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Appendix A: Deploying AVP Utilities and other virtual machines

Deploying AVP Utilities and virtual machines when Out of Band Management is enabled
Deploying AVP Utilities and virtual machines on the services port
Chapter 1: Introduction

Purpose
This document contains checklists and procedures for:

- Migrating Avaya Aura® System Platform to Appliance Virtualization Platform
- Upgrading Appliance Virtualization Platform from Release 7.x or 8.0.x to Release 8.1
- Troubleshooting Appliance Virtualization Platform

The primary audience for this document is anyone who migrates data from System Platform to Appliance Virtualization Platform or upgrades Appliance Virtualization Platform from Release 7.x or 8.0.x to Release 8.1 at a customer site.

Prerequisites
Before deploying or upgrading Appliance Virtualization Platform, ensure that you have the following knowledge, skills, and tools.

Knowledge
- Linux® Operating System
- Appliance Virtualization Platform

Skills
To administer the System Manager web console and Appliance Virtualization Platform.

Tools
For information about tools and utilities, see “Configuration tools and utilities”.

Change history
The following changes have been made to this document since the last issue:

October 2019 Upgrading Avaya Aura® Appliance Virtualization Platform
Comments on this document? infodev@avaya.com
<table>
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<th>Issue</th>
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<td>October 2019</td>
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<td>• Prerequisites for upgrading Appliance Virtualization Platform on page 51</td>
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<td>• Upgrading Appliance Virtualization Platform from Release 7.x or 8.0.x to Release 8.1.1 using Solution Deployment Manager on page 52</td>
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<tr>
<td>2</td>
<td>June 2019</td>
<td>Added the Accessing the port matrix document on page 110 section.</td>
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<td>1</td>
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<td>Release 8.1 document.</td>
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Avaya Aura® Virtualized Appliance overview

Avaya Aura® Virtualized Appliance is a turnkey solution. Avaya provides the hardware, all the software including the VMware hypervisor, and also offers the customer support of the setup.

The Virtualized Appliance offer is different from Avaya Aura® Virtualized Environment, where Avaya provides the Avaya Aura® application software and the customer provides and supports the VMware hypervisor and the hardware on which the hypervisor runs.

Deployment on the Appliance Virtualization Platform server is performed using the System Manager Solution Deployment Manager or the Solution Deployment Manager client.

Appliance Virtualization Platform overview

From Avaya Aura® Release 7.0 and later, Avaya provides the VMware®-based Avaya Aura® Appliance Virtualization Platform to provide virtualization for Avaya Aura® applications. Appliance Virtualization Platform replaces System Platform.

Appliance Virtualization Platform is the customized OEM version of VMware® ESXi 6.5. With Appliance Virtualization Platform, customers can run any combination of supported applications on Avaya-supplied servers. Appliance Virtualization Platform provides greater flexibility in scaling customer solutions to individual requirements.
Avaya Aura® Virtualized Appliance offer includes:

- Common Servers: Dell™ PowerEdge™ R620, Dell™ PowerEdge™ R630, HP ProLiant DL360p G8, and HP ProLiant DL360 G9
- Avaya Solutions Platform 120 Appliance: Dell PowerEdge R640
- Avaya S8300E

**Note:**
- Common Servers using ESXi 6.0 or 6.5 can require more memory than System Platform or ESXi 5.5. For information about Appliance Virtualization Platform memory requirements and memory validation process, see PSN027060u and the Avaya Aura® Release Notes on the Avaya Support website.

You can deploy the following applications on Appliance Virtualization Platform:

- AVP Utilities 8.1.1
- System Manager 8.1.1
- Session Manager 8.1.1
• Branch Session Manager 8.1.1
• Communication Manager 8.1.1
• Application Enablement Services 8.1.1
• WebLM 8.1.1
• Communication Manager Messaging 7.0

★ Note:

Communication Manager Messaging 7.0 is available for upgrades only.

For information about other Avaya product compatibility information, go to https://support.avaya.com/CompatibilityMatrix/Index.aspx.

★ Note:

For deploying Avaya Aura® applications on Appliance Virtualization Platform only use Solution Deployment Manager.

Solution Deployment Manager

Solution Deployment Manager overview

Solution Deployment Manager is a centralized software management solution in System Manager that provides deployments, upgrades, migrations, and updates to Avaya Aura® applications. Solution Deployment Manager supports the operations on the customer’s Virtualized Environment and the Avaya Aura® Virtualized Appliance model.

Solution Deployment Manager provides the combined capabilities that Software Management, Avaya Virtual Application Manager, and System Platform provided in earlier releases.

From Release 7.1 and later, Solution Deployment Manager supports migration of Virtualized Environment-based 6.x, 7.0.x, and 7.1.x applications to Release 8.x and later in the customer’s Virtualized Environment. For migrating to Release 8.x, you must use Solution Deployment Manager Release 8.x.

Release 7.0 and later support a standalone version of Solution Deployment Manager, the Solution Deployment Manager client. For more information, see Using the Solution Deployment Manager client.

System Manager with Solution Deployment Manager runs on:

• Avaya Aura® Virtualized Appliance: Contains a server, Appliance Virtualization Platform, and Avaya Aura® application OVA. Appliance Virtualization Platform includes a VMware ESXi 6.5 hypervisor.
• Customer-provided Virtualized Environment solution: Avaya Aura® applications are deployed on customer-provided, VMware® certified hardware.
• Software-Only environment: Avaya Aura® applications are deployed on the customer-owned hardware and the operating system.
With Solution Deployment Manager, you can do the following in Virtualized Environment and Avaya Aura® Virtualized Appliance models:

- Deploy Avaya Aura® applications.
- Upgrade and migrate Avaya Aura® applications.

**Note:**

When an application is configured with Out of Band Management, Solution Deployment Manager does not support upgrade for that application.

For information about upgrading the application, see the application-specific upgrade document on the Avaya Support website.

- Download Avaya Aura® applications.
- Install service packs, feature packs, and software patches for the following Avaya Aura® applications:
  - Communication Manager and associated devices, such as gateways, media modules, and TN boards.
  - Session Manager
  - Branch Session Manager
  - AVP Utilities
  - Appliance Virtualization Platform, the ESXi host that is running on the Avaya Aura® Virtualized Appliance.

The upgrade process from Solution Deployment Manager involves the following key tasks:

- Discover the Avaya Aura® applications.
- Refresh applications and associated devices, and download the necessary software components.
- Run the preupgrade check to ensure successful upgrade environment.
- Upgrade Avaya Aura® applications.
- Install software patch, service pack, or feature pack on Avaya Aura® applications.

For more information about the setup of the Solution Deployment Manager functionality that is part of System Manager 8.1.x, see Avaya Aura® System Manager Solution Deployment Manager Job-Aid.

### Capability comparison between System Manager Solution Deployment Manager and the Solution Deployment Manager client

<table>
<thead>
<tr>
<th>Centralized Solution Deployment Manager</th>
<th>Solution Deployment Manager Client</th>
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<td>Manage virtual machine lifecycle.</td>
<td>Manage virtual machine lifecycle.</td>
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*Table continues…*
### Solution Deployment Manager Client

For the initial System Manager deployment or when System Manager is inaccessible, you can use the Solution Deployment Manager client. The client must be installed on the computer of the technician. The Solution Deployment Manager client provides the functionality to deploy the OVAs or ISOs on an Avaya-provided server, customer-provided Virtualized Environment, or Software-only environment.

A technician can gain access to the user interface of the Solution Deployment Manager client from the web browser.

Use the Solution Deployment Manager client to:

- Deploy System Manager and Avaya Aura® applications on Avaya appliances, VMware-based Virtualized Environment, and Software-only environment.
- Upgrade System Platform-based System Manager.
- Upgrade VMware-based System Manager from Release 6.x, 7.x, or 8.0.x to Release 8.1 and later.
- Install System Manager software patches, service packs, and feature packs.
- Configure Remote Syslog Profile.
- Create the Appliance Virtualization Platform Kickstart file.
- Install Appliance Virtualization Platform patches.
- Restart and shutdown the Appliance Virtualization Platform host.
- Start, stop, and restart a virtual machine.
- Change the footprint of Avaya Aura® applications that support dynamic resizing. For example, Session Manager and Avaya Breeze® platform.
Note:

- You can deploy or upgrade the System Manager virtual machine only by using the Solution Deployment Manager client.
- You must always use the latest Solution Deployment Manager client for deployment.
- You must use Solution Deployment Manager Client 7.1 and later to create the kickstart file for initial Appliance Virtualization Platform installation or recovery.

Related links

Solution Deployment Manager client capabilities on page 16

Solution Deployment Manager client capabilities

The Solution Deployment Manager client provides the following capabilities and functionality:

- Runs on the following operating systems:
  - Windows 7, 64-bit Professional or Enterprise
  - Windows 8.1, 64-bit Professional or Enterprise
  - Windows 10, 64-bit Professional or Enterprise
  - Windows 16, 64-bit Professional or Enterprise
- Supports the same web browsers as System Manager.
- Provides the user interface with similar look and feel as the central Solution Deployment Manager in System Manager.
- Supports deployment of System Manager. The Solution Deployment Manager client is the only option to deploy System Manager.
- Supports the Flexible footprint feature. The size of the virtual resources depends on the capacity requirements of Avaya Aura® applications.
- Defines the physical location, Appliance Virtualization Platform or ESXi host, and discovers virtual machines that are required for application deployments and virtual machine life cycle management.
- Manages lifecycle of the OVA applications that are deployed on the Appliance Virtualization Platform or ESXi host. The lifecycle includes start, stop, reset virtual machines, and establishing trust for virtual machines.
Note:

For the Avaya Aura® Messaging element, trust re-establishment is not required.

• Deploys the Avaya Aura® applications that can be deployed from the central Solution Deployment Manager for Avaya Aura® Virtualized Appliance and customer Virtualized Environment. You can deploy one application at a time.

Note:

- System Manager must be on the same or higher release than the application you are upgrading to. For example, you must upgrade System Manager to 7.1.3.2 before you upgrade Communication Manager to 7.1.3.2.

All the applications that are supported by System Manager do not follow the general Avaya Aura® Release numbering schema. Therefore, for the version of applications that are supported by System Manager, see Avaya Aura® Release Notes on the Avaya Support website.

- Solution Deployment Manager Client must be on the same or higher release than the OVA you are deploying. For example, if you are deploying Communication Manager 7.1.3 OVA, Solution Deployment Manager Client version must be on Release 7.1.3, 7.1.3.1, 7.1.3.2, or 8.0. Solution Deployment Manager Client cannot be on Release 7.1.

• Configures application and networking parameters required for application deployments.

• Supports selecting the application OVA file from a local path or an HTTPS URL. You do not need access to PLDS.

• Supports changing the hypervisor network parameters, such as IP Address, Netmask, Gateway, DNS, and NTP on Appliance Virtualization Platform.

• Supports installing patches for the hypervisor on Appliance Virtualization Platform.

• Supports installing software patches, service packs, and feature packs only for System Manager.

Note:

To install the patch on System Manager, Solution Deployment Manager Client must be on the same or higher release as the patch. For example, if you are deploying the patch for System Manager Release 7.1.1, you must use Solution Deployment Manager Client Release 7.1.1 or higher.

However, to install the patch on System Manager Release 7.0.x, Solution Deployment Manager Client must be on Release 7.0.x.

Avaya Aura® applications use centralized Solution Deployment Manager from System Manager to install software patches, service packs, and feature packs. The applications that cannot be patched from centralized Solution Deployment Manager, use the application Command Line Interface or web console.

For more information about supported releases and patching information, see Avaya Aura® Release Notes on the Avaya Support website.
Solution Deployment Manager

Solution Deployment Manager simplifies and automates the deployment and upgrade process. With Solution Deployment Manager, you can deploy the following applications:

- AVP Utilities 8.1.1
- System Manager 8.1.1
- Session Manager 8.1.1
- Branch Session Manager 8.1.1
- Communication Manager 8.1.1
- Application Enablement Services 8.1.1
- WebLM 8.1.1
- Communication Manager Messaging 7.0

For information about other Avaya product compatibility information, go to [https://support.avaya.com/CompatibilityMatrix/Index.aspx](https://support.avaya.com/CompatibilityMatrix/Index.aspx).

With Solution Deployment Manager, you can migrate, upgrade, and update the following applications:

- Hardware-based Session Manager 6.x
- System Platform-based Communication Manager
  - Duplex CM Main / Survivable Core with Communication Manager
  - Simplex CM Main / Survivable Core with Communication Manager, Communication Manager Messaging, and Utility Services
  - Simplex Survivable Remote with Communication Manager, Branch Session Manager, and Utility Services
  - Embedded CM Main with Communication Manager, Communication Manager Messaging, and Utility Services
  - Embedded Survivable Remote with Communication Manager, Branch Session Manager, and Utility Services
- System Platform-based Branch Session Manager
  - Simplex Survivable Remote with Communication Manager, Branch Session Manager, and Utility Services
  - Embedded Survivable Remote with Communication Manager, Branch Session Manager, and Utility Services
**Note:**

You must manually migrate the Services virtual machine that is part of the template.

The centralized deployment and upgrade process provides better support to customers who want to upgrade their systems to Avaya Aura® Release 8.1.1. The process reduces the upgrade time and error rate.

**Solution Deployment Manager dashboard**

You can gain access to the Solution Deployment Manager dashboard from the System Manager web console or by installing the Solution Deployment Manager client.

![Solution Deployment Manager Dashboard](image)

**Solution Deployment Manager capabilities**

With Solution Deployment Manager, you can perform deployment and upgrade-related tasks by using the following links:

- **Upgrade Release Setting**: To select **Release 7.x Onwards** or **6.3.8** as the target upgrade. Release 8.1.1 is the default upgrade target.

- **Manage Software**: To analyze, download, and upgrade the IP Office, Unified Communications Module, and IP Office Application Server firmware. Also, you can view the status of the firmware upgrade process.

- **Application Management**: To deploy OVA files for the supported Avaya Aura® application.
  - Configure Remote Syslog Profile.
  - Generate the Appliance Virtualization Platform Kickstart file.

- **Upgrade Management**: To upgrade Avaya Aura® applications to Release 8.1.1.

- **User Settings**: To configure the location from where System Manager displays information about the latest software and firmware releases.

- **Download Management**: To download the OVA files and firmware to which the customer is entitled. The download source can be the Avaya PLDS or an alternate source.

- **Software Library Management**: To configure the local or remote software library for storing the downloaded software and firmware files.

- **Upload Version XML**: To save the version.xml file to System Manager. You require the application-specific version.xml file to perform upgrades.
Chapter 3: Network

Appliance Virtualization Platform networking

Overview

Appliance Virtualization Platform supports both public and management traffic over the same network interface or separation of public and management traffic over separate interfaces. The default configuration is public and management traffic using the same network interface. When you install Appliance Virtualization Platform, the public network of virtual machines is assigned to vmnic0 or Server Ethernet port 1 of the server.

- If the Out of Band Management Setup check box is clear on Create AVP Kickstart, the public and management interfaces of virtual machines are assigned on the public network. Assign public and management interfaces of virtual machines on the same network.

  The management port of Appliance Virtualization Platform is assigned to the public interface.

- If the Out of Band Management Setup check box is selected on Create AVP Kickstart, the public interfaces of virtual machines are assigned to vmnic0 or Server Ethernet port 1, and the Out of Band Management interfaces are assigned to vmnic2 or Server Ethernet port 3. Assign separate network ranges to the public and management interfaces of virtual machines. The management port must be given an appropriate IP address of the public and Out of Band Management network.

  The management port of Appliance Virtualization Platform is assigned to the Out of Band Management network.

★ Note:

All virtual machines on an Out of Band Management enabled Appliance Virtualization Platform host must support and implement Out of Band Management.

The vmnic1 or Server Ethernet port 2 of the server is assigned to the services port.

The internal Appliance Virtualization Platform hypervisor IP address from the services port is 192.168.13.6. After deploying the Appliance Virtualization Platform OVA, launch an SSH client while connected to the services port. Configure your computer for direct connection to the server with the following:

- IP Address: 192.168.13.5
- Subnet Mask: 255.255.255.248
- Gateway: 192.168.13.1
After deploying the AVP Utilities OVA, the services port IP address for the AVP Utilities shell is 192.11.13.6. Configure your computer for direct connection to the server with the following:

- IP address: 192.11.13.5
- Subnet Mask: 255.255.255.252
- Gateway: 192.11.13.6

You can access the AVP Utilities shell by using the IP Address 192.11.13.6.

**Note:**

An Appliance Virtualization Platform host and all virtual machines running on the host must be on the same subnet mask.

If Out of Band Management is configured in an Appliance Virtualization Platform deployment, you need two subnet masks, one for each of the following:

- Public or signaling traffic, Appliance Virtualization Platform, and all virtual machines public traffic.
- Management, Appliance Virtualization Platform, and all virtual machine management ports.

**Common servers**

When Appliance Virtualization Platform is installed, VMNIC0 is assigned to the public interface of virtual machines.

When deploying or reconfiguring Appliance Virtualization Platform:

- If the **Out of Band Management Setup** check box is clear on Create AVP Kickstart, VMNIC0 is used for both network and management traffic.
- If the **Out of Band Management Setup** check box is selected on Create AVP Kickstart, VMNIC2 is used for management by all the virtual machines on that hypervisor.

**S8300E**

When Appliance Virtualization Platform installs the connection through the media gateway, Ethernet ports are assigned to the public interface of virtual machines. When Appliance Virtualization Platform installs the connection through the media gateway backplane, the LAN port on the G4x0 Gateway is assigned to the public interface of virtual machines.

If Out of Band Management is enabled, the Out of Band Management network is on the LAN2 interface on the S8300E faceplate.

The Appliance Virtualization Platform management interface is assigned to:

- The public VLAN if Out of Band Management is disabled
- The Out of Band Management network if Out of Band Management is enabled
Appliance Virtualization Platform NIC ports

Terminology

- The OS VMNIC ports numbering starts from 0 and refers to the NIC ports from the operating system.
- The server NIC ports numbering starts from 1 and refers to the external physical NIC ports.

🌟 Note:
Avaya servers might contain up to 8 NIC ports.

The table provides the first four ports. The numbering continues in the same way for values greater than 4.

<table>
<thead>
<tr>
<th>NIC port</th>
<th>Server NIC</th>
<th>VMNIC port</th>
</tr>
</thead>
<tbody>
<tr>
<td>First NIC port</td>
<td>Server NIC 1</td>
<td>VMNIC 0 or eth0</td>
</tr>
<tr>
<td>Second NIC port</td>
<td>Server NIC 2</td>
<td>VMNIC 1 or eth1</td>
</tr>
<tr>
<td>Third NIC port</td>
<td>Server NIC 3</td>
<td>VMNIC 2 or eth2</td>
</tr>
<tr>
<td>Fourth NIC port</td>
<td>Server NIC 4</td>
<td>VMNIC 3 or eth3</td>
</tr>
</tbody>
</table>

General

- Appliance Virtualization Platform is installed with a fixed network configuration.

⚠️ Important:
Do not change the vSwitch and port group network configuration on Appliance Virtualization Platform. If you change the Appliance Virtualization Platform network configuration, the deployment or the connection to the deployed virtual machines might fail. Solution Deployment Manager maps and creates port groups while deploying the virtual machines as required.

- Appliance Virtualization Platform is installed with a normal or Out of Band Management configuration setup.

- Appliance Virtualization Platform is installed with Out of Band Management disabled or enabled.

  - If you are installing Appliance Virtualization Platform, you can enable Out of Band Management by using the Out of Band Management Setup check box on Create AVP Kickstart for generating the kickstart generator file.

  - If the server has Appliance Virtualization Platform preinstalled, Out of Band Management will be disabled. Enable Out of Band Management only if you require.

- Appliance Virtualization Platform is installed on a common server with the following network configuration if Out of Band Management is disabled:

  - Server NIC 1 (VMNIC0): Public and management port. Appliance Virtualization Platform management port is enabled on this Ethernet, and applications are deployed with both Public and Out of Band Management ports assigned to this interface. All IP addresses must be on the same network.

  - Server NIC 2 (VMNIC1): Services Port for use with the technician laptop. Initial Appliance Virtualization Platform installation must use the IP address 192.168.13.5, subnet mask...
255.255.255.248. Connections after AVP Utilities is deployed, use the IP address 192.11.13.5, subnet mask 255.255.255.252 with the gateway set as 192.11.13.6.

- Server NIC 3 (VMNIC2): Out of Band Management port. This port is not used in this setup.
- Server NIC 4–8 (VMNIC3–7): Additional network interfaces for virtual machines, such as duplex Communication Manager and Application Enablement Services private interface. These interfaces can be assigned to a free VMNIC of the installers during the virtual machine deployment.
- Server NIC 4–8 (VMNIC 8 and later): Any other Ethernet ports that can be used for NIC teaming.

Appliance Virtualization Platform is installed on a common server with the following network configuration if Out of Band Management is enabled:

- Server NIC 1 (VMNIC0): Public port and applications Public VMNICs are deployed to this interface. All public virtual machine IP addresses must be on the same network.
- Server NIC 2 (VMNIC1): Services Port for use with a technician's laptop. Initial Appliance Virtualization Platform installation must use the IP address 192.168.13.5, subnet mask 255.255.255.248. Connections after AVP Utilities is deployed must use 192.11.13.5, subnet mask 255.255.255.252 with the gateway set as 192.11.13.6.
- Server NIC 3 (VMNIC2): Out of Band Management port. The Appliance Virtualization Platform management port is assigned to this Ethernet. On virtual machines, application interfaces of Out of Band Management are assigned to this Ethernet. The following IP addresses must be on the same network and different from the Public network:
  - Appliance Virtualization Platform management IP address
  - Out of Band Management network IP address of AVP Utilities
  - Out of Band Management IP address of all virtual machines on this Appliance Virtualization Platform host
- Server NIC 4–8 (VMNIC3–7): Additional network interfaces for virtual machines to a free VMNIC: During the virtual machine deployment, the installer can assign additional network interfaces for virtual machines to a free VMNIC. Duplex Communication Manager and Application Enablement Services private interfaces require additional network interfaces.
- Server NIC 4–8 (VMNIC 8 and later): Any other Ethernet ports that can be used for NIC teaming.

You can change the Out of Band Management state after deployment with the `set_oobm` command after you install 7.0.1 on the Appliance Virtualization Platform host. You must perform the configuration through the Services Port on the Appliance Virtualization Platform system and in a very specific order to prevent losing connection to the virtual machines other than is expected during the process.

You must enable Out of Band Management on all virtual machines running on the Appliance Virtualization Platform host. On the same Appliance Virtualization Platform host, you cannot run some virtual machines with Out of Band Management enabled and some with Out of Band Management disabled. Out of Band Management must be enabled from the `ks.cfg` file on the USB stick or on the Appliance Virtualization Platform by using the `set_oobm` command from the Appliance Virtualization Platform shell.
Teaming NICs from CLI

About this task

You can configure the NIC teaming and NIC speeds on Appliance Virtualization Platform from the web interface of the Solution Deployment Manager client and System Manager Solution Deployment Manager. For more information, see *Administering Avaya Aura® System Manager*. 
Avaya recommends the use of Solution Deployment Manager web interface for configuring the NIC settings.

With Appliance Virtualization Platform, you can team NICs together to provide a backup connection when the server NIC or the Ethernet switch fails. You can also perform NIC teaming from the command line on Appliance Virtualization Platform.

Appliance Virtualization Platform supports Active-Standby and Active-Active modes of NIC teaming. For more information, see “NIC teaming modes”.

You cannot perform NIC teaming for S8300E server.

**Procedure**

1. Log in to the Appliance Virtualization Platform host command line, and type 
   # /opt/avaya/bin/nic_teaming list.

   The system displays the current setup of the system, and lists all vmnics.

   For example:

   ```
   Current Setup:
   Name: vSwitch0
   Uplinks: vmnic0
   Name: vSwitch1
   Uplinks: vmnic1
   Name: vSwitch2
   Uplinks: vmnic2
   List of all vmnics on host:
   vmnic0
   vmnic1
   vmnic2
   vmnic3
   ```

2. To add a free vmnic to a vSwitch, type 
   # /opt/avaya/bin/nic_teaming add <vmnic> <vSwitch>.

   The command changes the links to the active standby mode.

   For example, to add eth3 to the public virtual switch, type 
   # /opt/avaya/bin/nic_teaming add vmnic3 vSwitch0. To verify the addition of eth3, type esxcli network vswitch standard policy failover get -v vSwitch0.

   The system displays the following message:

   ```
   Load Balancing: srcport
   Network Failure Detection: link
   Notify Switches: true
   Failback: true
   Active Adapters: vmnic0
   Standby Adapters: vmnic3
   Unused Adapters:
   ```

3. To add eth3 to the list of active adapters, type 
   # esxcli network vswitch standard policy failover set -v vSwitch0 --active-uplinks vmnic0,vmnic3.

   The command changes the vmnic3 to the active mode.

4. To verify the mode of eth3, type 
   # esxcli network vswitch standard policy failover get -v vSwitch0.
The system displays the following message:

- **Load Balancing:** srcport
- **Network Failure Detection:** link
- **Notify Switches:** true
- **Failback:** true
- **Active Adapters:** vmnic0, vmnic3
- **Standby Adapters:**
- **Unused Adapters:**

5. To remove a vmnic from a vSwitch, type:
   
   ```
   # /opt/avaya/bin/nic_teaming remove <vmnic> <vSwitch>.
   ```

6. To move an additional vmnic back to standby mode, type:
   
   ```
   # esxcli network vswitch standard policy failover set -v vSwitch0 --active-uplinks vmnic0 --standby-uplinks vmnic3
   ```
   
   This puts the additional NIC back to standby mode.

7. To verify if the vmnic is moved to standby, type:
   
   ```
   # esxcli network vswitch standard policy failover get -v vSwitch0.
   ```

   The system displays the following:

   - **Load Balancing:** srcport
   - **Network Failure Detection:** link
   - **Notify Switches:** true
   - **Failback:** true
   - **Active Adapters:** vmnic0
   - **Standby Adapters:** vmnic3
   - **Unused Adapters:**

⚠ **Warning:**

The management and virtual machine network connections might be interrupted if you do not use correct network commands. Do not remove or change vmnic0, vmnic1, and vmnic2 from vSwitches or active modes.

**Related links**

- [NIC teaming modes](#) on page 26

---

**NIC teaming modes**

Appliance Virtualization Platform supports two modes of NIC teaming: Active-Standby and Active.

**Active-Standby**

In normal operation all the traffic goes through the active NIC setup. If this connection fails, the other standby link is activated and all the traffic uses the standby link. The settings for active and standby setup are:

- Network failover detection: Link status only
- Notify Switches: Yes
• Failback: Yes. If the active NIC becomes available again, you can use the active NIC over the standby NIC.

**Active-Active**

This is an active setup that uses route based load balancing based on the originating virtual port ID. This is a basic form of load balancing that may not provide full capacity of both links.

- Load Balancing: Route based on the originating virtual port ID
- Network failover detection: Link status only
- Notify Switches: Yes
- Failback : Yes

---

**Setting the Ethernet port speed**

**About this task**

Avaya recommends that the Appliance Virtualization Platform server, Ethernet ports, and the switch ports to which the ports are connected must be set to autonegotiate on both the server and the customer network switch.

⚠️ Important:

Use the procedure only if you must change the Ethernet port speeds. Incorrect setting of Ethernet NIC speeds might result in performance issues or loss of network connection to the system.

You cannot change the Ethernet port speed for the S8300E server.

**Procedure**

1. Log in to the Appliance Virtualization Platform host command line.
2. To list vmnics, type 
   ```bash
   #/opt/avaya/bin/nic_port list
   ```
   You must provide the full path.
3. To set a port to 1000 Mbps full duplex, type
   ```bash
   /opt/avaya/bin/nic_port set <100|1000> <vmnic>.
   ```
   Where 100 or 1000 is the speed in Mbps, and vmnic is the vmnic number. For example, vmnic0 for the public interface of the server.

   ✅ Note:

   Half duplex and 10 Mbps speeds are not supported for use with Appliance Virtualization Platform. Use 100 Mbps only in specific instances, such as while replacing a server that was previously running at 100 Mbps. All NIC ports must be connected to the network at least 1Gbps speeds. Most server NICs support 1Gbps.
4. Type
   ```bash
   #/opt/avaya/bin/nic_port set auto vmnic.
   ```
**Note:**

The default setting for ports is autonegotiate. You do not require to configure the speed in normal setup of the system.

---

**Supported TLS version**

Appliance Virtualization Platform Release 7.1 and later supports the TLS version 1.2. By default, TLS versions 1.0 and 1.1 are disabled, but you can enable, if required.
Chapter 4: Migration planning and considerations

Required permissions
You must have administrator credentials to perform the data migration from System Platform to Appliance Virtualization Platform.

Supported migrations

<table>
<thead>
<tr>
<th>System Platform to Appliance Virtualization Platform Release 8.1.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template</td>
</tr>
<tr>
<td>High Duplex / Communication Manager</td>
</tr>
<tr>
<td>Duplex Communication Manager Main / Survivable Core</td>
</tr>
<tr>
<td>Simplex Communication Manager Main / Survivable Core</td>
</tr>
<tr>
<td>Simplex Survivable Remote</td>
</tr>
<tr>
<td>System Manager including WebLM</td>
</tr>
<tr>
<td>Midsize Enterprise</td>
</tr>
<tr>
<td>SAL or SVM</td>
</tr>
<tr>
<td>Utility Services</td>
</tr>
<tr>
<td>Session Manager (Hardware-based)</td>
</tr>
<tr>
<td>Presence Services</td>
</tr>
<tr>
<td>Application Enablement Services</td>
</tr>
</tbody>
</table>

Planning for migration

Considerations
- Migration requires physical access to the server.
- The time needed for migration varies by application.
• When scheduling the maintenance window, allocate twice the time that is required for migration if rollback to System Platform is necessary.
  
  You can purchase the Hard Drive kits to reduce the rollback time.

**Migration times**

• Template migration can take between 2 and 8 hours to complete.

• Midsize Enterprise might take up to 15 hours.

---

**Configuration tools and utilities**

You must have the following tools and utilities for deploying, upgrading, and configuring Appliance Virtualization Platform:

• A browser for accessing Appliance Virtualization Platform by using the System Manager web interface

• An Solution Deployment Manager client running on your computer if System Manager is unreachable

• An SFTP client for Windows, for example WinSCP

• An SSH client, for example, PuTTy

---

**Supported servers**

In the Avaya appliance model, you can deploy or upgrade to Avaya Aura® Release 8.1.1 applications on the following Avaya-provided servers:

• **Dell™ PowerEdge™ R620**

• HP ProLiant DL360p G8

• **Dell™ PowerEdge™ R630**

• HP ProLiant DL360 G9

• S8300E, for Communication Manager and Branch Session Manager

• Avaya Solutions Platform 120 Appliance: Dell PowerEdge R640

**Note:**

- Avaya Aura® Release 8.0 and later does not support S8300D, Dell™ PowerEdge™ R610, and HP ProLiant DL360 G7 servers.

- Avaya Aura® Release 7.0 and later does not support S8510 and S8800 servers.

For fresh installations, use Avaya Solutions Platform 120 Appliance: Dell PowerEdge R640.
Software details of Appliance Virtualization Platform

For Avaya Aura® application software build details of OVA, ISO, service patch, Data migration Utility, or Solution Deployment Manager Client, see Avaya Aura® Release Notes on the AvayaSupport website at http://support.avaya.com/

Installing the Solution Deployment Manager client on your computer

About this task

In Avaya Aura® Virtualized Appliance offer, when the centralized Solution Deployment Manager on System Manager is unavailable, use the Solution Deployment Manager client to deploy the Avaya Aura® applications.

You can use the Solution Deployment Manager client to install software patches of only System Manager and hypervisor patches of Appliance Virtualization Platform.

Use the Solution Deployment Manager client to deploy, upgrade, and update System Manager.

From Avaya Aura® Appliance Virtualization Platform Release 7.0, Solution Deployment Manager is mandatory to upgrade or deploy the Avaya Aura® applications.

Procedure


2. On the Avaya Support website, click Support by Products > Downloads, and type the product name as System Manager, and Release as 8.1.x.

3. Click the Avaya Aura® System Manager Release 8.1.x SDM Client Downloads, 8.1.x link. Save the zip file, and extract to a location on your computer by using the WinZip application.
   You can also copy the zip file to your software library directory, for example, c:/tmp/Aura.

4. Right click on the executable, and select Run as administrator to run the Avaya_SDMClient_win64_8.1.1.0.0333784_28.exe file.
   The system displays the Avaya Solution Deployment Manager screen.

5. On the Welcome page, click Next.

6. On the License Agreement page, read the License Agreement, and if you agree to its terms, click I accept the terms of the license agreement and click Next.
7. On the Install Location page, perform one of the following:

- To install the Solution Deployment Manager client in the system-defined folder, leave the default settings, and click Next.

If the `C:\Program Files\Avaya\AvayaSDMClient` directory is not empty, the installer displays the following message: To install the SDM client, select an empty directory or manually delete the files from the installation directory.

If the file is locked and you are unable to delete it, reboot the machine, and then delete the file.

- To specify a different location for installing the Solution Deployment Manager client, click Choose, and browse to an empty folder. Click Next.

To restore the path of the default directory, click Restore Default Folder.

The default installation directory of the Solution Deployment Manager client is `C:\Program Files\Avaya\AvayaSDMClient`.

8. On the Pre-Installation Summary page, review the information, and click Next.

9. On the User Input page, perform the following:
   
a. To start the Solution Deployment Manager client at the start of the system, select the Automatically start SDM service at startup check box.

b. To change the default software library directory on windows, in Select Location of Software Library Directory, click Choose and select a directory.

   The default software library of the Solution Deployment Manager client is `C:\Program Files\Avaya\AvayaSDMClient\Default_Artifacts`.

   You can save the artifacts in the specified directory.

c. In Data Port No, select the appropriate data port.

   The default data port is 1527. The data port range is from 1527 through 1627.

d. In Application Port No, select the appropriate application port.

   The default application port is 443. If this port is already in use by any of your application on your system, then the system does not allow you to continue the installation. You must assign a different port number from the defined range. The application port range is from 443 through 543.

   **Note:**

   After installing the Solution Deployment Manager client in the defined range of ports, you cannot change the port after the installation.

e. (Optional) Click Reset All to Default to reset all values to default.

10. Click Next.

11. On the Summary and Validation page, verify the product information and the system requirements.
The system performs the feasibility checks, such as disk space and memory. If the requirements are not met, the user must make the required disk space, memory, and the ports available to start the installation process again.

12. Click **Install**.

13. On the Install Complete page, click **Done** to complete the installation of Solution Deployment Manager Client.

   Once the installation is complete, the installer automatically opens the Solution Deployment Manager client in the default web browser and creates a shortcut on the desktop.

14. To start the client, click the Solution Deployment Manager client icon.

**Next steps**

- Configure the laptop to get connected to the services port if you are using the services port to install.

- Connect the Solution Deployment Manager client to Appliance Virtualization Platform through the customer network or services port.

   For information about “Methods to connect the Solution Deployment Manager client to Appliance Virtualization Platform”, see *Using the Solution Deployment Manager client.*
Chapter 5: Migration process

Migration checklist

<table>
<thead>
<tr>
<th>No.</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1   | Get the backup media. | The backup media contains the following software:  
  • System Platform  
  • Templates  
  • System Platform service packs and software patches.  
  Download any missing components from the PLDS website. |
| 2   | Get the migration media. | From the PLDS website, download the following components that are required to migrate to Appliance Virtualization Platform:  
  • Appliance Virtualization Platform 8.1.1 installation file, avaya-avp-8.1.1.0.0.17.iso  
  • The Solution Deployment Manager client, if required  
  • OVA files for System Manager and other applications  
  • System Manager Release 8.1.1 patch file  
  • Release 8.1.1 patch files for other Avaya Aura® applications  
  Get USB Flash Drive in the FAT32 format. |
| 3   | Create a local backup of System Platform and the template data. | Creating a backup of the existing configuration on page 37 |

Table continues…
<table>
<thead>
<tr>
<th>No.</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
</table>
| 4   | Create a backup of all virtual machines. | Create a backup of each virtual machine. For more information, see the documentation of the application templates. For System Platform Release 6.0, perform the following:  
  • Log in to the System Platform console.  
  • Navigate to the SAL gateway.  
  • Note the values that you need to enter into the new SAL that you create.  
  Onboard SAL is optional, and might not be operational on System Platform. For remote SAL, update with the new values when the migration is complete. For Release 6.2 or later systems, you must navigate to the Services virtual machine, and record the settings. |
| 5   | Record System Platform and template values. | Record the data on the [System Platform and template values worksheet](#) on page 36.  
  1. On the Main Console page, note the IP addresses.  
  2. On [Server Management > Network Configuration](#), note the network configuration settings including DNS.  
  3. On the Date and Time page, note the NTP and timezone.  
  4. On [Server Management > SNMP Trap Receiver Configuration](#), note the SNMP settings. |
| 6   | Generate the Appliance Virtualization Platform kickstart file. | [Generating the Appliance Virtualization Platform kickstart file](#) on page 38 |
| 7   | Configure the USB drive. | [Configuring the Appliance Virtualization Platform USB drive](#) on page 41 |
| 8   | Insert the USB drive and Appliance Virtualization Platform DVD into the server and turn on the server. |  |
| 9   | Install Appliance Virtualization Platform. | [Deploying Appliance Virtualization Platform](#) on page 41 |

Table continues…
<table>
<thead>
<tr>
<th>No.</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Install the Appliance Virtualization Platform patch.</td>
<td>Upgrading Appliance Virtualization Platform from Release 7.x or 8.0.x to Release 8.1.1 using Solution Deployment Manager on page 52</td>
</tr>
<tr>
<td>11</td>
<td>Verify the Appliance Virtualization Platform installation.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Deploy AVP Utilities, System Manager, and other Avaya Aura® applications.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Install the patches for all Avaya Aura® applications.</td>
<td></td>
</tr>
</tbody>
</table>

**System Platform and template values worksheet**

While migrating the data from System Platform to Appliance Virtualization Platform, make a note of the following values:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>System Platform Domain 0 IP address</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>System Platform Console Domain IP address</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Services VM IP address if used</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Template VM 1 IP</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Template VM2 IP address</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Template VM3 IP address</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Template VM 4 IP address</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Template VM 5 IP address</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Template VM6 IP address</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>Template VM 7 IP address</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>Template VM 8 IP address</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>Template VM 9 IP address</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Subnet mask</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>Gateway</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Routes</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>NTP</td>
<td></td>
</tr>
</tbody>
</table>

*Table continues…*
### IP address mapping

<table>
<thead>
<tr>
<th>Reference</th>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>DNS</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>SNMP trap target 1</td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>SNMP trap target 2</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>SNMP trap target 3</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>SNMP trap target 4</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>SNMP trap target 5</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Timezone</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Location on System Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP addresses</td>
<td>Main System Platform web console page</td>
</tr>
<tr>
<td>Network settings that includes DNS</td>
<td>Server Management &gt; Network Configuration</td>
</tr>
<tr>
<td>NTP and Timezone</td>
<td>Date and Time page</td>
</tr>
<tr>
<td>SNMP settings</td>
<td>Server Management &gt; SNMP Trap Receiver Configuration</td>
</tr>
</tbody>
</table>

### Creating a backup of the existing configuration

**About this task**

Use this procedure to create a local backup of the System Platform and the template data prior to migrating to the Appliance Virtualization Platform.

**Procedure**

1. Log on to System Platform web console as an administrator.
2. Click **Server Management > Backup/Restore**.

3. Click **Backup**.

4. To take a local backup, in **Backup Method**, click **Local**.

5. Click **Backup Now**.

   The system creates a backup file in the `/vspdata/backup/archive` location in the System Platform console domain (C-DOM).

6. Log in to C-DOM.

7. Navigate to `/vspdata/backup/archive`.

8. Save a copy of the backup file in a location from where you can gain access to the file.

   The System Platform backup file contains the backup data from System Platform and the template.

---

### Generating the Appliance Virtualization Platform kickstart file

**Procedure**

1. On the System Manager web console, click **Services > Solution Deployment Manager > Application Management**.

2. In the lower pane, click **Generate AVP Kickstart**.

3. On Create AVP Kickstart, perform the following:
   a. Select 8.1.
   b. Enter the appropriate information in the fields.
   c. Click **Generate Kickstart File**.

   For more information, see “Create AVP Kickstart field descriptions.”

   The system prompts you to save the generated kickstart file on your local computer.

   For Appliance Virtualization Platform Release 8.1 and later, the kickstart file name must be `avp81ks.cfg`.

**Related links**

[Create AVP Kickstart field descriptions](#) on page 39
Create AVP Kickstart field descriptions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose AVP Version</td>
<td>The field to select the release version of Appliance Virtualization Platform.</td>
</tr>
<tr>
<td>Dual Stack Setup (with IPv4 and IPv6)</td>
<td>Enables or disables the fields to provide the IPv6 addresses.</td>
</tr>
<tr>
<td></td>
<td>The options are:</td>
</tr>
<tr>
<td></td>
<td>• yes: To enable the IPv6 format.</td>
</tr>
<tr>
<td></td>
<td>• no: To disable the IPv6 format.</td>
</tr>
<tr>
<td>AVP Management IPv4 Address</td>
<td>IPv4 address for the Appliance Virtualization Platform host.</td>
</tr>
<tr>
<td>AVP IPv4 Netmask</td>
<td>IPv4 subnet mask for the Appliance Virtualization Platform host.</td>
</tr>
<tr>
<td>AVP Gateway IPv4 Address</td>
<td>IPv4 address of the customer default gateway on the network. Must be on</td>
</tr>
<tr>
<td></td>
<td>the same network as the Host IP address.</td>
</tr>
<tr>
<td>AVP Hostname</td>
<td>Hostname for the Appliance Virtualization Platform host.</td>
</tr>
<tr>
<td></td>
<td>The hostname:</td>
</tr>
<tr>
<td></td>
<td>• Can contain alphanumeric characters and hyphen</td>
</tr>
<tr>
<td></td>
<td>• Can start with an alphabetic or numeric character</td>
</tr>
<tr>
<td></td>
<td>• Must contain at least 1 alphabetic character</td>
</tr>
<tr>
<td></td>
<td>• Must end in an alphanumeric character</td>
</tr>
<tr>
<td></td>
<td>• Must contain 1 to 63 characters</td>
</tr>
<tr>
<td>AVP Domain</td>
<td>Domain for the Appliance Virtualization Platform host. If customer does</td>
</tr>
<tr>
<td></td>
<td>not provide the host, use the default value. Format is alphanumeric string</td>
</tr>
<tr>
<td></td>
<td>dot separated. For example, mydomain.com.</td>
</tr>
<tr>
<td>IPv4 NTP server</td>
<td>IPv4 address or FQDN of customer NTP server. Format is x.x.x.x or ntp.mycompany.com</td>
</tr>
<tr>
<td>Secondary IPv4 NTP Server</td>
<td>Secondary IPv4 address or FQDN of customer NTP server. Format is x.x.x.x or</td>
</tr>
<tr>
<td></td>
<td>ntp.mycompany.com.</td>
</tr>
<tr>
<td>Main IPv4 DNS Server</td>
<td>Main IPv4 address of customer DNS server. One DNS server entry in each line.</td>
</tr>
<tr>
<td></td>
<td>Format is x.x.x.x.</td>
</tr>
<tr>
<td>Secondary IPv4 DNS server</td>
<td>Secondary IPv4 address of customer DNS server. Format is x.x.x.x. One DNS</td>
</tr>
<tr>
<td></td>
<td>server entry in each line.</td>
</tr>
<tr>
<td>AVP management IPv6 address</td>
<td>IPv6 address for the Appliance Virtualization Platform host.</td>
</tr>
<tr>
<td>AVP IPv6 prefix length</td>
<td>IPv6 subnet mask for the Appliance Virtualization Platform host.</td>
</tr>
<tr>
<td>AVP gateway IPv6 address</td>
<td>IPv6 address of the customer default gateway on the network. Must be on</td>
</tr>
<tr>
<td></td>
<td>the same network as the Host IP address.</td>
</tr>
<tr>
<td>IPv6 NTP server</td>
<td>IPv6 address or FQDN of customer NTP server.</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Secondary IPv6 NTP server</td>
<td>Secondary IPv6 address or FQDN of customer NTP server.</td>
</tr>
<tr>
<td>Main IPv6 DNS server</td>
<td>Main IPv6 address of customer DNS server. One DNS server entry in each line.</td>
</tr>
<tr>
<td>Secondary IPv6 DNS server</td>
<td>Secondary IPv6 address of customer DNS server. One DNS server entry in each line.</td>
</tr>
<tr>
<td>Public vLAN ID (Used on S8300E only)</td>
<td>VLAN ID for the S8300E server. If the customer does not use VLANs, leave the default value as 1. For any other server type, leave as 1. The range is 1 through 4090. Use Public VLAN ID only on the S8300E server.</td>
</tr>
</tbody>
</table>
| Out of Band Management Setup              | The check box to enable or disable Out of Band Management for Appliance Virtualization Platform. If selected the management port connects to eth2 of the server, and applications can deploy in the Out of Band Management mode. The options are:  
  • yes: To enable Out of Band Management  
    The management port is connected to eth2 of the server, and applications can deploy in the Out of Band Management mode.  
  • no: To disable Out of Band Management. The default option. |
| OOBM vLAN ID (Used on S8300E only)        | • For S8300E, use the front plate port for Out of Band Management  
  • For common server, use eth2 for Out of Band Management. |
| AVP Super User Admin Password             | Admin password for Appliance Virtualization Platform. The password must contain at least 8 characters and can include alphanumeric characters and @!$. You must make a note of the password because you require the password to register to System Manager and the Solution Deployment Manager client. |
| Confirm Password                          | Admin password for Appliance Virtualization Platform.                       |
| Enable Stricter Password (14 char pass length) | The check box to enable or disable the stricter password. The password must contain at least 14 characters. |
| WebLM IP/FQDN                             | The IP Address or FQDN of WebLM Server.                                    |
| WebLM Port Number                         | The port number of WebLM Server. The default port is 52233.                |

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generate Kickstart File</td>
<td>Generates the Appliance Virtualization Platform kickstart file and the system prompts you to save the file on your local computer.</td>
</tr>
</tbody>
</table>

Related links

Generating the Appliance Virtualization Platform kickstart file on page 38
Configuring the Appliance Virtualization Platform USB drive

Before you begin
Use the USB drive that Avaya provides in the media kit for this procedure. The provided USB is a FAT 32 format. If you must use a different USB, use a FAT 32 format file.

Procedure
1. Generate the Appliance Virtualization Platform kickstart file by using Solution Deployment Manager.

   See Migrating and Installing Avaya Aura® Appliance Virtualization Platform.

2. Save a copy of avp81ks.cfg on the USB drive.

Next steps
Install Appliance Virtualization Platform.

Deploying Appliance Virtualization Platform

Before you begin
- Configure the Appliance Virtualization Platform USB drive.
- Ensure that the backup file is saved on a different server because after the Appliance Virtualization Platform installation, server restarts, and all data is lost.
- To use the Solution Deployment Manager client for deploying the virtual machines, install the Solution Deployment Manager client on your computer.

Note:
To deploy Appliance Virtualization Platform server while connected to the customer network, ensure that the IP address used for Appliance Virtualization Platform is not in use by another system. If the configured IP address is already in use on the network during installation, the deployment process stops. You must remove the duplicate IP address, and restart the deployment.

Procedure
1. Insert the USB drive and the Appliance Virtualization Platform DVD into the server.

   Use an external Avaya-approved USB DVD drive for deploying Appliance Virtualization Platform on S8300E. The only supported USB DVD drive is Digistor DIG-72032, Digistor DIG73322, comcode 700406267.

2. Perform one of the following:
   - For new deployment, reboot the server or power-cycle the server.
For migrating from System Platform to Appliance Virtualization Platform, log on to the System Platform web console, and click **Server Management > Server Reboot/Shutdown > Reboot** to restart the server.

**Warning:**

When the server restarts, Appliance Virtualization Platform is deployed, and all existing data on the server is lost.

The system deploys Appliance Virtualization Platform and ejects DVD. The deployment process takes about 30 minutes to complete.

**Note:**

If using a monitor, the screen changes to black before the deployment is complete. A message in red text might briefly display, which is an expected behavior. Do not take any action.

3. Remove the USB drive and Appliance Virtualization Platform DVD.

**Note:**

When installing Appliance Virtualization Platform on an HP server, you must remove the USB drive when the server ejects DVD. Otherwise, the server might become nonoperational on reboot. If the server becomes nonoperational, remove the USB drive, and restart the server.

4. Using an SSH client, connect to the server through the eth1 services port by using the following network parameters for your system:
   - IP address: 192.168.13.5
   - Netmask: 255.255.255.248
   - Gateway: 192.168.13.1

The SSH client must use UTF-8 and TLS 1.2. Alternatively, you can connect to the public network address that was configured during the installation from a computer on the customer network.

You can access the Appliance Virtualization Platform host with IP address: 192.168.13.6.

5. Log in to Appliance Virtualization Platform as admin and provide the password that is configured in the Kickstart file.

The system displays the End user license agreement (EULA) screen.

6. Read the EULA, and type **Y** to accept the terms.

You can press any key to read EULA, and use the space bar to scroll down.

**Warning:**

Accept EULA before you deploy virtual machines. If deployments are attempted before you accept EULA, deployments fail.
7. On the System Manager web console, click **Services > Solution Deployment Manager > Application Management**.

8. Add a location.


10. Install the Appliance Virtualization Platform patch, if applicable.
    For more information, see Installing the Appliance Virtualization Platform patch from Solution Deployment Manager.

11. Perform one of the following:
    - For deploying on new server, deploy the AVP Utilities virtual machine, and then all other virtual machines.
    - For migrating from System Platform Server to Appliance Virtualization Platform, deploy the AVP Utilities virtual machine, and then all other virtual machines with the data that you noted in “System Platform and Template values”.

For instructions to deploy AVP Utilities and other virtual machines, see *Deploying Avaya Aura® AVP Utilities* and product-specific deployment guides.

12. From System Manager Solution Deployment Manager, install the required software patches for the virtual machines.

**Related links**

- [Upgrading Appliance Virtualization Platform from Release 7.x or 8.0.x to Release 8.1.1 using Solution Deployment Manager](#) on page 52
- [Removing the Appliance Virtualization Platform patch from the ESXi host CLI](#) on page 76
- [System Platform and template values worksheet](#) on page 36

**Licensing**

You must accept the Appliance Virtualization Platform End User License Agreement (EULA) before deploying applications on Appliance Virtualization Platform. You can accept EULA through an SSH login to the Appliance Virtualization Platform system after installation or first power on.

Appliance Virtualization Platform must be licensed with an appropriate license that is installed on an Avaya WebLM Server. A 30-day grace period will apply in which you must license Appliance Virtualization Platform and during this period, Appliance Virtualization Platform will be in License Error Mode. If after 30-day grace period an Appliance Virtualization Platform license is not acquired, Appliance Virtualization Platform enters in License Restricted Mode and Appliance Virtualization Platform administrative actions will be restricted.

For information about how to install and configure a license for Appliance Virtualization Platform, see "Installing and configuring Appliance Virtualization Platform licensing".
Enabling IP forwarding using Services Port VM for AVP Utilities

About this task
IP Forwarding is always disabled after an installation, regardless of the mode of deployment. Use the following procedure to enable IP Forwarding.

Note:
For security reasons, you must always disable IP forwarding after finishing your task.

Procedure
1. Start an SSH session.
2. Log in to AVP Utilities as admin.
3. In the command line, perform one of the following:
   • To enable IP forwarding, type `IP_Forward enable`.
   • To disable IP forwarding, type `IP_Forward disable`.
   • To view the status of IP forwarding, type `IP_Forward status`.

Example
```
IP_Forward enable
Enabling IP Forwarding
Looking for net.ipv4.ip_forward in /etc/sysctl.conf
Status of IP Forwarding
  .Enabled
```

Activating SSH from AVP Utilities

About this task
For security purpose, SSH access to Appliance Virtualization Platform shuts down in the normal operation. You must activate SSH on Appliance Virtualization Platform.

When you install or preinstall Appliance Virtualization Platform on a server, SSH is enabled. After you accept the license terms during Appliance Virtualization Platform installation, SSH shuts down within 24 hours. After SSH shuts down, you must reactivate SSH by using the `AVP_SSH enable` command from AVP Utilities.

Before you begin
Start an SSH session.

Procedure
1. Log in to the AVP Utilities virtual machine running on Appliance Virtualization Platform with administrator privilege credentials.
2. Type the following:

```
AVP_SSH enable
```

Within 3 minutes, from AVP Utilities, the SSH service starts on Appliance Virtualization Platform and runs for two hours. After two hours, you must reactivate SSH from AVP Utilities.

When SSH is enabled, you can use an SSH client such as PuTTY to gain access to Appliance Virtualization Platform on customer management IP address or the services port IP address of 192.168.13.6.

3. **(Optional)** To find the status of SSH, type `AVP_SSH status`.

4. To disable SSH, type `AVP_SSH disable`.

---

## Enabling and disabling SSH on Appliance Virtualization Platform from Solution Deployment Manager

### About this task

For security purpose, SSH access to Appliance Virtualization Platform shuts down in the normal operation. To continue access, enable the SSH service on Appliance Virtualization Platform from Solution Deployment Manager.

### Procedure

1. On the System Manager web console, click **Services > Solution Deployment Manager > Application Management**.

2. In **Application Management Tree**, select a location.

3. Select an Appliance Virtualization Platform host.

4. To enable SSH, do the following:
   a. Click **More Actions > SSH > Enable SSH**.
   b. In the Confirm dialog box, in the **Time (in minutes)** field, type the time after which the system times out the SSH connection.
      
      The range is 10 minutes through 120 minutes.
   c. Click **Ok**.
      
      The system displays **enabled** in the **SSH status** column.

5. To disable SSH, click **More Actions > SSH > Disable SSH**.
   
   The system displays **disabled** in the **SSH status** column.
Validating the migration

1. Verify that the ping to virtual machine is successful.
2. Verify if you can log on to each virtual machine successfully.
3. Verify that the customer configuration is restored correctly.
4. Verify that applications are licensed.
5. Verify that endpoints are registered.
6. Perform the postmigration validation steps that are specific to each application.

For more information on postmigration validation checks, see the appropriate application documentation.

Migrating from System Platform to Appliance Virtualization Platform by using hard disk drives

Installing Appliance Virtualization Platform by using hard disk drive

Before you begin

- Connect a monitor and USB keyboard to the server.
- Obtain the Appliance Virtualization Platform drive kit. The kit contains the following:
  - Hard disk drives
  - RAID configuration disk for your system
  - RAID documentation
  - Dell server import document, required if you must perform a rollback on the Dell server

For more information about the drive kits, see “Appliance Virtualization Platform Drive Kits”.

- A marker to label the removed disk drives.

Procedure

1. Shut down System Platform, and turn off the power to the server.

   For more information, see System Platform and the server documentation.

2. Remove each hard disk drive from the server, and mark the drive with the designated slot number.

3. Keep the removed drives in a safe place.
These drives are required to rollback to System Platform.

4. Insert new hard disk drives into the server hard disk drive slots starting with the lowest order server slot number.

For example, Dell slot 0 and HP slot 1.

5. Turn on the power to the server.

6. Open the DVD drive tray, and insert the appropriate server RAID configuration disk.

The server boots from the RAID configuration disk. For more information, see the RAID documentation for your system.

7. (Optional) If the server does not start from the RAID configuration disk, perform the following:
   
   a. Press Control+Alt+Delete a couple of times.
   
   b. If server does not still start from the disk, press F9 for HP or F2 for Dell to check the boot order in the server setup menu.

8. When the RAID configuration tool starts, follow the instructions to view RAID Array configuration progress.

   The tool automatically configures the Array Controller to: 2xHDD = RAID 1. 3x, 4x and 5xHDD = RAID 5. When the RAID configuration is complete, the system shuts down the server, and ejects the disk.


   For instructions, see “Deploying Appliance Virtualization Platform”.

Related links

   Deploying Appliance Virtualization Platform on page 41
   Appliance Virtualization Platform drive kits on page 47

---

### Appliance Virtualization Platform drive kits

700511583, R620 300GB 10K HDD 5 DRIVE KIT

<table>
<thead>
<tr>
<th>Code</th>
<th>Qty</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>700506756</td>
<td>5</td>
<td>R620 300GB 10K SAS 2.5” HDD</td>
</tr>
<tr>
<td>700506915</td>
<td>1</td>
<td>SOFTWARE, R620 RAID1 to RAID5 UPRG +Doc</td>
</tr>
<tr>
<td>-</td>
<td>1</td>
<td>Document for Setup of HDDs in Upgrade Kits</td>
</tr>
</tbody>
</table>

700511584, R620 300GB 10K HDD 3 DRIVE KIT

<table>
<thead>
<tr>
<th>Code</th>
<th>Qty</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>700506756</td>
<td>3</td>
<td>R620 300GB 10K SAS 2.5” HDD</td>
</tr>
</tbody>
</table>

Table continues…
## Migration process

### 700511585, R620 300GB 10K HDD 2 DRIVE KIT

<table>
<thead>
<tr>
<th>Code</th>
<th>Qty</th>
<th>Component</th>
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<td>700506915</td>
<td>1</td>
<td>SOFTWARE, R620 RAID1 to RAID5 UPGR +Doc</td>
</tr>
<tr>
<td>-</td>
<td>1</td>
<td>Document for Setup of HDDs in Upgrade Kits</td>
</tr>
</tbody>
</table>

### 700511588 DL360PG8 300GB 10K HDD 3 DRIVE KIT

<table>
<thead>
<tr>
<th>Code</th>
<th>Qty</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>700506756</td>
<td>2</td>
<td>R620 300GB 10K SAS 2.5&quot; HDD</td>
</tr>
<tr>
<td>700506915</td>
<td>1</td>
<td>SOFTWARE, R620 RAID1 to RAID5 UPGR +Doc</td>
</tr>
<tr>
<td>-</td>
<td>1</td>
<td>Document for Setup of HDDs in Upgrade Kits</td>
</tr>
</tbody>
</table>

### 700511589 DL360PG8 300GB 10K HDD 2 DRIVE KIT

<table>
<thead>
<tr>
<th>Code</th>
<th>Qty</th>
<th>Component</th>
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</thead>
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<tr>
<td>700506773</td>
<td>3</td>
<td>DL360PG8 300GB 10K SAS 2.5&quot; HDD</td>
</tr>
<tr>
<td>700501523</td>
<td>1</td>
<td>SOFTWARE, DL360/380PG8 RAID1 to RAID5 UPGR+ Doc</td>
</tr>
<tr>
<td>-</td>
<td>1</td>
<td>Document to Setup HDDs in Upgrade Kits</td>
</tr>
</tbody>
</table>

**Related links**

- [Finding documents on the Avaya Support website](#) on page 110
Chapter 6: Rollback process

Rolling back to System Platform

About this task

Note:
Due to the on-board flash drive, you can reinstall System Platform without the recovery DVD. You require the recovery disk for S8300E and common servers.

Before you begin
Keep the System Platform backup handy.

Procedure

1. Insert the recovery DVD into the server.
   The **Avaya Aura® Appliance Virtualization Platform 7.0 CentOS Recovery ISO** disk is available on PLDS and the Avaya Support site. Also, the 700510424 media kit contains the disk.

2. Log on to System Platform web console.

3. Restart the system.

4. Connect the laptop to the following:
   - For HP server, eth0 port, the first port on the back of an HP server
   - For common server R2, eth1 port on the rear side of the server
   - For S8300E server, service port network on the front panel

5. Reconfigure the laptop to the following:
   - IP address: 192.11.13.5
   - Netmask: 255.255.255.252

6. Start an SSH session, and connect to 192.11.13.6.

7. Log in as admin and provide the password admin01.

8. To change to the super user, type `su - root`.

9. Do the following:
   - For S8300E, type `parted /dev/sdb`.
Rollback process

- For other servers, type `parted /dev/sda`.

10. Type `mklabel msdos`.

11. To confirm, type `yes`.

12. To install System Platform, do the following:
   a. Insert the System Platform DVD into the server.
   b. Restart the system.
   c. Reposition cables to the correct ports.
   d. Connect a computer to the network.
   e. On the System Platform web console, install software patches for System Platform.
   f. Restore the System Platform backup.

Related links

Rolling back to System Platform by using hard disk drive on page 50

Rolling back to System Platform by using hard disk drive

Procedure

1. Retrieve the hard disk drives that you removed during the installation of Appliance Virtualization Platform.

2. Turn off the server, and perform the following:
   a. Connect the monitor, keyboard, and mouse to the server.
   b. Insert the hard disk drives that you want to import into the original slots of the server.

3. Turn on the power to the server.

4. Perform one of the following:
   - If the server is Dell™ PowerEdge™ R620 or Dell™ PowerEdge™ R630, press `f` on the server console when system prompts to import the foreign array.
     For more information, see the Dell server import document.
   - If the server is HP ProLiant DL360p G8 or HP ProLiant DL360 G9, the server automatically imports and no user interaction is required.
     When you confirm the server boot from hard disk drives, the system displays the login prompt on server console.

Related links

Installing Appliance Virtualization Platform by using hard disk drive on page 46
Rolling back to System Platform on page 49
Chapter 7: Upgrading Appliance Virtualization Platform

Prerequisites for upgrading Appliance Virtualization Platform

- If you are upgrading from Appliance Virtualization Platform 7.x to 8.x, ensure that Appliance Virtualization Platform 7.x is deployed on the server that is supported with Appliance Virtualization Platform 8.x.

If Appliance Virtualization Platform 7.x is deployed on the server that is not supported with Appliance Virtualization Platform 8.x, you need to manually upgrade Appliance Virtualization Platform to 8.x. For information, see Upgrading Appliance Virtualization Platform from Release 7.x to 8.x on page 55.

- System Manager cannot upgrade or update Appliance Virtualization Platform on which the System Manager itself is residing. Instead use Solution Deployment Manager Client to upgrade or update Appliance Virtualization Platform.

- When you upgrade or update Appliance Virtualization Platform, the system shuts down all the associated virtual machines and restarts the Appliance Virtualization Platform host. During the upgrade or update process, the virtual machines will be out of service. After the Appliance Virtualization Platform upgrade or update is complete, the system restarts the virtual machines.

- If you are upgrading or updating the Appliance Virtualization Platform host, then you must not restart, shutdown, upgrade, or install the patch on the virtual machine that is hosted on the same Appliance Virtualization Platform host.

If you are deploying, upgrading, or installing a patch on a virtual machine, then you must not restart, shutdown, upgrade, or update the Appliance Virtualization Platform host on which the same virtual machine is hosted.

- If you are using services port to upgrade or update Appliance Virtualization Platform, use Solution Deployment Manager Client. You must connect the system having Solution Deployment Manager Client directly with the Appliance Virtualization Platform services port (Gateway 192.168.13.1).

If you connect the system using the AVP Utilities services port (Gateway 192.11.13.6), the Appliance Virtualization Platform upgrade or update fails.

- If an application is running on Release earlier than 8.0.x and if it has Utility Services, you must back up Utility Services files and install them on Avaya Aura® Device Services Release 8.0. For migrating data from the legacy Avaya Aura® Utility Services to the Utility Server...
Upgrading Appliance Virtualization Platform

embedded within Avaya Aura® Device Services Release 8.0, see Administering Avaya Aura® Device Services on the Avaya Support website.

• While upgrading Appliance Virtualization Platform from Release 7.x or 8.0.x to Appliance Virtualization Platform 8.1.x, if NIC teaming is configured on the Appliance Virtualization Platform Release 7.x or 8.0.x server, the system restores the configuration on Appliance Virtualization Platform Release 8.1.x after the upgrade.

Upgrading Appliance Virtualization Platform from Release 7.x or 8.0.x to Release 8.1.1 using Solution Deployment Manager

About this task
Use the following procedure to upgrade Appliance Virtualization Platform from Release 7.x or 8.0.x to Release 8.1.1 by using the upgrade bundle from Solution Deployment Manager Client or System Manager Solution Deployment Manager.

Note:
Install only Avaya-approved service packs or software patches on Appliance Virtualization Platform. Do not install the software patches that are downloaded directly from VMware®.

Before you begin
1. Add a location.
   For information about adding a location, see Administering Avaya Aura® System Manager.
2. Select Location and add an Appliance Virtualization Platform host.
   For information about adding the Appliance Virtualization Platform host, see Administering Avaya Aura® System Manager.

To upgrade from Appliance Virtualization Platform Release 7.x or 8.0.x to Release 8.1.1, ensure that:

• Appliance Virtualization Platform 7.x is deployed on the server that is supported with Appliance Virtualization Platform 8.x.
• Utility Services 7.x is deployed on Appliance Virtualization Platform Release 7.x and trust is established with the application.
• AVP Utilities 8.x is deployed on Appliance Virtualization Platform Release 8.x and trust is established with the application.

Note:
• If you are upgrading Appliance Virtualization Platform from Release 7.x to 8.x, Solution Deployment Manager also upgrades Utility Services to AVP Utilities during the Appliance Virtualization Platform upgrade.
• If you are upgrading Appliance Virtualization Platform from Release 8.0.x to 8.1.x, you need to manually upgrade AVP Utilities after upgrading Appliance Virtualization Platform.
**Procedure**

1. To access Solution Deployment Manager, do one of the following:
   - On the System Manager web console, click **Services > Solution Deployment Manager**.
   - On the desktop, click the Solution Deployment Manager icon (SDM).

2. Click **Application Management**.

3. In **Application Management Tree**, select a location.

4. On the **Platforms** tab, in the Platforms for Selected Location <location name> section, select the Appliance Virtualization Platform host, and click **More Actions > AVP Update/Upgrade Management**.

If Utility Services is not deployed on Appliance Virtualization Platform Release 7.x or trust is not established with the Utility Services application, and you click **Upgrade/Update**, then the system displays the following message.

   
   [AVP - <AVP Name in SDM>] Required Utility Services (US) VM is absent or not registered with this SDM instance. If absent, deploy US. If not registered, refresh host and then select US VM, and click More Options > Reestablish Connection.

5. If you are using System Manager Solution Deployment Manager, on the Update Host page, click **Select Patch from Local SMGR**.

6. In **Select patch file**, provide the absolute path to the patch file of the host, and click **Update Host**.

   The patch file location is different for Solution Deployment Manager Client and System Manager Solution Deployment Manager.
   - For Solution Deployment Manager Client, the patch file must be available on windows machine where the Solution Deployment Manager client is hosted.
     
     For example, the absolute path on your computer can be `C: \ tmp \ avp \ upgrade-avaya-avp-8.1.0.0.0.xx.zip`.
   - For System Manager Solution Deployment Manager, the patch file must be in the `System Manager swlibrary` directory.

7. Note that, if you attempt to upgrade Appliance Virtualization Platform to Release 8.0 and later on S8300D, Dell™ PowerEdge™ R610, or HP ProLiant DL360 G7 server, the system displays the following message.

   
   [AVP - <IP_Address>] You are attempting to Update / Upgrade this AVP on host hardware that is not supported for this software version: Avaya Common Server R1 (HP DL360G7 or Dell R610) and the Avaya S8300D blade are deprecated for this release. Please refer to the Release Notes for this release for details of the supported host hardware.

8. **(Optional)** On the AVP Update/Upgrade - Enhanced Access Security Gateway (EASG) User Access window, read the following messages, and do one of the following:
When you upgrade Appliance Virtualization Platform from Release 7.0.x to Release 7.1 and later, the system displays the AVP Update/Upgrade - Enhanced Access Security Gateway (EASG) User Access window.

**Enable: (Recommended)**

By enabling Avaya Logins you are granting Avaya access to your system. This is necessary to maximize the performance and value of your Avaya support entitlements, allowing Avaya to resolve product issues in a timely manner. In addition to enabling the Avaya Logins, this product should be registered with Avaya and technically onboarded for remote connectivity and alarming. Please see the Avaya support site (support.avaya.com/registration) for additional information for registering products and establishing remote access and alarming.

**Disable:**

By disabling Avaya Logins you are preventing Avaya access to your system. This is not recommended, as it impacts Avaya’s ability to provide support for the product. Unless the customer is well versed in managing the product themselves, Avaya Logins should not be disabled.

a. To enable EASG, click **Enable EASG**.

   Avaya recommends to enable EASG.

   You can also enable EASG after deploying or upgrading the application by using the command: `EASGManage --enableEASG`.

b. To disable EASG, click **Disable EASG**.

9. If Utility Services is deployed on Appliance Virtualization Platform Release 7.x, the system upgrades Appliance Virtualization Platform to Release 8.1, and then updates Utility Services to AVP Utilities.

   This step is applicable when you upgrade from Release 7.x to Release 8.1.

   The system displays the Utility Services Upgrade window.

10. On the Utility Services Upgrade window, do the following:

    This step is applicable when you upgrade from Release 7.x to Release 8.1.

    a. In Platform Details, the data store is auto-selected as server-local-disk, and then click **Next**.

    b. In **OVA**, provide the AVP Utilities OVA file details, and then click **Next**.

       For AVP Utilities OVA, the system automatically performs the resource check and disables the **Flexi Footprint** field.

    c. In Config Parameters, provide the network and configuration parameters details, and click **Update**.
11. On the EULA Acceptance page, read the EULA, and do one of the following:
   This step is applicable when you upgrade from Release 7.x to Release 8.1.
   a. To accept the EULA, click Accept.
   b. To decline the EULA, click Decline.

   Once Appliance Virtualization Platform is upgraded, the system updates Utility Services to AVP Utilities.

12. To view the details, in the Current Action column, click Status Details.

   Host Create/Update Status window displays the details. The patch installation takes some time. When the patch installation is complete, the Current Action column displays the status.

   In the Platforms for Selected Location <location name> section, the system displays the update status in the Current Action column.

Next steps
If the virtual machines that were running on the Appliance Virtualization Platform host do not automatically start, manually start the machines.

---

**Upgrading Appliance Virtualization Platform from Release 7.x to 8.x**

**About this task**

If Appliance Virtualization Platform 7.x is deployed on server that is not supported with Appliance Virtualization Platform Release 8.x, use the following procedure to manually upgrade Appliance Virtualization Platform from Release 7.x to 8.x.

**Note:**

Install only Avaya-approved service packs or software patches on Appliance Virtualization Platform. Do not install the software patches that are downloaded directly from VMware®.

**Procedure**

- To upgrade Appliance Virtualization Platform with same Appliance Virtualization Platform IP Address, do the following:
  1. Take backup of all virtual machines that are running on Appliance Virtualization Platform Release 7.x.
  2. Shut down Appliance Virtualization Platform 7.x.
  3. Install fresh Appliance Virtualization Platform 8.x on the supported server with the same Appliance Virtualization Platform IP Address.
5. Install AVP Utilities 8.x by using Solution Deployment Manager Client.

6. Deploy all remaining virtual machines 8.x, except Utility Services on the new Appliance Virtualization Platform by using Solution Deployment Manager.

7. Restore the backup individually on the virtual machine.

For information about restoring backup when element is upgraded, see the application-specific document on the Avaya Support website.

• To upgrade Appliance Virtualization Platform with different Appliance Virtualization Platform IP Address, do the following:

  1. Install fresh Appliance Virtualization Platform 8.x on the supported server with different Appliance Virtualization Platform IP Address.
  3. Install AVP Utilities 8.1 by using Solution Deployment Manager Client.
  4. Upgrade virtual machines.

  For upgrading:
  - Virtual machines on Appliance Virtualization Platform 8.x, use different box upgrade.
  - System Manager use Solution Deployment Manager Client and other element use System Manager Solution Deployment Manager.

Upgrading Utility Services 7.x to AVP Utilities Release 8.1.1 in bulk during Appliance Virtualization Platform upgrade

About this task

Use this procedure to upgrade Utility Services 7.x to AVP Utilities Release 8.1.1 in bulk when you are upgrading one or more Appliance Virtualization Platform to Release 8.1.1.

Before you begin

• Take a backup of Utility Services manually.

• Add a location.

  For more information, see “Adding a location” section in Administering Avaya Aura® System Manager.

• Select Location and add a host.

  For more information, see “Adding an Appliance Virtualization Platform or ESXi host” section in Administering Avaya Aura® System Manager.

• Download a copy of the hostUSUpgradeInfo.xlsx spreadsheet from Avaya PLDS website at https://plds.avaya.com/ or from Avaya Support website at https://support.avaya.com. Fill the required system details in the spreadsheet.
Note:
If you provide the incorrect data in the spreadsheet, the upgrade might fail.

Procedure
1. On the System Manager web console, click Services > Solution Deployment Manager > Application Management.
2. In Application Management Tree, select a location.
3. On the Platforms tab, in the Platforms for Selected Location <location name> section, select the Appliance Virtualization Platform host, and click More Actions > AVP Update/Upgrade Management.

If Utility Services is not deployed on Appliance Virtualization Platform Release 7.x or trust is not established with the Utility Services application, and you click Upgrade/Update, then the system displays the following message.

[AVP - <AVP Name in SDM>] Required Utility Services (US) VM is absent or not registered with this SDM instance. If absent, deploy US. If not registered, refresh host and then select US VM, and click More Options > Reestablish Connection.

4. If you are using System Manager Solution Deployment Manager, on the Update Host page, click Select Patch from Local SMGR.
5. In Select patch file, provide the absolute path to the patch file of the host, and click AVPU Configuration Import.

For example, the absolute path on your computer can be C:\tmp\avp\upgrade-avaya-avp-8.1.0.0.0.xx.zip.

6. In the Import Configuration Excel File dialog box, do the following:
   a. Click Browse and select the file from the local computer.
   b. To upload the spreadsheet, click Open.

   The system displays the file size and percentage complete for the uploaded file. When the file upload is in-progress, do not navigate away from the page.
   c. Click Submit File.
7. Click Update Host and accept the EULA.
8. To view the details, in the Current Action column, click Status Details.

Host Create/Update Status window displays the details. The patch installation takes some time. When the patch installation is complete, the Current Action column displays the status.

In the Platforms for Selected Location <location name> section, the system displays the update status in the Current Action column.
Rolling back to Utility Services

About this task
Use this procedure to rollback Utility Services to 7.x if the upgrade from Utility Services to AVP Utilities fails from Release 7.x to Release 8.1 and later.

Before you begin
• Add a location.
• Select Location and add a host.

Procedure
1. On the System Manager web console, click Services > Solution Deployment Manager > Application Management.
2. In Application Management Tree, select a location.
3. On the Applications tab, in the Applications for Selected Location<location name> section, select the Utility Services application, and click More Actions > Rollback/Retry.
   If the Current Action Status column displays the VM Upgrade Failed message, the system enables More Actions > Rollback/Retry after selecting the Utility Services application.
4. In the Import Configuration Excel File dialog box, click Rollback.
   To upgrade Utility Services to AVP Utilities, use the Upgrade Management page of System Manager Solution Deployment Manager.
   The system displays the confirmation message to accept the rollback.

Retrying Utility Services to AVP Utilities upgrade

About this task
If the upgrade from Utility Services to AVP Utilities fails, use this procedure to retry the upgrade of Utility Services to AVP Utilities.

Before you begin
• Add a location.
• Select Location and add a host.
• Download a copy of the hostUSUpgradeInfo.xlsx spreadsheet from Avaya PLDS website at https://plds.avaya.com or from Avaya Support website at https://support.avaya.com. Fill the required system details in the spreadsheet.

   Note:
   If you provide the incorrect data in the spreadsheet, the upgrade might fail.
Procedure

1. On the System Manager web console, click Services > Solution Deployment Manager > Application Management.
2. In Application Management Tree, select a location.
3. On the Applications tab, in the Applications for Selected Location<location name> section, select the Utility Services application, and click More Actions > Rollback/Retry.
   If the Current Action Status column displays the VM Upgrade Failed message, the system enables More Actions > Rollback/Retry after selecting the Utility Services application.
4. On the Import Configuration Excel File dialog box, do the following:
   a. Click Browse and select the file from the local computer.
   b. To upload the spreadsheet, click Open.
      The system displays the file size and percentage complete for the uploaded file.
      When the file upload is in-progress, do not navigate away from the page.
   c. Click Submit File.
      Once the file is successfully uploaded, the system enables the Retry button.
   d. Click Retry.
      The system starts the upgrade of Utility Services to AVP Utilities.

Upgrading Appliance Virtualization Platform through services port

Upgrading Appliance Virtualization Platform from Release 7.x, 8.0.x to Release 8.1.x through services port using Solution Deployment Manager Client

About this task

Use the following procedure to upgrade Appliance Virtualization Platform from Release 7.x to Release 8.0.x through services port by using Solution Deployment Manager Client.

Before you begin

To upgrade from Appliance Virtualization Platform Release 7.x or 8.0.x to 8.1.x, ensure that:

- Appliance Virtualization Platform 7.x or 8.0.x is deployed on the server that is supported with Appliance Virtualization Platform 8.1.x.
Utility Services 7.x is deployed on Appliance Virtualization Platform Release 7.x and trust is established with the application.

**Note:**
- If you are upgrading Appliance Virtualization Platform from Release 7.x to 8.x, Solution Deployment Manager also upgrades Utility Services to AVP Utilities during the Appliance Virtualization Platform upgrade.

**Procedure**

1. To configure laptop with below configuration for Appliance Virtualization Platform, go to Network or Internet Settings > Ethernet > Local Area Connection > Internet Protocol version 4 (TCP/IPv4) Properties, do the following:
   a. Select the **Use the following IP address** option.
   b. In the **IP address** field, type 192.168.13.5.
   c. In the **Subnet mask** field, type 255.255.255.248.
   d. In the **Default Gateway** field, type 192.168.13.1

   Following is an example for changing the configuration for the Appliance Virtualization Platform host upgrade.

   ![Internet Protocol Version 4 (TCP/IPv4) Properties]

2. Connect the Service port (eth1) of the Appliance Virtualization Platform host with laptop.

   **Important:**
   While connecting through service port, WiFi or any other network must be disconnected. Only Services port connectivity is recommended.
3. Install the latest version of the Solution Deployment Manager client to which you want to upgrade Appliance Virtualization Platform.

4. Launch the Solution Deployment Manager client.

5. Click Application Management.

6. In Application Management Tree, select a location.

7. On the Platforms tab, in the Platforms for Selected Location <location name> section, click Add.

8. Add the Appliance Virtualization Platform host with the 192.168.13.6 IP Address on Solution Deployment Manager Client.

   Following is an example of adding the Appliance Virtualization Platform host.

   ![Add Platform Form]

9. For Appliance Virtualization Platform Release 7.x to 8.x upgrade, re-establish trust with Utility Services that is already deployed on the added Appliance Virtualization Platform host 7.x, and do the following:

   a. On the Applications tab, in the Applications for Selected Location <location name> area, select Utility Services.

   b. Click More Actions > Re-establish connection.

If you need to re-establish trust with Utility Services Release 7.0, select the version as 7.0.

Following is an example of re-establishing trust with Utility Services.

---

Comments on this document? infodev@avaya.com
Wait for 3 to 5 minutes for trust establishment to complete without any error as shown in below screen shot.

10. On the **Platforms** tab, in the Platforms for Selected Location <location name> section, select the Appliance Virtualization Platform host, and click **More Actions > AVP Update/Upgrade Management**.

11. On the Update Host page, click **Select patch from local SDM client machine**.

12. In **Select patch file**, provide the absolute path to the upgrade zip file of the host, and click **Update Host**.

For Solution Deployment Manager Client, the patch file must be available on windows machine where the Solution Deployment Manager client is hosted.

For example, the absolute path on your computer can be `C:\tmp\avp\upgrade-avaya-avp-8.x.0.0.0.xx.zip`. 
13. **(Optional)** On the AVP Update/Upgrade - Enhanced Access Security Gateway (EASG) User Access window, read the following messages, and do one of the following:

When you upgrade Appliance Virtualization Platform from Release 7.0.x to Release 7.1 and later, the system displays the AVP Update/Upgrade - Enhanced Access Security Gateway (EASG) User Access window.

**Enable: (Recommended)**

By enabling Avaya Logins you are granting Avaya access to your system.

This is necessary to maximize the performance and value of your Avaya support entitlements, allowing Avaya to resolve product issues in a timely manner.

In addition to enabling the Avaya Logins, this product should be registered with Avaya and technically onboarded for remote connectivity and alarming. Please see the Avaya support site (support.avaya.com/registration) for additional information for registering products and establishing remote access and alarming.

**Disable:**

By disabling Avaya Logins you are preventing Avaya access to your system.

This is not recommended, as it impacts Avaya’s ability to provide support for the product. Unless the customer is well versed in managing the product themselves, Avaya Logins should not be disabled.

a. To enable EASG, click *Enable EASG.*

   Avaya recommends to enable EASG.

   You can also enable EASG after deploying or upgrading the application by using the command: `EASGManage --enableEASG`.

b. To disable EASG, click *Disable EASG.*

14. If Utility Services is deployed on Appliance Virtualization Platform Release 7.x, the system upgrades Appliance Virtualization Platform to Release 8.x, and then updates Utility Services to AVP Utilities.

   This step is applicable when you upgrade from Release 7.x to Release 8.x.

   The system displays the Utility Services Upgrade window.

15. On the Utility Services Upgrade window, do the following:

   This step is applicable when you upgrade from Release 7.x to Release 8.x.

   a. In Platform Details, the data store is auto-selected as server-local-disk, and then click *Next.*

   b. In *OVA,* provide the AVP Utilities OVA file details, and then click *Next.*

      For AVP Utilities OVA, the system automatically performs the resource check and disables the *Flexi Footprint* field.
c. In Config Parameters, provide the network and configuration parameters details, and click Update.

16. On the EULA Acceptance page, read the EULA, and do one of the following:

This step is applicable when you upgrade from Release 7.x to Release 8.x.

a. To accept the EULA, click Accept.

b. To decline the EULA, click Decline.

Once Appliance Virtualization Platform is upgraded, the system updates Utility Services to AVP Utilities.
Upgrading Appliance Virtualization Platform through services port

Host Patching Status

Host Patching Completed

- Host Patching
- Pre update check
- Uploading Patch
- Retrieving Patch Installation Status
- pre-upgrade backup
- Stopping all guest VMs
- Enter Maintenance Mode
- AVP patch installation
- Verifying AVP State
- HOST_REFRESH
- VM-UPGRADE
- Extract OVA

Host Patching Status

Host Patching Completed

- Check resource beforeHost upload
- Prepare OVA file task
- Create Environment File
- Create VM and upload VMDK files task
- Create Environment ISO
- Attach Environment ISO to VM
- Shut Down old VM
- Ready to reconfigure VM
- Starting VM
- Running Status Plugin
- Detach Environment ISO from VM
- Update Service Port Task
- Commit
- Delete Old VM
17. To view the details, in the **Current Action** column, click **Status Details**.

Host Create/Update Status window displays the details. The patch installation takes some time. When the patch installation is complete, the **Current Action** column displays the status.

In the Platforms for Selected Location <location name> section, the system displays the update status in the **Current Action** column.

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### Updating Appliance Virtualization Platform through services port using Solution Deployment Manager Client

#### About this task

Use the following procedure to update Appliance Virtualization Platform from Release 8.0.x to Release 8.1.x through services port by using Solution Deployment Manager Client.

*Note:*

You can also use this procedure to update Appliance Virtualization Platform from Release 7.0.x to Release 7.1.x through services port by using Solution Deployment Manager Client. However, instances of AVP Utilities must be replaced with Utility Services.

#### Procedure

1. To configure laptop with below configuration for Appliance Virtualization Platform, go to **Network or Internet Settings > Ethernet > Local Area Connection > Internet Protocol version 4 (TCP/IPv4) Properties**, do the following:
   
   a. Select the **Use the following IP address** option.
   
   b. In the **IP address** field, type `192.168.13.5`.
   
   c. In the **Subnet mask** field, type `255.255.255.248`.
   
   d. In the **Default Gateway** field, type `192.168.13.1`

Following is an example for changing the configuration for the Appliance Virtualization Platform host upgrade.
2. Connect the Service port (eth1) of the Appliance Virtualization Platform host with laptop.

⚠️ Important:

While connecting through service port, WiFi or any other network must be disconnected. Only Services port connectivity is recommended.

3. Install the latest version of the Solution Deployment Manager client to which you want to upgrade Appliance Virtualization Platform.

4. Launch the Solution Deployment Manager client.

5. Click Application Management.

6. In Application Management Tree, select a location.

7. On the Platforms tab, in the Platforms for Selected Location <location name> section, click Add.

8. Add the Appliance Virtualization Platform host with the 192.168.13.6 IP Address on Solution Deployment Manager Client.

Following is an example of adding the Appliance Virtualization Platform host.
9. For Appliance Virtualization Platform Release 8.0.x to Release 8.1.x update, establish trust with AVP Utilities that is already deployed on the added Appliance Virtualization Platform host.

10. On the **Platforms** tab, in the Platforms for Selected Location <location name> section, select the Appliance Virtualization Platform host, and click **More Actions > AVP Update/Upgrade Management**.

11. On the Update Host page, click **Select patch from local SDM client machine**.

12. In **Select patch file**, provide the absolute path to the upgrade zip file of the host, and click **Update Host**.

   For Solution Deployment Manager Client, the patch file must be available on windows machine where the Solution Deployment Manager client is hosted.

   For example, the absolute path on your computer can be `C:\tmp\avp\upgrade-avaya-avp-8.x.0.0.0.xx.zip`. 
13. Check the Appliance Virtualization Platform host update status after 20-25 minutes.

14. To view the details, in the Current Action column, click Status Details. Host Create/Update Status window displays the details. The patch installation takes some time. When the patch installation is complete, the Current Action column displays the status.

In the Platforms for Selected Location <location name> section, the system displays the update status in the Current Action column.
Migrating System Platform-based elements or bare metal-based Communication Manager elements to Appliance Virtualization Platform remotely by using System Manager Solution Deployment Manager

Migrating Communication Manager 6.3.x or 6.4.x or CM Simplex on survivable remote template to Avaya Aura® Release 8.1.1 with Appliance Virtualization Platform remote deployment

About this task
You can perform the remote deployment, if Communication Manager Release 6.3.x or 6.4.x on System Platform is hosted on the server that is supported with Appliance Virtualization Platform. This procedure can be performed only on the same server.

Note:
To migrate from System Platform-based Communication Manager Release 6.3.x or 6.4.x to Appliance Virtualization Platform 8.1, you need to first migrate to Appliance Virtualization Platform 8.0.1.1, and then update Appliance Virtualization Platform to 8.1. However, during the migration process, Avaya Aura® applications are migrated to 8.1.

Use this procedure to migrate Communication Manager Release 6.3.x or 6.4.x on System Platform to Avaya Aura® Release 8.1.1 in the following configurations:

- Embedded remote template on S8300E CM Simplex with survivable remote template running on Dell™ PowerEdge™ R620, HP ProLiant DL360p G8, Dell™ PowerEdge™ R630, HP ProLiant DL360 G9, or Avaya Solutions Platform 120 Appliance.
  Survivable remote template does not contain Communication Manager Messaging and WebLM, and the bulk of the Communication Manager configuration data is transferred from the Communication Manager main server.
- Communication Manager, Utility Services, Branch Session Manager, and SAL or Services VM.

Note:
- Utility Services must be available on the Communication Manager 6.3.x or 6.4.x or CM Simplex on survivable remote template.
- You must have the minimum network speed of 2Mbps with up to 100ms delay (WAN).
- During manually patching elements, if the System Platform template is broken, then Solution Deployment Manager does not support the upgrade from System Platform-based Communication Manager Release 6.3.x or 6.4.x to 7.1.2 and later.

Before you begin
- Manually upgrade the System Platform template on the latest Release 6.3.x or 6.4.x. Then upgrade to Release 7.1.2 and later by using Solution Deployment Manager.
Remote upgrade is not supported from System Platform-based Communication Manager Release 6.0 to 7.1.2 and later.

- Download the following components from the PLDS website:
  - Appliance Virtualization Platform Release 8.1.1 installation file, avaya-avp-8.1.1.0.0.xx.iso.
  - Release 8.1 OVA files for System Manager and other Avaya Aura® applications deployed on System Platform.
  - Release 8.1.1 patch file for System Manager and other Avaya Aura® applications.

All the latest OVAs of elements that need to be upgraded with the latest AVP ISO must be available in Software library management in Solution Deployment Manager.

- Ensure that System Manager Solution Deployment Manager is available in the solution with appropriate Communication Manager licenses.

### Procedure

1. Create a backup of the following Communication Manager Release 6.3.x or 6.4.x and associated applications in the survivable remote template:
   a. Communication Manager
   b. SAL or Services VM backup by using SAL or Services VM application utility
   c. Branch Session Manager

2. Create a System Platform-based backup.
   You require the System Platform backup for disaster recovery purposes and to migrate the SAL Services VM data.

3. Record the following Communication Manager embedded main settings for Release 6.3.x or 6.4.x:
   - All IP addresses
   - Subnetwork mask
   - Gateway
   - DNS
   - NTP Server

4. Add System Platform, Communication Manager Release 6.3.x or 6.4.x, and associated applications in System Manager inventory on the Services > Inventory > Manage Elements page.

   For information about adding these elements, see Administering Avaya Aura® System Manager.

   Once elements are successfully added, you can view them on the Services > Solution Deployment Manager > Upgrade Management page.
5. On the System Manager web console, click **Services > Solution Deployment Manager > Upgrade Management**.

6. Select Communication Manager and associated elements, and then click **Pre-Upgrade Actions > Refresh Element(s)**.

7. On the next page, click **Schedule**.
   
   You can schedule the job now or for a later time.

8. After refresh is done, click **Pre-Upgrade Actions > Analyze**.

9. On the next page, click **Schedule**.
   
   You can schedule the job now or for a later time.

10. After analyze is done, click **Pre-upgrade Actions > Pre-upgrade Check**.
    
    The preupgrade check provides the hardware requirements for Communication Manager 6.3.x or 6.4.x and associated devices that you migrate and checks whether Utility Services is running on the virtual machine.

11. After Pre-upgrade check is done, click **Upgrade Actions > Upgrade/Update**.
    
    Solution Deployment Manager performs the following:
    
    • Imports the required network settings from System Platform.
    
    • Prompts you to fill the new attributes from OVA that are required for the deployment.
    
    • Creates a backup of Communication Manager Survivable remote template and other virtual machines that are deployed on System Platform.
    
    Solution Deployment Manager does not backup Communication Manager Messaging.

12. On the Upgrade Configuration page, click **edit**.


14. On the **Element Configuration** tab, fill the required fields, and click **Migrate to AVP install**.

15. On the **AVP Configuration** tab, provide the required details.
    
    If you are migrating from Communication Manager Release 6.3.x or 6.4.x, the system displays the following fields preconfigured and prepopulated.
    
    • **Source Root User**
    
    • **Source Root Password**
    
    • **AVP management IPv4 Address**: In this field assign a new IP address to Appliance Virtualization Platform.

16. Click **Save**.

17. To save the configuration, click **Save Configuration**.

    The update configuration is saved as a job in the Upgrade Jobs Status page.
18. On the Upgrade Configuration page, click **Upgrade**.
19. To view the upgrade status, perform the following:
   a. In the navigation pane, click **Upgrade Job Status**.
   b. In the **Job Type** field, click **Upgrade**.
   c. Click the upgrade job that you want to view.
20. On the Upgrade Management page, click 📸.

   The **Last Action** column displays **Upgrade**, and the **Last Action Status** column displays ✔.

---

**Next steps**

For migrating Communication Manager 6.3.x or 6.4.x S8300E CM Simplex on survivable remote template to Appliance Virtualization Platform, Utility Services element is also automatically migrated to AVP Utilities Release 8.x.

This process takes approximately 2 to 3 hours depending upon the number of elements to be migrated and network speed.

---

**Migrating System Platform-based system and elements in bulk to Appliance Virtualization Platform remotely by using System Manager Solution Deployment Manager**

**About this task**

Use this procedure to remotely migrate System Platform-based system and elements in bulk to Appliance Virtualization Platform Release 8.1.1. You can remotely migrate:

- Communication Manager, Branch Session Manager, and Utility Services that are running on System Platform.
- Communication Manager Release 5.2.1 bare metal system.

**Before you begin**

- On the Manage Elements page, add the System Platform system and required elements. For information about adding a new element, see *Administering Avaya Aura® System Manager*.
- Refresh the element.
- Analyze the software.
- Perform the pre-upgrade check.
- Download a copy of the **Bulk_Import_Spreadsheet_Template.xlsx** spreadsheet. For information, see “Downloading the bulk import spreadsheet template”.
- Fill the required system details in the **Bulk_Import_Spreadsheet_Template.xlsx** spreadsheet.
**Note:**

If you provide the incorrect data in the spreadsheet, the upgrade might fail.

**Procedure**

1. On the System Manager web console, click **Services > Solution Deployment Manager**.
2. In the navigation pane, click **Upgrade Management**.
   The system displays the Upgrade Management page.
3. Select the required element.
   When you select an element, the system selects the parent of the element and all child elements of the element in the hierarchy.
4. Click **Upgrade Actions > Upgrade/Update**.
5. On the Upgrade Configuration page, click **Bulk Import Configuration(s)**.
6. On the Upload Xlsx File Configuration dialog box, perform the following:
   a. Click **Browse** and select the file from the local computer.
   b. To upload the spreadsheet, click **Upload**.
   c. Click **Submit**.
      The system displays the file size, timestamp, and percentage complete for the uploaded file. When the file upload is in-progress, do not navigate away from the page.
      On the Upgrade Management page, the system displays the message: Please Wait - Saving Import Excel Sheet Configuration ... . You must wait until the system stops showing this message.
7. On the Upgrade Management page, click 🔍.
   The **Configuration Status** column displays ✔.
8. To save the configuration, click **Save Configuration**.
   The update configuration is saved as a job in the Upgrade Jobs Status page.
9. On the Upgrade Configuration page, click **Upgrade**.
10. To view the upgrade status, perform the following:
    a. In the navigation pane, click **Upgrade Job Status**.
    b. In the **Job Type** field, click **Upgrade**.
    c. Click the upgrade job that you want to view.
11. On the Upgrade Management page, click 🔍.
    The **Last Action** column displays **Upgrade**, and **Last Action Status** column displays ✔.
Downloading the bulk import spreadsheet template

About this task

Use the following procedure to download the Bulk_Import_Spreadsheet_Template.xlsx file.

Procedure

1. On the System Manager web console, click Services > Solution Deployment Manager.
2. In the navigation pane, click Upgrade Management.
3. On the Upgrade Management page, click Download > Bulk Import Spreadsheet.
   The system downloads the Bulk_Import_Spreadsheet_Template.xlsx file on your local computer.

Update Host field descriptions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patch location</td>
<td>The location where the Appliance Virtualization Platform patch is available. The options are:</td>
</tr>
<tr>
<td></td>
<td>• Select Patch from Local SMGR: To use the Appliance Virtualization Platform patch that is available on the local System Manager.</td>
</tr>
<tr>
<td></td>
<td>• Select Patch from software library: To use the Appliance Virtualization Platform patch that is available in the software library.</td>
</tr>
<tr>
<td>Ignore Signature Validation</td>
<td>Ignores the signature validation for the patch.</td>
</tr>
<tr>
<td>Note:</td>
<td>If the Appliance Virtualization Platform patch is unsigned, you must select the Ignore signature validation check box.</td>
</tr>
<tr>
<td>Select patch file</td>
<td>The absolute path to the Appliance Virtualization Platform patch file.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update Host</td>
<td>Installs the patch on the Appliance Virtualization Platform host.</td>
</tr>
</tbody>
</table>
Removing the Appliance Virtualization Platform patch from the ESXi host CLI

About this task

Use the procedure to restore the Appliance Virtualization Platform software to the earlier version.

In this procedure, the command installs the older release on the new release that you want to replace.

⚠️ Note:

You can remove the Appliance Virtualization Platform patch only from the host CLI. You cannot use System Manager Solution Deployment Manager or the Solution Deployment Manager client.

Before you begin

- Create a backup of each Avaya Aura® application that is deployed on Appliance Virtualization Platform by using the application’s native backup procedures.

If a problem occurs with the Appliance Virtualization Platform rollback, you can use the application backups to reinstall the applications and to restore its data.

- Start an SSH session.

- Log in to the Appliance Virtualization Platform host command line with admin user credentials.

- Copy the Appliance Virtualization Platform patch of the earlier version to the `/vmfs/volumes/server-local-disk` folder on the system.

Procedure

1. To stop all virtual machines that are running on the Appliance Virtualization Platform host, at the prompt, type `/opt/avaya/bin/stopallvms.py`.

2. To rollback from Appliance Virtualization Platform Release 8.0 and later to any of the previous releases, perform the following:
   a. Type the `/opt/avaya/bin/rollback_bootbank.sh /vmfs/volumes/server-local-disk/<complete path name of the rollback patch>` command.

      Ensure to type the complete path name of the rollback patch. Do not use a relative path.

      For example, to rollback from Appliance Virtualization Platform Release 8.0 to Release 7.0.0.x (`avaya-avp-7.0.0.1.0.x.zip`), type the following command:

         `/opt/avaya/bin/rollback_bootbank.sh /vmfs/volumes/server-local-disk/avaya-avp-7.0.0.1.0.x.zip`

   b. To reboot the system, type `/opt/avaya/bin/avpshutdown.sh -r`.

      The system must be rebooted.
3. To rollback from Appliance Virtualization Platform Release 7.1.3 and later to any of the previous releases, perform the following:
   a. Type the `/opt/avaya/bin/rollback_bootbank.sh /vmfs/volumes/server-local-disk/<complete path name of the rollback patch>` command.

   Ensure to type the complete path name of the rollback patch. Do not use a relative path.

   For example, to rollback from Appliance Virtualization Platform Release 7.1.3 to Release 7.0.0.x (`avaya-avp-7.0.0.1.0.x.zip`), type the following command:
   `/opt/avaya/bin/rollback_bootbank.sh /vmfs/volumes/server-local-disk/avaya-avp-7.0.0.1.0.x.zip`

   b. To reboot the system, type `/opt/avaya/bin/avpshutdown.sh -r`. The system must be rebooted.

4. To rollback from Appliance Virtualization Platform Release 7.1.2 to Release 7.1.0.x, perform the following:
   a. Type the `/opt/avaya/bin/rollback_bootbank.sh /vmfs/volumes/server-local-disk/<avaya-avp-7.1.0.0.0.x.zip>` command.

   Ensure to type the complete path name of the rollback patch. Do not use a relative path.

   b. To reboot the system, type `/opt/avaya/bin/avpshutdown.sh -r`. The system must be rebooted.

   When the system is rebooted, start a new Appliance Virtualization Platform SSH session.

   c. To re-enable SSH by using the Solution Deployment Manager client, on Application Management, click More Actions > Enable SSH.

   You can also enable SSH by using the VMware vSphere client.

   Issue the following commands after reboot:
   `/opt/avaya/bin/reduceReservation.sh` /opt/avaya/bin/installvibs.sh reboot

5. To rollback from Appliance Virtualization Platform Release 7.1.2 to Release 7.0.0.x, perform the following:
   a. Type the `/opt/avaya/bin/rollback_bootbank.sh /vmfs/volumes/server-local-disk/<avaya-avp-7.0.0.1.0.x.zip>` command.

   Ensure to type the complete path name of the rollback patch. Do not use a relative path.
b. Run the following by typing line-by-line or using cut and paste on the Appliance Virtualization Platform CLI.

```bash
ramgb=$(($(esxcli --formatter=keyvalue hardware memory get \ | grep -e "Memory\.|PhysicalMemory\.|integer" \ | cut -d "=" -f 2) / (1024 * 1024 * 1024)))
if [ "$ramgb" -le 48 ]; then
    memMinFreePct=1
elif [ "$ramgb" -le 16 ]; then
    memMinFreePct=2
fi
esxcli system settings advanced set -o /Mem/MemMinFreePct -i $memMinFreePct
```

c. To reboot the system, type `/opt/avaya/bin/avpshutdown.sh -r`.

The system must be rebooted.

When the system is rebooted, start a new Appliance Virtualization Platform SSH session.

d. To re-enable SSH by using the Solution Deployment Manager client, on Application Management, click **More Actions > Enable SSH**.

You can also enable SSH by using the VMware vSphere client.

Issue the following commands after reboot:

```
/opt/avaya/bin/reduceReservation.sh
/opt/avaya/bin/installvibs.sh
```

reboot

6. To rollback from Appliance Virtualization Platform Release 7.0.1.0.5 or 7.1.0.x to Release 7.0.0.0.21, type `/opt/avaya/bin/rollback_bootbank.sh /vmfs/volumes/server-local-disk/<avaya-avp-7.0.0.0.21.zip>`.

**Next steps**

Verify the Appliance Virtualization Platform software release and the ESXi version by using the `cat /opt/avaya/etc/avaya-avp.version` command.
Chapter 8: Installing and configuring Appliance Virtualization Platform licensing

Appliance Virtualization Platform license

From Appliance Virtualization Platform Release 7.1.2, you must install an applicable Appliance Virtualization Platform host license file on an associated Avaya WebLM server and configure Appliance Virtualization Platform to obtain its license from the WebLM server. WebLM Server can be either embedded System Manager WebLM Server or standalone WebLM Server. Appliance Virtualization Platform licenses are according to the supported server types.

For information about Appliance Virtualization Platform licenses and supported server types, see “Appliance Virtualization Platform licenses for supported servers”.

To configure the Appliance Virtualization Platform license file:

1. Obtain the applicable license file from the Avaya PLDS website.
2. Install the license file on the System Manager WebLM Server or Standalone WebLM Server.

**Note:**

The Appliance Virtualization Platform license file can contain multiple Appliance Virtualization Platform licenses that is for four different server types. One Appliance Virtualization Platform license file contains all the necessary licenses for the complete solution.

3. Configure the applicable WebLM IP Address/FQDN field for each Appliance Virtualization Platform host by using either System Manager Solution Deployment Manager, Solution Deployment Manager Client, or Appliance Virtualization Platform host command line interface.

You can view the license status of the Appliance Virtualization Platform host on the Platforms tab of the System Manager Solution Deployment Manager or Solution Deployment Manager Client interfaces. The Appliance Virtualization Platform license statuses on the Platforms tab are:

- **Normal:** If the Appliance Virtualization Platform host has acquired a license, the License Status column displays Normal.
- **Error:** If the Appliance Virtualization Platform host has not acquired a license. In this case, the Appliance Virtualization Platform enters the License Error mode and starts a 30-day
grace period. The License Status column displays Error - Grace period expires: <DD/MM/YY> <HH:MM>.

• **Restricted**: If the 30-day grace period of the Appliance Virtualization Platform license expires, Appliance Virtualization Platform enters the License Restricted mode and restricts the administrative actions on the host and associated virtual machines. The License Status column displays Restricted. After you install a valid Appliance Virtualization Platform license on the configured WebLM Server, the system restores the full administrative functionality.

**Note:**

Restricted administrative actions for:

- **AVP Host**: AVP Update/Upgrade Management, Change Password, Host Shutdown, and AVP Cert. Management.
- **Application**: New, Delete, Start, Stop, and Update.

**Appliance Virtualization Platform licensing alarms**

If the Appliance Virtualization Platform license enters either License Error Mode or License Restricted Mode, the system generates a corresponding Appliance Virtualization Platform licensing alarm. You must configure the Appliance Virtualization Platform alerting. For information about how to configure the Appliance Virtualization Platform alerting feature, see Administering Avaya Aura® AVP Utilities.

**Appliance Virtualization Platform licenses for supported servers**

The following table describes the applicable Appliance Virtualization Platform license type for S8300E and Common Server Release 2 and 3:

<table>
<thead>
<tr>
<th>Server type</th>
<th>Appliance Virtualization Platform license feature keyword</th>
<th>Appliance Virtualization Platform license feature display name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avaya S8300E</td>
<td>VALUE_AVP_1CPU_EMBD_SRV</td>
<td>Maximum AVP single CPU Embedded Servers</td>
</tr>
<tr>
<td>Common Server Release 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• HP ProLiant DL360p G8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Dell™ PowerEdge™ R620</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Server Release 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Dell™ PowerEdge™ R630</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• HP ProLiant DL360 G9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table continues…
WebLM overview

Avaya provides a Web-based License Manager (WebLM) to manage licenses of one or more Avaya software products for your organization. WebLM facilitates easy tracking of licenses. To track and manage licenses in an organization, WebLM requires a license file from the Avaya Product Licensing and Delivery System (PLDS) website at https://plds.avaya.com.

The license file of a software product is in an XML format. The license file contains information regarding the product, the major release, the licensed features of the product, and the licensed capacities of each feature that you purchase. After you purchase a licensed Avaya software product, you must activate the license file for the product in PLDS and install the license file on the WebLM server.

License activations in PLDS require the host ID of the WebLM server for inclusion in the license file. The host ID of the WebLM server is displayed on the Server Properties page of the WebLM server.
Obtaining the license file

About this task

For each licensed Avaya product that you are managing from the WebLM server, you can obtain a license file from PLDS, and install it on the corresponding WebLM server. For additional information on using PLDS, see *Getting Started with Avaya PLDS - Avaya Partners and Customers* at [https://plds.avaya.com](https://plds.avaya.com).

⚠️ Caution:

Do not modify the license file that you receive from Avaya. WebLM does not accept a modified license file.

You require the host ID of the WebLM server to obtain the license file from PLDS. For client node locking, while generating the license file, you must provide the WebLM server host ID and client host ID.

Procedure

1. Log on to the System Manager web console.
2. On the System Manager Web Console, click **Services > Licenses**.
3. In the left navigation pane, click **Server properties**.
4. Note the **Primary Host ID**.
5. Using the host ID, generate the license from PLDS.

Installing a license file

About this task

You can install a license file on the WebLM server. Use the Uninstall functionality to remove the license file from the WebLM server.

Licenses installed for WebLM Release 7.1 and later, must support SHA256 digital signature and 14–character host ID.

Before you begin

- Get the license file from the Avaya Product Licensing and Delivery System (PLDS) website at [https://plds.avaya.com](https://plds.avaya.com).
- Log on to the WebLM web console with administrator privilege credentials.
- For standard license file, remove the older license file before you install the new file.

⚠️ Note:

The system displays an error message if an older license file is still available.

For centralized license file, the system automatically overwrites the older license file during installation.
For information about the license file installation errors while installing the license file, see *Administering standalone Avaya WebLM*.

**Procedure**

1. In the navigation pane, click **Install license**.
2. On the Install license page, click **Browse**, and select the license file.
3. Read the terms and conditions, and click **Accept the License Terms & Conditions**.
4. Click **Install**.

WebLM displays a message on successful installation of the license file. The installation of the license file might fail for reasons, such as:

- The digital signature on the license file is invalid. If you get such an error, request PLDS to redeliver the license file.
- The current capacity use exceeds the capacity in the installed license.

**Related links**

- [Install license field descriptions](#) on page 83

---

### Install license field descriptions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enter license path</strong></td>
<td>The complete path where the license file is saved.</td>
</tr>
<tr>
<td><strong>Browse</strong></td>
<td>The option to browse and select the license file.</td>
</tr>
<tr>
<td><strong>Avaya Global License Terms &amp; Conditions</strong></td>
<td>Avaya license terms and conditions that the user must agree to continue the license file installation.</td>
</tr>
</tbody>
</table>

**Button**

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Install</strong></td>
</tr>
</tbody>
</table>

**Related links**

- [Installing a license file](#) on page 82

---

### Configuring WebLM Server for an Appliance Virtualization Platform host using Solution Deployment Manager

**Before you begin**

1. Add an Appliance Virtualization Platform host.

For information about adding a host, see *Administering Avaya Aura® System Manager*. 

---

Comments on this document? infodev@avaya.com
2. Obtain the license file from the Avaya PLDS website.
3. Install the license file on the System Manager WebLM Server or Standalone WebLM Server.

Procedure
1. On the System Manager web console, click Services > Solution Deployment Manager > Application Management.
2. In Application Management Tree, select a location.
3. On the Platforms tab, in the Platforms for Selected Location <location name> section:
   a. Select the Appliance Virtualization Platform host.
   b. Click More Actions > WebLM Configuration.
      The system displays the WebLM Configuration dialog box.
4. In WebLM IP Address/FQDN, type the IP address or FQDN of WebLM Server.
   For WebLM configuration, if you select:
   • Only one host then WebLM IP Address/FQDN displays the existing WebLM Server IP Address.
   • Multiple hosts then WebLM IP Address/FQDN will be blank to assign the same WebLM Server IP Address for all the selected Appliance Virtualization Platform hosts.
5. In Port Number, type the port number of WebLM Server.
   Embedded System Manager WebLM Server supports both 443 and 52233 ports.
6. Click Submit.
   The system displays the status in the Current Action column.
   The system takes approximately 9 minutes to acquire the Appliance Virtualization Platform host license file from the configured WebLM Server. On the Platforms tab, click Refresh.
   When the Appliance Virtualization Platform host acquires the license, on the Platforms tab, the License Status column displays Normal.

Related links
WebLM Configuration field descriptions on page 84
Viewing the Appliance Virtualization Platform host license status using Solution Deployment Manager on page 86

WebLM Configuration field descriptions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WebLM IP Address/FQDN</td>
<td>The IP Address or FQDN of WebLM Server.</td>
</tr>
<tr>
<td>Port Number</td>
<td>The port number of WebLM Server. The default port is 52233.</td>
</tr>
</tbody>
</table>
Configuring WebLM Server for an Appliance Virtualization Platform host from CLI

Before you begin

1. Obtain the license file from the Avaya PLDS website.
2. Install the license file on the System Manager WebLM Server or Standalone WebLM Server.

Procedure

1. Start an SSH session.
2. Log in to the Appliance Virtualization Platform host command line interface with admin user credentials.
3. To configure the Appliance Virtualization Platform WebLM server, type `/opt/avaya/bin/weblmurl <option> <WEBLM_SERVER_IP>`:

   Where, `<WEBLM_SERVER_IP>` is the IP Address and FQDN of WebLM Server on which the license file is installed.

   Options are:
   - `-h` or `?-`: To display command help.
   - `-c`: To set a complete WebLM URL with IP Address and FQDN.
   - `-x`: To display the current setting of WebLM URL.
   - `-d`: To set the WebLM URL to the default (dummy) URL.
   - `-g`: To display the URL of the WebLM GUI.
   - `-i`: To display the IP Address of the WebLM URL.

   **Note:**
   a. To set a complete WebLM URL, type `/opt/avaya/bin/weblmurl -c https://<WEBLM_SERVER_IP>:52233/WebLM/LicenseServer`

   For example: `/opt/avaya/bin/weblmurl -c https://13.16.15.72:52233/WebLM/LicenseServer`
b. To set a default WebLM URL, type 
```
/opt/avaya/bin/weblmurl -d <WEBLM_SERVER_IP>
```

4. Verify the Appliance Virtualization Platform license status.

**Related links**
- [Verifying the Appliance Virtualization Platform license status from host CLI](#) on page 86

---

## Viewing the Appliance Virtualization Platform host license status using Solution Deployment Manager

**Procedure**

1. On the System Manager web console, click **Services > Solution Deployment Manager > Application Management**.
2. In **Application Management Tree**, select a location.
3. On the **Platforms** tab, in the Platforms for Selected Location <location name> section, view the Appliance Virtualization Platform host license status in the **License Status** column.

**Related links**
- [Configuring WebLM Server for an Appliance Virtualization Platform host using Solution Deployment Manager](#) on page 83

---

## Verifying the Appliance Virtualization Platform license status from host CLI

**Procedure**

1. Start an SSH session.
2. Log in to the Appliance Virtualization Platform host command line interface with admin user credentials.
3. Perform one of the following:
   a. To display license status, type 
   ```
   /opt/avaya/bin/statuslicense --printLicStatus
   ```
   b. To display feature details associated with the license, type 
   ```
   /opt/avaya/bin/statuslicense --printFeature
   ```
   c. To display grace period with timestamp, type 
   ```
   /opt/avaya/bin/statuslicense --printGracePeriod
   ```
Chapter 9: Security

Extended security hardening

Appliance Virtualization Platform supports Standard, Commercial, and Military Grade security hardening. By default, Appliance Virtualization Platform comes with Standard Grade hardening configuration, no additional action is required to set up this configuration.

Commercial and military grade hardening apply specific security attributes as summarized in the following table:

<table>
<thead>
<tr>
<th>Security attribute</th>
<th>Commercial grade</th>
<th>Military grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricting system Access (SSH, DCUI, ESXi Shell) to appropriate users</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Limiting session connections and ensuring that these time out and disconnect if not in use. See Appliance Virtualization Platform security hardening policies on page 88.</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Reducing running services to a minimum</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Limiting open ports and applying appropriate firewall rules</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Requiring the use of strong passwords and ensuring password complexity. See Appliance Virtualization Platform security hardening policies on page 88.</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Disabling the use of weak ciphers and ensuring client-server connections are secured with strong SSL protocols. See Appliance Virtualization Platform security hardening policies on page 88.</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Configuring of remote logging to a central log host to provide a secure, centralized store of ESXi logs</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Limiting of network access by disabling unauthorized networks</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Periodic checking for extraneous device files and unauthorized setuid or setgid files, and unauthorized modification to authorized setuid or setgid files</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>VMware Managed Object Browser (MOB) disabled by default</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

Table continues…
<table>
<thead>
<tr>
<th>Security attribute</th>
<th>Commercial grade</th>
<th>Military grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMware Embedded Host Client (EHC) is disabled by default. To enable, run the <code>/opt/avaya/bin/harden/set_ehc enable</code> command.</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>EASG access disabled</td>
<td>—</td>
<td>Y</td>
</tr>
<tr>
<td>Military grade specific banner</td>
<td>—</td>
<td>Y</td>
</tr>
<tr>
<td>Limiting open ports and applying appropriate firewall rules</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>For information, see the port matrix document on the Avaya Support website.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Related links

Appliance Virtualization Platform security hardening policies on page 88

Appliance Virtualization Platform security hardening policies

This section describes the policies of the Appliance Virtualization Platform hardened system.

Appliance Virtualization Platform system session restrictions

- SSH access must be enabled and will time out after a pre-defined period.
- DCUI session will timeout after 600 seconds of non-use.
- ESXi Shell session will timeout after 600 seconds of non-use.

Appliance Virtualization Platform password policies

- A user is allowed three attempts to type the password. After three attempts the account will be locked for 15 minutes.
- Passwords must meet the following length and complexity requirements:
  - At least one character each of the four different character classes: number, special character, UPPER_CASE, and lower_case.
  - Minimum length of 15 characters.
  - A new password must not be similar to the old one.

Ciphers supported

- Only FIPS-approved ciphers are supported: aes256-ctr, aes192-ctr, and aes128-ctr.
- Appliance Virtualization Platform only supports TLS 1.2.

Commercial grade hardening checklist

Use the checklist to configure the commercial grade hardening for the Appliance Virtualization Platform host.
Enabling commercial grade hardening for the Appliance Virtualization Platform host

Before you begin
Enable SSH for the Appliance Virtualization Platform host.

Procedure

1. Start an SSH session.

2. Log in to the Appliance Virtualization Platform host command line interface with admin user credentials.

3. To enable commercial grade hardening, type the `/etc/init.d/avaya-harden start` command.

   The system displays the following message:
   
   After running this script, the AVP Landing Page, Embedded Host Client and access will be disabled. Ensure that AVP is registered with an SDM to allow for management functions and the enablement of SSH access.
   
   The Embedded Host Client can be enabled by using the AVP CLI set_ehc script. This should only be enabled for troubleshooting purposes and disabled when finished. By enabling Avaya Logins you are granting Avaya access to your system.

4. To continue the hardening process, type `y`.

   The system starts the hardening process.

   When the process completes, the system displays the message: `ok`. 
For applying the changes, the system displays the following message to reboot the system: To let the changes take effect, the system needs to be rebooted.

5. To reboot the system, type `y`.

You can also reboot the system later.

Related links
- Enabling and disabling SSH on Appliance Virtualization Platform from Solution Deployment Manager on page 45
- Rebooting the Appliance Virtualization Platform host from CLI on page 108
- Activating SSH from AVP Utilities on page 44

Adding SSH users and disabling unauthorized network access

About this task
Access for Avaya Services requires the following network to be allowed: 192.168.13.0/29.

Before you begin
Enable SSH for the Appliance Virtualization Platform host.

Note:
For Active Directory users, this procedure considers that the network administrator has already configured the Active Directory server and is accessible. Configuration of the Active Directory server is beyond the scope of this document, please refer relevant Microsoft documentation.

Procedure
1. Start an SSH session.
2. Log in to the Appliance Virtualization Platform host command line interface with admin user credentials.
3. At the prompt, type the `/etc/init.d/avaya-harden manual_fixes` command.
4. To add additional users to the list of allowed users to enable SSH access, follow the prompt, and perform the following.
   a. To add local users, type the local user names separated by a space.
      For example: `user1 user2`
   b. To add Active Directory (AD) users, type the AD user names including the AD domain separated by a space.
      For example: `<AD domain>\user1 <AD domain>\user2`
5. To add additional groups to the list of allowed groups to enable SSH access, follow the prompt, and perform the following.
   a. Type the AD domain.
   b. To add local groups, type the local group names separated by a space.
      
      For example: group1 group2
   c. To add AD groups, type the AD group names including the AD domain separated by a space.
      
      For example: <AD domain>\group1 <AD domain>\group2
   
   You must add the defined AD group AVP Admins as: <AD domain>\avp^admins.

6. To modify the currently allowed network IPs that can establish connection with AVP host services, follow the prompt, and type the IP addresses.

   AVP host services are: CIM Server, CIM Secure Server, cmmds, DNS Client, ipfam, NFC, rdt, SSH Server, vsanvp, vSphere Client, watchd, and vSphere Web Access.

   The system applies the configuration changes to the selected services and sets up the configured values.

---

**Configuring syslog server for remote logging**

**Before you begin**

Enable SSH for the Appliance Virtualization Platform host.

**Procedure**

1. Start an SSH session.

2. Log in to the Appliance Virtualization Platform host command line interface with admin user credentials.

3. To configure Syslog.global.logHost to the site-specific syslog server, type the `esxcli system syslog config set --loghost udp://192.168.13.1,<transport protocol://site specific syslog server address:port> command`

   You can configure multiple hosts separated by a comma (,).

   ✫ **Note:**

   You must include the rsyslog destination (udp://192.168.13.1) as this is used for Appliance Virtualization Platform alarming functionality.

4. To verify the syslog server setting, type the `esxcli system syslog config get` command.
Configuring encrypted syslog forwarding for Appliance Virtualization Platform

You must configure remote logging for Appliance Virtualization Platform to forward logs to AVP Utilities. Appliance Virtualization Platform uses AVP Utilities as its syslog server to forward logs to AVP Utilities. AVP Utilities then forward the logs to external syslog servers.

You can encrypt syslog forwarding for Appliance Virtualization Platform by using the TLS protocol. By default, UDP protocol is configured on Appliance Virtualization Platform to forward syslog messages to AVP Utilities. After you configure the remote logging on Appliance Virtualization Platform, you must also configure AVP Utilities so that it receives syslog messages from Appliance Virtualization Platform.

You can configure syslog using the following protocols:

- UDP
- TCP
- 1-way TLS
- 2-way TLS

**Before you begin**

Enable SSH for the Appliance Virtualization Platform host.

**Procedure**

1. Start an SSH session.
2. Log in to the Appliance Virtualization Platform host command line interface with admin user credentials.
3. Do one of the following:
   - To set the target to TCP, run the following command: 
     `/opt/avaya/bin/avp_rsyslog_config -s tcp`
   - To set the target to TLS, run the following command: 
     `/opt/avaya/bin/avp_rsyslog_config -s "tls,Cert_file_path"`
   - To reset the target to UDP, run the following command: 
     `/opt/avaya/bin/avp_rsyslog_config -s udp`

   **Note:**
   Depending on the protocol that you set in Appliance Virtualization Platform, you must use the same protocol in AVP Utilities. For example, in Appliance Virtualization Platform, if you have set the target to TLS, then you must configure TLS mode only in AVP Utilities.
4. Log on to AVP Utilities as an administrator.
5. Do one of the following:
   • To configure TCP mode, run the following command:
   avpu_tcp_syslog_serv_configure.sh <tcp port number>
   • To configure TLS mode, run the following command:
   avpu_tcp_syslog_serv_configure.sh <tls port number>
   • To restore UDP mode, run the following command:
   avpu_tcp_syslog_serv_configure.sh –r

6. To verify the syslog server setting, run the following command: opt/avaya/bin/
avp_rsyslog_config -g.

Verifying hardening status and completing remaining hardening settings

About this task
After enabling the commercial grade hardening, adding SSH user and groups, disabling
unauthorized network access, and establishing network connection with Appliance Virtualization
Platform host services, use this procedure to verify the hardening status and identify any settings
that might require manual updates. If required, perform the manual updates that are identified
during the execution of the script.

Before you begin
Enable SSH for the Appliance Virtualization Platform host.

Procedure
1. Start an SSH session.
2. Log in to the Appliance Virtualization Platform host command line interface with admin user
credentials.
3. At the prompt, type the /etc/init.d/avaya-harden status command.
   The system starts the process and displays the system hardening settings that you need to
   manually update.
4. Perform the manual updates that are identified during the execution of the script.

Checking for extraneous device and unauthorized Setuid or
Setgid files

About this task
After setting up the Appliance Virtualization Platform security hardening, you must run the weekly
check for extraneous device files, unauthorized Setuid or Setgid files, and unauthorized
modification to authorized Setuid or Setgid files.
Before you begin
Enable SSH for the Appliance Virtualization Platform host.

Procedure
1. Start an SSH session.
2. Log in to the Appliance Virtualization Platform host command line interface with admin user credentials.
3. To check for extraneous device files, type `cat /vmfs/volumes/server-local-disk/jitc/log/devicefiles/result.txt`.
   The system displays the message: OK: device files unchanged.
   ✪ Note:
   If SSH sessions are open at the time the cron job runs or if the Appliance Virtualization Platform host ESXi Shell is accessed by different users, the extraneous device files check can report false error result. These scenarios can cause differences in the /dev/char/pty and /dev/char/tty directories that lead to display of false error result in the result.txt file.
4. To reset the extraneous device files checking, remove the log files. To remove the log files, type `rm -rf /vmfs/volumes/server-local-disk/jitc/log/devicefiles`.
5. To check for unauthorized setuid, type `cat /vmfs/volumes/server-local-disk/jitc/log/setuid/result.txt`.
   The system displays the message: OK: setuid unchanged.
6. To check for unauthorized setgid, type `cat /vmfs/volumes/server-local-disk/jitc/log/setgid/result.txt`.
   The system displays the message: OK: setgid unchanged.

Result
All result files must indicate OK.

Appliance Virtualization Platform certificate management

The following certificates are applicable for Appliance Virtualization Platform:

• X.509 certificates: Appliance Virtualization Platform uses standard X.509 certificates to encrypt session information sent over SSL connections between server and client systems. When a client application initiates an SSL session with the server, the server sends its certificate to the client application, which checks the X.509 certificate against a list of known Certificate Authorities (CAs) to verify the authenticity of the certificate.
• **AVP server certificates**: Appliance Virtualization Platform server certificates are created during the installation process where the certificate name matches the DNS name of the server. These certificates are not signed by an official root CA but are used by System Manager Solution Deployment Manager or the Solution Deployment Manager client to validate a secure connection.

• **Storing CA certificate for encrypted syslog feature**: To establish TLS connection with AVP Utilities acting as an external syslog server, the CA certificate to authenticate AVP Utilities can be stored on Appliance Virtualization Platform. For more information, see Configuring encrypted syslog forwarding for Appliance Virtualization Platform on page 92.

**Related links**

- Certification validation on page 95
- Generating and accepting the Appliance Virtualization Platform host certificates on page 96
- Creating or editing generic CSR on page 97
- Create or edit CSR field descriptions on page 97
- Applying third-party certificates to Appliance Virtualization Platform on page 98
- Load Certificate field descriptions on page 99

---

**Certification validation**

With System Manager Solution Deployment Manager and the Solution Deployment Manager client, you can establish a certificate-based TLS connection between the Solution Deployment Manager service and a host that is running Avaya Aura® 7.x and later applications. This connection provides secure communication between System Manager Solution Deployment Manager or the Solution Deployment Manager client and Appliance Virtualization Platform.

The certificate-based sessions apply to the Avaya Aura® Virtualized Appliance offer using self-signed certificates or third-party certificates.

You can check the following with certificate-based TLS sessions:

- Certificate validity dates
- Origin of Certificate Authority
- Chain of Trust
- CRL
- Log Certificate Validation Events

Solution Deployment Manager checks the certificate status of hosts. If the certificate is incorrect, Solution Deployment Manager does not connect to the host.

For the correct certificate:

- The fully qualified domain or IP address of the host to which you are connecting must match the value in the certificate SAN or the certificate Common Name. The certificate must have valid dates.
- Appliance Virtualization Platform does not automatically regenerate their certificates when host details such as IP address or hostname and domain change. The certificate might become incorrect for the host.
If the certificate is incorrect for the Appliance Virtualization Platform host, Solution Deployment Manager regenerates the certificate on the host and then uses the corrected certificate for the connection.

To validate certificates, you can open the webpage of the host. The system displays the existing certificate and you can match the details.

**Related links**
- [Appliance Virtualization Platform certificate management](#) on page 94

---

**Generating and accepting the Appliance Virtualization Platform host certificates**

**About this task**

With Solution Deployment Manager, you can generate certificates only for Appliance Virtualization Platform hosts.

If the certificate is invalid:
- Get a correct certificate for the host and add the certificate.
- Regenerate a self-signed certificate on the host.

**Before you begin**

Get permissions to add a host to generate certificates.

**Procedure**

1. To access Solution Deployment Manager, do one of the following:
   - On the System Manager web console, click **Services > Solution Deployment Manager**.
   - On the desktop, click the Solution Deployment Manager icon.
2. In **Application Management Tree**, select a location.
3. On the **Platforms** tab, in the Platforms for Selected Location <location name> area, select an Appliance Virtualization Platform host.
4. Click **More Actions > Generate/Accept Certificate**.
5. In the Certificate dialog box, click the following:
   a. **Generate Certificate**
      
      You can generate certificate only for the Appliance Virtualization Platform host.
   b. **Accept Certificate**

Appliance Virtualization Platform places an IP address and FQDN in generated certificates. Therefore, from Solution Deployment Manager, you can connect to Appliance Virtualization Platform hosts through IP address or FQDN.
In the Platforms for Selected Location <location name> section, the **Platform Certificate Status** column must display a check mark.

**Related links**
- [Appliance Virtualization Platform certificate management](#) on page 94

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**Creating or editing generic CSR**

**About this task**

Use this procedure to create or edit a generic CSR for third-party Appliance Virtualization Platform certificates. With a generic CSR, you can apply the same set of data for more than one Appliance Virtualization Platform host.

**Procedure**

1. In **Application Management Tree**, select a location.
2. On the **Platforms** tab, in the Platforms for Selected Location <location name> area, select an Appliance Virtualization Platform host.
3. Click **More Actions > AVP Cert. Management > Generic CSR**.
4. In the Create/Edit CSR dialog box, add or edit the details of the generic CSR, such as organization, organization unit, locality, state, country, and email.
5. Click **Create/Edit CSR** and then click **OK**.

**Next steps**

Complete the CSR generation, download, third-party signing and push the certificates to the Appliance Virtualization Platform hosts.

**Related links**
- [Appliance Virtualization Platform certificate management](#) on page 94

---

**Create or edit CSR field descriptions**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>The organization name of the CSR.</td>
</tr>
<tr>
<td>Organization Unit</td>
<td>The organization unit of the CSR.</td>
</tr>
<tr>
<td>Locality</td>
<td>The locality of the organization associated with the CSR.</td>
</tr>
<tr>
<td>State</td>
<td>The state of the organization associate with the CSR.</td>
</tr>
<tr>
<td>Country</td>
<td>The country of the organization associate with the CSR.</td>
</tr>
<tr>
<td></td>
<td>In the Edit mode, you can specify only two letters for the country name.</td>
</tr>
<tr>
<td>Email</td>
<td>The email address associate with the CSR.</td>
</tr>
<tr>
<td>Button</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Create/Edit CSR</td>
<td>Saves or edits the information entered associated to the CSR.</td>
</tr>
<tr>
<td>Cancel</td>
<td>Cancels the add or edit operation of the CSR.</td>
</tr>
</tbody>
</table>

Related links

- [Appliance Virtualization Platform certificate management](#) on page 94

---

**Applying third-party certificates to Appliance Virtualization Platform**

**About this task**

Use this procedure to create, download, upload, and push third-party certificates to Appliance Virtualization Platform hosts.

**Before you begin**

- Add a location.
- Add an Appliance Virtualization Platform host to the location.
- Ensure that the certificate on the Appliance Virtualization Platform host is valid.

**Procedure**

1. On the System Manager web console, click **Services > Solution Deployment Manager > Application Management**.
2. In **Application Management Tree**, select a location.
3. On the **Platforms** tab, in the Platforms for Selected Location <location name> area, select an Appliance Virtualization Platform host.
4. **(Optional)** Add the details of the generic CSR.
   - If you add the generic CSR details, the system pre-populates the values in the View/Generate CSR dialog box.
   - For more information about creating the generic CSR, see “Creating or editing generic CSR”.
5. To generate CSR, do the following:
   a. Click **More Actions > AVP Cert. Management > Manage Certificate**.
   b. In the Load Certificate dialog box, select one or more Appliance Virtualization Platform hosts.
   c. Click **View/Generate CSR**.
      System Manager displays the View/Generate CSR dialog box.
   d. If the generic CSR details are not added for the Appliance Virtualization Platform host, add the details of the generic CSR.
e. Click **Generate CSR**.
   
   The system generates CSR for the Appliance Virtualization Platform host.

f. In the **Current Action** column, click **Status Details** to view the status.

6. To download CSR, do the following:

   a. Click **More Actions > AVP Cert. Management > Manage Certificate**.

   b. In the Load Certificate dialog box, select one or more Appliance Virtualization Platform hosts.

   c. Click **Download CSR**.

      In case of Firefox browser, the system prompts you to save the CSR.zip file.

   d. In the **Current Action** column, click **Status Details** to view the status.

      In the Download CSR Status dialog box, the system displays the path of the downloaded CSR.zip file.

7. Extract the downloaded certificates, and ensure that the third-party signs them.

8. To upload and push the signed certificate from a third-party CA, do the following:

   a. Click **More Actions > AVP Cert. Management > Manage Certificate**.

   b. In the Load Certificate dialog box, select one or more Appliance Virtualization Platform hosts.

   c. Click **Browse** and select the required certificates from the local computer.

   d. Click **I Agree to accept to add the same certificate in SDM**.

   e. Click **Push Certificate**.

   f. In the **Current Action** column, click **Status Details** to view the status.

**Related links**

[Appliance Virtualization Platform certificate management](#) on page 94

---

**Load Certificate field descriptions**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform IP</td>
<td>The IP address of the Appliance Virtualization Platform host.</td>
</tr>
<tr>
<td>Platform FQDN</td>
<td>The FQDN of the Appliance Virtualization Platform host.</td>
</tr>
<tr>
<td>Certificate</td>
<td>The option to select the signed certificate for the Appliance Virtualization Platform host.</td>
</tr>
<tr>
<td>I agree to accept to add the same certificate in SDM.</td>
<td>The option to accept the certificate in Solution Deployment Manager.</td>
</tr>
</tbody>
</table>
### Button | Description
--- | ---
View/Generate CSR | Displays the View/Generate CSR dialog box to generate CSR.
Download CSR | Downloads CSR for the selected host.
Browse | Displays the dialog box where you can choose the signed certificate file. The accepted certificate file formats are:
  - .crt
  - .pki
Retrieve Certificate | Displays the Certificate dialog box with the details of the uploaded signed certificate.
Push Certificate | Pushes the uploaded signed certificate to the selected Appliance Virtualization Platform host.
Cancel | Cancels the push operation.

### Related links
[Appliance Virtualization Platform certificate management](#) on page 94
Chapter 10: Post-deployment and upgrade tasks

Verifying the Appliance Virtualization Platform software release and the ESXi version

Procedure

1. Start an SSH session.
2. Log in to the Appliance Virtualization Platform host command line interface with admin user credentials.
3. To verify the Appliance Virtualization Platform software release, type `cat /opt/avaya/etc/avaya-avp.version` or `/opt/avaya/bin/swversion` command.

   The system displays the following:

   # Maj.Min.FP.SP.PATCH.BUILD
   Release: 8.1.1.0.0.xx

4. To verify the ESXi version, type the `esxcli system version get` command.

   The system displays the following:

   Product: VMware ESXi
   Version: 6.5.0
   Build: Releasebuild-xxxxxxx
   Update: x

Virtual Machine snapshot on Appliance Virtualization Platform

When you apply an update by using Solution Deployment Manager, snapshots are left on Appliance Virtualization Platform. If a snapshot is left on Appliance Virtualization Platform, it is detrimental to system performance and over time can utilize all the available disk space. Therefore, ensure that snapshots are not left on Appliance Virtualization Platform for an extended period of time and are removed on a timely manner.

You can review and delete Virtual Machine snapshots from Appliance Virtualization Platform by using Solution Deployment Manager Snapshot Manager.
Deleting the virtual machine snapshot by using Solution Deployment Manager

About this task

Use this procedure to delete the virtual machine snapshots that reside on the Appliance Virtualization Platform host by using Solution Deployment Manager.

Procedure

1. To access Solution Deployment Manager, do one of the following:
   • On the System Manager web console, click **Services > Solution Deployment Manager**.
   • On the desktop, click the Solution Deployment Manager icon (SDM).
2. In **Application Management Tree**, select a location.
3. On the **Platforms** tab, in the Platforms for Selected Location <location name> section, select the Appliance Virtualization Platform host.
4. Click **More Actions > Snapshot Manager**. The system displays the Snapshot Manager dialog box.
5. Select one or more snapshots, and click **Delete**.
   You must review all listed snapshots and remove snapshots that are more than 24 hours old.
   The system deletes the selected snapshots.

Related links

- [Virtual Machine snapshot on Appliance Virtualization Platform](#) on page 101
- [Snapshot Manager field descriptions](#) on page 102

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### Snapshot Manager field descriptions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM ID</td>
<td>The ID of the virtual machine.</td>
</tr>
<tr>
<td>Snapshot Age</td>
<td>The duration of snapshot creation. For example: 75 days 19 hours</td>
</tr>
<tr>
<td>VM Name</td>
<td>The name of the virtual machine.</td>
</tr>
</tbody>
</table>

*Table continues...*
Enhanced Access Security Gateway overview

Enhanced Access Security Gateway (EASG) overview

EASG provides a secure method for Avaya services personnel to access the Avaya Aura® application remotely and onsite. Access is under the control of the customer and can be enabled or disabled at any time. EASG must be enabled for Avaya Services to perform tasks necessary for the ongoing support, management and optimization of the solution. EASG is also required to enable remote proactive support tools such as Avaya Expert Systems® and Avaya Healthcheck.

Managing EASG from CLI

About this task

After deploying or upgrading an Avaya Aura® application, you can enable, disable, or view the status of EASG.

Before you begin

Log in to the application CLI interface.

Procedure

1. To view the status of EASG, run the command: EASGStatus.
   
   The system displays the status of EASG.

2. To enable EASG, do the following:
   
   a. Run the command: EASGManage --enableEASG.
      
      The system displays the following message.

Related links

Virtual Machine snapshot on Appliance Virtualization Platform on page 101
By enabling Avaya Services Logins you are granting Avaya access to your system. This is required to maximize the performance and value of your Avaya support entitlements, allowing Avaya to resolve product issues in a timely manner.

The product must be registered using the Avaya Global Registration Tool (GRT, see https://grt.avaya.com) to be eligible for Avaya remote connectivity. Please see the Avaya support site (https://support.avaya.com/registration) for additional information for registering products and establishing remote access and alarming.

b. When the system prompts, type yes.

The system displays the message: EASG Access is enabled.

3. To disable EASG, do the following:
   a. Run the command: EASGManage --disableEASG.

The system displays the following message.

By disabling Avaya Services Logins you are denying Avaya access to your system. This is not recommended, as it can impact Avaya's ability to provide support for the product. Unless the customer is well versed in managing the product themselves, Avaya Services Logins should not be disabled.

b. When the system prompts, type yes.

The system displays the message: EASG Access is disabled.

Viewing the EASG certificate information

Procedure

1. Log in to the application CLI interface.
2. Run the command: /opt/avaya/easg/.bin/EASGProductCert --certInfo.

The system displays the EASG certificate details, such as, product name, serial number, and certificate expiration date.

EASG site certificate

EASG site certificates are used by the onsite Avaya technicians who do not have access to the Avaya network to generate a response to the EASG challenge. The technician will generate and provide the EASG site certificate to the customer. The customer loads this EASG site certificate on each server to which the customer has granted the technician access. The EASG site certificate will only allow access to systems on which it has been installed, and will only allow access to the given Avaya technician and cannot be used by anyone else to access the system including other Avaya technicians. Once this is done, the technician logs in with the EASG challenge/response.
Managing site certificates

Before you begin

1. Obtain the site certificate from the Avaya support technician.

2. You must load this site certificate on each server that the technician needs to access. Use a file transfer tool, such as WinSCP to copy the site certificate to /home/cust directory, where cust is the login ID. The directory might vary depending on the file transfer tool used.

3. Note the location of this certificate and use in place of installed_pkcs7_name in the commands.

4. You must have the following before loading the site certificate:
   • Login ID and password
   • Secure file transfer tool, such as WinSCP
   • Site Authentication Factor

Procedure

1. To install the site certificate:
   a. Run the following command: sudo EASGSiteCertManage --add <installed_pkcs7_name>.
   b. Save the Site Authentication Factor to share with the technician once on site.

2. To view information about a particular certificate: run the following command:
   • sudo EASGSiteCertManage --list: To list all the site certificates that are currently installed on the system.
   • sudo EASGSiteCertManage --show <installed_pkcs7_name>: To display detailed information about the specified site certificate.

3. To delete the site certificate, run the following command:
   • sudo EASGSiteCertManage --delete <installed_pkcs7_name>: To delete the specified site certificate.
   • sudo EASGSiteCertManage --delete all: To delete all the site certificates that are currently installed on the system.
Chapter 11: Troubleshooting

Troubleshooting Appliance Virtualization Platform

Appliance Virtualization Platform does not install

Perform the following as appropriate:

- Ensure that you are connected to the services port on the server with the following network configuration on the laptop:
  - IP address: 192.168.13.5
  - Netmask: 255.255.255.248
  - Gateway: 192.168.13.1
- Defective USB drive. Place the avp81ks.cfg kickstart file on another USB and connect the USB to the server
- Unsupported server: Release 7.1 and later does not support S8500 and S8800 servers. Change to a Release 8.1.1 supported server.
- Duplicate IP address for Appliance Virtualization Platform management interface already on the network. Remove the duplicate IP address and reinstall Appliance Virtualization Platform.
- USB stick left plugged in on HP servers. Remove the USB stick, and reboot the server.
- Deployments take longer duration or fail. Ensure that the network settings and network configuration is correct for the virtual machine that is being deployed.

Virtual machine deployment fails during the sanity check

- Ensure that IP forwarding is enabled on AVP Utilities if you deploy virtual machines from the services port with the Solution Deployment Manager client.
- Ensure that System Manager Solution Deployment Manager or Solution Deployment Manager client can connect to the management IP address of the application being deployed.
- Ensure that the server is physically connected. If Out of Band Management is enabled, ensure that the Appliance Virtualization Platform host and the virtual machines are deployed with Out of Band Management configurations.

Virtual machine deployment fails

Ensure that you accept EULA by gaining access to Appliance Virtualization Platform using SSH, and accepting the EULA.
Cannot SSH to Appliance Virtualization Platform
SSH has shutdown. Activate SSH from AVP Utilities or from Solution Deployment Manager. For more information, see Activating SSH from AVP Utilities.

On the monitor, the screen displays a warning message in red and then goes blank
During the Appliance Virtualization Platform installation, the monitor displays blank screen, which is a normal behavior. No action is required.

Related links
Activating SSH from AVP Utilities on page 44

Unable to connect to Appliance Virtualization Platform host from vSphere Web Client

Condition
The vSphere Web Client throws an SSL verification failure error when you gain access to the Appliance Virtualization Platform host for which you regenerated the certificate.

Cause
The vSphere Web Client might use the old certificate of the Appliance Virtualization Platform host from the cache instead of the regenerated certificate.

Use the following procedure if the system displays an SSL verification error when you gain access to the Appliance Virtualization Platform host from vSphere Web Client.

Solution
1. Restart the Appliance Virtualization Platform host.
2. Using vSphere Web Client, gain access to the Appliance Virtualization Platform host.

Related links
Restarting Appliance Virtualization Platform or an ESXi host on page 108

Viewing installation log traces

Solution
To view the installation log traces, press ALT-F12.
Restarting Appliance Virtualization Platform or an ESXi host

About this task
The restart operation fails, if you restart the host on which System Manager itself is running. If you want to restart the host, you can do this either through vSphere Client or through the Solution Deployment Manager client.

Procedure
1. On the System Manager web console, click Services > Solution Deployment Manager > Application Management.
2. In Application Management Tree, select a location.
3. On the Platforms tab, in the Platforms for Selected Location <location name> area, select a platform.
4. Click More Actions > Lifecycle Action > Host Restart.
5. On the confirmation dialog box, click Yes.

The system restarts the host and virtual machines running on the host.

Related links
Restarting Appliance Virtualization Platform or an ESXi host on page 108

Rebooting the Appliance Virtualization Platform host from CLI

Before you begin
From Solution Deployment Manager, shut down the virtual machines that are running on the host.

Procedure
1. Start an SSH session and log in to the Appliance Virtualization Platform host.
2. At the prompt, type /opt/avaya/bin/avpshutdown.sh -r.

The system displays Are you sure you want to stop all VMs and reboot?.

Warning:
If you fail to provide the -r option, the system displays Are you sure you want to stop all VMs and shutdown? and assumes that you want to perform the shutdown operation.

If you use the shutdown option when reset is intended, the host does not restart as part of the process and you must manually start the server.
3. To confirm the reboot operation, type **Y**.

The system stops all virtual machines that are running on the Appliance Virtualization Platform host. The Appliance Virtualization Platform host reboots and restarts all virtual machines automatically.
Chapter 12: Resources

Appliance Virtualization Platform documentation

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

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Finding documents on the Avaya Support website

Procedure
2. At the top of the screen, type your username and password and click Login.
3. Click Support by Product > Documents.
4. In Enter your Product Here, type the product name and then select the product from the list.
5. In Choose Release, select an appropriate release number.
6. In the Content Type filter, click a document type, or click Select All to see a list of all available documents.
   For example, for user guides, click User Guides in the Content Type filter. The list displays the documents only from the selected category.
7. Click Enter.

Accessing the port matrix document

Procedure
2. Log on to the Avaya website with a valid Avaya user ID and password.

3. On the Avaya Support page, click **Support By Product > Documents**.

4. In **Enter Your Product Here**, type the product name, and then select the product from the list of suggested product names.

5. In **Choose Release**, select the required release number.

6. In the **Content Type** filter, select one or more of the following categories:
   - Application & Technical Notes
   - Design, Development & System Mgt
   The list displays the product-specific Port Matrix document.

7. Click **Enter**.

---

**Avaya Documentation Portal navigation**

Customer documentation for some programs is now available on the Avaya Documentation Portal at [https://documentation.avaya.com](https://documentation.avaya.com).

⚠️ **Important:**

For documents that are not available on the Avaya Documentation Portal, click **Support** on the top menu to open [https://support.avaya.com](https://support.avaya.com).

Using the Avaya Documentation Portal, you can:

- Search for content in one of the following ways:
  - Type a keyword in the **Search** field.
  - Type a keyword in **Search**, and click **Filters** to search for content by product, release, and document type.
  - Select a product or solution and then select the appropriate document from the list.
- Find a document from the **Publications** menu.
- Publish a PDF of the current section in a document, the section and its subsections, or the entire document.
- Add content to your collection by using **My Docs** (⭐).

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

- Create, rename, and delete a collection.
- Add content from various documents to a collection.
- Save a PDF of selected content in a collection and download it to your computer.
- Share content in a collection with others through email.
- Receive content that others have shared with you.
• Add yourself as a watcher by using the **Watch** icon (/fontawesome-eye-slash).

Navigate to the **My Content > Watch list** menu, and do the following:
- Set how frequently you want to be notified, starting from every day to every 60 days.
- 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 portal.

• 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 portal. The available functionality depends on the role with which you are logged in.

---

**Training**

The following courses are available on the Avaya Learning website at [http://www.avaya-learning.com](http://www.avaya-learning.com). After logging in to the website, enter the course code or the course title in the **Search** field and press **Enter** or click > to search for the course.

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**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.

**Procedure**

- To find videos on the Avaya Support website, go to [https://support.avaya.com/](https://support.avaya.com/) and do one of the following:
  - In **Search**, type Avaya Mentor Videos, click **Clear All** and select **Video** in the Content Type.
In **Search**, type the product name. On the Search Results page, click **Clear All** and select **Video** in the **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 key word or key words 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 the topic. For example, Contact Centers.

⚠️ **Note:**

Videos are not available for all products.

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**Support**

Go to the Avaya Support website at [https://support.avaya.com](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.

---

**Using the Avaya InSite Knowledge Base**

The Avaya InSite Knowledge Base is a web-based search engine that provides:

- Up-to-date troubleshooting procedures and technical tips
- Information about service packs
- Access to customer and technical documentation
- Information about training and certification programs
- Links to other pertinent information

If you are an authorized Avaya Partner or a current Avaya customer with a support contract, you can access the Knowledge Base without extra cost. You must have a login account and a valid Sold-To number.

Use the Avaya InSite Knowledge Base for any potential solutions to problems.

2. Log on to the Avaya website with a valid Avaya user ID and password.
   
   The system displays the Avaya Support page.
3. Click **Support by Product** > **Product-specific Support**.

4. In **Enter Product Name**, enter the product, and press **Enter**.

5. Select the product from the list, and select a release.

6. Click the **Technical Solutions** tab to see articles.

7. Select relevant articles.
Appendix A: Deploying AVP Utilities and other virtual machines

Deploying AVP Utilities and virtual machines when Out of Band Management is enabled

Before you begin
Install the Solution Deployment Manager client on your computer.

Procedure

1. Connect the computer to the Out of Band Management network with access to the Appliance Virtualization Platform Management Network IP address that you configured in the kick start generator file.
2. Using the Solution Deployment Manager client, create a location.
3. In the location that you created, create a host of Appliance Virtualization Platform by using the Management Network IP address of Appliance Virtualization Platform.
4. Ensure that AVP Utilities OVA is saved in the sub-folder in the Default_Artifacts directory during the Solution Deployment Manager client installation.
   You can save OVA files of all virtual machines that you want to deploy.
5. Create a new virtual machine in the host that you created in Step 3.
6. To set the OVA software library, select the complete path to the Default_Artifacts directory.
   In the Configuration Parameters section, the page displays parameters that are specific to AVP Utilities.
7. Fill in the AVP Utilities parameters.
   Provide the IP address that you want to allocate to Communication Manager.
   If Out of Band Management is enabled, provide information in the Out of Band Management-related fields. If Out of Band Management is disabled, leave the fields blank.
8. Deploy AVP Utilities, and wait for the virtual machine to deploy successfully.
9. Install the AVP Utilities 8.1.1 feature pack.
Deploying AVP Utilities and virtual machines on the services port

Before you begin

• Download the Solution Deployment Manager client from the PLDS website.
• Install the Solution Deployment Manager client on your computer.

Procedure

1. Using the Solution Deployment Manager client, create a location.
2. To connect the computer to the services port on the server, configure the following:
   • **IP address**: 192.168.13.5
   • **Netmask**: 255.255.255.248
   • **Gateway**: 192.168.13.1

   On the Solution Deployment Manager client, in the Appliance Virtualization Platform host, provide the IP address 192.168.13.6.
3. In the location that you created, create a host of Appliance Virtualization Platform by using the Management Network IP address of Appliance Virtualization Platform.
4. Ensure that AVP Utilities OVA is saved in the sub-folder in the `Default_Artifacts` directory during the Solution Deployment Manager client installation.

   You can save OVA files of all virtual machines that you want to deploy.
5. Create a new virtual machine in the host that you created in Step 3.
6. To set the OVA software library, select the complete path to the `Default_Artifacts` directory.

In the Configuration Parameters section, the page displays parameters that are specific to AVP Utilities.

7. Enter the IP address details for AVP Utilities, deploy AVP Utilities, and wait for the virtual machine to deploy successfully.

8. Install the AVP Utilities 8.1.1 feature pack.

**Note:**

Before installing any service pack or feature pack, you must remove any pre-installed Service packs or Feature packs from the system. To verify the pre-installed service pack or feature pack installation status, run the `swversion` command from the command line interface. To remove the pre-installed service packs/feature packs run the `update -e <service tag>` command. Service and Feature packs are cumulative and include all of the security remediation and bug fixes of previous service or feature packs.

9. Change the AVP Utilities configuration parameters to the following:

   - **IP address:** 192.11.13.5
   - **Netmask:** 255.255.255.252
   - **Gateway:** 192.11.13.6

   On the Solution Deployment Manager client, in the Appliance Virtualization Platform host, leave the IP address as 192.168.13.6.

10. Ensure that the IP forwarding feature is enabled on AVP Utilities.

11. Deploy all other virtual machines in the solution one after the other.

12. **(Optional)** During the deployment, if the sanity check fails, verify the host network configuration.

   The deployment might be successful, however, sanity check can fail due to a bad network connection.

13. Install the feature pack for Avaya Aura® applications.

14. Validate the system.

**Related links**

- [Enabling IP forwarding using Services Port VM for AVP Utilities](#) on page 44
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