute directory path containing only standard English alphanumeric characters and the

Requirement/ Information Needed	Your value	Notes
		symbols / (forward slash), _ (underscore), - (hyphen), ~ (tilde), or . (period).
Primary VPMS server hostname or IP address	_____	
Auxiliary VPMS database password	_____	See the <i>Primary VPMS server installation worksheet</i> topic in the <i>Implementing Voice Portal on multiple servers</i> guide.
postgres database account password	_____	The VPMS server uses this account to log in to the Voice Portal database to store and retrieve data, and to install new updates or patches. The database administrator can use this account to log into the local VoicePortal database and perform database administration tasks.
Do you want to create a database account that can access the report information in the database?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, account user name, if different from default: _____ Password: _____	Default user name: report This user account can only read those tables in the Voice Portal database that store report data. Speech application developers can use this account to login to the database to create custom reports using any SQL-enabled report generation tool. * Note: The report user name cannot be the same as the VPMS web interface administration user account name or the report reader user account name.
Do you want to create a report writer database account that allows external Voice Portal servers to write report data into the Voice	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, account username: _____ If Yes, account password: _____	This account allows reports to be created and stored on this auxiliary VPMS.

Requirement/ Information Needed	Your value	Notes
Portal database on this server.		
3rd-party SSL certificate information, if required	The existing certificate's location: _____ The existing certificate's password: _____	
Will Avaya Services maintain this server?	_____ Yes _____ No If Yes, what is the Listed Directory Number (LDN) for this server? _____ Where is the Avaya Service Account authentication file located? _____ If Avaya Services is going to connect to the system using a dial up modem, what is the Remote Access Service (RAS) IP address for this system? _____	
External time sources that the VPMS server should be synchronize with, if desired	Name or IP address of primary time source: _____ Name or IP address of secondary time source: _____	

MPP server upgrade worksheet

Complete the following worksheet for each planned Media Processing Platform (MPP) server on this Voice Portal system.

Requirement or information needed	Your value	Notes
Ensure that the hardware meets the minimum requirements.		See <i>Minimum server machine hardware requirements</i> topic in the <i>Planning for Voice Portal</i> guide.

Requirement or information needed	Your value	Notes
What access method are you going to use?	<input type="checkbox"/> Local keyboard, mouse, and monitor <input type="checkbox"/> Remote access via SSH client or modem	
Corporate LAN IP address	_____	
PBX LAN IP address, if different from corporate LAN	_____	
Avaya Enterprise Linux network configuration information	Subnet mask on Corporate LAN _____ Subnet mask on PBX LAN, if different from Corporate LAN _____ Default gateway _____ Primary DNS Server _____ DNS domain name _____ Timezone _____	
Is the default language for Linux set to English?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If No, set the default language to English. You can change the default language after Voice Portal is installed.
Maximum simultaneous calls	_____	The maximum number of calls that this MPP can handle at any one time. It is equivalent to the maximum number of ports that Voice Portal will allocate to this MPP. For assistance in sizing your MPP server capacity and setting the correct value for the Maximum Simultaneous Calls parameter for each MPP server, contact your Avaya Services representative or Avaya Business Partner. For more information, see MPP server capacity .

Requirement or information needed	Your value	Notes
Will Avaya Services maintain this server?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, what is the Listed Directory Number (LDN) for this server? _____	

ASR server installation worksheet

Complete a copy of the following worksheet for each Automatic Speech Recognition (ASR) server in the Voice Portal system.

Requirement or information needed	Your value
Server name	_____
IP address	_____
Server type	<input type="checkbox"/> IBM WebSphere, minimum version R5.1.3 with Fix Pack 3 <input type="checkbox"/> Loquendo <input type="checkbox"/> Nuance Recognizer , minimum version 9.0.1 with Nuance Speech Server version 5.0.1 <input type="checkbox"/> Nuance OpenSpeech Recognizer (OSR) , minimum version 3.0.13 with SpeechWorks MediaServer (SWMS) component version 3.1.14 or 3.1.15 * Note: SWMS version 4.0 is <i>not</i> supported.
Total number of Nuance, Loquendo or IBM licenses available on this speech server	_____
Configured languages	_____ _____ _____ _____ _____
Will Avaya Services maintain this server?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, what is the Listed Directory Number (LDN) for this server? _____

TTS server installation worksheet

Complete a copy of the following worksheet for each Text-to-Speech (TTS) server in the Voice Portal system.

Requirement or information needed	Your value
Server name	_____
IP address	_____
Server type	_____ IBM WebSphere, minimum version R5.1.3 with Fix Pack 3 _____ Loquendo _____ Nuance RealSpeak, minimum version 4.5 with Nuance Speech Server version 5.0.1 _____ Nuance RealSpeak, minimum version 4.0.12 with the Nuance patch for RealSpeak and SpeechWorks MediaServer (SWMS) component version 3.1.14 or 3.1.15 * Note: SWMS version 4.0 is <i>not</i> supported.
Total number of Nuance, Loquendo or IBM licenses available on this speech server	_____
Configured voices	_____ _____ _____ _____ _____
Will Avaya Services maintain this server?	_____ Yes _____ No If Yes, what is the Listed Directory Number (LDN) for this server? _____

H.323 installation worksheet

Complete the following worksheet for each H.323 connection that you want to use with this Voice Portal system.

! Important:

Configure the PBX as detailed in *Avaya Configuration Note 3910* on the Avaya online support Web site, <http://support.avaya.com>.

Requirement or information needed	Your value
Do you want to use supervised transfers or perform outbound calling with the Application Interface web service?	<input type="checkbox"/> Yes <input type="checkbox"/> No * Note: If Yes, you need Communication Manager 3.1 build 369 or later with the Avaya Special Application SA8874 feature.
PBX name	_____
Gatekeeper IP address	_____
Alternative Gatekeeper IP address	_____
Codecs installed on the switch	_____ _____ _____ _____
Does the PBX use Media Encryption?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Hunt Group information -- Group 1</i>	
Pilot number	_____
Station range	_____
First station password	_____
What type of passwords does the group use?	<input type="checkbox"/> Identical <input type="checkbox"/> Sequential
What type of calls are the ports used for?	<input type="checkbox"/> Inbound only <input type="checkbox"/> Inbound and outbound <input type="checkbox"/> Maintenance
<i>Hunt Group information -- Group 2</i>	

Requirement or information needed	Your value
Pilot number	_____
Station range	_____
First station password	_____
What type of passwords does the group use?	<input type="checkbox"/> Identical <input type="checkbox"/> Sequential
What type of calls are the ports used for?	<input type="checkbox"/> Inbound only <input type="checkbox"/> Inbound and outbound <input type="checkbox"/> Maintenance
<i>Hunt Group information -- Group 3</i>	
Pilot number	_____
Station range	_____
First station password	_____
What type of passwords does the group use?	<input type="checkbox"/> Identical <input type="checkbox"/> Sequential
What type of calls are the ports used for?	<input type="checkbox"/> Inbound only <input type="checkbox"/> Inbound and outbound <input type="checkbox"/> Maintenance
<i>Hunt Group information -- Group 4</i>	
Pilot number	_____
Station range	_____
First station password	_____
What type of passwords does the group use?	<input type="checkbox"/> Identical <input type="checkbox"/> Sequential
What type of calls are the ports used for?	<input type="checkbox"/> Inbound only <input type="checkbox"/> Inbound and outbound <input type="checkbox"/> Maintenance
<i>Hunt Group information -- Group 5</i>	
Pilot number	_____
Station range	_____
First station password	_____
What type of passwords does the group use?	<input type="checkbox"/> Identical <input type="checkbox"/> Sequential
What type of calls are the ports used for?	<input type="checkbox"/> Inbound only <input type="checkbox"/> Inbound and outbound <input type="checkbox"/> Maintenance

SIP installation worksheet

Complete the following worksheet for each SIP connection that you want to configure on this Voice Portal system.

You can configure as many SIP connections as you need. However, only one SIP connection can be enabled at any one time.

! Important:

Configure the PBX and Avaya SIP Enablement Services as detailed in *Avaya Configuration Note 3911* on the Avaya online support Web site, <http://support.avaya.com>.

Requirement or information needed	Your value
Do you want to use Secure Real-time Transport Protocol (SRTP)?	<input type="checkbox"/> Yes <input type="checkbox"/> No * Note: If Yes, you need Avaya SIP Enablement Services version 4.0 or later with either Communication Manager version 3.0 or later or a third-party SIP Gateway or SIP Trunk.
PBX name	_____
What proxy transport do you want to use?	<input type="checkbox"/> TCP <input type="checkbox"/> TLS
SIP Domain	_____
Proxy server address	_____
Proxy server port, if different from default	_____ * Note: The default for TCP is 5060, and the default for TLS is 5061.
Listener port, if different from default	_____ * Note: The default for TCP is 5060, and the default for TLS is 5061.
P-Asserted-Identity, if used	_____
Simultaneous call settings	_____ Maximum number of calls that this connection can handle at any one time If desired, specify the number of simultaneous calls that can be: <input type="checkbox"/> Inbound <input type="checkbox"/> Outbound

Requirement or information needed	Your value
	<p>* Note: If you specify the number of inbound and outbound calls, the values should add up to the maximum number of calls.</p>

Speech application installation worksheet

Complete the following worksheet for each speech application you want to deploy on the Voice Portal system.

*** Note:**

For information about using Avaya Dialog Designer to create speech applications, see your Dialog Designer documentation.

Requirement or information needed	Your value
Application name	_____
What is the application MIME type?	_____ VoiceXML _____ CCXML _____ CCXML/VoiceXML
If the MIME type is VoiceXML or CCXML/VoiceXML, the URL to the initial VoiceXML page	_____
If the MIME type is CCXML or CCXML/VoiceXML, the URL to the initial CCXML page	_____
If this application uses Automatic Speech Recognition (ASR) resources, what languages are required?	_____ _____ _____ _____
If this application uses Text-to-Speech (TTS) resources, what voices are required?	_____ _____ _____ _____

Requirement or information needed	Your value
What will this application be used for?	<input type="checkbox"/> Specific inbound calls <input type="checkbox"/> Inbound calls not handled by another application <input type="checkbox"/> Outbound calls * Note: If it is for outbound calls, configure the Application Interface web service. For details, see <i>The Application Interface web service</i> topic in the <i>Administering Voice Portal</i> guide.
What called numbers should be associated with this application?	_____ _____ _____ _____
Which server will perform DTMF processing?	<input type="checkbox"/> The ASR server. You must select this option if the DTMF grammar uses ECMA script. <input type="checkbox"/> The MPP server.
If this application was not developed using Dialog Designer, do you want to add its log and breadcrumb information to the Voice Portal report database so that it appears in the application reports?	<input type="checkbox"/> Yes <input type="checkbox"/> No * Note: If Yes, configure the Application Logging web service. For details, see <i>The Application Logging web service for third-party speech applications</i> topic in the <i>Administering Voice Portal</i> guide.