Deploying Avaya Session Border Controller for Enterprise in Virtual Appliance

Release 8.0.x
Issue 2
June 2020

© 2019-2020, Avaya Inc.
All Rights Reserved.

Notice

While reasonable efforts have been made to ensure that the information in this document is complete and accurate at the time of printing, Avaya assumes no liability for any errors. Avaya reserves the right to make changes and corrections to the information in this document without the obligation to notify any person or organization of such changes.

Documentation disclaimer

“Documentation” means information published in varying mediums which may include product information, operating instructions and performance specifications that are generally made available to users of products. Documentation does not include marketing materials. Avaya shall not be responsible for any modifications, additions, or deletions to the original published version of Documentation unless such modifications, additions, or deletions were performed by or on the express behalf of Avaya. End User agrees to indemnify and hold harmless Avaya, Avaya's agents, servants and employees against all claims, lawsuits, demands and judgments arising out of, or in connection with, subsequent modifications, additions or deletions to this documentation, to the extent made by End User.

Link disclaimer

Avaya is not responsible for the contents or reliability of any linked websites referenced within this site or Documentation provided by Avaya. Avaya is not responsible for the accuracy of any information, statement or content provided on these sites and does not necessarily endorse the products, services, or information described or offered within them. Avaya does not guarantee that these links will work all the time and has no control over the availability of the linked pages.

Warranty

Avaya provides a limited warranty on Avaya hardware and software. Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya’s standard warranty language, as well as information regarding support for this product while under warranty is available to Avaya customers and other parties through the Avaya Support website: https://support.avaya.com/helpcenter/getGenericDetails?detailId=C20091120112456651010 under the link “Warranty & Product Lifecycle” or such successor site as designated by Avaya. Please note that if You acquired the product(s) from an authorized Avaya Channel Partner outside of the United States and Canada, the warranty is provided to You by said Avaya Channel Partner and not by Avaya.

“Hosted Service” means an Avaya hosted service subscription that You acquire from either Avaya or an authorized Avaya Channel Partner (as applicable) and which is described further in Hosted SAS or other service description documentation regarding the applicable hosted service. If You purchase a Hosted Service subscription, the foregoing limited warranty may not apply but You may be entitled to support services in connection with the Hosted Service as described further in your service description documents for the applicable Hosted Service. Contact Avaya or Avaya Channel Partner (as applicable) for more information.

Hosted Service

THE FOLLOWING APPLIES ONLY IF YOU PURCHASE AN AVAYA HOSTED SERVICE SUBSCRIPTION FROM AVAYA OR AN AVAYA CHANNEL PARTNER (AS APPLICABLE), THE TERMS OF USE FOR HOSTED SERVICES ARE AVAILABLE ON THE AVAYA WEBSITE, HTTPS://SUPPORT.AVAYA.COM/LICENSEINFO UNDER THE LINK “Avaya Terms of Use for Hosted Services” OR SUCH SUCCESSOR SITE AS DESIGNATED BY AVAYA, AND ARE APPLICABLE TO ANYONE WHO ACCESSES OR USES THE HOSTED SERVICE. BY ACCESSING OR USING THE HOSTED SERVICE, OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE DOING SO (HEREINAFTER REFERRED TO INTERCHANGEABLY AS “YOU” AND “END USER”), AGREE TO THE TERMS OF USE. IF YOU ARE ACCEPTING THE TERMS OF USE ON BEHALF A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT THAT YOU HAVE THE AUTHORITY TO BIND SUCH ENTITY TO THESE TERMS OF USE. IF YOU DO NOT HAVE SUCH AUTHORITY, OR IF YOU DO NOT WISH TO ACCEPT THESE TERMS OF USE, YOU MUST NOT ACCESS OR USE THE HOSTED SERVICE OR AUTHORIZE ANYONE TO ACCESS OR USE THE HOSTED SERVICE.

Licenses

THE SOFTWARE LICENSE TERMS AVAILABLE ON THE AVAYA WEBSITE, HTTPS://SUPPORT.AVAYA.COM/LICENSEINFO, UNDER THE LINK “AVAYA SOFTWARE LICENSE TERMS (Avaya Products)” OR SUCH SUCCESSOR SITE AS DESIGNATED BY AVAYA, ARE APPLICABLE TO ANYONE WHO DOWNLOADS, USES AND/OR INSTALLS AVAYA SOFTWARE, PURCHASED FROM AVAYA INC., ANY AVAYA AFFILIATE, OR AN AVAYA CHANNEL PARTNER (AS APPLICABLE) UNDER A COMMERCIAL AGREEMENT WITH AVAYA OR AN AVAYA CHANNEL PARTNER. UNLESS OTHERWISE AGREED TO BY AVAYA IN WRITING, AVAYA DOES NOT EXTEND THIS LICENSE IF THE SOFTWARE WAS OBTAINED FROM ANYONE OTHER THAN AVAYA, AN AVAYA AFFILIATE OR AN AVAYA CHANNEL PARTNER; AVAYA RESERVES THE RIGHT TO TAKE LEGAL ACTION AGAINST YOU AND ANYONE ELSE USING OR SELLING THE SOFTWARE WITHOUT A LICENSE. BY INSTALLING, DOWNLOADING OR USING THE SOFTWARE, OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE INSTALLING, DOWNLOADING OR USING THE SOFTWARE (HEREINAFTER REFERRED TO INTERCHANGEABLY AS “YOU” AND “END USER”), AGREE TO THESE TERMS AND CONDITIONS AND CREATE A BINDING CONTRACT BETWEEN YOU AND AVAYA INC. OR THE APPLICABLE AVAYA AFFILIATE (“AVAYA”).

Avaya grants You a license within the scope of the license types described below, with the exception of Heritage Nortel Software, for which the scope of the license is detailed below. Where the order documentation does not expressly identify a license type, the applicable license will be a Designated System License as set forth below in the Designated System(s) License (DS) section as applicable. The applicable number of licenses and units of capacity for which the license is granted will be one (1), unless a different number of licenses or units of capacity is specified in the documentation or other materials available to You. “Software” means computer programs in object code, provided by Avaya or an Avaya Channel Partner, whether as stand-alone products, pre-installed on hardware products, and any upgrades, updates, patches, bug fixes, or modified versions thereto. “Designated Processor” means a single stand-alone computing device. “Server” means a set of Designated Processors that hosts (physically or virtually) a software application to be accessed by multiple users. “Instance” means a single copy of the Software executing at a particular time: (i) on one physical machine; or (ii) on one deployed software virtual machine (“VM”) or similar deployment.

License types

Designated System(s) License (DS). End User may install and use each copy or an Instance of the Software only: 1) on a number of Designated Processors up to the number indicated in the order; or 2) up to the number of Instances of the Software as indicated in the order, Documentation, or as authorized by Avaya in writing. Avaya may require the Designated Processor(s) to be identified in the order by type, serial number, feature key, Instance, location or other specific designation, or to be provided by End User to Avaya through electronic means established by Avaya specifically for this purpose.

Concurrent User License (CU). End User may install and use the Software on multiple Designated Processors or one or more Servers, so long as only the licensed number of Units are accessing and using the Software at any given time. A “Unit” means the unit on which Avaya, at its sole discretion, bases the pricing of its licenses and can be, without limitation, an agent, port or user, an e-mail or voice mail account in the name of a person or corporate function (e.g., webmaster or helpdesk), or a directory entry in the administrative database utilized by the Software that permits one user to interface with the Software. Units may be linked to a specific, identified Server or an Instance of the Software.

Heritage Nortel Software

“Heritage Nortel Software” means the software that was acquired by Avaya as part of its purchase of the Nortel Enterprise Solutions Business in December 2009. The Heritage Nortel Software is the

software contained within the list of Heritage Nortel Products located at https://support.avaya.com/LicenseInfo under the link "Heritage Nortel Products" or such successor site as designated by Avaya. For Heritage Nortel Software, Avaya grants Customer a license to use Heritage Nortel Software provided hereunder solely to the extent of the authorized activation or authorized usage level, solely for the purpose specified in the Documentation, and solely as embedded in, for execution on, or for communication with Avaya equipment. Charges for Heritage Nortel Software may be based on extent of activation or use authorized as specified in an order or invoice.

Copyright

Except where expressly stated otherwise, no use should be made of materials on this site, the Documentation, Software, Hosted Service, or hardware provided by Avaya. All content on this site, the documentation, Hosted Service, and the product provided by Avaya including the selection, arrangement and design of the content is owned either by Avaya or its licensors and is protected by copyright and other intellectual property laws including the sui generis rights relating to the protection of databases. You may not modify, copy, reproduce, republish, upload, post, transmit or distribute in any way any content, in whole or in part, including any code and software unless expressly authorized by Avaya. Unauthorized reproduction, transmission, dissemination, storage, and or use without the express written consent of Avaya can be a criminal, as well as a civil offense under the applicable law.

Virtualization

The following applies if the product is deployed on a virtual machine. Each product has its own ordering code and license types. Unless otherwise stated, each Instance of a product must be separately licensed and ordered. For example, if the end user customer or Avaya Channel Partner would like to install two Instances of the same type of products, then two products of that type must be ordered.

Third Party Components

"Third Party Components" mean certain software programs or portions thereof included in the Software or Hosted Service may contain software (including open source software) distributed under third party agreements ("Third Party Components"), which contain terms regarding the rights to use certain portions of the Software ("Third Party Terms"). As required, information regarding distributed Linux OS source code (for those products that have distributed Linux OS source code) and identifying the copyright holders of the Third Party Components and the Third Party Terms that apply is available in the products, Documentation or on Avaya's website at: https://support.avaya.com/Copyright or such successor site as designated by Avaya. The open source software license terms provided as Third Party Terms are consistent with the license rights granted in these Software License Terms, and may contain additional rights benefiting You, such as modification and distribution of the open source software. The Third Party Terms shall take precedence over these Software License Terms, solely with respect to the applicable Third Party Components to the extent that these Software License Terms impose greater restrictions on You than the applicable Third Party Terms.

The following applies only if the H.264 (AVC) codec is distributed with the product. THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL USE OF A CONSUMER OR OTHER USES IN WHICH IT DOES NOT RECEIVE REMUNERATION TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE HTTP://WWW.MPEGLA.COM.

Service Provider

THE FOLLOWING APPLIES TO AVAYA CHANNEL PARTNER'S HOSTING OF AVAYA PRODUCTS OR SERVICES. THE PRODUCT OR HOSTED SERVICE MAY USE THIRD PARTY COMPONENTS SUBJECT TO THIRD PARTY TERMS AND REQUIRE A SERVICE PROVIDER TO BE INDEPENDENTLY LICENSED DIRECTLY FROM THE THIRD PARTY SUPPLIER. AN AVAYA CHANNEL PARTNER'S HOSTING OF AVAYA PRODUCTS MUST BE AUTHORIZED IN WRITING BY AVAYA AND IF THOSE HOSTED PRODUCTS USE OR EMBED CERTAIN THIRD PARTY SOFTWARE, INCLUDING BUT NOT LIMITED TO MICROSOFT SOFTWARE OR CODECS, THE AVAYA CHANNEL PARTNER IS REQUIRED TO INDEPENDENTLY OBTAIN ANY APPLICABLE LICENSE AGREEMENTS, AT THE AVAYA CHANNEL PARTNER'S EXPENSE, DIRECTLY FROM THE APPLICABLE THIRD PARTY SUPPLIER.

WITH RESPECT TO CODECS, IF THE AVAYA CHANNEL PARTNER IS HOSTING ANY PRODUCTS THAT USE OR EMBED THE H.264 CODEC OR H.265 CODEC, THE AVAYA CHANNEL PARTNER ACKNOWLEDGES AND AGREES THE AVAYA CHANNEL PARTNER IS RESPONSIBLE FOR ANY AND ALL RELATED FEES AND/OR ROYALTIES. THE H.264 (AVC) CODEC IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL USE OF A CONSUMER OR OTHER USES IN WHICH IT DOES NOT RECEIVE REMUNERATION TO: (I) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (II) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION FOR H.264 (AVC) AND H.265 (HEVC) CODECS MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE HTTP://WWW.MPEGLA.COM.

Compliance with Laws

You acknowledge and agree that it is Your responsibility for complying with any applicable laws and regulations, including, but not limited to laws and regulations related to call recording, data privacy, intellectual property, trade secret, fraud, and music performance rights, in the country or territory where the Avaya product is used.

Preventing Toll Fraud

"Toll Fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf). Be aware that there can be a risk of Toll Fraud associated with your system and that, if Toll Fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya Toll Fraud intervention

If You suspect that You are being victimized by Toll Fraud and You need technical assistance or support, call Technical Service Center Toll Fraud Intervention Hotline at +1-800-643-2353 for the United States and Canada. For additional support telephone numbers, see the Avaya Support website: https://support.avaya.com or such successor site as designated by Avaya.

Security Vulnerabilities

Information about Avaya's security support policies can be found in the Security Policies and Support section of https://support.avaya.com/security.

Suspected Avaya product security vulnerabilities are handled per the Avaya Product Security Support Flow (https://support.avaya.com/css/P8/documents/100161515).

Downloading Documentation

For the most current versions of Documentation, see the Avaya Support website: https://support.avaya.com, or such successor site as designated by Avaya.

Contact Avaya Support

See the Avaya Support website: https://support.avaya.com for product or Hosted Service notices and articles, or to report a problem with your Avaya product or Hosted Service. For a list of support telephone numbers and contact addresses, go to the Avaya Support website: https://support.avaya.com (or such successor site as designated by Avaya), scroll to the bottom of the page, and select Contact Avaya Support.

Trademarks

The trademarks, logos and service marks ("Marks") displayed in this site, the Documentation, Hosted Service(s), and product(s) provided by Avaya are the registered or unregistered Marks of Avaya, its affiliates, its licensors, its suppliers, or other third parties. Users are

not permitted to use such Marks without prior written consent from Avaya or such third party which may own the Mark. Nothing contained in this site, the Documentation, Hosted Service(s) and product(s) should be construed as granting, by implication, estoppel, or otherwise, any license or right in and to the Marks without the express written permission of Avaya or the applicable third party.

Avaya is a registered trademark of Avaya Inc.

All non-Avaya trademarks are the property of their respective owners. Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.

Contents

Chapter 1: Introduction ... 7
Purpose ... 7
Change history ... 7
Chapter 2: Architecture overview ... 8
Avaya Aura® Virtualized Appliance overview ... 8
Appliance Virtualization Platform overview ... 8
Virtual Appliance components ... 10
Chapter 3: Planning ... 11
Planning checklist ... 11
Configuration tools and utilities ... 11
Supported servers ... 12
Supported footprints of Avaya SBCE in virtual appliance ... 12
Mapping the virtual interfaces ... 13
Downloading software from PLDS ... 14
Latest software updates and patch information ... 15
Chapter 4: Predeployment tasks ... 17
Installing the Solution Deployment Manager client ... 17
Accessing the Solution Deployment Manager client dashboard ... 19
Accessing Solution Deployment Manager ... 19
Managing the location ... 20
Adding a location ... 20
Viewing a location ... 20
Editing the location ... 21
Deleting a location ... 21
New and Edit location field descriptions ... 21
Managing the host ... 22
Adding an Appliance Virtualization Platform or ESXi host ... 22
Shutting down the Appliance Virtualization Platform host ... 24
Restarting Appliance Virtualization Platform or an ESXi host ... 24
Removing an Appliance Virtualization Platform or ESXi host ... 25
Appliance Virtualization Platform license ... 25
Configuring WebLM Server for an Appliance Virtualization Platform host using Solution Deployment Manager ... 26
WebLM Configuration field descriptions ... 27
Viewing the Appliance Virtualization Platform host license status using Solution Deployment Manager ... 27
Chapter 5: Deployment ... 29
Deployment checklist ... 29
Deploying the Avaya SBCE OVA file by using Solution Deployment Manager ... 30

Managing the application ... 31
Application Deployment field descriptions ... 31
Editing an application from Solution Deployment Manager ... 35
Starting an application from Solution Deployment Manager ... 36
Stopping an application from Solution Deployment Manager ... 37
Restarting an application from Solution Deployment Manager ... 37
Common causes for application deployment failure ... 37
Chapter 6: Postinstallation verification ... 39
Verifying successful deployment of an EMS server ... 39
Logging on to the EMS web interface ... 39
Logging in to the EMS using SSH ... 39
Installing and verifying successful installation of EMS and Avaya SBCE ... 40
Chapter 7: Maintenance ... 41
Viewing the job history of virtual machine operations ... 41
Job History field descriptions ... 41
Monitoring a host and virtual machine ... 42
Monitoring a platform ... 42
Monitoring an application ... 43
Deleting the virtual machine snapshot from the Appliance Virtualization Platform host ... 43
Chapter 8: Resources ... 44
Documentation ... 44
Finding documents on the Avaya Support website ... 46
Accessing the port matrix document ... 46
Avaya Documentation Center navigation ... 47
Training ... 48
Viewing Avaya Mentor videos ... 48
Support ... 49

Chapter 1: Introduction

Purpose

This guide provides information about how to install and configure Avaya Session Border Controller for Enterprise (Avaya SBCE) in an enterprise having Session Initiation Protocol (SIP) trunks.

This document is intended for anyone who wants to install, configure, and verify Avaya SBCE.

Change history

Issue	Date	Summary of changes
2	June 2020	Updated the topic Mapping the virtual interfaces on page 13.

Chapter 2: Architecture overview

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.

Important:

Avaya SBCE supports deployment of Appliance Virtualization Platform server using Solution Deployment Manager client only.

Appliance Virtualization Platform overview

Avaya provides a VMware®-based Avaya Aura® Appliance Virtualization Platform to provide virtualization for Avaya SBCE.

The Avaya Aura® Virtualized Appliance offer includes:

- The Avaya Aura® Appliance Virtualization Platform and Solution Deployment Manager (SDM) are the required minimum configuration.
- Full SDM client and SDM embedded in System Manager support requires Avaya Aura® Release 8.1.2 or later.
- Supported servers are the Avaya Converged Platform 120 Appliance servers.

  Note:

  Deployment on the Avaya S8300E servers is not supported.
- An Avaya Converged Platform server using ESXi 6.0 or 6.5 requires more memory. For memory validation process, see PSN027060u or the Release Notes on the Avaya Support website.
- The EMS function supports deployment in shared Appliance Virtualization Platform mode: the EMS can share the appliance with other Avaya applications.

- The SBCE function only supports deployment in dedicated Appliance Virtualization Platform mode. That is, SBCE is the only application on top of one appliance.
- The sizing and performance of Avaya SBCE on Appliance Virtualization Platform can be found in Avaya One Source and are identical to the performance capacities found with customer-provided VMware deployments.

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.

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

Virtual Appliance components

Software component	Description
ESXi Host	The physical machine running the ESXi Hypervisor software.
Appliance Virtualization Platform	Avaya-provided virtualization turnkey solution that includes the hardware and all the software including the VMware hypervisor.
Solution Deployment Manager	Centralized software management solution of Avaya that provides deployment, upgrade, migration, and update capabilities for the Avaya Aura® virtual applications.
Open Virtualization Appliance (OVA)	The virtualized OS and application packaged in a single file that is used to deploy a virtual machine.

Chapter 3: Planning

Planning checklist

Complete the following tasks before deploying Avaya SBCE on Appliance Virtualization Platform:

Task	Reference	✔
Download the required software and patches.	Downloading software from PLDS on page 14 Latest software updates and patch information on page 15	
Purchase and obtain the required licenses.	—	
Register for PLDS, and activate license entitlements.	Go to the Avaya Product Licensing and Delivery System at https://plds.avaya.com/.	
Verify the server compatibility.	Supported servers on page 12	
Get the following information to create a backup on the remote server: • IP address • Directory • User name • Password	—	

Configuration tools and utilities

To deploy and configure Avaya SBCE Open Virtualization Application (OVA), you need the following tools and utilities:

- A browser for accessing the Avaya SBCE web interface. See “Supported browsers”.
- A 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 or PuTTYgen.

Supported servers

In the Avaya Aura® Virtualized Appliance model, Solution Deployment Manager supports the following servers for new deployments to the latest release:

- Dell™ PowerEdge™ R640 Avaya Converged Platform 120 Appliance
- Dell™ PowerEdge™ R630
- HP ProLiant DL360 G9

In the Avaya Aura® Virtualized Appliance model, Solution Deployment Manager supports the following servers for upgrades to the latest release:

- Dell™ PowerEdge™ R620
- HP ProLiant DL360p G8
- Dell™ PowerEdge™ R630
- HP ProLiant DL360 G9

For the most updated list of supported servers with Avaya Aura® Virtualized Appliance, see *Deploying Avaya Aura® Appliance Virtualization Platform*.

Supported footprints of Avaya SBCE in virtual appliance

Table 1: Avaya SBCE resource requirements on Appliance Virtualization Platform:

Resource	Variant	
	SBC	**EMS**
vCPU core	4 dedicated cores	3 floating cores
vCPU reservation	8800 MHz to 9600 MHz	6600 MHz to 7200 MHz
Minimum CPU speed based on Xeon x5670 or equivalent processor	2.2 GHz	2.2 GHz
Memory reservation	8 GB	8 GB
Storage reservation	8.8 GB — thin provisioned 160 GB — thick provisioned (Recommended)	8.8 GB — thin provisioned 160 GB — thick provisioned (Recommended)
Network Interfaces	6 Virtual Interfaces @ 100 Mbps or 1000 Mbps	2 Virtual Interfaces @ 100 Mbps or 1000 Mbps

Mapping the virtual interfaces

Reference material

To better understand how the interfaces of an Avaya Aura® Appliance Virtualization Platform operate on an Avaya SBCE deployment, use the information in this section and refer to the section “Appliance Virtualization Platform NIC ports” in the *Deploying Avaya Aura® Appliance Virtualization Platform* document.

Considerations when setting up virtual interfaces

If the Avaya Aura® Appliance Virtualization Platform is used as a dedicated server for Avaya SBCE, Avaya recommends that you do not use Out of Band Management. That is, use the default setting of no Out of Band Management as described in several sections of the *Deploying Avaya Aura® Appliance Virtualization Platform* document.

Port mapping guidelines

Use the following guidelines to help you set up port mapping:

- VMNIC0 and VMNIC1 are restricted ports.
- VMNIC0 (or eth0) is reserved as a public port and a management port. The Appliance Virtualization Platform management port is enabled on this Ethernet interface. 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.
- VMNIC1 (or eth1) is reserved as a Services Port for to connect a technician laptop. For more information, see *Deploying Avaya Aura® Appliance Virtualization Platform*.
- VMNIC2 (or eth2) is not used when Out of Band Management is disabled. It can be used for Avaya SBCE data interfaces.
- VMNIC3 (or eth3) through VMNIC7 (or eth7) are additional network interfaces for Avaya SBCE data interfaces. Depending on the deployment, VMNIC3 through VMNIC7 can be mapped to the Avaya SBCE A1, A2, B1 and B2 interfaces to meet your security and bandwidth requirements.
- To improve the networking throughput and reliability, “teaming NICs” can be used. For more information, see *Deploying Avaya Aura® Appliance Virtualization Platform*.

Example port mappings

The following are some example port mappings for a server that has six NIC ports. These are just examples and you are not limited to these combinations.

Option 1 — Four NIC port server:

Appliance Virtualization Platform NIC interfaces	Appliance Virtualization Platform/Avaya SBCE interface
VMNIC0	Appliance Virtualization Platform management
	Avaya SBCE M1
	Avaya SBCE M2
VMNIC1	Appliance Virtualization Platform Service Port

Table continues…

Appliance Virtualization Platform NIC interfaces	Appliance Virtualization Platform/Avaya SBCE interface
VMNIC2	Spare (backup VMNIC4, VMNIC5)
VMNIC3	Spare (backup VMNIC4, VMNIC5)
VMNIC4	Avaya SBCE A1
	Avaya SBCE B1
VMNIC5	Avaya SBCE A2
	Avaya SBCE B2

Option 2 — Dedicated NIC interface for each Avaya SBCE interface:

Appliance Virtualization Platform NIC interfaces	Appliance Virtualization Platform/Avaya SBCE interface
VMNIC0	Appliance Virtualization Platform management
	Avaya SBCE M1
	Avaya SBCE M2
VMNIC1	Appliance Virtualization Platform Service Port
VMNIC2	Avaya SBCE A1
VMNIC3	Avaya SBCE B1
VMNIC4	Avaya SBCE A2
VMNIC5	Avaya SBCE B2

Option 3 — Teaming NICs:

Appliance Virtualization Platform NIC interfaces	Appliance Virtualization Platform/Avaya SBCE interface
VMNIC0	Appliance Virtualization Platform management
	Avaya SBCE M1
	Avaya SBCE M2
VMNIC1	Appliance Virtualization Platform Service Port
Teaming NICs - VMNIC2 and VMNIC4	Avaya SBCE A1
	Avaya SBCE A2
Teaming NICs -VMNIC3 and VMNIC5	Avaya SBCE B1
	Avaya SBCE B2

Downloading software from PLDS

When you place an order for an Avaya PLDS-licensed software product, PLDS creates the license entitlements of the order and sends an email notification to you. The email includes a license

activation code (LAC) and instructions for accessing and logging into PLDS. Use the LAC to locate and download the purchased license entitlements.

In addition to PLDS, you can download the product software from http://support.avaya.com using the **Downloads and Documents** tab at the top of the page.

Note:

Only the latest service pack for each release is posted on the support site. Previous service packs are available only through PLDS.

Procedure

1. Enter http://plds.avaya.com in your Web browser to access the Avaya PLDS website.
2. Enter your login ID and password.
3. On the PLDS home page, select **Assets**.
4. Click **View Downloads**.
5. Click on the search icon (magnifying glass) for **Company Name**.
6. In the **%Name** field, enter **Avaya** or the Partner company name.
7. Click **Search Companies**.
8. Locate the correct entry and click the **Select** link.
9. Enter the Download Pub ID.
10. Click **Search Downloads**.
11. Scroll down to the entry for the download file and click the **Download** link.
12. In the **Download Manager** box, click the appropriate download link.

    Note:

    The first link, **Click to download your file now**, uses the Download Manager to download the file. The Download Manager provides features to manage the download (stop, resume, auto checksum). The **click here** link uses your standard browser download and does not provide the download integrity features.
13. If you use Internet Explorer and get an error message, click the **install ActiveX** message at the top of the page and continue with the download.
14. Select a location where you want to save the file and click **Save**.
15. If you used the Download Manager, click **Details** to view the download progress.

Latest software updates and patch information

Before you start the deployment or upgrade of an Avaya product or solution, download the latest software updates or patches for the product or solution. For more information, see the latest

release notes, Product Support Notices (PSNs), and Product Correction Notices (PCNs) for the product or solution on the Avaya Support web site at https://support.avaya.com/.

After deploying or upgrading a product or solution, use the instructions in the release notes, PSNs, or PCNs to install any required software updates or patches.

For third-party products used with an Avaya product or solution, see the latest release notes for the third-party products to determine if you need to download and install any updates or patches.

Chapter 4: Predeployment tasks

Installing the Solution Deployment Manager client

About this task

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

You can use the Solution Deployment Manager client to:

- Install software patches of System Manager and hypervisor patches of Appliance Virtualization Platform.
- Deploy, upgrade, and update System Manager.

Procedure

1. Navigate to the Avaya Support website at http://support.avaya.com.
2. 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/SBC`.
4. Right click on the executable, and select **Run as administrator** to run the `Avaya_SDMClient_win64_8.1.3.0.xxxxxxx_xx.exe` file.
5. On the Welcome page of the Avaya Solution Deployment Manager window, click **Next**.
6. On the License Agreement page, read the License Agreement, and click **I accept the terms of the license agreement**.
7. Click **Next**.
8. On the Install Location page, do one of the following:
   - To install the Solution Deployment Manager client in the system-defined folder, leave the default settings, and click **Next**.
   - 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`.

9. On the Pre-Installation Summary page, review the information, and click **Next**.
10. On the User Input page, do the following:
    a. To start the Solution Deployment Manager client, 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 the 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 application, you must assign a different port number from 443 to 543.

       Note:

       After installing the Solution Deployment Manager client, you cannot change the port number.
    e. **(Optional)** Click **Reset All to Default** to reset all values to default.
11. Click **Next**.
12. On the Summary and Validation page, verify the product information and the system requirements.

    The installer performs the feasibility checks, such as disk space and memory. If the requirements are not met, you must allocate the required disk space, memory, and the ports available to restart the installation process.
13. Click **Install**.
14. On the Install Complete page, click **Done**.

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

For more information, see *Using the Solution Deployment Manager client*.

Accessing the Solution Deployment Manager client dashboard

About this task

Note:

If you perform deploy, upgrade, and update operations from the Solution Deployment Manager client, ignore the steps that instruct you to access System Manager Solution Deployment Manager and the related navigation links.

Procedure

To start the Solution Deployment Manager client, do one of the following:

- On your computer, click **Start** > **All Programs** > **Avaya** > **Avaya SDM Client**.
- On your desktop, click .

Accessing Solution Deployment Manager

Before you begin

You must start Solution Deployment Manager to deploy and upgrade virtual machines, and install service packs or patches.

Procedure

Do one of the following:

- Double-click the Solution Deployment Manager client.

  Note:

  All the management operation related to System Manager, such as, deployment, patching, or upgrade can only be done by using Solution Deployment Manager client.

- Click **Services** > **Solution Deployment Manager**.

Managing the location

Adding a location

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. On the **Locations** tab, in the Locations section, click **New**.
3. In the New Location section, do the following:
   a. In the Required Location Information section, type the location information.
   b. In the Optional Location Information section, type the network parameters for the virtual machine.
4. Click **Save**.

   The system displays the new location in the **Application Management Tree** section.

Related links

Add and Edit platform field descriptions

Viewing a location

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. Click the Locations tab.

   The Locations section lists all locations.

Editing the location

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. On the **Locations** tab, in the Locations section, select a location that you want to edit.
3. Click **Edit**.
4. In the Edit Location section, make the required changes.
5. Click **Save**.

Related links

Add and Edit platform field descriptions

Deleting a location

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. On the **Locations** tab, in the Locations section, select one or more locations that you want to delete.
3. Click **Delete**.
4. In the Delete confirmation dialog box, click **Yes**.

   The system does not delete the applications that are running on the platform and moves the platform to **Unknown location Platform mapping**.

New and Edit location field descriptions

Required Location Information

Name	Description
Name	The location name.

Table continues…

Name	Description
Avaya Sold-To #	The customer contact number. Administrators use the field to check entitlements.
Address	The address where the host is located.
City	The city where the host is located.
State/Province/Region	The state, province, or region where the host is located.
Zip/Postal Code	The zip code of the host location.
Country	The country where the host is located.

Optional Location Information

Name	Description
Default Gateway	The IP address of the virtual machine gateway. For example, 172.16.1.1.
DNS Search List	The search list of domain names.
DNS Server 1	The DNS IP address of the primary virtual machine. For example, 172.16.1.2.
DNS Server 2	The DNS IP address of the secondary virtual machine. For example, 172.16.1.4.
NetMask	The subnet mask of the virtual machine.
NTP Server	The IP address or FQDN of the NTP server. Separate the IP addresses with commas (,).

Button	Description
Save	Saves the location information and returns to the Locations section.
Edit	Updates the location information and returns to the Locations section.
Delete	Deletes the location information, and moves the host to the Unknown location section.
Cancel	Cancels the add or edit operations, and returns to the Locations section.

Managing the host

Adding an Appliance Virtualization Platform or ESXi host

About this task

Use the procedure to add an Appliance Virtualization Platform or ESXi host. You can associate an ESXi host with an existing location.

If you are adding a standalone ESXi host to System ManagerSolution Deployment Manager or the Solution Deployment Manager client, add the standalone ESXi host using its FQDN only.

Solution Deployment Manager only supports the Avaya Aura® Appliance Virtualization Platform and VMware ESXi hosts. If you try to add another host , the system displays the following error message:

```
Retrieving host certificate info is failed: Unable to communicate with
host. Connection timed out: connect. Solution Deployment Manager only
supports host management of VMware-based hosts and Avaya Appliance
Virtualization Platform (AVP).
```

Before you begin

Add a location.

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. In **Application Management Tree**, select a location.
3. On the **Platforms** tab, in the Platforms for Selected Location <location name> section, click **Add**.
4. In the New Platform section, do the following:
   a. Provide details of Platform name, Platform FQDN or IP address, user name, and password.

      For Appliance Virtualization Platform and VMware ESXi deployment, you can also provide the root user name.

   b. In **Platform Type**, select **AVP/ESXi**.

   c. If you are connected through the services port, set the Platform IP address of Appliance Virtualization Platform to 192.168.13.6.
5. Click **Save**.
6. In the Certificate dialog box, click **Accept Certificate**.

   The system generates the certificate and adds the Appliance Virtualization Platform host. For the ESXi host, you can only accept the certificate. If the certificate is invalid, Solution Deployment Manager displays the error. To generate certificate, see VMware documentation.

   In the Application Management Tree section, the system displays the new host in the specified location. The system also discovers applications.

Next steps

1. In Application Management Tree, establish trust for all the virtual machines that are deployed on the host.
2. Ensure that the system populates the **Application Name** and **Application Version** for each virtual machine.

Shutting down the Appliance Virtualization Platform host

About this task

You can perform the shutdown operation on one Appliance Virtualization Platform host at a time. You cannot schedule the operation.

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **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. Click **More Actions** > **Lifecycle Action** > **Host Shutdown**.

   The Appliance Virtualization Platform host and virtual machines shut down.

Restarting Appliance Virtualization Platform or an ESXi host

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **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.

Removing an Appliance Virtualization Platform or ESXi host

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. On the **Platforms** tab, in the Platforms for Selected Location <location name> section, select one or more platforms that you want to delete.
3. Click **Remove**.
4. On the Delete page, click **Yes**.

Appliance Virtualization Platform license

From Appliance Virtualization Platform Release 7.1.2 onwards,, 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.

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 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 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 exist for the following options:

  - **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 alarming. For information about how to configure the Appliance Virtualization Platform alarming feature, see *Administering Avaya Aura® AVP Utilities*.

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

Before you begin

- Add an Appliance Virtualization Platform host.

  For information about adding a host, see *Administering Avaya Aura® System Manager*.
- Obtain the license file from the Avaya PLDS website.
- Install the license file on the System Manager WebLM Server or Standalone WebLM Server.

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **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**.

WebLM Configuration field descriptions

Name	Description
WebLM IP Address/FQDN	The IP Address or FQDN of WebLM Server.
Port Number	The port number of WebLM Server. The default port is 52233.

Button	Description
Submit	Saves the WebLM Server configuration.
Cancel	Closes the WebLM Configuration dialog box.

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

Procedure

1. Do one of the following:

   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **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.

Chapter 5: Deployment

Deployment checklist

Use the following checklist to deploy Avaya SBCE by using Solution Deployment Manager:

Task	Link/Notes	✔
Download the following software from the Avaya Support website: • Avaya SBCE OVA • Solution Deployment Manager client	http://support.avaya.com	
Upload the software that is required for deployment on the computer on which the Solution Deployment Manager client is installed that is the OVA file.	-	
For Avaya Aura® Virtualized Appliance deployments, install the supported server. Appliance Virtualization Platform is preinstalled on the server.	Supported servers on page 12	
Ensure that the following information is handy: • FQDN/IP address, netmask, and gateway • Out of Band Management configuration details.	-	
Install the `Avaya_SDMClient_win64_8.1.3.0.xxxxxxx_xx.exe` file.	Install the Solution Deployment Manager client.	
Add a location.	Adding a location on page 20	
Add the Appliance Virtualization Platform host.	Adding an Appliance Virtualization Platform or ESXi host on page 22	
Deploy the Avaya SBCE OVA file and provide the network and configuration parameters.	Deploying the Avaya SBCE OVA file by using Solution Deployment Manager on page 30	
To activate the serviceability agent registration, reset the AVP Utilities application.	-	
Verify the installation of Avaya SBCE.	Installing and verifying successful installation of EMS and Avaya SBCE on page 40	

Deploying the Avaya SBCE OVA file by using Solution Deployment Manager

Before you begin

- If System Manager Solution Deployment Manager is not available, install the Solution Deployment Manager client.
- Add a location.
- Add the Appliance Virtualization Platform host.
- Deploy AVP Utilities.

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. In **Application Management Tree**, select a platform.
3. On the **Applications** tab, in the Applications for Selected Location <location name> section, click **New**.

   The system displays the Applications Deployment section.
4. In the Select Location and Platform section, do the following:
   a. In **Select Location**, select a location.
   b. In **Select Platform**, select a platform.

      The system displays the host name in the **Platform FQDN** field.
5. In **Data Store**, select a data store, if not displayed upon host selection.

   The page displays the capacity details.
6. Click **Next**.
7. To get the OVA file, select the **OVA** tab, and click one of the following:
   - **URL**, in **OVA File**, type the absolute path to the application OVA file, and click **Submit**.
   - **S/W Library**, in **File Name**, select the application OVA file.
   - **Browse**, select the required application OVA file from a location on the computer, and click **Submit File**.

   If the OVA file does not contain a valid Avaya certificate, then the system does not parse the OVA and displays the following message:

   ```
   Invalid file content. Avaya Certificate not found or invalid
   ```
8. In **Flexi Footprint**, select the footprint size that the application supports.

9. Click **Next**.

   In Configuration Parameters and Network Parameters sections, the system displays the fields that are specific to the application that you deploy.

10. In the Network Parameters section:
    - For Appliance Virtualization Platform, the system auto populates the following fields and these fields are read only:
      - **Public**
      - **Out of Band Management**
    - For the ESXi host, select the required port groups.

11. In the Configuration Parameters section, complete the fields.

    For more information, see “Application Deployment field descriptions”.

12. Click **Deploy**.

13. Click **Accept the license terms**.

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

    The system displays the virtual machine on the Applications for Selected Location <location name> page.

14. To view details, click the **Status Details** link.

Managing the application

Application Deployment field descriptions

Select Location and Platform

Name	Description
Select Location	The location name.
Select Platform	The platform name that you must select.
Platform FQDN	The platform FQDN.
Data Store	The data store for the application. The page populates the capacity details in the Capacity Details section.

Capacity Details

The system displays the CPU and memory details of the Appliance Virtualization Platform or ESXi host. The fields are read-only.

Note:

If the host is in a cluster, the system does not display the capacity details of CPU and memory. Ensure that the host resource requirements are met before you deploy the virtual machine.

Name	Description
Name	The resource name.
Full Capacity	The maximum capacity.
Free Capacity	The available capacity.
Reserved Capacity	The reserved capacity.
Status	The configuration status.

Provide grub, root and ipcs credentials

Name	Description
Platform IP	The platform IP address.
Platform FQDN	The platform FQDN.
Grub user of OS	The grub credentials of the OS.
Root user of OS	The root credentials of the OS.
Ipcs user of OS	The ipcs credentials of the OS.

OVA/ISO Details

Name	Description
URL/Local Path	The option to specify the URL or absolute path from where you can get the OVA file
SW Library	The option to select the default path provided during the installation of the Solution Deployment Manager client.
File Name	The default path provided during the installation of the Solution Deployment Manager client. The default path is `C:\Program Files\Avaya\SDMClient\Default_Artifacts`. The field is available only when you click **OVA from software library**
Browse	The option to specify the location from where you can get the OVA file.

Table continues…

Name	Description
Select OVA	The URL or absolute path to the OVA or ISO file of the application that you must provide. For example, `C:\Program Files\SDM\<Application OVA_8.1.ova>` The field is available only when you click **Browse**. **Note:** System Manager validates any file that you upload during deployment, and accepts only the OVA file type. System Manager filters uploaded files based on file extension and mime types or bytes in the file. When you select **OVA from software library**, you can select the OVA file of the application that you want to deploy.
Submit File	The field is available only when you click **Browse**. Select the OVA file of the application that you want to deploy.
Flexi Footprint	The footprint size supported for the selected application. **Important:** Ensure that the required memory is available for the footprint sizes that you selected. The upgrade operation might fail due to insufficient memory.

Avaya SBCE Configuration Parameters

Name	Description
Application Name	A descriptive name assigned to the EMS or Avaya SBCE. **Note:** Ensure that the appliance name is unique.
IP Mode	Depending on the type of addresses used in your network, select **IP Mode** from the following options:type IPV4 32 or DUAL_STACK. • **IPV4** • **DUAL_STACK**
Hostname	The hostname of the device

Table continues…

Name	Description
Appliance Type	The deployment type for the device. The options are: • **EMS** • **SBCE** • **EMS+SBCE**
Network Passphrase	A unique password that the EMS server and Avaya SBCE security devices deployed throughout the network will use for authentication. This field is displayed for Avaya SBCE-only installations. **Important:** The same passphrase must be configured on all the SBCE instances that are managed by an EMS and on the managing EMS as well. Different passphrases prevent the EMS and Avaya SBCE security devices from communicating with one another.
Network Instance Type [none/primary/secondary]	The instance type for the network deployment. The options are: • **None** • **Primary** • **Secondary**
[Optional] Management IP Address (ipv4)	The IPv4 address of the management network.
[Optional] Netmask	The network mask of the management network.
[Optional] Default Gateway	The IPv4 address of the gateway to the management network.
IPv6 Address	The IPv6 address of the management network. The system displays this field only when you select **Dual Stack** on the IP Mode screen. **Note:** In **Dual Stack** the IPv6 address is optional but the IPv4 address is compulsory.
IPv6 Prefix	The length of the prefix for the management network IPv6 address. The system displays this field only when you select Dual Stack on the Management IP Configuration screen.

Table continues…

Name	Description
IPv6 Gateway	The IPv6 address of the gateway to the management network. The system displays this field only when you select **Dual Stack** on the IP Mode screen. **Note:** In **Dual Stack** the IPv6 address is optional but the IPv4 address is compulsory.

Avaya SBCE Network Parameters

Name	Description
M1 **M2** **A1** **A2** **B1** **B2**	The management interfaces (M1 and M2) and voice interfaces (A1, A2, B1 and B2) for network mapping for additional VM network interfaces. The options are: • **Map to Existing Network Connection on Host** • **Map to Network Adapter on Host (a network connection will be automatically created)**

Button	Description
Deploy	Displays the EULA acceptance screen. To accept EULA and start the deployment process, click **Accept**.

Editing an application from Solution Deployment Manager

Before you begin

- Install the Solution Deployment Manager client.
- An ESXi host must be available.
- When you change the IP address or FQDN:
  - AVP Utilities must be available and must be discovered.
  - If AVP Utilities is discovered, the system must display AVP Utilities in the **App Name** column. If the application name in **App Name** is empty, click **More Actions** > **Re-establish connection** to establish trust between the application and System Manager.

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **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 an application, and click **Edit**.

   The system displays the Edit App section.
4. To update the IP address and FQDN of the application in the local Solution Deployment Manager inventory, do the following:
   a. Click **More Actions** > **Re-establish connection**.

      Note:

      To update IP address or FQDN for AVP Utilities, establish trust on all applications that are running on the host on which AVP Utilities resides.

   b. Click **More Actions** > **Refresh App**.

      Note:

      To update IP address or FQDN for AVP Utilities, refresh all applications that are running on the host on which AVP Utilities resides.

   c. Click **Update IP/FQDN in Local Inventory**.
   d. Click **Update App IP/FQDN**.
   e. Provide the IP address and FQDN of the application.

      Update IP/FQDN in Local Inventory updates the IP address or FQDN of the application only in the local database in System Manager. The actual IP address or FQDN of the host does not change. Use **Update Network Params** in the **Platforms** tab to update the IP address or FQDN of the host.
5. Click **Save**.

Starting an application from Solution Deployment Manager

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. From the **Application Management Tree**, select a platform to which you added applications.
3. On the **Applications** tab, select one or more applications that you want to start.
4. Click **Start**.

   In **Application State**, the system displays `Started`.

Stopping an application from Solution Deployment Manager

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. From the **Application Management Tree**, select a ESXi or vCenter host to which you added applications.
3. On the **Applications** tab, select one or more applications that you want to stop.
4. Click **Stop**.

   In **Application State**, the system displays `Stopped`.

Restarting an application from Solution Deployment Manager

Before you begin

Applications must be in the running state.

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. From the **Application Management Tree**, select a host to which you added applications.
3. On the **Applications** tab, select one or more applications that you want to restart.
4. Click **Restart**.

   In **Application State**, the system displays `Stopped` and then `Started`.

Common causes for application deployment failure

If the application is not reachable from System ManagerSolution Deployment Manager or Solution Deployment Manager client, the OVA deployment fails at the sanity stage, because you might have:

- Provided an IP which is not on the network.

- Provided wrong network values that causes the network configuration for the application to not work properly.
- Chosen a private virtual network.

Following are some examples of wrong network values and configuration that can result in the OVA deployment failure:

- Using an IP which is already there on the network (duplicate IP).
- Using an IP which is not on your network at all.
- Using a DNS value, such as `0.0.0.0`.
- Deploying on an isolated network on your VE deployment.

You can check the deployment status in the **Current Action Status** column on the **Applications** tab.

Chapter 6: Postinstallation verification

Verifying successful deployment of an EMS server

You can verify the successful deployment of EMS using one of the following methods:

- Access the EMS server using the web interface.
- Access the EMS server through console.
- Establish a CLI session through a secure shell session (SSH).

Logging on to the EMS web interface

Procedure

1. Open a new browser tab or window.
2. Type the following URL:

   `https://<Avaya EMS IP address>`
3. Press **Enter**.

   The system displays a message indicating that the security certificate is not trusted.
4. Accept the system message and continue to the next screen.

   If the Welcome screen is displayed, the EMS is operating normally and available for use. You can log in to EMS and perform normal administrative and operational tasks. See *Administering Avaya Session Border Controller for Enterprise*.
5. Type the username and password as `ucsec`.

   On first login, system prompts you to change the password.
6. Enter a new password and login with the new password.

Logging in to the EMS using SSH

Procedure

1. Log in to SSH client using PuTTy.
2. Type the IP address for Avaya SBCE.

3. Specify the port as **222**.
4. Select the connection type as SSH and press `Enter`.
5. Enter the user name and password to log in.

   Note:

   You cannot gain access to shell with user account `ucsec`.

   User account `ipcs` or user accounts that have shell access can be used for logging in to Avaya SBCE.

Installing and verifying successful installation of EMS and Avaya SBCE

Procedure

1. Log in to the EMS web interface with administrator credentials.
2. In the navigation pane, click **Device Management**.

   Following step is not applicable for the single server deployment of Avaya SBCE.
3. On the Device Management page, do the following:
   a. In the **Devices** tab, click **Add**.
   b. In the Add Devices window, type the Avaya SBCE details, such as the host name and the management IP address.
   c. Click **Finish**.

   On the Device Management page, the **Status** column of the Avaya SBCE device displays Registered.
4. Click **Install**.
5. In the Install Wizard, type the configuration. For more information, see *Administering Avaya Session Border Controller* document.
6. Click **Finish**.

   In the **Devices** tab, the **Status** column of the device displays **Commissioned** indicating that the device is successfully deployed and configured.

Chapter 7: Maintenance

Viewing the job history of virtual machine operations

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. In the lower pane, click **Job History**.
3. On the Job History page, in **Operation**, select one or more operations.
4. Click **Submit**.

   The page displays the details of jobs that you selected.

Related links

Job History field descriptions on page 41

Job History field descriptions

Name/Button	Description
Operation	The operation that is performed on a virtual machine. You can select one or more operations that are performed on a virtual machine, such as host restart, virtual machine deployment, and patch installation.
Submit	Provides details of jobs that you selected.

History

Name	Description
Job ID	The unique name of the virtual machine management job.

Table continues…

Name	Description
IP/FQDN	The IP address or host name of the virtual machine or the host where the operation is performed.
Operation	The operation performed on the virtual machine or host. For example, host refresh, virtual machine deployment, and patch installation.
Status	The status of the job.
Start Time	The start time of the job.
End Time	The end time of the job.

Related links

Viewing the job history of virtual machine operations on page 41

Monitoring a host and virtual machine

Monitoring a platform

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. Click **Monitor Platforms**.
3. On the Monitor Hosts page, do the following:
   a. In **Hosts**, click a host.
   b. Click **Generate Graph**.

   The system displays the graph regarding the CPU/memory usage of the host that you selected.

Monitoring an application

Procedure

1. Do one of the following:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager** > **Application Management**.
   - On the desktop, click the SDM icon (), and then click **Application Management**.
2. Click **Monitor Applications**.
3. In the Monitor VMs page, do the following:
   a. In **Hosts**, click a host.
   b. In **Virtual machines**, click a virtual machine on the host that you selected.
4. Click **Generate Graph**.

   The system displays the graph regarding the CPU/memory usage of the virtual machine that you selected.

Deleting the virtual machine snapshot from the Appliance Virtualization Platform host

Procedure

1. In the Web browser, type the following URL: `https://<AVP IP Address or FQDN>/ui`
2. To log in to the Appliance Virtualization Platform host, provide the credentials.
3. In the left navigation pane, click **Virtual Machines**.
4. Select the virtual machine, click **Actions** > **Snapshots** > **Manage snapshots**.

   The system displays the Manage snapshots - <Virtual machine name> dialog box.
5. Select the snapshot and click **Delete snapshot**.

   The system deletes the selected snapshot.

Chapter 8: Resources

Documentation

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

Title	Description	Audience
Design		
Avaya Session Border Controller for Enterprise Overview and Specification	High-level functional and technical description of characteristics and capabilities of the Avaya SBCE.	Sales engineers, solution architects, and implementation engineers
Avaya Session Border Controller for Enterprise Release Notes	Describes any last minute changes to the product, including patches, installation instructions, and upgrade instructions.	Sales and deployment engineers, solution architects, and support personnel
Avaya Converged Platform Overview and Specification	Describes the key features of Avaya Converged Platform servers.	IT Management, sales and deployment engineers, solution architects, and support personnel
Implementation		
Deploying Avaya Session Border Controller for Enterprise	Describes how to plan and deploy an Avaya SBCE system on the supported set of hardware servers.	Sales and deployment engineers, solution architects, and support personnel
Deploying Avaya Session Border Controller for Enterprise in a Virtualized Environment	Describes how to plan and deploy an Avaya SBCE system on customer-provided VMware servers.	Sales and deployment engineers, solution architects, and support personnel
Deploying Avaya Session Border Controller for Enterprise in a Virtualized Appliance	Describes how to plan and deploy an Avaya SBCE system on a virtualized appliance.	Sales and deployment engineers, solution architects, and support personnel

Table continues…

Title	Description	Audience
Deploying Avaya Session Border Controller for Enterprise on Amazon Web Services	Describes how to plan and deploy an Avaya SBCE system on Amazon Web Services.	Sales and deployment engineers, solution architects, and support personnel
Avaya Session Border Controller for Enterprise Port Matrix	Describes the incoming and outgoing port usage required by the product.	Sales and deployment engineers, solution architects, and support personnel
Upgrading Avaya Session Border Controller for Enterprise	Describes how to upgrade to the latest release of Avaya SBCE.	Sales and deployment engineers, solution architects, and support personnel
Installing the Avaya Converged Platform 110 Appliance	Describes how to install Avaya Converged Platform 110 series servers.	Sales and deployment engineers, solution architects, and support personnel
Administration		
Administering Avaya Session Border Controller for Enterprise	Describes configuration and administration procedures.	Implementation engineers and administrators
Maintenance and Troubleshooting		
Troubleshooting and Maintaining Avaya Session Border Controller for Enterprise	Describes troubleshooting and maintenance procedures for Avaya SBCE.	Implementation engineers
Maintaining and Troubleshooting Avaya Converged Platform 110 Appliance	Describes procedures to maintain and troubleshoot Avaya Converged Platform 110 Series servers.	Implementation engineers
Using		
Working with Avaya Session Border Controller for Enterprise Multi-Tenancy	Describes how to set up, maintain, and use the Avaya SBCE Multi-tenancy feature.	Implementation engineers and administrators
Working with Avaya Session Border Controller for Enterprise Geographic-Redundant Deployments	Describes how to set up, maintain, and use the Avaya SBCE Geographic-redundant deployment feature.	Implementation engineers and administrators

For Dell documentation, go to https://www.dell.com/support/.

For HP documentation, go to https://www.hpe.com/support.

For Portwell documentation, go to https://portwell.com/.

Finding documents on the Avaya Support website

Procedure

1. Go to https://support.avaya.com.
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 the appropriate release number.

   The **Choose Release** field is not available if there is only one release for the product.
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 only displays the documents for the selected category.
7. Click **Enter**.

Accessing the port matrix document

Procedure

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

Customer documentation for some programs is now available on the Avaya Documentation Center website at https://documentation.avaya.com.

Important:

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

Using the Avaya Documentation Center, you can:

- Search for content using one of the following:
  - Type a keyword in **Search**, and click **Filters** to search for content by product, release.
  - From **Products & Solutions**, select a solution and product, and select the appropriate document from the list.
- Sort documents on the search results page by last updated dated and relevance.
- 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 **Manage Content** > **My Docs** menu, and do any of the following:
  - Create, rename, and delete a collection.
  - Add topics from various documents to a collection.
  - Save a PDF of selected content in a collection and download it to your computer.
  - Share content in a collection with others through email.
  - Receive collection that others have shared with you.
- Add yourself as a watcher by using the **Watch** icon (👁).

  Navigate to the **Manage Content** > **Watchlist** menu, and do the following:
  - Enable **Include in email notification** to receive email alerts.
  - Unwatch selected content, all content in a document, or all content on the Watch list page.

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

Note:

Some functionality is only available when you log on to the website. 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 www.avaya-learning.com. After logging into the website, enter the course code or the course title in the **Search** field and click **Go** to search for the course.

Note:

Avaya training courses or Avaya learning courses do not provide training on any third-party products.

Course code	Course title
2060W	What is new for Avaya Session Border Controller for Enterprise
2066W	Administering the Avaya Session Border Controller for Enterprise
2080C	Implementing and Supporting Avaya Session Border Controller — Platform Independent
2080T	Avaya Session Border Controller for Enterprise Platform Independent and Support Test
2080V	Implementing and Supporting Avaya Session Border Controller — Platform Independent
26160W	Avaya Session Border Controller for Enterprise Fundamentals
7008T	Avaya Session Border Controller for Midmarket Solutions Implementation and Support Test
7008W	Avaya Session Border Controller for Midmarket Solutions Implementation and Support
2035W	Avaya Unified Communications Roadmap for Avaya Equinox Clients
43000W	Selling Avaya Unified Communications Solutions

Viewing Avaya Mentor videos

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

About this task

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

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

Support

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

Index

A

accessing port matrix 46
access Solution Deployment Manager 19
access Solution Deployment Manager client 19
adding
    ESXi host 22
adding ESXi host 22
add location
    add 20
    location 20
Appliance Virtualization Platform 8
    license 25
    restarting 24
    shutting down 24
    WebLM configuration 25
Appliance Virtualization Platform components 10
Appliance Virtualization Platform overview 8
application
    edit 35
    monitoring 43
    restart 37
    start 36
    stop 37
Application Deployment
    field descriptions 31
Avaya Aura Virtualized Appliance offer 8
Avaya SBCE
    deploy 30
Avaya SBCE deployment
    checklist 29
Avaya SBCE in virtual appliance 12
Avaya support website 49
Avaya virtualization platform 8
AVP license status 27

C

Change IP FQDN 35
checklist
    Avaya SBCE deployment 29
collection
    delete 47
    edit name 47
    generating PDF 47
    sharing content 47
common causes
    application deployment failure 37
components
    Appliance Virtualization Platform 10
configuration tools 11
configuring
    WebLM Server on Appliance Virtualization Platform 26
content
    publishing PDF output 47
    searching 47
    sharing 47
    sort by last updated 47
    watching for updates 47

D

deleting a location
    deleting 21
    location 21
deploy
    Avaya SBCE 30
deployment checklist 29
documentation center 47
    finding content 47
    navigation 47
documentation portal 47
    finding content 47
    navigation 47
document changes 7
document purpose 7
downloading software
    using PLDS 14

E

edit
    application 35
edit application 35
editing the location
    editing 21
    location 21
Edit Location 21
EMS
    verification 39
EMS,
    GUI 39
ESXi host
    removing 25
    restarting 24

F

field descriptions
    Edit Location 21
    Job History 41
    New Location 21
    WebLM Configuration 27
finding content on documentation center 47
finding port matrix 46

I

interfaces 13

J

Job History 41

L

latest software patches 15
logging in EMS 39

M

monitoring
    application 43
    platform 42
My Docs 47

N

New Location 21

P

patch information 15
PCN 15
planning checklist 11
platform
    monitoring 42
PLDS
    downloading software 14
port matrix 46
PSN 15

R

related documentation 44
release notes for latest software patches 15
removing
    Appliance Virtualization Platform host 25
    ESXi host 25
restart
    application 37
restart application from SDM 37
restarting
    Appliance Virtualization Platform 24
    ESXi host 24

S

SDM client
    installing 17
searching for content 47
Select Flexi Footprint 35
sharing content 47
shutting down
    AVP 24
snapshot from Appliance Virtualization Platform
    deleting 43
software patches 15
Solution Deployment Manager
    access 19
    restart application 37
    start 19
    start application 36
    stop application 37
Solution Deployment Manager client
    installing 17
Solution Deployment Manager client dashboard 19
sort documents by last updated 47
start
    application 36
start application from SDM 36
start Solution Deployment Manager 19
stop
    application 37
stop application from SDM 37
support 49
supported footprints 12
supported servers 12

T

training 48

U

utilities 11

V

verify EMS installation 40
verifying EMS and SBCE installation 40
verify SBCE installation 40
videos 48
Viewing AVP host
    license status 27
viewing job history 41
view location
    location 20
    view 20
Virtualized Appliance 8
Virtualized Environment 8
virtual machine operations
    job history 41

W

watch list 47

WebLM Server on AVP host 26