Implementing Avaya Experience Portal on multiple servers

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Chapter 1: Introduction

Purpose

This document provides information about installing the Avaya Experience Portal software on two or more dedicated server machines.

This document is intended for anyone who is involved with installing, configuring, and verifying Avaya Experience Portal in a multiple server environment at a customer site. The audience includes and is not limited to implementation engineers, field technicians, business partners, solution providers, and customers.

Chapter 2: Avaya provided operating system installation

Overview

When you purchase an Avaya provided server offer for Avaya Experience Portal, Avaya supplies the hardware for each server that is a part of the Experience Portal system. With each server, Avaya may also include one or more additional dual in-line memory module (DIMM) cards and Avaya Secure Access Link (SAL) or the Enhanced Access Security Gateway (EASG) solution.

The Avaya Experience Portal bundled server option includes the following:

- The hardware required for the number of Experience Portal servers.
- The Enterprise Linux installer that is used to install the Avaya Enterprise Linux operating system.
- The Experience Portal software that runs on each EPM and MPP server in the system.
- The Orchestration Designer software.

  Orchestration Designer is an Eclipse plug-in tool that provides an integrated GUI for application design and implementation. Use Orchestration Designer to create speech applications that conform to the Experience Portal requirements and recommendations.

For information on the installation steps for common server R3 both HP DL 360 G9 and Dell R630, see Installing the HP ProLiant DL360 G9 Server or Installing the Dell PowerEdge R630 Server.

For information on Avaya Solutions Platform (ASP) 110 and 130 server support, see the *Avaya Experience Portal Overview and Specification* guide. For information on deploying ASP 130, see the *Deploying Avaya Experience Portal in an Avaya Customer Experience Virtualized Environment* guide.

Note:

Ensure that you download the Avaya Experience Portal ISO from the Avaya Support Site.

Preparing to connect to Avaya Enterprise Linux using an Ethernet cable

To install Avaya Enterprise Linux on a server using an Ethernet cable connection from a laptop, you must configure the laptop to establish communication between the laptop and the server.

About this task

Use the procedure to prepare the laptop to connect to Avaya Enterprise Linux using a Ethernet cable.

Before you begin

- Install the Avaya provided hardware on the server.
- Ensure that eth1, which is also called port 2, is available for use when you connect to the server using a network cable.
- Obtain the following equipment for the remote connection:
  - Telnet client and secure shell (SSH) client programs installed on the laptop.

    Note:

    PuTTY is a popular, free program that can function as both a Telnet client and as an SSH client.
  - An Ethernet or a CAT5 network cable that connects the laptop to the Services port on the server, eth1.

Procedure

1. Connect an Ethernet (or CAT5) network cable from the laptop to the temporary services port eth1.

   Note:

   The eth1 port is also called port 2.
2. Configure the laptop with the following settings:

   `ipaddress=192.11.13.5`

   `netmask=255.255.255.252`
3. Verify link connectivity between the system and the server.
   a. At the command line prompt, enter the `ping 192.11.13.6` command.
   b. Check the LED on the temporary Services port and the LED on the network card of the laptop.

      The LED light flashes green when the link is connected.
   c. The screen displays the response from the server that shows that the server is operational.
4. Insert the Enterprise Linux Installer software into a DVD drive on the Experience Portal server.

5. Reboot the server so that the server starts from the Avaya Enterprise Linux Installer software.

Next steps

Install or upgrade Avaya Enterprise Linux.

Installing and configuring Avaya Enterprise Linux

Before you begin

- Install the Avaya provided hardware at the customer site.
- Connect a keyboard and a monitor to the server if you install Avaya Enterprise Linux using a direct connection.
- Configure the laptop if you use an Ethernet connection. For more information, see Preparing to connect to Avaya Enterprise Linux using an Ethernet cable on page 9.
- Complete the installation worksheet to answer the questions raised during the installation.

Important:

When you install Avaya Enterprise Linux on a server, the system erases existing data from the server. If required, back up the existing data before you install Avaya Enterprise Linux.

Procedure

1. Insert the Enterprise Linux Installer DVD into the DVD drive.
2. Reboot the server so that the server boots from the Enterprise Linux Installer software.
3. If you install from the console:

   In the Avaya Enterprise Linux installer Welcome screen, type `1` and press `Enter` at the boot prompt to select the **Fresh Install** option.

   Important:

   You must enter your selection in the Welcome screen within 60 seconds. Otherwise, the installer runs a search function to locate an Ethernet connection on the eth1 interface.

   The system displays the file transfer message, and then the Warning screen.
4. If you install on a laptop through an Ethernet connection to eth1:
   a. On a command line, enter the **`ping -t 192.11.13.6`** command to determine when the server completes the reboot.
   b. After the screen displays the response from the server, type `Ctrl+C` to stop the ping command.
   c. Open a Telnet client, such as PuTTY, and connect to the IP address 192.11.13.6.

Note:

The default client is SSH. Ensure that you select telnet.

Important:

Initiate the telnet session within 5 minutes of the server responding to the ping command. If you do not initiate the telnet session, the installer ejects the DVD and reboots the server.

Note:

To use the Windows command telnet as the telnet client:

- Enter the **telnet** command.
- At the Microsoft Telnet> prompt, enter the **set term vt100** command.
- At the Microsoft Telnet> prompt, enter the **open 192.11.13.6** command.

Note: When using telnet connection, the install screen might not display the information clearly.

The system displays the file transfer message and then the Warning screen.

5. On the Warning screen, type `Yes` and press `Enter` to continue with the installation.

   Note:

   Instead of displaying the Warning screen, the system might display the **No Disks found! /dev/sda missing** error. To resolve this error, type `n` and press `Enter` at the **Eject CD/DVD before rebooting** prompt.

   The system displays the Network-related information screen.

6. Enter the following details on the Network-related information screen:
   - **Hostname or FQDN**: Type the hostname of the server.
   - **IP Address (eth0)**: Type a static IP address of the server.
   - **SubNetmask** : Type the subnet mask of the server.
   - **Gateway**: Type the IP address of the gateway.
   - **DNS Domain** : Type the domain name of the server.
   - **DNS Server 1**: Type the IP address of the first DNS server.
   - **DNS Server 2**: Type the IP address of the second DNS server.
   - **DNS Server 3**: Type the IP address of the third DNS server.
7. Press `Enter`.

   The system displays the network related information that you have entered.

8. Type `Yes` and press `Enter` to confirm the network related information.

   The system displays the Time Zone selection screen.

9. Type the required option and press `Enter` to select a region.

   The system displays the list of corresponding time zones.
10. Type the required option and press `Enter` to select a time zone.

    The system displays the time zone information that you have specified.
11. Type `c` and press `Enter` to confirm the details.

    The system displays the Date and Time screen.
12. Specify the date details:
    - day of month
    - month
    - year
13. Specify the time details:
    - hours

      Note:

      Type the hour in 24-hour format.
    - minutes
14. Press `Enter`.

    The system displays the Date and Time that you have specified.
15. Type `yes` and press **Enter** to confirm the date and time information.

    The system displays the NTP Configuration screen.
16. On the NTP Configuration screen, enter the following details:
    - NTP server 1: Type the IP address of the first NTP server.
    - NTP server 2: Type the IP address of the second NTP server.
    - NTP server 3: Type the IP address of the third NTP server.

    Note:

    You can leave all the NTP server addresses blank as the Experience Portal system automatically configures NTP on all servers, other than the primary EPM, to synchronize with the primary EPM.
17. Press `Enter`.

    The system displays the NTP information that you have specified.
18. Type `yes` and press **Enter** to confirm the NTP details.

    The system erases all existing data, and installs Avaya Enterprise Linux. When the installation is complete, the system ejects the DVD and reboots the server.

Important:

Once the server reboots, you can no longer access the server remotely through telnet. You must use an SSH client, such as PuTTY.

PuTTY can function as an SSH client as well as a telnet client.

19. Remove the Avaya Enterprise Linux DVD from the DVD drive.

    The installation is complete.

20. **(Optional)** Log in to Linux on the Experience Portal server after the server reboots.

    The Enterprise Linux Installer creates craft and sroot accounts but they are disabled with no predefined password. The craft and sroot accounts are Avaya Service Accounts and can only be enabled via EASG control. You should use the cust and root accounts to login to the server. Avaya Enterprise Linux has assigned a default password for both accounts.

    For more details, see State of identity variables in Master Software Image and on first boot. on page 13

    Note:

    - You cannot log in directly as a root user except through the console. Log in as a non-root user and switch to a root account using the **su –** command.
    - If you install from the console, log in to the local Linux console as root.
    - If you install through an Ethernet connection to eth1:
      - Use a secure shell (SSH) client, such as PuTTY, to open an SSH connection to the 192.11.13.6 IP address.
      - Log in to Linux as cust and enter the **su –** command to change to the user root.

Next steps

After you install Avaya Enterprise Linux, you can:

- Install Avaya Enterprise Linux on another Avaya-provided server by repeating this procedure.
- Install the Experience Portal software.

State of identity variables in Master Software Image and on first boot

After you install and configure Avaya Enterprise Linux, the Enterprise Linux Installer creates user accounts. The sroot and craft account passwords are disabled with no predefined password, unless EASG is enabled. You should use cust and root accounts to login to the server.

User name	Group	Purpose	Status of Account
sroot	root	Avaya Services root access	Disabled
root	root	Customer root access	Enabled
craft	susers	Avaya Services non-root access	Disabled
cust	susers	Customer non-root access	Enabled

First boot

You will not be able to use the Avaya Service accounts, craft and sroot, to gain access to the server once the server is upgraded to Avaya Enterprise Linux 8.x. The craft and sroot accounts will be controlled via EASG as soon as Experience Portal is installed.

The craft and sroot users are disabled unless EASG is enabled. In this case, the craft and sroot users will use challenge/response authentication.

This applies to both non-OVA and OVA deployments.

First root login

The root and cust users which have default values in the software image, are forced to be updated on first root login. These accounts that are needed to log into a newly created system use pre-defined passwords:

Account	User Name	Password
Non-root access	cust	custpw
Root access	root	rootpw

After you login to the server as root using the default password, Avaya Enterprise Linux will enforce an Avaya First Login Experience which will prompt for a new bootloader, root and cust passwords.

To support headless configuration, root & cust are not forced to be updated on first boot, but are forced to be updated on the first root login.

Restarting the Linux system in a single user mode for diagnostics

About this task

This task must be done on the head of the server since it is executed prior to network services being available.

Note:

Restarting the Linux system in a single user mode requires a password.

Procedure

1. Reboot the system or power on the system.

2. As soon as BIOS ends, start typing `ESC`. The screen is blank at this time and the window is only a few seconds long.
3. If the grub screen shows up, proceed with the next step. Otherwise wait till the system boots and then reboot again.
4. Type `p` to enter the boot loader password.
5. Type in the boot loader password that you have set in first root login.
6. Type `a` to append the line.
7. Scroll down to the `linux`... line.

   This line tells GRUB 2 which kernel to boot.
8. Go to the end of the line, enter a space by pressing the space bar and then type `single` .
9. Press `Enter` to exit edit mode.

   The system will then boot into single user mode.
10. Type the root password when the system prompts.
11. Type the command `runlevel`. It should respond **NS**, where the S stands for single user.
12. Perform diagnostics.
13. Press `Ctrl-D` to return to normal operation.

Chapter 3: Customer provided operating system installation

Overview

When you purchase the Avaya Experience Portal software-only offer, you must obtain and install Red Hat Enterprise Linux 7.x or 8.x 64 bit or later minor update. For security updates, you must update Red Hat Enterprise Linux to 7.x or 8.x 64 bit or later minor update.

Note:

To install the mod_nss package in the `Servers/ Web Servers` directory, configure the package to use an alternate port and not use any of the following reserved Experience Portal ports: 80, 443, 8005, 8009, 8080, 8443, and 9443.

For details about obtaining Red Hat Enterprise Linux Server 7.x or 8.x 64 bit, see the Red Hat website, http://www.redhat.com.

For hardware requirements, see *Avaya Experience Portal Overview and Specification* on the Avaya Support website.

If you have already installed Red Hat Enterprise Linux Server 7.x or 8.x 64 bit, the `aepinstall bash` script will check all required RPM packages.

Note:

Before installing Red Hat Enterprise Linux Server 7.x or 8.x 64 bit for the software-only offer, you must install and integrate all the new hardware into the system.

Installing Red Hat Enterprise Linux Server

About this task

The default values provided for the Red Hat Enterprise Linux Server installation are suitable from an Experience Portal perspective. However, there are instances where you must select values other than the default. The following steps are guidelines to installing Red Hat Enterprise Linux Server and provide instructions for instances when the default values are not suitable for Experience Portal.

Before you begin

Complete the installation worksheet to answer the questions raised during the installation.

Procedure

1. Reboot the server so that it boots from the media of a supported version of Red Hat Enterprise Linux Server.

   The system displays the **Welcome to Red Hat Enterprise Linux** screen.
2. Select the **Install Red Hat Enterprise Linux** option.
3. Select **English** as the language to use during the installation process.
4. Select the U.S. English keyboard option.
5. Select **Installation Destination** and select the disk to install Red Hat Enterprise Linux..
6. Select **Network and Host name**.
7. Enter the host name and select **Apply**.

   Note:

   All network configuration including the hostname and IP (and other properties specified in steps 7 and 8) must remain the same.
8. To configure the network:
   a. Ensure that `eth0/ens192`, the main Ethernet interface, is enabled.
   b. On the **IPv4 Settings** tab, configure the following settings using the values specified on the installation worksheet:
      - Static IP address
      - Netmask
      - Gateway
      - DNS servers
      - Search domains
9. Enter the applicable timezone.
10. Select **Begin Installation**.
11. Enter the root password. Ensure that you enter the value that you have specified in the installation worksheet.
12. Complete the installation and reboot the system.
13. After the system reboots, complete the post-installation configuration procedures.
    a. Accept the **License Agreement** and **Finish Configuration** (RHEL 8.x).
    b. Set the system clock.
    c. Create a non-root account. Ensure that you use the value that you have specified in the installation worksheet.

Note:

After the Experience Portal software is installed, use a non-root account to log in and then change to `root` account by using the **`su -`** command.

d. Disable the firewall.

e. Set default umask to `027` in the `/etc/profile` and `/etc/bashrc` scripts.

f. Configure a yum repository that has required Experience Portal packages.

14. Configure Avaya Secure Access Link (SAL) or the Enhanced Access Security Gateway (EASG) solution if you have purchased a maintenance agreement with Avaya services, and the server is the Primary EPM server.

Next steps

After you install Red Hat Enterprise Linux Server:

- Perform the software installation prerequisite tasks on this server.
- Install Red Hat Enterprise Linux Server on another customer provided server by repeating this procedure.

Chapter 4: Partition requirements for hard drive

Partition requirements for hard drive

Recommended partitioning scheme

Consider either of the following options when partitioning the hard drive to ensure Experience Portal files are installed properly:

- All the directories, including /opt and /var are under the main root (/) partition.
- If you have separate root and /var partitions, ensure that minimum 20 to 40 gigs are in the main root partition or in /opt, if it is a separate partition. The rest of the available free space is allocated to the /var partition.

Note:

The space in the /var partition should be as large as the space of the root partition.

Chapter 5: Experience Portal software installation prerequisites

Prerequisites checklist for installing Avaya Experience Portal software

Complete these tasks before you install the Avaya Experience Portal software on the server.

S.No	Description	Notes	✔
1	Ensure that the hard drive is partitioned properly in order to create sufficient space for Experience Portal software installation.	See the *Partition requirements for hard drive* topic in *Administering Avaya Experience Portal*.	
2	Ensure that you have access to the Avaya Experience Portal site-specific licensing information from Avaya.	See the *License Requirements* topic in *Upgrading to Avaya Experience Portal 8.1*.	
3	Verify that you can access all of the target systems using at least one of the following methods: • _____ A computer on the customer's network that has an SSH client to reach the target system • _____ A keyboard, monitor, and mouse, attached directly to the target system • _____ A cable that connects a second computer that has a keyboard, monitor, mouse, and an SSH client.		
4	Disable any firewall or anti-virus software on the target systems.		

Table continues…

S.No	Description	Notes	✔
5	Set default umask to 027 in the `/etc/profile` and `/etc/bashrc` scripts. After setting the umask to `027` in these files, you need to log on again for the setting to take effect. Use the `umask` command to verify that the umask default is 027.		
6	Check to see if there are any Experience Portal patches available on http://support.avaya.com. If there are patches available, download those patches before you begin the installation.		
7	Verify that all servers are running the correct version of Avaya Enterprise Linux or Red Hat Enterprise Linux.	See Verifying the Linux version number on page 25.	
8	Verify that all servers can communicate with one another.	See Verifying server communication worksheet on page 25.	
9	Make sure that none of the mount points are stale or hung.	See Checking for stale or hung mount points on page 31.	
10	Verify that the time is synchronized between all the Experience Portal servers. **Important:** If the time is not properly synchronized between the EPM and MPP servers, the upgrade process could hang.	See Verifying server time synchronization on page 32.	
11	To connect your Experience Portal system to an external Oracle database, you must first obtain the JDBC driver from Oracle.	See Installing Oracle JDBC driver on page 33.	
12	Ensure that you configure a yum respository containing all the required Experience Portal packages. Otherwise the prerequisite installation for the Experience Portal server may fail. This is for Red Hat Enterprise Linux installations only.		

Default Red Hat umask

Avaya Experience Portal 8.1.1 requires default umask to be set to `027`. You can set this in the `/etc/profile` and `/etc/bashrc` scripts.

Avaya Linux and OVAs have default umask set to `027`. Fresh installs and upgrades will verify that umask is set to `027`. If umask is not set, then the installer asks if you want to set it to `027`. If you answer 'yes', the installer applies this setting to the OS. If you answer 'no', the installer exits.

Platform Vendor Independent Check

The Platform Vendor Independent Check (PVI checker) is the same utility that is executed by the AEP installer (aepinstall.sh). The PVI checker (pvicheck.sh) can be run by customers outside of installation. That is, a customer can check the prerequisites or preinstall these packages before installing Experience Portal.

The PVI checker is located under Support/PrereqCheckerInstaller of the Experience Portal media.

Note:

Experience Portal does not bundle any packages that are obtained from Red Hat. Experience Portal provides a PVI checker that installs all Red Hat Enterprise Linux packages that are needed to install Experience Portal, provided that customers configure a valid yum repository on the system that contains all required Experience Portal prerequisites. Customers can either run the Experience Portal PVI checker standalone outside of installation or alternatively run the PVI checker within the Experience Portal installer. All OS packages required by Experience Portal are standard Red Hat Enterprise Linux packages. Since Avaya Enterprise Linux for Experience Portal 8.x already contains all the required prerequisites, this note primarily applies to software-only customers.

PVI checker

The PVI checker can be executed by running the `bash pvichecker.sh` script. This checks all the pre-requisites required such as non-root account, hostname resolvable, required Red Hat RPM packages installed, and then lists the ones that passed or failed.

If the PVI checker is invoked with the `-install` parameter, that is running `pvicheck.sh -install` , it installs any missing RPMs, provided a yum repository is configured. It also performs other correction tasks like adding hostname to `/etc/hosts` and disabling firewall.

The PVI checker can also be invoked with the `-headless` parameter which suppresses the need for user input.

High level packages required for the installation of Experience Portal 8.1

The following lists the high level packages that are required for the installation of Experience Portal 8.1.

Note:

If these packages are not already installed on the OS and a yum repository is configured, the Experience Portal installer will install them.

These packages do not include dependencies that may be required to install these packages. The exact dependency list will vary and depends on what the customer has installed on their OS.

You can view the full list of RPMs required for Avaya Experience Portal 8.1 by running `pvicheck.sh`.

Red Hat 7.x and Red Hat 8.x pre-requisite RPMs:

policycoreutils-python-utils.noarch

libgcc.x86_64

libgcc.i686

libstdc++.x86_64

libstdc++.i686

glibc.x86_64

glibc.i686

openssl.x86_64

openssl-libs.i686

httpd.x86_64

mod_ssl.x86_64

httpd-tools.x86_64

php-common.x86_64

php-cli.x86_64

php.x86_64

php-soap.x86_64

php-xml.x86_64

php-pgsql.x86_64

php-process.x86_64

java-1.8.0-openjdk.x86_64

libicu.x86_64

java-1.8.0-openjdk-headless.x86_64

java-1.8.0-openjdk-devel.x86_64

chrony.x86_64

net-tools.x86_64

hostname.x86_64

sysstat.x86_64

bc.x86_64

tcpdump.x86_64
wget.x86_64
perl.x86_64
libidn.i686
krb5-libs.i686
fontconfig.i686
openldap.i686
gd.i686
libatomic.i686
cairo.x86_64
lsof.x86_64
libpng12.i686
libpng12.x86_64
pam.i686
libcap.i686
mlocate.x86_64
bind-utils.x86_64
traceroute.x86_64
dos2unix.x86_64
unzip.x86_64
zip.x86_64
nfs-utils.x86_64
libxml2.x86_64
binutils.x86_64
libpwquality.x86_64
libcurl.i686
mozjs52.i686
mozjs52.x86_64
pcre.i686

Red Hat 7.x pre-requisite RPMs

python3.x86_64

Red Hat 8.x pre-requisite RPMs

compat-openssl10.i686

compat-openssl10.x86_64

libnsl2.i686

libnsl2.x86_64

libnsl.i686

libnsl.x86_64

nspr.i686

mozjs60.i686

Verifying the Linux version number

Procedure

1. On the Experience Portal server, log in to Linux as any user.
2. If you are using Avaya Enterprise Linux, enter the `swversion` command.

   The result must state the version as RH8.x.64-AV18EP8. If this version is incorrect, contact Avaya technical support.

   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 `cat /etc/redhat-release` command to ensure that the Linux build version is correct.

   The result for both Red Hat 7.x and Red Hat 8.x must be either of the following versions at a minimum:

   - Red Hat Enterprise Linux Server release 7.x (Maipo)
   - Red Hat Enterprise Linux release 8.x (Ootpa)

Verifying server communication worksheet

Complete these tasks to ensure that all Experience Portal servers can communicate with each other and with all external servers.

Note:

Avaya is responsible only for the systems Avaya provides. External systems are the customer responsibility.

S.No	Description	Notes	✔
1	Verify that the primary EPM server can communicate with all servers.	See Verifying communication between the primary EPM server and all other servers on page 26.	
2	Verify that the MPP servers can communicate with all servers.	See Verifying communication between the primary EPM server and all other servers on page 26.	
3	If you plan to configure an EPM server, verify that the EPM server can communicate with all servers.	See Optional: Verifying communication between the auxiliary EPM server and all other servers on page 30.	

Verifying communication between the primary EPM server and all other servers

About this task

The planned primary EPM server must have a static IP address and hostname, and it must be able to communicate with all other Experience Portal servers using either:

- A Domain Name Server (DNS) to translate hostnames to their corresponding IP addresses
- The `/etc/hosts` file to map the IP addresses and hostnames

Important:

If the servers cannot communicate with one another, you will encounter installation errors and be forced to rerun the installation.

In addition, the primary EPM server must also be able to communicate with all external servers such as the PBX, application servers, speech servers, and the Communication Manager.

Procedure

1. Log on to Linux on the Experience Portal Primary EPM server.
2. Verify the primary EPM server's IP address and hostname:
   a. Enter the `hostname -i` command.

      This command can return more than one IP address including `127.0.0.1`. The IP address of the EPM server is the address other than `127.0.0.1`. If this check fails, you must manually map the hostnames as described in Manually mapping hostnames to connect the primary EPM with other servers on page 29.

   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 Manually mapping hostnames to connect the primary EPM with other servers on page 29.

3. Verify that the primary EPM 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 both check fails, you need to manually map the hostnames as described in Manually mapping hostnames to connect the primary EPM with other servers on page 29.
   d. If your Experience Portal system contains more than one MPP server, repeat this step for each of the MPP servers.
4. If this system has an auxiliary EPM server, verify that the primary EPM server can communicate with the auxiliary EPM server by hostname or IP address:
   a. Enter the `ping -c 4 <auxiliary_epm_hostname>` command, where:

      <auxiliary_epm_hostname> is the hostname of the auxiliary EPM server.

   b. Wait for the system to respond with the contact information.
   c. If this check fails, enter the `ping -c 4 <auxiliary_epm_ipaddress>` command, where:

      <auxiliary_epm_ipaddress> is the IP address of the auxiliary EPM 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 EPM 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 Experience Portal system:

      - A PBX server.
      - An application server.
      - A speech server.
      - Communication Manager.
      - Avaya Aura® Session Manager.

   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 both of these checks fail, you need to manually map the hostnames as described in Manually mapping hostnames to connect the primary EPM with other servers on page 29.

f. Repeat this procedure for each external server in your Experience Portal system.

Verifying communication between the MPP servers and all other servers

About this task

All planned Experience Portal servers must be able to communicate with each other using either:

- A Domain Name Server (DNS) to translate hostnames to their corresponding IP addresses
- The `/etc/hosts` file to map the IP addresses and hostnames

Important:

If the servers cannot communicate with one another, you will encounter installation errors and be forced to rerun the installation.

In addition, the servers must also be able to communicate with all external servers such as the PBX, application servers, speech servers, and the Communication Manager.

Procedure

1. Log on to Linux on the Experience Portal MPP server.
2. Verify that the MPP server can communicate with the EPM server by hostname or IP address:
   a. Enter the `ping -c 4 <epm_hostname>` command, where:

      <epm_hostname> is the hostname of the EPM server.

   b. Wait for the system to respond with the contact information.
   c. If this check fails, enter the `ping -c 4 <epm_ipaddress>` command, where:

      <epm_ipaddress> is the IP address of the EPM 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 as described in Manually mapping hostnames to connect the primary EPM with other servers on page 29.
   f. If your Experience Portal system contains an auxiliary EPM server, repeat this step for the auxiliary EPM server.
3. Verify that the MPP 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 Experience Portal system:

- A PBX server.
- An application server.
- A speech server.
- Communication Manager.
- Avaya Aura® Session Manager.

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 both of these checks fail, you need to manually map the hostnames as described in Manually mapping hostnames to connect the primary EPM with other servers on page 29.

f. Repeat this procedure for each external server in your Experience Portal system.

4. If you have additional MPP servers in your Experience Portal system, repeat this procedure for each MPP server.

Manually mapping hostnames to connect the primary EPM with other servers

About this task

To manually map hostnames to IP addresses without a DNS, you need to edit the `/etc/hosts` file on the planned primary EPM server so that it includes an entry for each of the servers in the Experience Portal system.

Procedure

1. Log into Linux on the planned primary EPM server.
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. Make sure that the first line contains `127.0.0.1 localhost localhost.localdomain`, with the IP address and hostnames separated by spaces or tabs.
5. Create a new line for each server in the Experience Portal system using the format *`IP_address hostname1 hostname2...`* where:

IP_address is the IP address of a server in the Experience Portal system and *hostname1 hostname2...* is one or more hostnames, separated by tabs or spaces, to associate with the IP address.

You should have one entry for each of the following components used in your Experience Portal system:

- All MPP servers.
- The auxiliary EPM server, if one is planned for this Experience Portal system.
- All PBX servers.
- All application servers.
- All speech servers.
- Communication Manager.
- Avaya Aura® Session Manager.

6. Save and close the file.

Example

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

```
127.0.0.1 localhost localhost.localdomain #Required first line
10.10.10.120 primary-epm primary-epm.samplecompany.com #Primary EPM server IP address
10.10.10.121 first-mpp first-mpp.samplecompany.com  #First MPP server
10.10.10.122 second-mpp second-mpp.samplecompany.com  #Second MPP server
```

Optional: Verifying communication between the auxiliary EPM server and all other servers

About this task

All planned Experience Portal servers must be able to communicate with each other using either:

- A Domain Name Server (DNS) to translate hostnames to their corresponding IP addresses
- The `/etc/hosts` file to map the IP addresses and hostnames

Important:

If the servers cannot communicate with one another, you will encounter installation errors and be forced to rerun the installation.

In addition, the EPM server must also be able to communicate with all external servers such as the PBX, application servers, speech servers, and the Communication Manager.

Procedure

1. Log on to Linux on the Auxiliary EPM server.
2. Verify that the auxiliary EPM 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 both check fails, you need to manually map the hostnames as described in Manually mapping hostnames to connect the primary EPM with other servers on page 29.

d. If your Experience Portal system contains more than one MPP server, repeat this step for each of the MPP servers.

3. Verify that the auxiliary EPM server can communicate with the external servers:

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 Experience Portal system:

- A PBX server.
- An application server.
- A speech server.
- Communication Manager.
- Avaya Aura® Session Manager.

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 both of these checks fail, you need to manually map the hostnames as described in Manually mapping hostnames to connect the primary EPM with other servers on page 29.

f. Repeat this procedure for each external server in your Experience Portal system.

Checking for stale or hung mount points

About this task

If you have file systems saved on the Experience Portal servers, check if the mount points are stale or hung. Stale or hung mount points can cause RPM installations to not respond while installing the Experience Portal software. Use this procedure to check for stale or hung mount points on the Experience Portal servers.

Procedure

1. On the Experience Portal server, log in to Linux as any user.
2. Enter the `df` command.

If the server:

- Responds to the command: The mount points are working.
- Does not respond to the command: The mount point is stale or is not responding.

Note:

Run the `umount` command to unmount any stale or hung mount points.

Verifying server time synchronization

About this task

If you plan to install the EPM and MPP software on separate servers, ensure that the time is synchronized across the servers. Experience Portal automatically configures the chronyd (Network Time Protocol) software that synchronizes the servers. Ensure the following:

- The time synchronization is relatively close before you install or upgrade the Experience Portal software. Otherwise the installation process may not complete successfully.
- If there is a difference in the time, the time on all planned MPP servers must lag behind that of the planned EPM server. The NTP software has to set the time on the MPP servers ahead by a small amount instead of trying to adjust the time backward.

Note:

Experience Portal only requires that the EPM and MPP servers are synchronized. However, you must also synchronize all servers that Experience Portal connects to, including the application server, any speech servers, and the PBX. For more information, see External time sources on page 71.

Procedure

1. On each Experience Portal server, in the same time frame, run the `date` command.
2. Verify that all Experience Portal servers report the time within a few seconds of each server response. If there is a time difference, verify that the planned MPP servers lag behind the planned EPM server.

   For example, an MPP server time of 2:10:00 and a EPM server time of 2:10:03 is acceptable.
3. If one or more servers differ by more than a few seconds, set the appropriate date and time by running 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 must enter `date 0331141508.35`.

Time Synchronization between the external database and EPM servers

If you connect an Experience Portal system to an external database, you must synchronize the time so that the time is the same across all servers. While Experience Portal only requires that the EPM and media server time be synchronized, make sure that you also synchronize all of the servers that Experience Portal connects to. For more information, see the *External time sources* topic in the *Implementing Avaya Experience Portal on multiple servers* guide.

Installing the Oracle JDBC driver

About this task

This procedure only applies to installing Oracle JDBC driver as all other supported database drivers are packaged with Experience Portal.

To have the Oracle JDBC driver installed by the Experience Portal install program, perform the following steps after you install or upgrade Linux. It is recommended that you perform the procedure before you install or upgrade Experience Portal.

The procedure also provides information on how to install the Oracle JDBC driver after you install or upgrade Experience Portal.

Before you begin

To connect your Experience Portal system to an external Oracle database, you must first obtain the JDBC driver from Oracle. The Oracle JDBC driver is not shipped with Experience Portal.

Experience Portal is tested with the following Oracle Releases:

- Oracle 11g Release 2: Download the Oracle JDBC driver from http://www.oracle.com/technetwork/apps-tech/jdbc-112010-090769.html. Download files ojdbc6.jar and orai18n.jar.
- Oracle 12c Release 2 (12.2.0.1): Download the Oracle JDBC driver and UCP downloads from http://www.oracle.com/technetwork/database/features/jdbc/jdbc-ucp-122-3110062.html.
- Oracle 21c (21.1): Download the Oracle JDBC driver and UCP downloads from https://www.oracle.com/database/technologies/appdev/jdbc-ucp-21-1-c-downloads.html. Ensure that you download the ojdbc8.jar and orai18n.jar files, rather than the ojdbc11.jar file. The ojdbc8.jar and orai18n.jar files support the Java version used by your Experience Portal system.

Important:

Web browsers might change the file extension of the files to .zip when the files are downloaded. Rename the files back to ojdbc6.jar, ojdbc7.jar, ojdbc8.jar, and orai18n.jar.

Avaya recommends the following for better results:

- Use Oracle 11g drivers when you are upgrading to Experience Portal 8.x and connecting to an Oracle 11g database.

- Use Oracle 12c drivers for fresh installation of Experience Portal 8.x and connecting to either an Oracle 11g or 12c database.
- Use Oracle 21c drivers when you are upgrading to Experience Portal 8.x and connecting to an Oracle database greater than 12c.

Procedure

1. Log in to Linux on the Primary Experience Portal server as a root user.
2. Run the **mkdir ~/OracleJDBC** command to create the `~/OracleJDBC` folder.
3. Copy the `ojdbc6.jar/ojdbc7.jar/ojdbc8.jar` and `orai18n.jar` driver files to the `~/OracleJDBC` folder.

   Important:

   Do not delete the Oracle JDBC driver files from the `~/OracleJDBC` directory after you install or upgrade Experience Portal. You will need the files if you reinstall or upgrade Experience Portal.
4. If you install the Oracle JDBC driver after you install or upgrade the Experience Portal server, you must do the following:
   a. Run the **/sbin/service vpms stop** command to stop the vpms service.
   b. Run the **cd $AVAYA_HOME/Support/Database** command to navigate to the appropriate directory.
   c. Run the **bash InstallOracleJDBC.sh** command to install the JDBC driver.

      Important:

      Run the **InstallOracleJDBC.sh** command only after you download the Oracle driver in the `~/OracleJDBC` directory on the server.
   d. Run the **/sbin/service vpms start** command to start the vpms service.
5. Repeat the procedure on each Auxiliary Experience Portal server.

Chapter 6: Installing the EPM and MPP software on different servers

AEP installation script

The AEP installation script for all server types uses the `aepinstall.sh` script. This script is included in the AEP ISO that is being installed. For example, AEP-8.x.iso. The script does the following:

- Checks the server using the pre-requisite or Platform Vendor Independent (PVI) checker to verify that minimum hardware requirements and OS RPM packages are installed, and other OS configurations are completed.
- Installs Primary EPM, Auxiliary EPM, Standalone MPP, or the co-resident Primary EPM or MPP.
- Supports headless installs of the servers using an XML file in all required settings.

AEP installation script parameters

The AEP installation script has the following parameters:

-help	Prints out help.
-pvicheck	Runs the pre-requisite (PVI) checker and generates a report in `/opt/Avaya/InstallLogs/pvicheck.log`.
-headless input-file.xml	Allows headless (silent) install of any AEP server type.
-autoupgrade	Not correctly supported.

AEP headless (silent) installation

The AEP installer supports the ability to be headless, which means installation of any server type without user interaction. This is accomplished with the use of an xml file that is passed into the installer.

The AEP ISO that is being installed has a template version of an xml file that can be used as an example. The file is called `aepinstallconfig.xml`and has the following elements:

<Global> element::

The Global element *must* be included for all server types. It contains the following element:

<InstallType>	Must have one of the following values: • Primary EPM • Auxiliary EPM • Standalone EPM • Single Server - Primary EPM and MPP

<PrimaryEPM> element:

The <PrimaryEPM> element must exist if the server type is Primary EPM or Single Server - Primary EPM and MPP. It contains the following elements:

<WebAdminUsername>	Username for AEP web admin login
<WebAdminPassword>	Password for AEP web admin login
<CreateDBAccountForAux>	Boolean for vpcommon account creation for the auxiliary server connection
<DBAccountForAuxPassword>	vpcommon password
<EnableEASG>	Disable or enable EASG
<ProductIdentifier>	10 digit Product ID

<AuxiliaryEPM> element:

The <AuxiliaryEPM> element must exist if the server type is Auxiliary EPM. It contains the following elements:

<PrimaryEPMHostnameOrIPAddress>	Primary EPM IP address or hostname
<PrimaryEPMDBPassword>	Primary EPM vpcommon password
<CreateReportWriterUser>	Boolean for DB Report writer account creation
<ReportWriterUsername>	Report writer username
<ReportWriterPassword>	Report writer password

<CommonEPM> element:

The <CommonEPM> element must exist if the server type is Primary EPM, Single Server - Primary EPM and MPP, or Auxiliary EPM. It contains the following elements:

<CreateReportReaderUser>	Boolean for DB Report reader account creation
<ReportReaderUsername>	Report reader username
<ReportReaderPassword>	Report reader password

<MPP> element:

The <MPP> element must exist if the server type is Standalone MPP or Single Server - Primary EPM and MPP. It contains the following element:

<MPPEPMHostnameOrIPAddress>	Primary EPM IP address or hostname

Installing the EPM software on the primary EPM server

All Avaya Experience Portal systems require a primary EPM server running the Experience Portal Manager (EPM) software.

Before you begin

- Complete the Primary EPM server installation worksheet on page 86 and have it available to help answer the questions raised during the installation.
- Before you install the software, read the Avaya Experience Portal Release notes on the Avaya Support site. These release notes contain information about the product that is not included in the formal documentation set.
- Download any patches for Avaya Experience Portal Release 8.1 from the Avaya Support website at http://support.avaya.com.
- Ensure that you download the Avaya Experience Portal ISO file from the Avaya Support web site and burn it to a DVD if required.
- Check if default umask is set to `027`. If it is not set to `027`, the installer asks if you want to set it to `027`. If you select 'yes', the installer applies this setting to the OS. If you select 'no', the installer exits.

Note:

You can run the prerequisite installer before installing Experience Portal. For more details, see Platform Vendor Independent Check on page 22

Procedure

1. Log into the server on which you want to install the primary EPM software.
   - Log on to the local Linux console as root.
   - Or log on remotely as a non-root user and then change the user to root by entering the `su - root` command.

   Note:

   By default, the craft and sroot users are disabled in Avaya Experience Portal 8.1 Avaya Enterprise Linux fresh installations. Avaya Service Login accounts can only access the Avaya Experience Portal system if they are EASG protected.
2. Insert the Avaya Experience Portal 8.1 software installation DVD into the DVD drive of the server.

   Tip:

   These instructions assume that you are going to access the Experience 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 Experience Portal installation ISO image to that directory. However, that directory must be readable by all users on the system. If the directory

is only readable for root users, the installation script will encounter errors and will not complete successfully.

3. Mount the Avaya Experience Portal 8.1 software 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 drive in the `fstab` file.
   - If you are working with a supported version of Red Hat Enterprise Linux Server, to mount the DVD:
     - Run the `mkdir -p /media/cdrom` command.

       Note:

       This command is required only if the /media/cdrom mount point does not exist.

     - Run the `mount -o ro /dev/cdrom /media/cdrom` command.

     Warning:

     When Red Hat Enterprise Linux Server automatically mounts the DVD, the files on the DVD are not executable. You must manually mount the Experience Portal installation DVD using the commands shown above.
4. Change to the mount point directory.
5. Enter the `bash aepinstall.sh` command and press `Enter` to start the installation script.

   The `bash aepinstall.sh` script checks to make sure the calling user has root privileges.
6. Press **Enter** to continue.
7. On the EPM Administrator section, do the following
   a. Type the name you want to use for the EPM user account that will have access to all Experience Portal management functions and press `Enter`.

      The Experience Portal administrator uses this account to log in to the EPM web interface to administer the Experience Portal system. The account is assigned the Administration user role as well as the Auditor and User Manager user roles.
      For details about User Roles, see *Administering Avaya Experience Portal* on http://support.avaya.com.
   b. Type the password for this account and press `Enter`.

      Note:

      All passwords you enter during the installation must:

      - Be at least eight characters in length.

- Contain at least one alphabetic character and one digit.
- Not contain user name.

c. To confirm the password, type the password again and press `Enter`.

8. On the Database Logins section, you can create a PostgreSQL database user account that can read the report data in the Experience Portal database. Select `y` or `n`.

   If you select `y`, do the following:

   a. Enter the account name or press `Enter` to use the default account [report].

   b. Type a password for the account and press `Enter`.

   c. Confirm the password by typing the password again and press `Enter`.

   The system displays the EASG (Enhanced Access Security Gateway) Acceptance of Terms.

9. Read through the EASG Acceptance of Terms.

   - To enable EASG, Type `y` and press `Enter`.
   - To disable EASG, type `n` and press `Enter`.

10. On the Database Login for Auxiliary EPM section, you can specify whether you want to create a PostgreSQL user account for the optional Auxiliary EPM server.

    This account allows each Auxiliary EPM server limited access to the main Experience Portal database, and it is required if you plan to configure an Auxiliary EPM server.

    Answer `y` or `n` when the system prompts if you would like to configure this Primary EPM to support one or more Auxiliary EPM server.

    If you select y, then do the following:

    a. Type the password for this account and press `Enter`.

    b. Confirm the password by typing the password again and press `Enter`.

11. On the Product ID section, type the Product ID created with the Automatic Registration Tool (ART) for this Experience Portal system and press `Enter`.

    The notification feature uses the Product ID to generate SNMP traps. SNMP traps are unsolicited notifications of significant events from an SNMP agent to an SNMP manager. The SNMP agent resides on a managed network device.

12. Experience Portal uses the ssl protocol to establish a secure connection between its servers. This connection requires a security certificate that can be created by Experience Portal or purchased from a third-party company.

    By default, the installer generates and installs a SHA256 2048 bit server certificate. The installer also generates and installs a SHA256 2048 bit EPM Root certificate. External certificates (CAs) or third party certificates can be installed after the AEP installer is completed.

13. When the system displays a summary of all of the inputs entered, do the following:
    - Press `y` to continue with these settings
    - Press `n` to re-enter the settings.
14. Experience Portal begins installing the software. During the install, it displays messages indicating its progress.

    The installation process can appear completed or stopped even though it is still processing and installing the software.

    Please wait until the `aepinstall.sh` script completes installing and displays the message:

    ```
    20210402-17:15:15 Finished Installation
    ```

    The aepinstall.sh script creates a log file at `/opt/Avaya/InstallLogs/aepinstall.log`
15. On the **Select Backup Scheduler configuration** section, enable or disable the backup scheduler to perform system backups.

    You can select the frequency to run the the backup scheduler. The options are:
    - None
    - Daily at 00:00
    - Weekly on Sunday at 00:00
    - Monthly on the 1st of every month at 00:00
16. To unmount and eject the DVD:
    a. Change the directory to a location that is outside the mount point. For example, enter the `cd /` command to change to the root directory.
    b. Unmount the DVD as described in the server documentation.
    c. To eject the Experience Portal installation DVD, press the button on the DVD drive or enter the `eject` command.
17. Check the status of the vpms service and all other services by running the following command:

    `systemctl is-active vpms tomcat sl activemq httpd postgresql epmcompmgr`

    A list appears for each service. If the vpms service is running properly, the command displays `active` for all the services in the list.

Next steps

- To verify if the installation or upgrade was successful, go to `http://EPM-Server/VoicePortal` and log into the Experience Portal web interface.

  Where, `EPM-server` is the hostname or the IP address of the system where the primary EPM logon using EPM Administrator account.

- Install any required patches that you download from the Avaya online support website, http://support.avaya.com.
- Install the MPP software on the MPP servers as described in MPP software installation on page 41.
- For security reasons, change the password of the EPM user account created during the installation as described in the *Changing your account password* topic in the *Administering Avaya Experience Portal* guide. The Experience Portal administrator uses this account to log in to the EPM web interface to administer the Experience Portal system.

Install the MPP software

MPP software installation

When you install the primary EPM software, Experience Portal automatically records the name and location of the primary EPM server. It then adds that information into a file that can be used to install the MPP software on a server without further user input. Therefore, after you have installed the EPM software there are two MPP installation options.

All Avaya Experience Portal systems require at least one Media Processing Platform (MPP) to process incoming and outgoing calls

Note:

You can run the prerequisite installer before installing Experience Portal. For more details, see Platform Vendor Independent Check on page 22

Interactive MPP install

On each server, you launch the Experience Portal installation program and answer the prompts as they are displayed, just as you did for the EPM software installation. For details, see Installing the MPP software interactively on page 41.

Headless (Silent) MPP install

The AEP install script now supports the ability to install any server type without user interaction. All configuration inputs are passed in through an xml file.

For more information on invoking the aepinstall.sh script in headless mode, see AEP installation script on page 35.

Installing the MPP software interactively

Before you begin

- Make sure you have installed the EPM software on the primary EPM server as described in Installing the EPM software on the primary EPM server on page 37.
- Complete the MPP server installation worksheet on page 90 and have it available to help answer the questions raised during the installation.

- Download any patches for Avaya Experience Portal Release 8.1 from the Avaya Support website at http://support.avaya.com.
- Ensure that you download the Avaya Experience Portal ISO file from the Avaya Support website and burn it to a DVD.
- Check if default umask is set to `027`. If it is not set to `027`, the installer asks if you want to set it to `027`. If you select 'yes', the installer applies this setting to the OS. If you select 'no', the installer exits.

Procedure

1. Log into the server on which you want to install the primary EPM software.
   - Log on to the local Linux console as root.
   - Or log on remotely as a non-root user and then change the user to root by entering the `su - root` command.

   Note:

   By default, the craft and sroot users are disabled in Avaya Experience Portal 8.1 Avaya Enterprise Linux fresh installations. Avaya Service Login accounts can only access the Avaya Experience Portal system if they are EASG protected.
2. Insert the Avaya Experience Portal 8.1 software installation DVD into the DVD drive of the server.

   Tip:

   These instructions assume that you are going to access the Experience 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 Experience Portal installation DVD to that directory. However, that directory needs to be readable by all users on the system because the Experience Portal installation script changes users during execution. If the directory is only readable by the root 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 Avaya Experience Portal 8.1 software 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 drive in the `fstab` file.
   - If you are working with a supported version of Red Hat Enterprise Linux Server, to mount the DVD:
     - Run the `mkdir -p /media/cdrom` command.

Note:

This command is required only if the /media/cdrom mount point does not exist.

- Run the `mount -o ro /dev/cdrom /media/cdrom` command.

Warning:

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

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

   The `bash aepinstall.sh` script checks to make sure the calling user has root privileges.
6. Press **Enter** to continue.
7. Read through the end user license agreement and select **Y** to accept the terms of the license agreement.

   Experience Portal automatically starts the PVI checker, which analyzes your system's hardware and operating system configuration. The PVI checker does the following:

   - Checks to ensure that a non-root user account has been created.
   - Asks the user to confirm that one of these accounts is the non-root account the user has configured, and to set the password.
   - Checks for any missing pre-requisite RPMs and installs any if missing.
   - Creates a log file in `/opt/Avaya/InstallLogs/pvicheck.log`.
   - Checks if default umask is set to `027`. If it is not set to `027`, the installer asks if you want to set it to `027`. If you select 'yes', the installer applies this setting to the OS. If you select 'no', the installer exits.
8. After the configuration analysis is complete, the PVI checker displays a message stating whether all prerequisite checks passed followed by the first Prerequisite Status page.
9. From the installation options, enter `3` to select Standalone MPP and confirm.
10. Verify that the Primary EPM is online as the next step requires Primary EPM to be contactable.
11. On the Primary EPM Server Location section, enter the Primary EPM hostname or IP address and confirm.

    This checks the connection to the Primary EPM. If the Primary EPM is not contactable, then this will fail and you will be again asked to enter the Primary EPM Location.

Note:

During the MPP software installation, if the MPP server does not have an EASG state, it will set the EASG state as the same EASG state of the Primary EPM. If the MPP server is set to disable EASG, ensure that you have access to the system without the Avaya Service Logins, and that you can get root access without using sroot.

12. Experience Portal begins installing the software. During the install, it displays messages indicating its progress.

    The installation process can appear completed or stopped even though it is still processing and installing the software.

    Please wait until the `aepinstall.sh` script completes installing and displays the message:

    ```
    20210402-17:15:15 Finished Installation
    ```

    The aepinstall.sh script creates a log file at `/opt/Avaya/InstallLogs/aepinstall.log`

13. To unmount and eject the DVD:

    a. Change the directory to a location that is outside the mount point. For example, enter the `cd /` command to change to the root directory.

    b. Unmount the DVD as described in the server documentation.

    c. To eject the Experience Portal installation DVD, press the button on the DVD drive or enter the `eject` command.

14. To verify that chronyd is operating properly, enter the `chronyc tracking` command.

    The system displays a status message similar to the following:

    ```
    Reference ID    : 0A868E42 (10.134.142.66)
    Stratum         : 4
    Ref time (UTC)  : Thu Sep 17 12:47:44 2020
    System time     : 0.000000488 seconds fast of NTP time
    Last offset     : +0.000008485 seconds
    RMS offset      : 0.000039525 seconds
    Frequency       : 24.108 ppm slow
    Residual freq   : +0.001 ppm
    Skew            : 0.030 ppm
    Root delay      : 0.147401720 seconds
    Root dispersion : 0.003942181 seconds
    Update interval : 1037.7 seconds
    Leap status     : Normal
    ```

    Verify that the Reference ID points to the Primary EPM server.

Next steps

- Install any required patches that you download from the Avaya online support website, http://support.avaya.com.
- If needed, install the MPP software on another server machine by repeating this procedure on that machine.

- If needed, install the auxiliary EPM software as described in Optional: Installing the EPM software on auxiliary EPM server on page 48.
- If the Experience Portal software has been installed on all server machines, configure and test the Experience Portal system as described in Checklist for configuring a basic Experience Portal system on page 53.

Directory details of the EPM system components

Most Experience Portal components and log files are located in the default installation directory that you specify during installation. However, several components cannot be relocated and are stored in fixed paths even if you specify a different path than the default installation directory.

The following table lists some of the components that are stored in fixed paths.

This table does not include standard RHEL packages, such as Apache and NTP, that are installed with or used by Experience Portal.

Component	Directory
Experience Portal Manager web application	`/opt/Tomcat/tomcat/webapps/VoicePortal`
Experience Portal Management web services	`/opt/Tomcat/tomcat/webapps/axis2`
Avaya License Manager	The collocated WebLM is installed in the `/opt/WebLMServer/tomcat/webapps/WebLM` directory. If you use an Standalone WebLM, the license manager can be installed in a different directory on the external system.
Experience Portal database	The Postgres files are installed in the `/var/lib/pgsql` directory. Most of the database data is in the `/var/lib/pgsql/data` directory.
Tomcat for EPM and HTML	`/opt/Tomcat`
Tomcat for SMS and Email Processor	`/opt/MMSServer`
Apache Axis2: web services container	`/opt/Tomcat/tomcat/webapps/axis2`
Postgres Database	`/var/lib/pgsql`
Experience Portal Backup	`/opt/Avaya/backup`
Install Agent	`/opt/Avaya/InstallAgent`

Core Services	`/opt/coreservices`
	`/opt/Avaya/CoreServiceConfig`
	`/opt/Avaya/CoreServiceInstall`

User accounts created during Experience Portal software installation

During Experience Portal software installation, the following user accounts are created for use on various systems to support Experience Portal operation and management.

System	User name	Password	Purpose
EPM web interface	User defined	User defined	The Experience Portal administrator uses this account to administer and configure the Experience Portal system.
PostgreSQL on the primary and optional auxiliary EPM server	postgres	Automatically generated	Since Experience Portal 7.0, this password is automatically generated in the database configuration file. This password is no longer user defined as in the case of previous releases. EPM uses this account to log in to the Experience Portal database to store and retrieve data. The database administrator uses this account to access the Experience Portal database to install new updates or patches and perform database backups. **Note:** If you make changes to the Experience Portal database, the EPM might not function properly, and data might be lost. You must then reinstall the EPM software.
PostgreSQL on the primary and optional auxiliary EPM server	User defined Default user name is: report	User Defined	This user account allows external Experience Portal servers to read the data in the tables that store report data on the Primary EPM server.
PostgreSQL on the optional auxiliary EPM server	User defined Default user name is: reportwriter	User defined	This user account can only change the data in the tables that store report data in the Experience Portal database on the Auxiliary EPM server.

Table continues…

System	User name	Password	Purpose
Linux on the EPM server	postgres	User defined	Used to run the `psql` tool for interactive database access and internally used to run database processes. **Note:** If you make manual changes to the Experience Portal database, the EPM might not function properly, and data might be lost. You must reinstall the EPM software.
Linux on the EPM and MPP servers	avayavp	Login disabled	Used internally to run some Experience Portal processes.
	apache (UCID 48)	Login disabled	This account is created when the httpd RPM is installed and it is used by the Apache server.

Chapter 7: Optional: Installing the EPM software on auxiliary EPM server

Optional: Installing the EPM software on auxiliary EPM server

The Avaya Experience Portal system may include one or more auxiliary EPM servers running the Experience Portal Manager software. The auxiliary EPM server handles Application Interface web service requests, shares Application Logging web service requests when the Primary EPM is in service, and handles all requests when the Primary EPM is down.

Before you begin

- Complete the Auxiliary EPM server installation worksheet on page 92 and have it available to help answer the questions raised during the installation.
- Download any patches for Avaya Experience Portal Release 8.1 from the Avaya Support website at http://support.avaya.com.
- Install the EPM software on the primary EPM server as described in Installing the EPM software on the primary EPM server on page 37.
- Ensure that you download the Avaya Experience Portal ISO file from the Avaya Support website and burn it to a DVD.
- Check if default umask is set to `027`. If it is not set to `027`, the installer asks if you want to set it to `027`. If you select 'yes', the installer applies this setting to the OS. If you select 'no', the installer exits.

Procedure

1. Log into the server on which you want to install the auxiliary EPM software.
   - Log on to the local Linux console as root.
   - Or log on remotely as a non-root user and then change the user to root by entering the `su - root` command.

Note:

By default, the craft and sroot users are disabled in Avaya Experience Portal 8.1 Avaya Enterprise Linux fresh installations. Avaya Service Login accounts can only access the Avaya Experience Portal system if they are EASG protected.

2. Insert the Avaya Experience Portal 8.1 software installation DVD into the DVD drive of the server.

Tip:

These instructions assume that you are going to access the Experience 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 Experience Portal installation ISO image to that directory. However, that directory must be readable by all users on the system. If the directory is only readable for root users, the installation script will encounter errors and will not complete successfully.

3. Mount the Avaya Experience Portal 8.1 software 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 drive in the `fstab` file.
   - If you are working with a supported version of Red Hat Enterprise Linux Server, to mount the DVD:
     - Run the `mkdir -p /media/cdrom` command.

       Note:

       This command is required only if the /media/cdrom mount point does not exist.
     - Run the `mount -o ro /dev/cdrom /media/cdrom` command.

     Warning:

     When Red Hat Enterprise Linux Server automatically mounts the DVD, the files on the DVD are not executable. You must manually mount the Experience Portal installation DVD using the commands shown above.
4. Change to the mount point directory.
5. Enter the `bash aepinstall.sh` command and press `Enter` to start the installation script.

   The `bash aepinstall.sh` script checks to make sure the calling user has root privileges.
6. Press **Enter** to continue.
7. Read through the end user license agreement and select **Y** to accept the terms of the license agreement.

Experience Portal automatically starts the PVI checker, which analyzes your system's hardware and operating system configuration. The PVI checker does the following:

- Checks to ensure that a non-root user account has been created.
- Asks the user to confirm that one of these accounts is the non-root account the user has configured, and to set the password.
- Checks for any missing pre-requisite RPMs and installs any if missing.
- Creates a log file in `/opt/Avaya/InstallLogs/pvicheck.log`.
- Checks if default umask is set to `027`. If it is not set to `027`, the installer asks if you want to set it to `027`. If you select 'yes', the installer applies this setting to the OS. If you select 'no', the installer exits.

8. After the configuration analysis is complete, the PVI checker displays a message stating whether all prerequisite checks passed followed by the first Prerequisite Status page.
9. From the installation options, enter `2` to select Auxiliary EPM and confirm.
10. Verify that the Primary EPM is online as the next step requires Primary EPM to be contactable.
11. On the Primary EPM Server Location section, specify the server name or IP address of the EPM server.
12. On the Database Login Check for Auxiliary EPM section, enter the password for the auxiliary EPM database account created during the installation of the primary EPM.

    Note:

    During the auxiliary EPM software upgrade, if the auxiliary EPM sever does not have an EASG state, it will set the EASG state as the same EASG state of the Primary EPM. If the auxiliary EPM server is set to disable EASG, make sure you have access to the system without the Avaya Service Logins, and make sure you can get root access without using sroot.
13. To confirm this password, re-enter the same password.
14. On the Database Logins section, you can create a PostgreSQL database user account that can read the report data in the Auxiliary Experience Portal database. Select y or n.

    If you select `y`, do the following:

    a. Enter the account name or press `Enter` to use the default account [report].
    b. Type a password for the account and press `Enter`.
    c. Confirm the password by typing the password again and press `Enter`.

    Note:

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

15. On the **Database Logins** section, you can create a 'QL database user account on the Auxiliary EPM server that can allow external systems to write report data into the Experience Portal database on this server. Select y or n.

    If you select `y`, then do the following:

    a. Enter the account name or press `Enter` to use the default account [reportwriter].

    b. Type a password for the account and press `Enter`.

    c. Confirm the password by typing the password again and press `Enter`.

    Note:

    This user account can only change the data in the tables that store report data in the Experience Portal database on the Auxiliary EPM server.

16. Press `Enter` to end the installation script.

    During the installation process, Experience Portal creates several log files that you can use to verify what happened during installation. When the installation process is complete, Experience Portal moves these logs to the standard log directory and displays the exact path on the screen. You can view the detailed logs at `$AVAYA_HOME/logs/install_<date>`.

17. To unmount and eject the DVD:

    a. Change the directory to a location that is outside the mount point. For example, enter the `cd /` command to change to the root directory.

    b. Unmount the DVD as described in the server documentation.

    c. To eject the Experience Portal installation DVD, press the button on the DVD drive or enter the `eject` command.

18. Load the environment variables created during the installation by logging out of Linux and then logging back in.

    a. Log out of the Linux system.

    b. Log back in to the Linux system.

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

19. Check the status of the vpms service and all other services by running the following command:

    `systemctl is-active vpms tomcat sl activemq`

    A list appears for each service. If the vpms service is running properly, the command displays `active` for all the services in the list.

Next steps

- To verify if the installation or upgrade was successful, go to `http://EPM-Server/VoicePortal` and log into the Experience Portal web interface.

  Where, `EPM-server` is the hostname or the IP address of the system where the primary EPM logon using EPM Administrator account.
- Install any required patches that you download from the Avaya online support website, http://support.avaya.com.
- If the Experience Portal software has been installed on all server machines, configure and test the Experience Portal system as described in Checklist for configuring a basic Experience Portal system on page 53.

Chapter 8: Configuring and initializing the Avaya Experience Portal system

Checklist for configuring a basic Experience Portal system

After you install Experience Portal Manager and at least one Media Processing Platform, you can configure and test the Avaya Experience Portal system. After you successfully test the system, you can configure the optional Experience Portal features.

Important:

You must complete the following steps in the order given or you might encounter errors during the procedures.

S.No	Description	Notes	✔
1	Log in to the Experience Portal Manager (EPM) web interface.	**Tip:** Once you log in, click the **Help** button on the appropriate EPM web page for information on how to configure the EPM web page.	
2	Install the Experience Portal license file.	See Installing the license file on page 56.	
3	Add at least one Voice over IP (VoIP) H.323 or SIP connection.	See Adding H.323 connections on page 60 or Adding a SIP connection on page 61.	
4	(Optional) Add multichannel applications, such as SMS, Email, and HTML applications. You can add one SMS, one Email, and one HTML application for each channel.	See *Administering Avaya Experience Portal*.	
5	Add all of the installed MPP servers.	See Adding the MPP servers on page 61.	
6	Add one or more Automatic Speech Recognition (ASR) servers.	See Adding ASR servers on page 61.	
7	Add one or more Text-to-Speech (TTS) servers.	See Adding TTS servers on page 62.	

Table continues…

S.No	Description	Notes	✔
8	If you have installed the EPM software on an optional auxiliary EPM server, add the auxiliary EPM server to the Experience Portal system.	See Optional: Adding the auxiliary EPM server on page 64.	
9	Add the Experience Portal test application.	See Adding the Experience Portal test application on page 66.	
10	Start all the MPPs in the Experience Portal system.	See Starting all MPP servers on page 65.	
11	(Optional) Connect the EPM server to an external time source so that all servers in the Experience Portal system are synchronized.	See External time sources on page 71.	
12	EPM can accept input in non-English languages. Configure EPM to accept input in Chinese, Japanese, or Korean.	See: • Configuring Chinese on Avaya Enterprise Linux on page 73 • Configuring Japanese on Avaya Enterprise Linux on page 74 • Configuring Korean on Avaya Enterprise Linux on page 75	
13	To enable organization level access in Experience Portal, run the **`EnableOrganizations`** command.	See *Administering Avaya Experience Portal*.	

Logging in to the EPM web interface using the Avaya Services init account

Procedure

1. Open a compatible browser and enter the URL of your Experience Portal system.

   The URL is: `http://`*`EPM-server`*`/VoicePortal`.

   `EPM-server` is the hostname or the IP address of the system where the primary EPM software is installed.

   Note:

   Enable TLS security in your IE browser.

2. In the **User Name** field, enter `init`.
3. Click **Submit**.

4. Use the challenge information to generate the appropriate response password for the init account, and enter the password in the **Password** field.
5. Click **Logon**.

   The system logs you in to EPM.

Logging in to the Experience Portal web interface

The Experience Portal Manager (EPM) web interface is the main interface to the Experience Portal system.

Procedure

1. Open an Internet Explorer browser and enter the URL for your Experience Portal system.

   The default URL is: `https://EPM-server/VoicePortal`, where *EPM-server* is the hostname or IP address of the system where the primary EPM software is installed.

   Note:

   TLS security must be enabled in the IE browser. For more information on configuring browsers to use TLS security, see Configuring browsers to use TLS security on page 58.
2. In the **User Name** field, enter the user name of the EPM Administration account that was created during the installation procedure.

   The user name must match the specified Administration account name exactly, including case.
3. Click **Submit**.
4. In the **Password** field, enter the password assigned to the EPM Administration account during the installation procedure.

   The password must match the password assigned to the specified user name exactly, including case.
5. Click **Logon**.

   If the user name and password:

   - Match what was specified for the Administration account during installation, the EPM displays the Avaya Experience Portal Management System Home page with the Experience Portal version number and **Legal Notice** display text box.
   - Do not match the Administration user account, the EPM displays an error message and returns you to the **User Name** prompt so that you can try again.

Important:

Be careful when you enter the user name and password a second time, because the EPM will automatically lock the user account out of the system if you specify too many incorrect user name and password combinations.

Installing the license file

A license file is required for the Experience Portal operation as the license file defines all features authorized to use. Avaya sends the Experience Portal license file separately in an email.

About this task

Note:

If you do not receive a license file from Avaya, contact your Avaya representative or Avaya Partner representative.

Experience Portal provides an initial 30-day grace period for all features with restricted capacity for fresh installs.

Before you begin

Avaya Experience Portal 8.1.2 upgrades the local WebLM co-resident server to WebLM 8.1. If the WebLM server does *not* reside on the Experience Portal EPM server, you can upgrade the WebLM software to version 8.1 or later. For more information on the latest WebLM GA software, see http://support.avaya.com.

Important:

If a Standalone WebLM is being used, you must install the WebLM trusted certificates on the EPM. For more information on installing trusted certificates for secure communications with Standalone Avaya WebLM, see *Administering Avaya Experience Portal*.

Procedure

1. Open the email that contains the Experience 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 Experience Portal servers from a network connection.

   For example, you can install the license file on any server from which you can access the EPM web interface.
3. Log on to the EPM web interface by using an account with the Administration user role.
4. From the EPM main menu, select **Security** > **Licensing**.

   The Licensing page displays the license information 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 the **Location** 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` or `52233`.

If no port number is specified, Experience Portal uses 443 as the port number.

6. Click **Verify**.

   The browser opens a separate window and displays the Avaya WebLM page, which contains a **License Administration** link.

7. Click **License Administration**.

   The system displays the Web License Manager Logon page.

8. If you have done a fresh installation of the WebLM server, you have to do the following:
   a. Enter the default user name `admin`.
   b. Enter the default password `weblmadmin`.
   c. Press `Enter` or click the arrow button to log in.
   d. Enter the details on the Change Password page. Make sure that you type `weblmadmin` in the **Current Password** field.
   e. Click **Submit**.
   f. On the Logon page, log in with your new password.

9. If you have an existing WebLM server, you have to do the following:
   a. Type the user name.
   b. Type the password.
   c. Click **Log on**.

10. On the Install License page, click **Browse** to locate the Experience Portal license file and select the license file to use.

11. Select **Accept the License Terms & Conditions**, and click **Install**.

    WebLM uploads the license file from your computer to the WebLM server and displays the message `License file installed successfully.`

12. Log out of the Web License Manager and close the Web License Manager page.

13. On the EPM Licensing page, click **Apply**.

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

15. Verify that the new licensing information is correct.

Checklist for configuring external systems

In order to work with Experience Portal, you need to set configuration options in the 3rd party products.

S.No	Description	Notes	✔
1	You need at least one Windows system with a Microsoft Internet Explorer (IE) browser that is configured to use TLS security.	See Configuring browsers to use TLS security on page 58.	
2	If you are running Orchestration Designer applications with a WebSphere Application Server (WAS) and Nuance speech servers, you need to configure the MIME type declarations.	See Configuring a WebSphere Application Server to work with Nuance speech servers on page 59	
3	To use A-Law encoding with a Nuance server that supports Automatic Speech Recognition (ASR), you need to configure the Nuance server.	See Configuring A-Law encoding for Nuance ASR servers on page 59.	
4	If you want to use Nuance SWI_rawScore, you need to configure additional parameters on the Nuance speech server.	See the Nuance documentation.	

Configuring browsers to use TLS security

A web interface to the EPM for administering Experience Portal is included with the EPM software. To access the EPM web interface, you must use a Microsoft Internet Explorer IE11 browser that is configured to use TLS security.

Procedure

1. In an IE browser window, select **Tools** > **Internet Options**.
2. Go to the **Advanced** tab.
3. In the **Security** section, ensure that the **Use TLS 1.x** check box is selected. If not, select the check box.
4. Click **OK**.

Configuring a WebSphere Application Server to work with Nuance speech servers

If you are running Orchestration Designer applications with a WebSphere Application Server (WAS) and Nuance speech servers, you need to manually declare the grammars that Orchestration Designer uses on the WAS.

Procedure

1. Open a Web browser and go to `http://<WAS_ipaddress>:9090/admin`, where *<WAS_ipaddress>* is the IP address of your WAS server.
2. Log in as `AnyOne`.
3. Expand **Environment** in the left-hand pane.
4. Click **Virtual Hosts** in the expanded list.
5. In the right-hand pane, select the virtual host that manages your speech applications or, if you have not created a separate virtual host, select **default host**.
6. Click **MIME Types**.
7. Look for the `application/srgs+xml` MIME type. If it does not exist, click **New** and add it. If it does exist, select it and click **Edit**.
8. Add `grxml grammar` to the `application/srgs+xml` MIME type extensions.
9. Stop and then restart the WAS server.

Configuring A-Law encoding for Nuance ASR servers

If you want to use A-Law encoding with a Nuance server that supports Automatic Speech Recognition (ASR), you need to configure the additional parameters.

Procedure

1. On each Nuance server machine, log in to the operating system and navigate to the directory in which the Nuance `Baseline.xml` file is stored.
2. Open the `Baseline.xml` file in an ASCII editor.
3. Add the following additional value to *both* the `swirec_audio_media_type` and `swiep_audio_media_type` parameters:

   ```
   <value>audio/x-alaw-basic;rate=8000</value>
   ```

4. Save and close the file.
5. Restart the Nuance server.
6. Repeat this procedure for any other Nuance ASR servers in the Experience Portal system.

Configuring parameters for getting recognition results from the Nuance server

About this task

You must configure parameters in the NSSserver.cfg and Baseline.xml files of the Nuance speech server to get the recognition results of *no match* from the Nuance server.

Before you begin

Install a supported version on Nuance Speech Server and Nuance Recognizer. For Nuance version information, see the *Avaya Experience Portal Overview and Specification* .

Procedure

1. On each Nuance server machine, log in to the operating system.
2. Navigate to the `usr/local/Nuance/SpeechServer/server/config` directory in which the Nuance `NSSserver.cfg` file is stored.
3. Open the `NSSserver.cfg` file in an ASCII editor.
4. Define the values as given below:

   ```
   server.mrcp2.osrspeechrecog.mrcpdefaults.VSP.server.osrspeechrecog.
   result.sendnomatch VXIString true

   server.mrcp1.osrspeechrecog.result.sendnomatch VXIString true
   ```

5. Save and close the file.
6. Open the `Baseline.xml` file in an ASCII editor.
7. Define the value as given below:

   ```
   <param name=”swisr_result_enable_speech_mode"> <value> 1 </value>
   </param>
   ```

8. Restart the NSSservice.

Adding H.323 connections

Before you begin

Ensure that the switch is configured.

Procedure

1. From the EPM main menu, select **System Configuration** > **VoIP Connections** and go to the H.323 tab.
2. Click **Add**.
3. On the Add H.323 Connection page, enter the appropriate information and click **Save**.

4. Repeat this procedure for each H.323 connection you want to add.

Adding a SIP connection

Before you begin

Configure Communication Manager.

Procedure

1. From the EPM main menu, select **System Configuration** > **VoIP Connections** and go to the SIP tab.
2. Click **Add**.
3. On the Add SIP Connection page, enter the appropriate information and click **Save**.

Adding the MPP servers

Procedure

1. From the EPM menu, select **System Configuration** > **MPP**.
2. On the MPP Servers page, click **Add**.
3. On the Add MPP Server first page, specify the fields as required and click **Continue**.
4. On the Add MPP Server second page, specify the fields as required and click **Save**.

   If you log in using the init account, ensure that you enter the correct LDN number for the server in the **LDN** field. If you do not specify an LDN number, Experience Portal uses the default value of (000)000-0000.

   Note:

   Verify the security certificate details in the **MPP Certificate** section, and select the **Trust new certificate** check box. If you do not select the **Trust new certificate** check box, you cannot save the changes.

Adding ASR servers

About this task

You can add an Automated speech recognition (ASR) type speech server.

Procedure

1. From the EPM menu, select **System Configuration** > **Speech Servers**.
2. On the Speech Servers page, click the ASR tab and click **Add**.
3. On the Add ASR Server page, specify the fields as required and click **Save**.

   To add a Nuance type server, in the **Engine Type** field, select **Nuance**.

   For more information about the pre-configurations and installation requirements for a Nuance speech server, see Pre-configurations and installations required for adding a Nuance speech server on page 63.

   Note:

   After you save the changes, the **System Monitor** webpage and the **MPP Manager** webpage on EPM display the **Restart Required** configuration status for MPPs in the **Running** state.
4. Restart the MPP server.

Adding TTS servers

About this task

You can add a Text-to-Speech (TTS) type speech server.

Procedure

1. From the EPM menu, select **System Configuration** > **Speech Servers**.
2. On the Speech Servers page, click the TTS tab and click **Add**.
3. On the Add TTS Server page, specify the fields as required and click **Save**.

   To add a Nuance type server, in the **Engine Type** field, select **Nuance**.

   For more information about the pre-configurations and installation requirements for a Nuance speech server, see Pre-configurations and installations required for adding a Nuance speech server on page 63.

   Note:

   After you save the changes, the **System Monitor** webpage and the **MPP Manager** webpage on EPM display the **Restart Required** configuration status for MPPs in the **Running** state.
4. Restart the MPP server.

Pre-configurations and installations required for adding a Nuance speech server

About this task

Use this procedure before adding a Nuance-type speech server.

Procedure

1. Create a virtual machine (VM) with the latest version of the Windows server and access to the Internet.
2. Check access to the VM through Remote Desktop Protocol (RDP) on your local computer.
3. Enable the **Show hidden files, folders, and drives** option.
4. Click https://nuancecommunity.force.com/NuanceNetwork/s/ to go to the Nuance network portal and log in with your credentials.
5. Download the `NSS-6.2.10-x86-windows.zip` file for the speech Nuance speech server.

   Check the following description of compatibility with other products: *Nuance Speech Server 6.2.10 for Windows. Nuance Speech Server 6.2.10 is compatible with Nuance Recognizer 10.2.8 and Nuance Vocalizer for Enterprise 6.0.6. Size: 83,225 KB*.
6. Download the following files for the vocalizer for enterprise:
   a. Download the `NVE-6.0.6-x86-windows.zip` file for the kernel.
   b. Download the `NVE_6.0.3_en_US_Tom_bet1_x86-windows.zip` file for the language file.
   c. Download the `sdk-eval-NVN6_0_license.lic` file for the license file.
7. Download the following files for the recognizer:
   a. Download the `NRec-10.2.8-x86_64-windows.zip` file for the kernel.
   b. Download the `NRec-en-US-10.0.2-10.2.0.x86_64-windows.zip` file for the language file.
   c. Download the `sdk-eval-recognizer10_license.lic` file for the license file.
8. Download the `NLICMGR-11.7.0-x86_64-windows.zip` file for the license manager.
9. Install the files in the following order:
   a. `NRec-10.2.8-x86_64-windows.zip`
   b. `NRec-en-US-10.0.2-10.2.0.x86_64-windows.zip`
   c. `NVE-6.0.6-x86-windows.zip`
   d. `NVE_6.0.3_en_US_Tom_bet1_x86-windows.zip`
   e. `NSS-6.2.10-x86-windows.zip`

f. `NLICMGR-11.7.0-x86_64-windows.zip`

10. Do the following to create the license file:
    a. Go to `C:\Program Files\Nuance\license_manager\license` and create `nuance.lic` file.
    b. Add contents of `sdk-eval-recognizer10_license.lic` and `sdk-eval-NVN6_0_license.lic` to the `nuance.lic` file.
    c. In `nuance.lic`, delete the comments starting with the pound sign (#).
11. Go to `Start\All Programs\Nuance\License Manager 11.7\Licensing Tools\Config Services\<Path to the license file>\C:\Program Files\Nuance\license_manager\license` and set `nuance.lic` for License Manager.
12. Go to **Start/Stop/Reread** tab and restart the server.
13. To configure the recognizer, go to `C:\Program Files\Nuance\Recognizer\config\Baseline.xml` and set the value for `swiep_license_ports` to `4`.
14. To configure the vocalizer, go to `C:\Program Files (x86)\Nuance\Vocalizer for Enterprise\config\baseline.xml` and set the value for `tts_license_ports` to `4`.
15. To add recognizer services, go to `Start/Command Prompt/Run as Administrator` and run the following command:

    `cd C:\Program Files\Nuance\Recognizer\Recognizer Service\amd64\bin>nrs-win-service-init.exe -i nrs-win-service.exe -servlet nrs -port 8200`
16. To start the services, go to the following paths:
    - `Services\Nuance Recognition Service\Start`.
    - `Services\Nuance Speech Service\Start`.

    If a service does not start, restart the VM, disable Windows Firewall, and then try to start both services.

Optional: Adding the auxiliary EPM server

Before you begin

Ensure that you configure the Outcall Web Service Authentication on the EPM Settings page.

Procedure

1. Log in to the EPM Web interface using an Administration user role.
2. From the EPM main menu, select **System Configuration** > **EPM Server**.

3. On the EPM Servers page, click **Add**.
4. On the first Add EPM Server page, enter the appropriate information and click **Continue**.
5. On the second Add EPM Server page, enter the appropriate information.

   If you logged in using the init account, ensure that the LDN number specified in the **LDN** field matches the information in the Avaya Services database for this server.
6. Click **OK**.

Starting all MPP servers

Before you begin

Add all of the installed MPP servers as described in Adding the MPP servers on page 61.

Procedure

1. From the EPM main menu, select **System Management** > **MPP Manager**.
2. On the MPP Manager page, make sure that the **Mode** column says **Online** for all servers. If any servers are shown as **Offline**:
   a. Click the Selection check box next to each Offline MPP server.
   b. Click the **Online** button in the **Mode Commands** group and confirm your selection when prompted by the system.
3. Click the Selection check box in the first column header of the MPP server table to select all MPP servers.
4. Click **Start** in the **State Commands** group and confirm your selection when prompted by the system.

   Experience Portal starts the MPP servers. This process can take several minutes depending on how many servers there are in your system.
5. After a few minutes, click **Refresh**, and verify the following for all MPP servers:
   - **Mode** is **Online**
   - **State** is **Running**
   - **Config** is **OK**
6. Make sure that all licensed telephony ports are correctly allocated to the MPP servers:
   a. From the EPM main menu, select **Real-time Monitoring** > **Port Distribution**.
   b. On the Port Distribution page, verify the details in the **Mode** and **State** columns.

Next steps

Once the MPP servers start successfully, the Avaya Experience Portal system is available. You can now test it by running the sample application as described in Running the sample application on page 68.

Adding the Experience Portal test application

About this task

You can use the sample application that is installed with Experience Portal to test how the system handles telephony resource requests.

- If you run the sample application as a VoiceXML application, Experience 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
- If you run the sample application as a CCXML application, Experience Portal uses a more advanced CCXML page that provides all the functionality of the VoiceXML application and you can test the following CCXML features:
  - Call conferencing
  - Call classification
  - Call merge for calls using a SIP connection

Before you begin

If you want to test Automatic Speech Recognition (ASR) resources, ensure that you add one or more ASR servers to the Experience Portal system.

If you want to test Text-to-Speech (TTS) resources, ensure that you add one or more TTS servers to the Experience Portal system.

Procedure

1. From the EPM main menu, select **System Configuration** > **Applications**.
2. On the Applications page, click **Add**.

   EPM displays the Add Application page.
3. In the **Name** field, type the name you want to use to identify the application on the system. After you save the application, this name cannot be changed.

   For example, type `Test_App`.
4. Enter the required parameters for the application.

   The following table provides information on the parameters that you must enter for each application type.

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

5. Click **Verify** to make sure that the system can locate the sample application page.

   If EPM can find the specified page, EPM displays the 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 system can locate the sample application page.

   Note:

   Instead of opening the file in a separate window, the browser might prompt you to save the file as a text file. You can choose to save the file and use text editor to open the file.

6. If you want to test ASR resources, complete the following steps:
   a. Select the type of ASR server you want to use from the **ASR** drop-down list.
   b. From the **Languages** list, select **English(US) en-us**.
7. If you want to test TTS, complete the following steps:
   a. Select the type of TTS server you want to use from the **TTS** drop-down list.
   b. 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. To test transcriptions, go to the **Transcription** section of the **Reporting Parameters** group and set the transcription parameters.

   Note:

   You can set the transcription parameters only if you have the Privacy Manager user role.

10. Click **Save**.

    EPM displays the Applications page with the test application listed in the table.

Running the sample application

Procedure

1. Call the test application number.

   The test application number is the number that you specify when you add the test application to the Experience Portal system.

2. If you run the test application as a VoiceXML application, press:
   - 1 for Automatic Speech Recognition (ASR)
   - 2 for Text-to-Speech (TTS)
   - 3 for Bridge Transfer
   - 4 for Blind Transfer
   - 5 for Consultative Transfer
   - 6 for Audio test
   - 7 to Exit
3. If you run the test application as a CCXML application, press:
   - 1 for Automatic Speech Recognition (ASR)
   - 2 for Text-to-Speech (TTS)
   - 3 for Bridge Transfer
   - 4 for Blind Transfer
   - 5 for Consultative Transfer
   - 6 for Audio test
   - 7 to test Conferencing
   - 8 to test Merge
   - 9 to test Call Classification
   - 0 to Exit

Next steps

After you run the application, you can create reports to verify the application's performance and, if you have enabled transcriptions, view the transcription data.

Test Application result for Call Classification option

When you run the test application as a CCXML application, and press 9 to test call classification, the application plays the following prompts based on the call status:

Call Status	Prompt
Line is busy	The busy tone is detected.
Invalid number is detected	Fail to create call.
Call is connected and human voice is heard	Detected live voice.
Call is connected and a recorded message is detected	Detected answering machine.
Call is connected and fax is detected	Detected fax.
Call is connected and sit tone is detected	The sit tone is detected.
Trunks are busy	The fast busy tone is detected.
Call classification detection does not detect anything within the specified timeout period	Timeout is detected.
Error occurs during call classification detection	Error occurs while detecting.
Call is not answered	No answer is detected.

Test Application result for Call Conferencing option

When you run the test application as a CCXML application, and press 7 to test call conferencing, the application plays the following prompts based on the call status:

Call Status	Prompt
Call to destination fails	Fail to create call.
Call is successful	Thank you. **Note:** When the call conference is successful, the application plays additional prompts. For H323, enter 9 with the phone number. Otherwise, the call fails.

Test Application result for Call Merge option

When you run the test application as a CCXML application, and press 8 to test call merging, the application plays the following prompts based on the call status:

Call Status	Prompt
The application detects H.323 connection	This option is not supported in H.323. Please use SIP.
Merge is successful.	Thank you. **Note:** After playing the thank you prompt, the application merges the call. This option is not supported for H.323.

Software Upgrade functionality

You can upgrade the MPPs running on the Experience Portal system from the Software Upgrade page in the EPM web interface. If you want to use the Software Upgrade functionality, you need to authorize the EPM to upgrade the MPPs. For more information on Software Upgrade, see *Administering Avaya Experience Portal*.

If you don't want to use the Software Upgrade functionality to upgrade the MPPs, disable the InstallAgent RPM.

Note:

Disabling the InstallAgent package is optional.

Disable the InstallAgent package if you don't want EPM to use a public key-based SSH mechanism to remotely administer the MPP upgrades, and if you don't want this package installed on your system.

Optional: Disabling the InstallAgent RPM

Procedure

1. Delete the .ssh directory by entering the *rm -r /home/vpinstall/.ssh* command.

   Or

   If you want to save the .ssh directory for future reference, you can rename the directory. For example, to rename the .ssh file to .sshOld, enter the `mv /home/vpinstall/.ssh /home/vpinstall/.sshOld` command.

2. Enter the `chmod -s /opt/Avaya/InstallAgent/bin/InstallAgent` command to disable the InstallAgent RPM.

   The command removes the user ID permission from the InstallAgent package.

Reinstalling the InstallAgent RPM

About this task

If you have previously disabled the InstallAgent RPM, as described in Optional Disabling the InstallAgent RPM on page 70, and want to use the Software Upgrade feature to upgrade the MPPs, you need to reinstall the InstallAgent RPM.

Procedure

On the Experience Portal server, enter the `rpm -U <IA RPM> --replacepkgs` command to reinstall the InstallAgent RPM.

For example, `rpm -U av-ia-8.0.0.0-0626.rpm --replacepkgs`.

Note:

The InstallAgent RPM is located in the `Support/PrereqCheckerInstaller/ExternalPackages/installagent` directory of the Experience Portal installation image.

External time sources

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

- The server running the Primary EPM software
- Any application servers running on dedicated machines
- All available speech servers
- All PBX switches
- All email servers

You can use a corporate or a public time server as the external time source.

Note:

Avaya only provides guidelines for public time servers. Ensure that the servers you choose are accessible through your corporate firewall. 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 the time server meets all requirements before you change the `chrony.conf` file on the Primary EPM server.

Configuring the Primary EPM 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 71.

Procedure

1. Log on to Linux on the Experience Portal Primary EPM server.
   - If you are an Avaya Services representative, and use Avaya Enterprise Linux, or if the Avaya Service accounts are installed on this server, log on to the local Linux console as root.
   - Otherwise, log on remotely as a non-root user, and then change the user to root by entering the `su - root` command.
2. Open the `/etc/chrony.conf` file in an ASCII text editor.
3. Edit the file to add the primary external time source and an explicit declaration to set the local clock. You can also add a secondary time source for scenarios where the primary source is not 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
   # Record the rate at which the system clock gains/losses time.
   driftfile /var/lib/chrony/drift
   ```

   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`. If the `chrony.conf` file at your site has different settings, check with your system administrator before you change them.

   The following uses the external time sources `0.rhel.pool.ntp.org` and `1.rhel.pool.ntp.org`:

   ```
   server 0.rhel.pool.ntp.org // primary external time server
   server 1.rhel.pool.ntp.org          // secondary time server
   server 127.127.1.0                 // set local clock to time received from
   external server
   # Record the rate at which the system clock gains/losses time.
   driftfile /var/lib/chrony/drift
   ```

4. Save and close the file.
5. Using a text editor of your choice, open the `/etc/ntp/step-tickers` file. The EPM uses this file for initial time setup.
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 `0.rhel.pool.ntp.org` and `1.rhel.pool.ntp.org`, add the following lines:

   ```
   0.rhel.pool.ntp.org
   1.rhel.pool.ntp.org
   ```

7. Save and close the file.
8. Restart the `chronyd` daemon by entering the `systemctl restart chronyd` 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 EPM web pages

You can enter non-English characters as field values if you have the appropriate languages installed on the EPM server. If you are using Avaya Enterprise Linux, Avaya provides font files for Chinese, Japanese, and Korean.

Configuring Chinese on Avaya Enterprise Linux

Procedure

1. Log on to Linux on the Experience Portal Primary EPM server in one of the following ways:
   - Log on to the local Linux console as a root user if you are an Avaya Services representative, use Avaya Enterprise Linux, or if the Avaya Service accounts are installed on this server.
   - Log on remotely as a non-root user and then change the user to root by entering the `su - root` command.
2. Navigate to the Linux font directory by entering the `cd /usr/share/fonts` command.

   Note:

   If the font directory does not already exist, create the directory 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.

   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.
4. Extract the font file by running the `tar -xvf TTzh_CN.tar` command.
5. Copy the system language file to the Linux system configuration directory by running the `cp $AVAYA_HOME/Support/fonts/zh_CN/i18n /etc/sysconfig/` command.
6. Navigate to the Java fonts directory by running the `cd $JAVA_HOME/jre/lib/fonts` command.

Note:

If the fonts directory does not already exist, create the directory by entering the `mkdir $JAVA_HOME/jre/lib/fonts` command, then navigate to the directory that you just created.

7. Create the fallback directory by running the `mkdir fallback` command.
8. Navigate to the fallback directory by running the `cd fallback` command.
9. Copy the Chinese font files to the fallback directory by running 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 EPM server machine by entering the `reboot` command.

Configuring Japanese on Avaya Enterprise Linux

Procedure

1. Log on to Linux on the Experience Portal Primary EPM server.
   - If you are an Avaya Services representative, and use Avaya Enterprise Linux, or if the Avaya Service accounts are installed on this server, log on to the local Linux console as root.
   - Otherwise, log on remotely as a non-root user, and then change the user to root by entering the `su - root` command.
2. Navigate to the Linux font directory by entering the `cd /usr/share/fonts` command.

   Note:

   If the font directory does not already exist, create the directory 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.

   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.
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.

   Note:

   If the fonts directory does not already exist, create the directory by entering the `mkdir $JAVA_HOME/jre/lib/fonts` command, then navigate to the directory that you just created.

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 EPM server machine by entering the `reboot` command.

Configuring Korean on Avaya Enterprise Linux

Procedure

1. Log on to Linux on the Experience Portal Primary EPM server.
   - If you are an Avaya Services representative, and use Avaya Enterprise Linux, or if the Avaya Service accounts are installed on this server, log on to the local Linux console as root.
   - Otherwise, log on remotely as a non-root user, and then change the user to root by entering the `su - root` command.
2. Navigate to the Linux font directory by entering the `cd /usr/share/fonts` command.

   Note:

   If the font directory does not already exist, create the directory 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.

   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.

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 following command:

`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.

   Note:

   If the fonts directory does not already exist, create the directory by entering the `mkdir $JAVA_HOME/jre/lib/fonts` command, then navigate to the directory that you just created.

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 EPM server machine by entering the `reboot` command.

Disabling the RedHat Enterprise Linux GUI login page from displaying the user list

About this task

If you have installed a graphical interface for RHEL, the RHEL GUI login page displays a list of users on the startup screen.

This list also includes the avayavp user. To eliminate a potential security hazard, you must disable the RHEL GUI login page from displaying the list of users.

Procedure

1. To disable the login page from displaying the list of users, enter the following command on the console:

   ```
   sudo -u gdm gconftool-2 --type bool --set /apps/gdm/simple-greeter/disable_user_list true
   ```

2. To verify that the user list is disabled on the login page, enter the following command on the console:

   ```
   sudo -u gdm gconftool-2 --get /apps/gdm/simple-greeter/disable_user_list
   ```

If the command returns the value as True, then the login page does not display the list of users.

Chapter 9: Troubleshooting installation issues

Installation log files

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

Avaya Experience Portal creates several log files during the installation process. The installation process creates the `/opt/Avaya/InstallLogs/aepinstall.log` log file. The PVI checker creates the `/opt/Avaya/InstallLogs/pvichecker.log` log file.

General installation log files

Log filename	Description
`aepinstall.log`	This is the first log file you should consult if you need to troubleshoot an installation issue. **Note:** This file contains detailed log messages which might appear to be warnings or errors, but can safely be ignored, particularly if those warnings do not appear in the installation summary (ISSummary.log).
`SetIAVersion<component>.log`	Version history of the Experience Portal components installed. The <component> can be VPMS, MPP, or Docs.
`GetIAVersionVPMS.err.log`	Log file containing any warning messages generated while trying to retrieve version information as part of an upgrade. The presence of a warning in this log file does not necessarily indicate an error.

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.

EPM-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.

Changing the Product ID for an existing Experience Portal system

Before you begin

If you have just installed or upgraded the Experience Portal software and are still logged into the server, verify that you reloaded the environment variables as described in Reloading the Experience Portal environment variables on page 83.

Procedure

1. Log on to Linux on the Experience Portal Primary EPM server.
   - If you are an Avaya Services representative, and use Avaya Enterprise Linux, or if the Avaya Service accounts are installed on this server, log on to the local Linux console as root.
   - Otherwise, log on remotely as a non-root user, and then change the user to root by entering the `su - root` command.
2. Navigate to the Support/VP-Tools directory by entering the **`cd /opt/Avaya/ExperiencePortal/Support/VP-Tools`** command.
3. Stop *vpms* service by entering the **`service vpms stop`** command.
4. To run the script:

   On Linux: Enter the `bash ResetProductID New_ProductID` command where New_ProductID is the product ID that you want to use.
5. Restart *vpms* service by entering the **`service vpms restart`** command.
6. Restart all MPPs by entering the **`service mpp restart`**
7. Follow any on-screen instructions displayed by the script.

Changing PostgreSQL user account passwords

About this task

Experience Portal uses the following PostgreSQL user accounts:

Default account name	Description
postgres	The database administrator can use this account to log in to the local Avaya Experience Portal database and perform database administration tasks. The password for this account is automatically generated. You cannot add other accounts of this type, delete this account, or change the account name. **Important:** Contact the Avaya Services representative to modify the local VoicePortal database as the database contains critical configuration information used to run the system.
report	You can have any number of accounts of this type with any account names.
reportwriter	This user account can only change the data in the tables that store report data in the Experience Portal database on the Auxiliary EPM server. You can have any number of accounts of this type with any account names. **Important:** Contact the Avaya Services representative to modify the tables that store report data in the local VoicePortal database.
vpcommon	This account allows each Auxiliary EPM server limited access to the main Experience Portal database, and it is required if you plan to configure an Auxiliary EPM server. You can delete this account and set the password for this account, but you cannot add other accounts of this type or change the account name.

Use the `SetDbPassword.sh` script to change all account passwords and add and delete all accounts except for postgres, which you cannot delete.

Before you begin

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

Procedure

1. Log on to Linux on the Experience Portal server with root privileges.
2. Enter the `cd $AVAYA_HOME/Support/Security-Tools/SetDbPassword` command, where `$AVAYA_HOME` is an environmental variable pointing to the name of the installation directory specified during the Experience Portal software installation.
3. Enter the `bash SetDbPassword.sh update -u` *username* command, where *username* is the name of the user account whose password you want to change.
4. Type the password you want to use for this account and press `Enter`.

   When you change the password for the postgres account, Experience Portal stops and then restarts the **vpms** service.

5. Enter the `/sbin/service vpms status` command to verify if the **vpms** service has started.

Next steps

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

Time synchronization problems

Experience Portal uses *chronyd daemon* to control and synchronize the clocks when the EPM and MPP software is running on different servers. The dedicated MPP servers and the optional auxiliary EPM server point to the primary EPM server as the reference clock.

Note:

If the time difference is too large, chronyd cannot synchronize the client and server clocks immediately. A workaround is to manually synchronize the clocks before starting chronyd. After chronyd starts, it adjusts the clients clock with the server timings slowly. The slow process is by design so that confusion with other processes that are running and depends on the clock can be avoided.

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

Determining whether the servers are synchronized

Procedure

1. Simultaneously log in to Linux on the EPM server, each MPP server, and, if configured, the optional auxiliary EPM server.
2. On each server, during the same time enter the `date` command.
3. Verify that each MPP server and the optional auxiliary EPM server are synchronized with the primary EPM server.
4. If you find one or more unsynchronized servers, follow the procedure Verify that the chronyd service is operating properly on page 81 .

Verify that the chronyd service is operating properly

Procedure

1. Log on to Linux on the Experience Portal server with root privileges.
2. Enter the `systemctl status chronyd` command.

   If the server returns a message stating that the chronyd service is running, continue with this procedure. Otherwise, go to Synchronizing the MPP or auxiliary clock with the primary on page 82.

3. To verify that chronyd is operating properly, enter the `chronyc tracking` command.

   The system displays a status message similar to the following:

```
Reference ID    : 0A868E42 (10.134.142.66)
Stratum         : 4
Ref time (UTC)  : Thu Sep 17 12:47:44 2020
System time     : 0.000000488 seconds fast of NTP time
Last offset     : +0.000008485 seconds
RMS offset      : 0.000039525 seconds
Frequency       : 24.108 ppm slow
Residual freq   : +0.001 ppm
Skew            : 0.030 ppm
Root delay      : 0.147401720 seconds
Root dispersion : 0.003942181 seconds
Update interval : 1037.7 seconds
Leap status     : Normal
```

   Verify that the Reference ID points to the Primary EPM server.

Synchronizing the MPP or auxiliary EPM clock with the primary EPM

Procedure

1. If you are working with an MPP server and the MPP software is running, stop it using the EPM web interface:
   a. Log on to the EPM web interface by using an account with the Administration or Operations user role.
   b. From the EPM 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 changes to 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 operational grace period expires, whichever comes first.

2. If necessary, log in to Linux on the server.
   - If you are an Avaya Services representative, and use Avaya Enterprise Linux, or if the Avaya Service accounts are installed on this server, log on to the local Linux console as root.
   - Otherwise, log on remotely as a non-root user, and then change the user to root by entering the `su - root` command.
3. If you are working with:
   - An MPP server, stop the `mpp` process by entering the `/sbin/service mpp stop` command.

- The auxiliary EPM server, stop the vpms service by entering the `/sbin/service vpms stop` command.

4. Restart the chronyd process by entering the `systemctl restart chronyd` command.
5. To verify that chronyd is operating properly, enter the `chronyc tracking` command.

   The system displays a status message similar to the following:

```
Reference ID    : 0A868E42 (10.134.142.66)
Stratum         : 4
Ref time (UTC)  : Thu Sep 17 12:47:44 2020
System time     : 0.000000488 seconds fast of NTP time
Last offset     : +0.000008485 seconds
RMS offset      : 0.000039525 seconds
Frequency       : 24.108 ppm slow
Residual freq   : +0.001 ppm
Skew            : 0.030 ppm
Root delay      : 0.147401720 seconds
Root dispersion : 0.003942181 seconds
Update interval : 1037.7 seconds
Leap status     : Normal
```

   Verify that the Reference ID points to the Primary EPM server.
6. If you are working with:
   - An MPP server, start the `mpp` process by entering the `/sbin/service mpp start` command.
   - The auxiliary EPM server, start the vpms service by entering the `/sbin/service vpms start` command.
7. Verify the service has started by entering the `/sbin/service mpp status` or `/sbin/service vpms status` command.

Time Synchronization between external database and EPM servers

If you connect a Experience Portal system to an external database, you may want to make sure that you synchronize the time so that it is same across all servers. While Experience Portal only requires that the EPM and MPP server time be synchronized, you can also synchronize all the servers that Experience Portal connects to. For more information, see the *External time sources* topic in the *Implementing Avaya Experience Portal on multiple servers* guide.

Reloading the Experience Portal environment variables

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

Procedure

1. Log completely out of the Linux system.
2. If you are on the console and are working with:
   - Avaya Enterprise Linux, enter the `su - root` command.
   - Red Hat Enterprise Linux Server, enter the `su -` command.

Note:

If you are a remote user, log in to Linux by entering a non-root user name and password at the prompts.

File system check (fsck) reports error in number of days

Condition

When a file system check (fsck) is performed during the boot up process, it indicates an error of extremely large number of days since the file system was checked.

Following is an example of the error message:

```
Sep 20 13:34:35 i3250-mpp fsck: RHE4.0-AV11.3EP2 has gone 49706 days
without being checked, check forced.

Sep 20 13:34:35 i3250-mpp fsck:  RHE4.0-AV11.3EP2:
```

Cause

- The system's clock was set backwards manually.
- NTP was reconfigured and then restarted at the time of OS or software installation.

Solution

You can ignore the number of days reported since the last check. Regardless of the exact number of days since the file system was last checked, fsck performs this check and reports the file system errors.

Chapter 10: Installation worksheets

Installation worksheets for the Avaya Experience Portal dedicated server configuration

Before you begin the installation of Avaya Experience Portal on two or more dedicated servers, you should complete these installation worksheets. They are your guide to collecting the information necessary for a successful Experience Portal installation and configuration.

All users should complete:

- One copy of the Primary EPM server installation worksheet on page 86.
- One copy of the MPP server installation worksheet on page 90 for each planned MPP.
- If desired, one copy of the Auxiliary EPM server installation worksheet on page 92.

In addition, if this deployment includes:

- H.323 connections, complete one copy of the H.323 installation worksheet on page 96 for each connection.
- SIP connections, complete one copy of the SIP installation worksheet on page 99 for each connection that you want to configure.
- Automatic Speech Recognition (ASR) servers, complete one copy of the ASR server installation worksheet on page 94 for each ASR server
- Text-to-Speech (TTS) servers, complete one copy of the TTS server installation worksheet on page 95 for each TTS server
- Speech applications, complete one copy of the Speech application installation worksheet on page 100 for each application that will be deployed on the Experience Portal system.

Primary EPM server installation worksheet

Complete this worksheet if you are installing the EPM server on a dedicated Experience Portal server.

Requirement/ Information Needed	Your value	Notes
Ensure that the hardware meets the minimum requirements. For more information on minimum server machine hardware requirements, see *Avaya Experience Portal* Overview and Specification on http://support.avaya.com.		
What access method are you going to use?	_____ Local keyboard, mouse, and monitor _____ Remote access via SSH client	
Server information	IP address _____ Host name _____	The hostname cannot contain spaces or periods.
Do you want to enable EASG on the Primary EPM?	_____ Yes _____ No	
For RHEL 7.x or 8.x, verify default umask is set to 027.	_____ Yes	

Table continues…

Requirement/ Information Needed	Your value	Notes
Avaya Enterprise Linux network configuration information	Subnet mask on Corporate LAN _____ Default gateway _____ Primary DNS Server _____ DNS domain name _____ Time zone _____	See Overview on page 8.
For customer-provided hardware, is Release 7.x or 8.x 64 bit or newer update installed?	_____ Yes _____ No	See Overview on page 16.
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 Experience Portal is installed.
Can all planned Experience Portal servers communicate with one another?	_____ Yes _____ No	For more information, see the *Verifying server communication worksheet* topic in the *Implementing Avaya Experience Portal on multiple servers* guide.
For Avaya Enterprise Linux, user account passwords	`cust` account password: _____ root account password: _____	
For RHEL 7.x or 8.x 64 bit, user accounts and passwords	root account password: _____ Non-root account name: _____ Non-root account password: _____	

Table continues…

Requirement/ Information Needed	Your value	Notes
Installation directory, if different from default	_____	Default directory: `/opt/Avaya/ExperiencePortal` Specify an absolute directory path containing only standard English alphanumeric characters and the symbols `/` (forward slash), `_` (underscore), `-` (hyphen), `~` (tilde), or `.` (period).
EPM web interface administration user name and password	User name: _____ Password: _____	The Experience Portal administrator uses this account to log in to the EPM web interface to administer the Experience Portal system. The account is assigned the Administration user role as well as the Auditor and User Manager user roles. For details about User Roles, see *Administering Avaya Experience Portal* on http://support.avaya.com.
postgres database account password	_____	From EP 7.0 onwards, this password is automatically generated.
Do you want to create a database account that can access the report information in the database?	_____ Yes _____ No If Yes, account user name, if different from the default: _____ Password: _____	Default user name is: reportwriter **Note:** The report user name cannot be the same as any of the EPM web interface administration user account names or the report writer user account name.
Do you want to create an account that the optional auxiliary EPM server can use to access the Experience Portal database?	_____ Yes _____ No If Yes, account password: _____	With this account, the auxiliary EPM server gets limited access to the main Experience Portal database. The access is required to configure an auxiliary EPM server. For details, see *Administering Avaya Experience Portal*.
What is the Product ID for this system?	_____	For information about license requirements, see *Avaya Experience Portal Overview and Specification* on http://support.avaya.com.
Third-party SSL certificate information.	The location of the existing certificate: _____ The existing certificate's password: _____	

Table continues…

Requirement/ Information Needed	Your value	Notes
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? _____	
WebLM information	License server URL, if not located on the EPM server: _____ WebLM password: _____	
The external time sources that the EPM server should be synchronized with, if desired	The name or IP address of primary time source: _____ The name or IP address of secondary time source: _____	
Do you want to enter values in the EPM in languages other than English?	_____ Yes _____ No	

MPP server installation worksheet

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

Requirement or information needed	Your value	Notes
Ensure that the hardware meets the minimum requirements. For more information on minimum server machine hardware requirements, see *Avaya Experience Portal* Overview and Specification on http://support.avaya.com.		
What access method are you going to use?	_____ Local keyboard, mouse, and monitor _____ Remote access via SSH client	
Corporate LAN IP address	_____	
PBX LAN IP address, if different from the corporate LAN	_____	
For RHEL 7.x or 8.x, verify default umask is set to 027.	_____ Yes	

Table continues…

Requirement or information needed	Your value	Notes
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 _____ Time zone _____	
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 Experience 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 Experience 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 about MPP server capacity, see *Avaya Experience Portal Overview and Specification* on http://support.avaya.com.
Will Avaya Services maintain this server?	_____ Yes _____ No If Yes, what is the Listed Directory Number (LDN) for this server? _____	

Auxiliary EPM server installation worksheet

Complete this worksheet if you are installing an auxiliary EPM server.

Requirement/ Information Needed	Your value e	Notes
Ensure that the hardware meets the minimum requirements. For more information on minimum server machine hardware requirements, see *Avaya Experience Portal* Overview and Specification on http://support.avaya.com.		
What access method are you going to use?	_____ Local keyboard, mouse, and monitor _____ Remote access via SSH client	
Server information	IP address _____ Host name _____	The host name cannot contain spaces or periods.
For RHEL 7.x or 8.x, verify default umask is set to 027.	_____ Yes	
Avaya Enterprise Linux network configuration information	Subnet mask on Corporate LAN _____ Default gateway _____ Primary DNS Server _____ DNS domain name _____ Time zone _____	See Overview on page 8.

Table continues…

Requirement/ Information Needed	Your value e	Notes
For customer-provided hardware, is Release 7.x or 8.x 64 bit or newer update installed?	_____ Yes _____ No	See Overview on page 16.
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 Experience Portal is installed.
Can all planned Experience Portal servers communicate with one another?	_____ Yes _____ No	For more information, see *Implementing Avaya Experience Portal on multiple servers* on http://support.avaya.com.
For Avaya Enterprise Linux, user account passwords	`cust` account password: _____ root account password: _____	
For RHEL 7.x or 8.x 64 bit, user accounts and passwords	root account password: _____ Non-root account name: _____ Non-root account password: _____	
Installation directory, if different from default	_____	Default directory: `/opt/Avaya/ExperiencePortal` Specify an absolute directory path containing only standard English alphanumeric characters and the symbols `/` (forward slash), `_` (underscore), `-` (hyphen), `~` (tilde), or `.` (period).
Primary EPM server host name or IP address	_____	
If Yes, account password: _____ _	_____	See Primary EPM server installation worksheet on page 86
postgres database account password	_____	From EP 7.0 onwards, this password is automatically generated.

Table continues…

Requirement/ Information Needed	Your value e	Notes
Do you want to create a database account that can access the report information in the database?	_____ Yes _____ No If Yes, account user name, if different from the default: _____ Password: _____	Default user name is: reportwriter **Note:** The report user name cannot be the same as any of the EPM web interface administration user account names or the report writer user account name.
Do you want to create a database account that can write report data into the database?	_____ Yes _____ No If Yes, account user name, if different from the default: _____ Password: _____	Default user name is: report This user account can only change the data in the tables that store report data in the Experience Portal database on the Auxiliary EPM server. **Note:** The report user name cannot be the same as the EPM web interface administration user account name or the report reader account name.
Third-party SSL certificate information.	The location of the existing certificate: _____ 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? _____	

ASR server installation worksheet

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

Requirement or information needed	Your value
Server name	_____
IP address	_____

Table continues…

Requirement or information needed	Your value
Server type	____ Loquendo, minimum version: ____ ____ Nuance Recognizer (using Real Speak), minimum version: ____ ____ Nuance Recognizer (using Vocalizer), minimum version: ____ **Note:** For information about the supported minimum versions, see the Self Service Compatibility Matrix on the Avaya Support site at http://support.avaya.com.
Total number of Nuance or Loquendo licenses available on this speech server	_____
Configured languages	_____ _____ _____ _____ _____ _____
Will Avaya Services maintain this server?	_____ Yes _____ 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 Experience Portal system.

Requirement or information needed	Your value
Server name	_____
IP address	_____

Table continues…

Requirement or information needed	Your value
Server type	_____ Loquendo, minimum version: _____ _____ Nuance RealSpeak, minimum version: _____ _____ Nuance Vocalizer, minimum version: _____ **Note:** For information about the supported minimum versions, see the Self Service Compatability Matrix on the Avaya Support site at http://support.avaya.com.
Total number of Nuance or Loquendo 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 Experience Portal system.

Important:

Configure the PBX.

Requirement or information needed	Your value
Do you want to use supervised transfers or perform outbound calling with the Application Interface web service?	_____ Yes _____ 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?	_____ Yes _____ No
Hunt Group information -- Group 1	
Pilot number	_____
Station range	_____
First station password	_____
What type of passwords does the group use?	_____ Identical _____ Sequential
What type of calls are the ports used for?	_____ Inbound only _____ Inbound and outbound _____ Maintenance
Hunt Group information -- Group 2	
Pilot number	_____
Station range	_____
First station password	_____
What type of passwords does the group use?	_____ Identical _____ Sequential

Table continues…

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

SIP installation worksheet

Complete the following worksheet for each SIP connection that you want to configure on this Experience 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 Aura® Session Manager.

Requirement or information needed	Your value
Do you want to use Secure Real-time Transport Protocol (SRTP)?	_____ Yes _____ No **Note:** If Yes, you need Avaya Aura® Session Manager with Communication Manager version 5.2.
PBX name	_____
What proxy transport do you want to use?	_____ TCP _____ TLS
SIP Domain	_____
Proxy server address	_____
Proxy server port, if different from the default	_____ **Note:** The default for TCP is 5060, and the default for TLS is 5061.
Listener port, if different from the 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: _____ Inbound _____ Outbound **Note:** If you specify the number of inbound and outbound calls, the values should add up to the maximum number of calls.

Speech application installation worksheet

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

Note:

For information about using Orchestration Designer to create speech applications, see the Orchestration Designer documentation at http://support.avaya.com/.

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, what is the URL to the initial VoiceXML page?	_____
If the MIME type is CCXML or CCXML/VoiceXML, what is the URL to the initial CCXML page?	_____
If the application uses Automatic Speech Recognition (ASR) resources, which are the languages that you require?	_____ _____ _____ _____ _____
If the application uses Text-to-Speech (TTS) resources, which are the voices that you require?	_____ _____ _____ _____ _____

Table continues…

Requirement or information needed	Your value
What is the application used for?	_____ Specific inbound calls _____ Inbound calls not handled by another application _____ Outbound calls **Note:** If the application is used for outbound calls, configure the Application Interface web service. For details, see *Administering Avaya Experience Portal*.
Which dialed numbers are associated with the application?	_____ _____ _____ _____ _____
Which server performs DTMF processing?	_____ The ASR server. You must select this option if the DTMF grammar uses the ECMA script. _____ The MPP server.
If the application is not developed using Orchestration Designer, do you want to add the log and call flow data information to the Experience Portal report database so that the information appears in the application reports?	_____ Yes _____ No **Note:** If Yes, configure the Application Logging web service.

Chapter 11: Resources

Documentation

The following table lists the documents related to Avaya Experience Portal. Download the documents from the Avaya Support website at http://support.avaya.com.

Title	Description	Audience
Avaya Experience Portal Documentation Roadmap	Lists all the documents related to Experience Portal and describes the organization of content across the documents.	Avaya Professional Services Implementation engineers
Administering Avaya Experience Portal	Provides general information about and procedures for administering and configuring specific Experience Portal functions and features using a web-based interface.	Administrators Implementation engineers
Avaya Experience Portal Overview and Specification	Describes tested product characteristics and capabilities, including product overview and feature descriptions, interoperability, performance specifications, security, and licensing requirements.	Administrators Sales engineers Implementation engineers Avaya Professional Services
Implementing Avaya Experience Portal on a single server	Provides procedures to install and configure the Avaya Experience Portal software on a single server.	Implementation engineers
Implementing Avaya Experience Portal on multiple servers	Provides procedures to install and configure Avaya Experience Portal software on two or more dedicated servers.	Implementation engineers

Table continues…

Title	Description	Audience
Deploying Avaya Experience Portal in an Avaya Customer Experience Virtualized Environment	Provides procedures for deploying the Experience Portal virtual application in the Avaya Customer Experience Virtualized Environment. This document includes installation, configuration, initial administration, troubleshooting, and basic maintenance checklists and procedures.	Implementation engineers
Upgrading to Avaya Experience Portal 8.1	Describes how to upgrade your Avaya Experience Portal system to Avaya Experience Portal 8.1.	Implementation engineers
Troubleshooting Avaya Experience Portal	Provides general information about troubleshooting and resolving system problems. This document also provides detailed information and procedures for finding and resolving specific problems.	Administrators Implementation engineers Avaya Professional Services
Avaya Experience Portal Solutions Guide	Provides a high-level description of Avaya Experience Portal as well as topology diagrams, connectivity details, interoperability concept, product interactions, and failover best practices.	Sales engineers Implementation engineers Avaya Professional Services
Avaya Experience Portal Programmer's Reference	Provides information about designing speech applications for Avaya Experience Portal.	Application Developers
Deploying Avaya Experience Portal on Amazon Web Services	Provides procedures for deploying Avaya Experience Portal as *Software as a Solution* by using the Amazon Web Services Management console.	Administrators Implementation engineers Support Personnel Avaya Professional Services
Deploying Avaya Experience Portal on Google Cloud Platform	Provides procedures for deploying Avaya Experience Portal as *Software as a Solution* by using the Google Cloud Platform.	Administrators Avaya Professional Services Implementation engineers Support Personnel

Table continues…

Title	Description	Audience
Deploying Avaya Experience Portal on Microsoft Azure	Provides procedures for deploying Avaya Experience Portal as *Software as a Solution* by using the Microsoft Azure portal.	Administrators Implementation engineers Support Personnel Avaya Professional Services
Avaya Experience Portal Security White Paper	Provides information about the security strategy for Experience Portal, and provides suggestions that companies can use to improve the security of the Experience Portal systems and applications.	Avaya Professional Services Implementation engineers
Avaya Experience Portal Mobile Web Best Practices White Paper	Provides recommended strategies for deploying Avaya Orchestration Designer Mobile Web applications with Avaya Experience Portal, detailing configuration for security, scalability and high availability.	Avaya Professional Services Implementation engineers
Avaya Experience Portal Call Classifications White Paper	Provides information about the call classification feature in Avaya Experience Portal, detailing the configuration and tuning of the call progress engine.	Sales engineers Implementation engineers
Avaya Experience Portal Dialogflow White Paper	Provides information about connecting Avaya Experience Portal self-service applications to Google Dialogflow. This document provides details on configuration, licensing, and other information to help customers with Dialogflow integration.	Avaya Professional Services Implementation engineers
Avaya Experience Portal Nuance Mix Integration White Paper	Provides information about connecting Avaya Experience Portal to Nuance Mix. This document provides details on configuration, licensing, and other information to help customers with Nuance Mix integration.	Avaya Professional Services Implementation engineers

Finding documents on the Avaya Support website

Procedure

1. Go to https://support.avaya.com.

2. To log in, click **Sign In** at the top of the screen and then enter your login credentials when prompted.
3. Click **Product Support** > **Documents**.
4. In **Search Product**, start typing the product name and then select the appropriate product from the list displayed.
5. In **Select Release**, select the appropriate release number.

   This field is not available if there is only one release for the product.
6. **(Optional)** In **Enter Keyword**, type keywords for your search.
7. From the **Select Content Type** list, select one or more content types.

   For example, if you only want to see user guides, click **User Guides** in the **Select Content Type** list.
8. Click to display the search results.

Avaya Documentation Center navigation

For some programs, the latest customer documentation is now available on the Avaya Documentation Center website at https://documentation.avaya.com.

Important:

For documents that are not available on Avaya Documentation Center, click **More Sites** > **Support** on the top menu to open https://support.avaya.com.

Using the Avaya Documentation Center, you can:

- Search for keywords.

  To filter by product, click **Filters** and select a product.
- Search for documents.

  From **Products & Solutions**, select a solution category and product, and then select the appropriate document from the list.
- Sort documents on the search results page.
- Click **Languages** ( ) to change the display language and view localized documents.
- Publish a PDF of the current section in a document, the section and its subsections, or the entire document.
- Add content to your collection using **My Docs** ( ).

  Navigate to the **Manage Content** > **My Docs** menu, and do any of the following:

  - Create, rename, and delete a collection.
  - Add topics from various documents to a collection.
  - Save a PDF of the selected content in a collection and download it to your computer.

  - Share content in a collection with others through email.
  - Receive collection that others have shared with you.
- Add yourself as a watcher using the **Watch** icon ( ).

  Navigate to the **Manage Content** > **Watchlist** menu, and do the following:

  - Enable **Include in email notification** to receive email alerts.
  - Unwatch selected content, all content in a document, or all content on the Watch list page.

  As a watcher, you are notified when content is updated or deleted from a document, or the document is removed from the website.
- Share a section on social media platforms, such as Facebook, LinkedIn, and Twitter.
- Send feedback on a section and rate the content.

Note:

Some functionality is only available when you log in to the website. The available functionality depends on your role.

Technical onboarding of Avaya Experience Portal 7.x and 8.x

For more information see, How to Register and Onboard Avaya Experience Portal on the Avaya Support website.

Viewing Avaya Mentor videos

Avaya Mentor videos provide technical content on how to install, configure, and troubleshoot Avaya products.

About this task

Videos are available on the Avaya Support website, listed under the video document type, and on the Avaya-run channel on YouTube.

- To find videos on the Avaya Support website, go to https://support.avaya.com/ and do one of the following:
  - In **Search**, type `Avaya Mentor Videos`, click **Clear All** and select **Video** in the **Select Content Type**.
  - In **Search**, type the product name. On the Search Results page, click **Clear All** and select **Video** in the **Select Content Type**.

    The **Video** content type is displayed only when videos are available for that product.

In the right pane, the page displays a list of available videos.

- To find the Avaya Mentor videos on YouTube, go to www.youtube.com/AvayaMentor and do one of the following:
  - Enter a keyword or keywords in the **Search Channel** to search for a specific product or topic.
  - Scroll down Playlists, and click a topic name to see the list of videos available. For example, Contact Centers.

Note:

Videos are not available for all products.

Support

Go to the Avaya Support website at https://support.avaya.com for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

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